Bandworld

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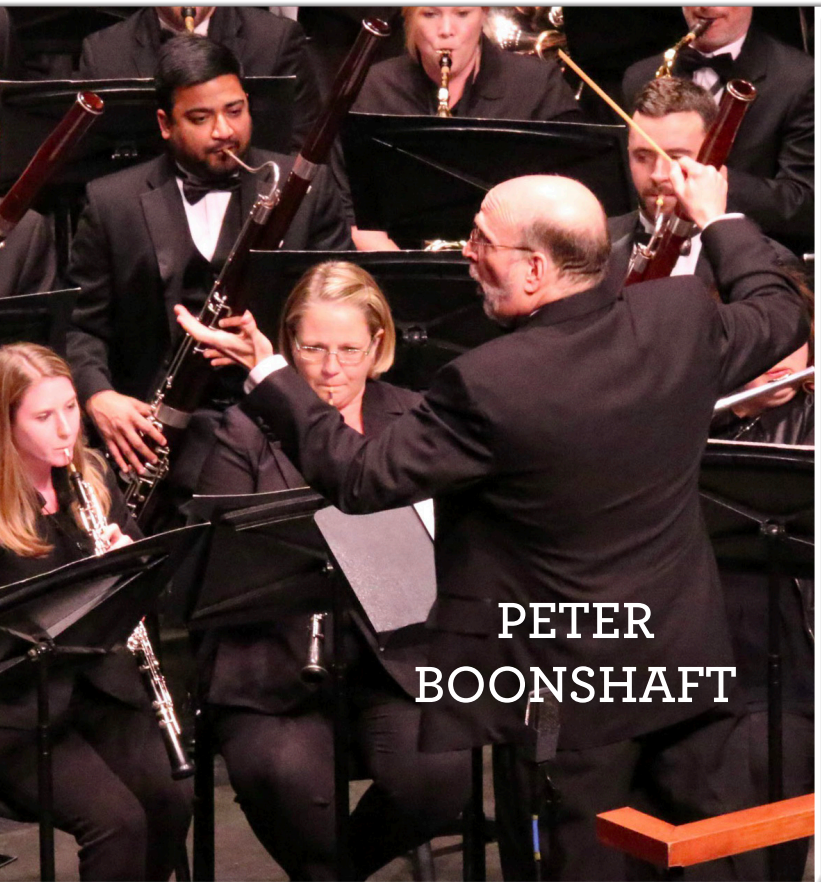

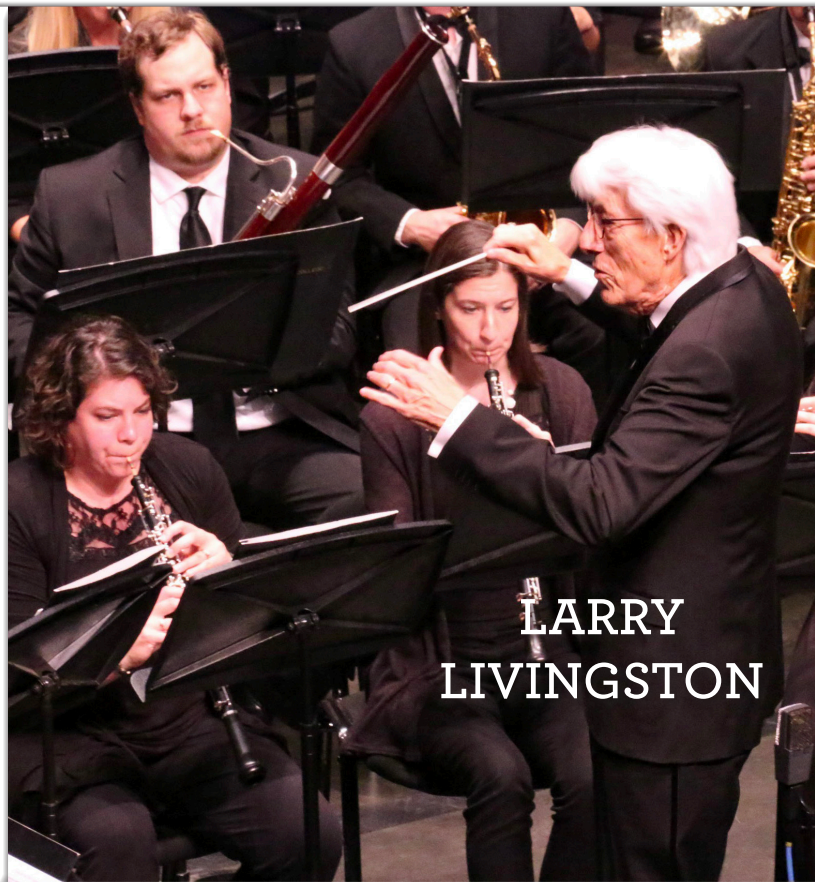

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The Future of the Bandworld

MusiClips

by Ira Novoselsky Bio

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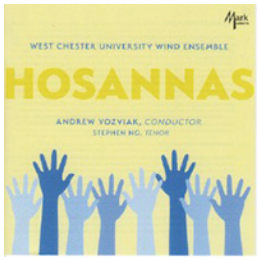

O Sacred Head Now Wounded

arranged by David Maslanka

Album Title: HOSANNAS
Recording: West Chester University Wind Ensemble
Conductor: Andrew Yozviak
Tenor Soloist: Stephen Ng
Publisher: MARK Masters 52463-MCD

The West Chester University Wind Ensemble recordings are among the finest offerings for band enthusiasts. The title work is David Maslanka's profound suite of musical "praises". This is the Drum by Andrew Boysen Jr. is a nod to legendary American composer Morton Gould and his use of distinctive drumming/percussive motifs. John Corigliano originally wrote Lullaby for Natalie for orchestra and later set the peaceful music for wind band. The popular Old Home Days (Charles Ives/Jonathan Elkus) is one of the most frequently performed Ives works for band. Karel Husa's powerful Smetana Fanfare opens this excellent CD in style!!

Concerto for Trombone Mvmt.II

by Dana Wilson

Album Title: COLOR + LIGHT
Recording: Ohio University Wind Symphony
Conductor: Andrew Trachsel
Trombone Soloist: Lucas Rego Borges
Publisher: MARK Masters 51498-MCD

Color + Light is a masterful recording which truly illuminates the wind band. Luminescence (David Biedenbender) opens the program; this is a metamorphosis of the choral melody Break Forth O Beauteous Heavenly Light of Johann Schop, later harmonized by J.S. Bach. Monk by the Sea (Michael Markowski) is music inspired by the famous Caspar David Friedrich landscape. The Descending Blue by Daniel French can best be described as a basic wave form based on the predominant to dominant chord progression. Concerto for Trombone (Dana Wilson) adds another gem to the trombone and band repertoire while Winter Dreams (Michael Daugherty) pays homage to seasonal lithographs of Iowa artist Grant Wood (famous for American Gothic). The final composition is Sound and Smoke by Viet Cuong which gets its title from Goethe's Faust: the two movements are feudal castle lights and avalanche of eyes. Color + Light exemplifies the art of wind band music to its highest.

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Pushing On

by John Philip Sousa

Album Title: JOHN PHILIP SOUSA: MUSIC FOR WIND BAND VOL. 16
Recording: Marine Band of the Royal Netherlands Navy
Conductors: Keith Brion
Publisher: NAXOS 8.559746

Volume 16 in this stellar series continues to provide the best in familiar and unfamiliar Sousa. The centerpiece is a twenty two minute operetta selection from The Charlatan. The last operetta from Sousa was the incomplete Irish Dragoon; the Circus Galop and Overture are featured. March enthusiasts will appreciate performances of Pushing On, The Triumph of Time, On the Tramp and two rarities: Homeward Bound and Wedding March. Also included are Tyrolienne; an early solo & variation work based on a French folk melody and I've Made My Plans for the Summer for voice or solo cornet and band (Sergeant Major John Curfs is the cornet soloist). The remaining composition is the standardized "Education version" Sousa and Walter Damrosch made of the Star Spangled Banner most bands (and orchestras) play. As always, informative note are included.

The King of England's Wedding

By John Louis Moraleda

Album Title: CATALAN WIND MUSIC
Recording: Barcelona Symphonic Band

Conductor: Salvador Brotons
Publisher: NAXOS 8.573547

It is very important to understand the instrumentation of the Barcelona Symphonic Band on this recording. In addition to the standard woodwind section the Catalan cobla instruments are heard. These include the flabiol (fipple flute), tible and tenores; the latter two being Catalan shawns with their distinctive piercing sonorities. The sound of these instruments may take some doing for Western listeners to accept yet they are orchestrated with the same musicality as the other winds in solo and tutti scored passages. The first featured composition is L'Alimara (Manuel Oltra, arr. Jordi Leon); a symphonic portrait with medieval echoes originally scored for two cobles and percussion. The four movement Suite Empordanesa (Juli Garreta, arr. Richard Lamonte de Grignon) is one of the classic works in Catalan music and is the composer's impressions while on a boat trip. Tirant to Blanc by Joan Lluis Moraleda is a picturesque suite that harkens the listener to days of knighthood. Catalan Wind Music is a fascinating introduction to a rarely visited side of world music; highly recommended.

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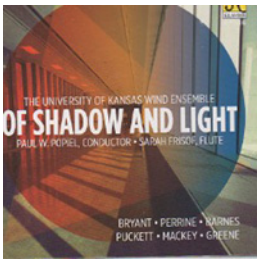

Sheltering Sky

by John Mackey

Album Title: OF SHADOW AND LIGHT
Recording:University of Kansas Wind Ensemble
Conductor: Paul W. Popiel
Flute Soloist: Sarah Frisof
Publisher: Klavier K-11216

There is nothing short of professionalism with Of Shadow and Light; an excellent recording from the University of Kansas Wind Ensemble. Radiant Joy (Steven Bryant) is an aptly named opener followed by Only Light (Aaron Perrine); an essay in hope and healing. The prolific composer James Barnes is next with his 1981 Ostwald Award winning Visions Macabre. Knells for Bonnie is short elegy for flute and chamber winds by Joel Puckett; Sarah Frisof is featured soloist. John Mackey's Sheltering Sky was commissioned for a junior high school band yet its musical content can easily fit on the programs of upper level bands. The final composition is The Moon Glistens (Joni Greene); an intriguing work based on Greene's Autumn Reflections for Choir. One of the more enticing CDs of wind ensemble literature; well worth getting acquainted with.

Saltarello

By Ferenc Farkas

Album Title: FERENC FARKAS: MUSIC FOR WIND ENSEMBLE
Recording: Budapest Wind Symphony
Conductor: Laszlo Marosi
Publisher: Toccata Classics TOCC-0349

Ference Farkas was a very popular composer and one of the Hungarian music legends alongside Bartok & Kodaly. The Budapest Wind Symphony is an ideal ensemble to showcase the works of Farkas. The delightful Early Hungarian Dances from the 17th Century (arr. Zempleni) lead off the program followed by the Sly Students: Suite (arr. Kurmann); a ballet idiomatic with folk and modern music stylings. Timon of Athens (arr. Kurmann) is inspired by the Shakespearean play of the same name while Csinom Palko: Mischievous Tune (arr. Eordogh & Kurmann) is music reconstructed from a radio play and cinema. The original Farkas works include two brass pieces (Tower Music from Nyirbator and Musica per Ottoni) as well as a pair of full band compositions; Contrafacta Hungarica and Intrada Passacaglia, Saltarello. The entire recording is a true treasure that should be enjoyed by all.

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Dance of the Moving Mist

by Carl Nielson arranged by Johan de Meij

Album Title: DOWNTOWN DIVERTIMENTO
Recording: Various Wind Orchestras
Conductor: Various Conductors
Trombone Soloists: Joseph Alessi & Hirulo Gamo
Publisher: AMSTEL CLASSICS CD2015-01

Downtown Divertimento is another collection of high quality compositions and arrangements by Johan de Meij. The title work harkens to de Meij's Symphony No. 2 "The Big Apple". Downtown Divertimento is an eleven minute triptych of the Chelsea neighborhood in Manhattan. The other two original compositions are Ceremonial Fanfare for Brass & Percussion and Summer which draws its inspiration from Finnish folk music. Trombone artistry is on display when Joseph Alessi performs Ravel's Pavane for a Dead Princess and is joined by Hiroku Gamo for Verdi's Duo from Don Carlo. Three movements from Carl Nielsen"s Aladdin Suite add some evocative sounds to this program. The remaining two works will get your feet tapping : Joropo is a lively Venezuelan dance by Moises Moleiro Sanchez and Highlights from Riverdance (Bill Whelan) is for the Irish in all of us. Highly recommended!

Allemande for Eleven Instruments

by John S. Gray

Album Title: CANADIAN PANORAMA
Recording: Winds of the Scarborough Philharmonic Orchestra:
Conductor: Ronald Royer
Publisher: Cambria CD-1227

An orchestral winds program is a little something different for your band/wind ensemble palate. Canadian Panorama begins with the sparkling Fundy: A Poem of Wind and Waves (Chris Meyer). Saturday Night at Fort Chambly (Alex Eddington) is a collage of French-Canadian folksongs while Allemande (John S. Gray) gets its inspiration from the neo-classical composers of the 1930's. Whirligig (Alexander Rapoport) and Serenade for Clarinet and Winds (Jim McGrath) are an absolute delight and no Canadian program is complete without hearing from the legendary Howard Cable; McIntyre Ranch Country is his tribute to the Canadian West. Conductor Ronald Royer is also the composer of Travels With Mozart: Variations on a Theme from the Magic Flute and Rhapsody for Oboe, Horn and Wind Ensemble; a most engaging pair of works. I can't say enough about this excellent recording.

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Start Up Questions

by
Ralph Hultgren

What the music teacher may be able to say in response.

Why should parents outlay money on music lessons and what are the benefits?

A discussion about musical activity cannot be based solely around the cost. Music for young people (and this is the premise of the Young Conservatorium) is a unique way for them to understand themselves and others in the world and a unique way for them to make comment on that world. To just equate its value with other tangible and therefore quantifiable things is to deny its essential quality.

That said, it positions the parent in respect of expending monies for such an educational experience. We tend to spend money and focus our educational attention on the three "R's". In so doing we rightly address vocational issues but we may neglect those fundamental issues of the human spirit, our culture (western and other) and civilization. The measure of a civilized society may well be its engagement with art.

Given the above, we can conclude that a music education is an education for the whole person. A music education is an education that can benefit the whole society. It is also a chance for the young person to engage in activities that allow them:

• To be a team player without a football or bat.
• To contribute as a player without being left on the bench because they are only replacement material.
• To be expressive while not being concerned about spelling, grammar and what others will say about what they are saying.

Making music is a unique way of being in the world and parents must way up the cost of that intangible end product with what their child's life may be missing with out it.

Where a child begins their music education is pivotal. There are many anecdotal stories of the little old lady around the corner who teachers piano or music theory and who has done so for 50 years. This is not to suggest that they are less than adequate to teach children. What is imperative is that parents investigate not just a teacher but a teacher's philosophy. There is no point in a child going to a teacher because they want to be able to join a band or orchestra only to be saddled with a teacher whose sole aim in life is to have them pass examinations.

Given the above, the parent should investigate:
• The teacher's background and experience
• The teacher's interest in children's broader music education and musical experiences

• Whether the teacher has connections with group music making (the child may well want to play in a group instead of just practicing in their room)
• The fee structures of various teachers and organizations that provide instruction. Be sure to compare “apples” with “apples” when doing so.

Can you give me some advice on buying musical equipment?
Is it financially prudent to rent rather than buy to start with, in case your child changes their mind about which instrument they wish to play?

The purchase of musical equipment needs to be undertaken as careful as the purchase of any item that requires a substantial investment. In the beginning the costs may not be very large but good quality instruments (the “high’ end of student range and also professional models) cost good quality dollars.

Also be aware that retailers advise on what they sell. If they are particular importers of an instrument range or if they have special or exclusive relationships with importers then they will naturally incline themselves toward “promoting” those lines as the “best” available. Canvas advice widely (the teacher, school, investigate many stores, compare “sales” stories etc) and go for the names that are more commonly known. On brand names, it used to be said that “if it flies or swims don’t buy it”. Matters have changed somewhat these days and my two youngest children play or have played instruments that “fly or swim” because they are good entry-level instruments.

Renting can be an excellent option especially for string instruments. As the child grows they can exchange the instrument for one slightly bigger and still be playing a violin or cello or other string instrument as they come in many different sizes.

In Summary:
• Consider the interest of the child whether they are prone to “fads”-rent then!
• Investigate widely and canvas a variety of opinion
• Ask the teachers’ advice
• If you need an instrument to begin the learning process then rent
• Go for the known names where possible
• Ask if the rental programs rental purchase
• Good quality student instruments usually hold their value reasonably well
• Remember the additional costs of music and accessories as well as recordings as they become more able to discern musical output for themselves

Is there any additional advice you may have for parents in relation to music lessons?

Your child’s experience of music is important to them and should also be to you.
• Show genuine interest in their practice without taking over
• Let them play for you (because at the beginning it is very often “play”)
• Give them a place to practice and allow them a time to “perform” for the family. Investigate group music making if that’s appropriate
• Don’t expect your child to sound “fantastic” overnight!

• Encourage them
• Don't expect them to "win" or pass a multitude of exams

Be sure that you encourage parents to appreciate the joy that music making can bring to their child's life and to attempt to work with their child given that situation. Maybe there is an adult group nearby and the parent could begin to learn too! What a concept!

Ten Guide Posts

by
Jimmie Reynolds

The lack of proper preparation of the score for rehearsal and performance is one of the most serious deterrents to successful music making. Proper preparation involves more than just following the band. It is wrong to learn a score by daily repetition in rehearsal. Serious preparation should not be limited to contest performance alone. “It’s just a march,” and “I’ve heard that piece a thousand times,” should not serve as excuses for inadequate score preparation. A cursory examination of meter changes and tempo changes cannot pass for score study. What is there then, in preparing a piece for rehearsal and public performance?

If you have built, in kit form, a model airplane or stereo amplifier, or put a child’s bicycle together on Christmas eve, you will have determined that it is best to follow the instructions. Some instructions are simple to follow and others are enormously complex. Some are very clear; others are quite obscure, and so it is with scores. These Guide Posts will assist in learning a score. And, as in building a kit, it’s best to follow “instructions” and not skip any steps.

MELODY–Play and/or sing every melody and melodic fragment in all parts.
A study of melody demands that we examine not just the obvious, but all the subtleties as well. Look for counter subjects of nearly equal melodic importance. Find melodic significance in short fragments, and give melodic emphasis to canonic passages and obscure melodic echoes occurring in other voices. Imagining the melody played by another instrument often sheds light on its essential characteristics. Study melody from the composer’s point of view, not the instrumentalist’s. Strive at all costs to allow the melodic line to stand out clearly and not become mired in an often too heavy harmonic or rhythmic background.

HARMONY–Determine the intended harmonic scheme, and the vertical or horizontal orientation. Learn by sight and sound all progressions, their directors and resolutions. Consider harmonic ideas on the basis of chordal importance and not on instrumental weight. Balance chordal voices rather than instruments–and there is a difference. The simple expedient of playing a passage slowly at the piano will clarify a composer’s harmonic intentions quicker than anything else. Then it is possible to establish the dynamics required of the various instruments to recreate the original harmonic intentions of the composer. Much of the music for younger bands is harmonically very simple and straight forward, yet many performances do not reflect even a partial realization of the harmonic implications of the piece.

RHYTHM–Establish the basic pulse, the rhythmic configurations and the interaction of rhythm content.
Rhythmic drive and forward motion is essential to all music. Look for it particularly in slow pieces. Make a simple re-study of the mathematical basis of note division, and

always use a metronome. Look for the source of the rhythmic generation. It is seldom in the melody. Seek the correct stylistic interpretation of rhythmic patterns.

TEXTURE–Study the instrumentation, the color possibilities, and the tonal density.
An honest basic tone quality is the primary goal, but all except the least experienced bands are capable of achieving a wide variety of tonal colors. The band's tonal pallete is fantastically rich; find ways to exploit it. The frequent criticism of excessive tonal density can be eliminated (in most pieces) by simply seeking clarity of line and finding the composer's intended textural scheme. Even the little pieces for young bands, designed to have everyone playing all the time, can be made far more interesting by judicious cuts, creating new woodwind and brass textures. Strive to create new colors by the proper balancing of different melodic line instruments.

CONTOUR–Determine the basic analytical form and the deviations from the typical.
Find the high and low points, the essential climaxes and moments of rest. Study contour within phrases and ideas as well as the contour of the entire work.
Discover the basic architectural scheme of the piece. Just as a carpenter uses brick, stone, wood, or plastic, to build a house, the composer uses instrumental combinations in a variety of sizes and shapes to create a piece. The materials used have little effect, however, on the ultimate shape of the house or its utility, as the form or architectural structure of a piece is usually quite independent of its building materials. Many of us are guilty of not being able to see the forest for the trees, or of becoming so involved in instrumental techniques that we do not see the music.

DYNAMICS–Determine the composer's basic dynamic intention.
Is it a loud piece or a soft piece? Grade the dynamics in relation to harmonic and melodic importance. All fortissimos are seldom equal in any piece. Study the tuttis to determine if all the instruments should really be marked fortissimo. Often an adjustment of accompaniment dynamics clarifies the entire piece. Avoid losing quality or intensity in pianissimo. Study all stress signs for consistency between instruments and the faithful interpretation of the composer's intent. Be sure to grade all crescendos and diminuendos so that they are properly proportioned.

PACE–Choose tempos which reveal with clarity what you believe to be the composer's intention.
With a metronome, find a spectrum of possible tempos for a given section and then compromise on the best one for you players. Avoid anticipating ritards. Look for the harmonic necessity for tempo changes. Control you tempos; don't let them control you. Grade all accelerandos and decelerandos so that they are appropriately gradual.

INTENT–Find the artistic aim of the composer through a study of musical, historical, and philosophic ramifications of the score.
There is no substitute, in the study of a score, for a broad knowledge of music literature. A great deal of our band music can be classified either as derived miniatures, or as copies (transcriptions) of the music of the last several hundred years. There is little excuse for performing Skornicka's reliable old "Eroica" without going to the source; yet,

performances occur every year showing little evidence that the student (to say nothing of the conductor) has ever heard the work from which it was taken. Learn to make a game of finding the Rachmaninoff or Prokoviev, the Schumann or Puccini in many works for school bands. It is a compliment to all the composers involved, when their intentions are realized and appreciated by the youngsters. Is it a simple or a complex piece? Is the composer speaking in contemporary idioms, or from another historical period? Is the composer trying to express something extra-musical?

TECHNICAL–Study each separate part.
Look for fingering problems, breath marks, trills, turns, and awkward lines or intervals. Isolate technically difficult passages for special work or simplification. Anticipate intonation problems based on known instrumental characteristics.

CONDUCTING–Isolate and master those passages which may cause a problem in clearly indicating your intent through baton technique to the performer. Learn phrase lengths, memorize important entries and decide upon necessary and desirable cueing. Hear as many varied performances of a work as you can, so as to establish certain standards or parameters of execution. A piece must be allowed to grow and develop in your mind. Learn to put it away after concentrated study. When you return to it, new insights will often appear. This requires time, experience, and much patience.
In conclusion, it is also important to be honest with ourselves about how the music really sounds. Try to avoid confusing musicality with your love for your students and your appreciation of their accomplishments. The latter is ultimately more important, but without the former, we are shortchanging our students. Remember too, that these guide posts are just for preparation. The act of conducting is the final step, the realization of the composer's creation–but that is an entirely different subject.

39 Steps to Low Contest Ratings

by

Jimmie Reynolds

If you follow carefully this random list, you will be guaranteed a IV, III, or II rating at the festival. If you observe 90 percent or more you can earn a IV; 50 percent will get you by with a III. It is possible to earn a II if you follow only 25 percent. Face the bitter truth that if you adhere to only 10 or 15 percent, you might receive a superior.

1. Never pay attention to 2nd and 3rd clarinet and trumpet parts or inner voices.
2. Never encourage students to play horn. After beats are no fun.
3. Pay attention to mouthpieces. Any old one will do.
4. Never hurt an oboe players feelings. Let them ruin your performance.
5. Be sure your flutes play sharp, especially C#.
6. Keep it a secret about sharp and flat partials on brass instruments.
7. Never use a third valve slide.
8. Be sure that the tubas play all short notes too long.
9. Never connect notes in legato passages.
10. Never separate staccato notes.
11. Always assume that an accent means hit it hard.
12. At all costs avoid dynamic contrasts.
13. Be sure to allow tied and dotted notes to run into the next note.
14. Never separate accented notes.
15. Always allow short notes to attach themselves to the preceding note.
16. If it says ff, be sure that everyone is playing ff.
17. If a solo is indicated to be playing pp, be sure no one hears it.
18. Let all sustained tones sag at the end.
19. Spend too much time on scales; a bored band is a happy band.
20. Always play scales loud and never let the students hear themselves.
21. Be sure that the trumpets play loud enough to cover everyone.
22. Never play a chorale, but if you do, make it a complicated one like in a lot of sharps.
23. Choose too difficult music. It will impress the judge.
24. Be sure to always conduct never teach.
25. Always let the melody be covered by something else.
26. Encourage poor posture—slouching, elbows on knees, legs crossed, etc.
27. Never practice your own instrument or play for your students.
28. Be sure the woodwinds have sufficient broken reeds.
29. Never have a “set-up” with a specific place for each chair and student.
30. Don’t number music folders, or label them or have a place for them.
31. Pass out music only at rehearsals. Better yet, let a student with grade and attitude problems do it.
32. Always be sure that your rehearsal is cluttered with books, coats, broken instruments, music, etc.
33. Keep a friendly rehearsal environment. Let everyone talk all the time.
34. Never start or stop rehearsal on time. Parents and teachers like this.

35. Be sure that you never hurt a trouble makers feelings by suggesting that he/she leave the rehearsal.
36. Always assume that judges are dishonest, incompetent or prejudiced.
37. Don't keep a bulletin board. It is better to take time to answer each student's questions individually.
38. Never, never study a score. It is better to learn from the first reading.
39. Never learn from a colleague; they are surely out to get you.

GOOD LUCK! There are many more ways to qualify for a low rating but that will have to wait for a later edition.

American Band College of Sam Houston™ State University

Matthew Wendell

American Band College
Sam Houston State University
MUSI 6285 PA1
Applied Analysis and Pedagogy

July 2015

This project presented for the partial fulfillment for the Master's of Arts in Conducting Degree.

For the Lobo Band of Spanish Fork Junior High School, Spanish Fork, Utah

Special thanks to:
Megan Jensen, Bobbi Hughes-Millman, David Huff, Dr. Robert Spring, and Summerhayes Music
Great bands are made with great people.

To the Student:

Congrats on playing the Clarinet! The clarinet is one of the most prominent instruments in band and is used in a wide variety of musical contexts. Wind instruments that used wooden reeds have been discovered as early as 3000 B.C. in Egypt. However, the modern instrument you play today was not around until 1840, and since that time, it has still gone through some changes. As a clarinetist, you have a strong history of great musicians and amazing music ahead of and behind you! This book was written with you in mind, intended for you to develop good playing habits at home and to establish basic skills to help develop your musical "chops" as you work from materials given to you by your band director—me, Mr. Wendell.

It is assumed that you already know the basics of assembling and playing your instrument. Like, how to open the case so the clarinet doesn't flop out onto the floor and break, or how to sit and stand with the instrument in hand so that you sound good, you feel good, and you look good while you play. You should also know how to safely put the thing together so that the bridge mechanism is safe and the keys, rods, and tenons don't get damaged—or out of regulation—because, you know, taking care of your instrument is a pretty big deal. These things are fragile, like us. The difference is, if we fall to the ground, our body can heal itself. A clarinet can't do that! Take care of your instrument. Swab it out when you're done playing so it stays clean and dry, too. And another thing you should pay attention to is, how you take care of your reeds! If your reeds are bad, you sound bad. Who wants to sound bad? Nobody. Anyway, we'll go over a few of these things in more detail in this lil' book. But if you ever have any questions about anything, all you need to do is ask. It will help if you write your questions down as they come up. Feel free to send an email to me at Matthew.Wendell@nebo.edu.

Use this material as a guide for you to begin with, as a part of your daily routine. There's only one secret to getting better and that is to play some music on your clarinet every day. You will use this book as a supplement to all the other music you receive in Band and the exercises in this book are meant for your daily playing, so enjoy!

Happy Playing!

Mr. Wendell

P.S. The majority of what you'll play in this book has been adapted from the "Celebrated Method for the Clarinet" by Hyacinthe Klosé. Although there are slurs everywhere, it is expected to mix up the articulations on every thing you play. You can even put on a minus track, or your favorite album, and play in the style of your most favorite music.

To Teachers:

This book is not a step-by-step method. It's purpose is to provide students within their first two—three years of playing supplemental materials for learning their instrument that most band method books leave out. With that being said, this book leaves a lot of things out. You will want to go through the first pages with the students, making sure they understand the concepts. This book assumes that students know how to use, read, and interpret data from a tuner and metronome. This book is not a book on rhythm. Yet, you will certainly want to take time training students on how to count and play in time and how to write down metronome markings, etc. It is critical that students also know how to tell if they are flat or sharp, how to listen for the wave speed while tuning, how that affects intonation, and how they can manipulate their embouchures to affect tuning. They need to have a basic understanding of how to account for data coming from the tuner and metronome, as well as how to record and interpret that data in order to synthesize it into their playing. The materials covering tuners in this book are a reinforcement of what is assumed they already know.

I also recommend spending time reviewing student work and playing journals with the pupil. Use musical terms when discussing progress toward goals. It would be very wise to take time and listen to music with your students. Share with them what music excites you and talk about how and why you feel what you feel. Chances are they feel it, too. But the poor squids don't know how to articulate these things and they need to hear it from you. Students and their families often have very low awareness of the clarinet world and will need your guidance for discovery.

The challenge was to make something that would help me learn the instrument and something I would use with my own students to help them. So much still to be learned...

Happy Listening!

Mr. Wendell

AMERICAN BAND COLLEGE
FOR DIRECTORS

Table of Contents

Never over stuff you case! Music goes in your music folder. The case must close with ease.

Instrument Care

Not everything you will need to know about caring for your instrument will be found in your text book from Band class. The information found on the first couple pages of the book only goes so far. Let's review and give some extra tips.

Things you MUST have in your case!

#1—Your Clarinet! DUH! But it MUST be in working order, serviced at least once a year (or as needed), clean, regulated, and a good brand. **I highly recommend the Yamaha Clarinet with a Clark Fobes Debut or Vandoren B45 mouthpiece with some Rico 2.5 reeds, a Rovner 1R Ligature and a Sam Ash Deg Elastic Claricord Neck Strap, and some pencil grips. This setup is a recipe for success. I want all my beginners to have this setup when they are first starting.**

What you'll need.

1—Cork Grease, 2—Mouthpiece Brush, 3—Thumbsaver, 4—Rico Reed Case, 5—Cleaning Brush, 6—Cotton Swab

#2—At the very least, FOUR GOOD REEDs that are in great shape. And they need to be in reed protectors/ cases because the default plastic thing they come with is garbage.

#3—A cotton cleaning swab (silk preferred). You want to make sure to get one that has a protected weight on the end (rubberized or covered in cloth). If you get a different material, you might end up doing more harm than good because swabs can easily get stuck inside your instrument and other fabrics shed fuzz in the clarinet. **EVERY TIME YOU PLAY, YOU MUST SWAB OUT YOUR INSTRUMENT, LEAVING IT SPIT AND DEBRIS FREE!! YOU MUST! JUST DO IT! ALWAYS!** It's the humane thing to do, like seriously, you could get really sick and you will end up unloading your piggy-bank paying for professional cleanings and new pads. Always swab safely, my friends.

#4—Cork Grease! You'll need this from time-to-time to lubricate the corks on the instrument so you can SAFELY assemble and disassemble the instrument when you play.

Fobes Debut Mpc

Rovner 1R Ligature

SamAsh.com Claricord Elastic Neck Strap

Pencil Grip for your new thumb rest.

Things you must do EVERY DAY

You must use proper technique every time you play. Proper technique protects and strengthens your body and protects your instrument. The keys are made of a soft metal and all too often the side keys will bend if allowed to rest on the right hand. Then the teacher will need to correct your hand position and since the keys get all bent out of shape, they don't function properly *and then* YOU sound bad. No one wants to sound bad.

Since we live in a crazy climate. You will never want to leave your clarinet in the heat or in the cold. When the winter comes and it gets really cold, you need to allow your clarinet to warm up on its own. Don't try blowing warm air through the instrument to warm it up. Doing this heats the inside of the clarinet faster than the outside and can/will crack your clarinet.

Never leave your clarinet in the car, in the sun, outside, by a vent, or at the school overnight.

Side note: Mouthpiece Cap

Mouthpiece caps are for protecting the mouthpiece. They are used when carrying the clarinet securely and keeping the reed damp when switching between instruments. So when you're going from backstage to on stage for your next big gig, you need to protect your reed and mouthpiece. When you are carrying the clarinet around, hold it upright and close to you. This will minimize the chances of banging the instrument into stands, chairs, people, other instruments, walls, your own eyeballs, cars, etc…

Remember that when putting your instrument away,

YOU MUST TAKE OFF THE REED WHEN YOU ARE DONE PLAYING!!

1. Wipe off the reed with your fingertips then safely store it in your reed case.
2. Then take off the mouthpiece, swab it dry and swab the clarinet.

REED CASES ARE A MUST!
The sleeves the reeds come in are worthless when it comes to protection.

Swabbing

Every time you are finished playing, you need to use your swab!

Swabbing protects your Clarinet from all kinds of nastiness like acids in your spit, sugars from your spit, and bacteria from the air and your spit. Your "condensation" can and will damage pads ($$$), the body of the instrument, and even your personal health.

HOW TO SAFELY SWAB:

Take the mouthpiece off before you swab because the weight at the end of the swab could chip the mouthpiece. Insert the weight first from the larger end to the smaller end. Don't just yank the swab out like a fool. Instead, when you grab the string pull it out a little bit and wrap it around your hand until you can actually grab the cloth. REMEMBER to wipe out the rings of each joint. Pools of spit condense in these areas and will need to be wiped dry as well.

Just like anything you practice, you'll get faster and more efficient as you go. With slow comes speed—so start slow and focus on technique and the speed will come.

At the end of each week, throw your swab into the laundry to keep things sanitary.

What to do when the swab gets stuck? Hey, it happens. Don't panic. Don't yank or try to force out the swab. And don't let some novice (like dad, mom, siblings, friends) mess with it either because they can damage the instrument. Just bring it in to your director, a certified repair technician, or your private teacher and they will help you. Better to just leave it be than bust up your clarinet.

Also, if you're playing for a long time, there will be moisture building up. Keep your swab close by for a quick dry. You might even have moister pockets on the tone holes and keys, too. You can usually just open the hole or key and then blast some air on it to clear out moisture. It is highly unlikely that doesn't work. But if, and when, you can't clear the keys, you can use a pipe cleaner or a Q-tip. Use hair curler paper or even a dollar bill to dry the pads and keep them clean.

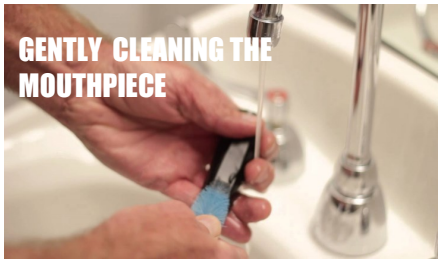
Things you must do EVERY TWO WEEKS

Use WARM soapy water on the mouthpiece to clean off any bacteria and gunk buildup. It's best if you use a mouthpiece brush.

DO NOT USE HOT WATER—EVER! This can warp your mouthpiece and cause it to discolor. Dry it off when you're done.

Take a small soft brush (a new paintbrush will work) and dust out under the key mechanisms.

BE CAREFUL not to damage or put any strain on the keys or key mechanism.



Things you must do ONCE A MONTH

Clean out the tone holes with a Q-tip or pipe cleaner. Again, BE CAREFUL not to damage or put any strain on the keys or key mechanisms!

Vacuum out your case once a month. Clean out all the lint and other stuff in your case. Stay classy, my friend, because this will help keep your instrument in good health.

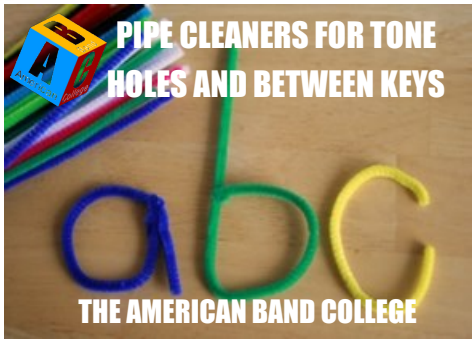
Brush your reed cases with soapy water.

TWICE A YEAR

At least twice year (like Christmas Vacation, Spring Break, or Summer Vacation) you should clean the corks. Use a clean cloth and remove the old dirty grease from the corks and tenons and you can use a Q-tip for the corners. Once you remove the old grease, you'll need to rub new grease into the corks using your thumb and index finger.

Sam Houston State University

KEY BRUSH



There's an App for that! Tuners and Metronomes

There is one mobile app that is great for all you'll need and it's called "Tonal Energy." You can get it on Apple and Android devices: www.TonalEnergy.com.

You will need this app to help you play your pitches in tune. This app is extremely powerful and so simple to use. I highly recommend it! If you don't have a smart device, that's okay too. You will need to buy a tuner and a metronome or a combo of the two. This app is cheaper and nicer than most tuner-metronomes you can get at the store.

Playing with Good Tone

What does it mean to play in tone?

Simply put, having a good tone means that your sound is pleasant to listen to. Playing "in tone" means that you're using an appropriate tone for the style you're playing. Good tone is *the* most important aspect of music. Who wants to listen to a performance if it's not pleasant? No one!

When we talk about tone we describe it as subtle changes in the color of sound. (The musical word for color is "timbre," (TAM-burr —hey, it's French). We use adjectives to describe our tone; answering, "What does it sound like?" It might sound resonant, squeaky, round, big, small, wavy, smooth, mellow, rigid, stressed, relaxed, calming, happy, sad, angry, loving, warm, cold, soothing, rich, vibrant, anemic, light, heavy, bright, dark, flat, sweet, and so on.

Hearing differences in good and bad tone are pretty obvious, which makes playing with a good tone easy to understand, but it takes a lot of repetition to really learn. Playing every day will help you get there FAST, too! Sure, you might start with some pretty funky sounds, and you might sound like a duck or an elk call, but this is normal. You will master it! You will be awesome!

How you get there?

We need to learn what our instrument is supposed to sound like; and listening to masters on our instrument is how we learn. Think about how you learned to speak. You knew nothing about speaking, but within a couple years you became fluent and spoke very well. You didn't learn how to speak by reading a book, you listened to masters of language—your parents. Sure, as you got better you started reading books and started to write. These things are tools helping you to develop more mastery and we are always learning and improving. It's the same with speaking in the musical language.

Once you know what to sound like the how becomes easier. The how has everything to do with the setup of the instrument (quality equipment and in good working order) and the setup of the player. The key to a great sound is technique. Technique includes using correct posture—hand placement and horn angle; having the correct embouchure—how much mouthpiece in the mouth, the pointing of the chin, the shape and placement of the bottom lip and top teeth, the vowel shape in the mouth and placement of the tongue; having a quality and focused air stream supported by the abdominal muscles. Playing with a great sound is that easy. Difficulty comes from lack of information and coaching and from neglect of playing fundamentals.

How do we develop good tone?

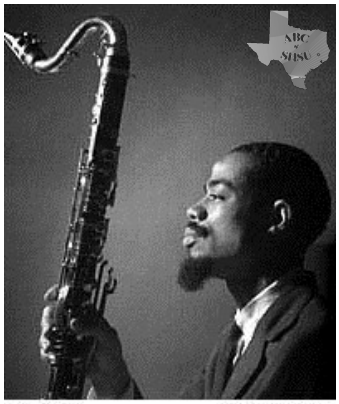
We develop good tone by listening and by playing/speaking.

The more you listen to professional players, the better you'll begin to sound. You'll start speaking clarinet just like they do. As you get older and begin mastering the clarinet yourself, you'll start noticing the smallest changes or accents and dialects of different players and styles of music. Over time you'll be playing those different styles, too. It's as simple as listening, just like you did as a baby, and then trying to copy the masters—your teachers. *This is another reason for why having a private teacher is important!* Just like your babbling as a baby went from "goo goo, ga ga" to "mama, dada," which soon became, "Mom! Dad told me to ask you if I can borrow the car keys...." Daily playing and training with a clarinet master will accelerate your training!

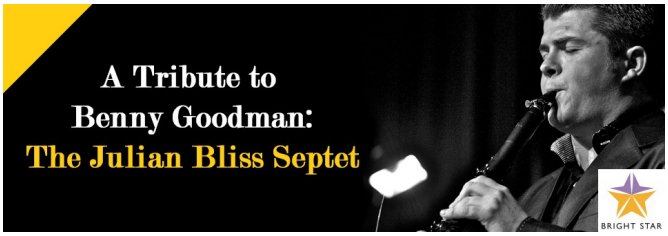
Below you will find some masters for you to learn from. It's a long list, but, in real life, this list is actually very small. Just pick one and listen! Listen to more than just one song by each artist. Listen to their tone and style. What do they sound like? Can you make that sound? How cool would it be to add your name to this list? Think about it. Julian Bliss was going pro before he was a teenager! Sometimes closing your eyes will help. You should be free of distractions and noise pollution when you listen. Use headphones! YouTube is awesome! Enjoy this music. You'll have to go out and find it though. Gems like these aren't just on the radio. If you need help, ask your teacher and friends. Share your music.

Benny Goodman
Artie Shaw
Sydney Bechet
Julian Bliss
Eddie Daniels
Bob Mintzer
Emma Johnson
Sabine Meyer
Paul Meyer
Ricardo Morales
David Campbell
James Campbell
Gervase De Peyer
Eric Dolphy (B.Cl.)
Marcus Miller (B.Cl.)
John Russo
John Russo
Robert Spring
Richard Stoltzman
Jack Brymer
Karl Leister
James Campbell
Stanley Drucker
David Glazer
David Harman
Raymond Lorellis
Mitchel Lurie
Thea Kink
Kari Kriikku


Robert Spring



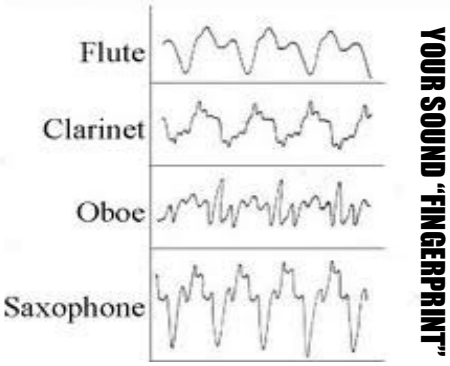
Eric Dolphy © Chuck Stewart



Remember:
These people started as beginners just like you. HAPPY LISTENING!

How to Use a Tuner

Playing in Tune!



YOUR SOUND "FINGERPRINT"

What does it mean to play "in tune?"

Playing in tune simply means that the sounds being played all fit together in a beautiful way. There's a bit more science to it than that, but that's the basic idea. It all comes down to the physics of sound. As a young musician you must understand the very basics of playing in tune and once you "get it," you will never want to hear anything out of tune ever again—I promise!

Playing in tune is all about the physics of sound and how pitches interact with each other as they move through the air. When we play together, our sound waves mix together. Our goal is to combine our sound waves so they create what is called "Beat-less Tuning" or "Wave-less Tuning." This is also called "Just Intonation."

As we play and mix the sounds with others, we are creating a new sound and a new color—even a new instrument. When pitches played together are "in tune," the new sound will not have any beats or waves. You can hear the pulse or the beats. These beats and waves are noticeable pulsations in the pitch, sounding like, "Wah, Wah, Wah." When these waves are heard, the sounds are "out of tune." Our goal is to be in control of our sound and make the waves as smooth as possible. Think of being on a boat at sea. Too many waves can make us sea-sick; too big of waves can even destroy or sink our ship! So what we want are no waves at all. We want glassy water for smooth sailing.

Playing in tune is no mystery.

Here are some things to play every day to help you get bigger, faster, stronger. Doing these things every day will make you an intonation BEAST! You don't have to do these things, but if you want to not sound like a dying animal, then you're gonna' wanna' play. Why? Because these exercises will help you play with great tone and in tune. You can't play in tune if you have bad tone. You can't have great tone if you're out of tune. They go together like bread and butter. If you have great tone, you'll have great tuning and vice versa. In order to play in tune, you must be able to control your pitch. This is best done by using a tuner and a tuning drone.

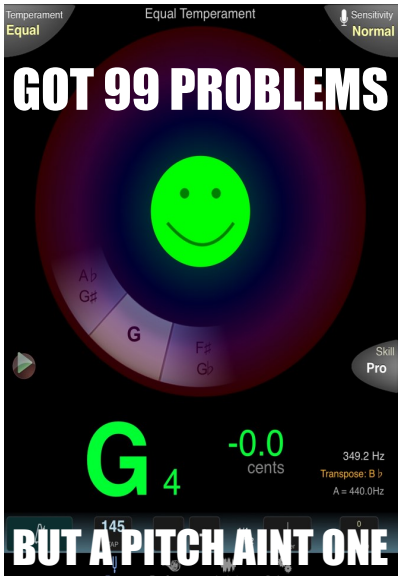
The secret?

You need to use your ears and play through this stuff:

"Five-Minute F" (Concert F—your G)
Using a "Tuning Drone"

"Five-Minute F" (your G)

IMPORTANT



- You're building up embouchure strength.
- This is physical training. Your chops will burn and you will get tired. Once you start to feel the "burn," STOP and REST. Approach this like weight training so you don't overdo it! Start small and work up. Start with a couple seconds, then ten, then twenty, thirty… one minute… two minutes… etc. You'll improve in a safe and healthy way by incrementing up every couple of days.
- Keep your embouchure set and on the instrument at ALL times. Breathe through your nose and try to play longer and longer each day. Remember, once you feel the burn, give ten more seconds, stop and rest at least as long as you've played. Pinch your lips for a massage and drink gallons of water.
- Always listen while you play. Keep the volume *mezzo-forte* or medium-loud.

Steps:

The first week goal will be 1min. That's one SOLID minute of playing the note in tune. The second week, your goal will be 1.5min. Third week, 2min...you get the idea? Play smart and stay focused on playing with good tone and good tuning.

1. Get the best tone you can possibly play on your instrument. You must always use proper playing technique! You really have to listen to your own sound and have a great set-up. Make sure the tone is open, rich, and full. You want a clear sound. Once you have the tone quality set then you can look at your tuner. Watch what it says and adjust the length of the instrument so that it is in tune.
2. Play a Concert F and try to maintain that pitch for 5 minutes. Use a stop watch/timer.
3. Focus on embouchure and breath support to keep your tone centered and steady.
4. Be creative and experiment, playing across a range of dynamics and different rhythms.
5. REST as much as you play. Take a break. Shake out your hands as needed. Always use good technique. Push yourself. You might hit the five minute mark sooner or later. You do want your muscles to burn, but only a little bit. If you over work small muscles, you can cause t issue damage. Once you start to feel the burn in your embouchure, go an extra ten seconds and then you're done. Pinch your lips, giving them a little massage and drink some water. DO NOT resume playing until five minutes have passed. Then, you can go ahead and sing and finger through the next passage of music before you play them, or listen to some clarinetists.

Using a "Tuning Drone"

Using a tuning drone is one of the best ways to build your sense of intonation. What you need is a reference pitch. This reference pitch, or fundamental, is going to be what you'll listen to and tune to while you play. This exercise will help you develop your ability to play in tune and in tone no matter the key or note. After doing this, you'll be able to easily find and remove waves in your playing. This skill is essential for intonation and tuning. And once you have better control—producing a centered, rich tone and maintaining pitch for a length of time—using a tuning drone will be the funnest way for you to pay through a lot of music. From playing through scales and patterns to playing songs, tuning drones are fun to use!

IMPORTANT RULES FOR THIS GAME!

- Always use tons of air support. FLEX THOSE ABS!
- Always play with your best technique and posture to play the best sound you can.
- Always listen to your sound. If it sounds wrong, it is. Fix it.
- Listen to your body and feel how it's adjusting. Especially your lips, tongue, and air.
- Play with your ears and not your eyes. LISTEN!
- Rest as much as you play.

1. Find a tuning drone, listen to it for a few seconds, sing or hum the pitch.
2. Play along with the drone using your best technique and tone.
3. Listen for waves and adjust accordingly while keeping your tone centered at all times.
4. Start small and work your way out. The easiest pitches or intervals to tune are the unison (same pitch as the drone), the octave above the drone, the perfect fourth and perfect fifth (scale degrees 4 and 5 of the drone's major scale).
5. Pay attention to certain pitches that tend to be sharp or flat. These will naturally have beats. Our goal is to remove those beats. **BTW—Your instrument is built to play sharp!**

Remove the waves:

You can use your embouchure by changing the firmness or softness of your lips, adjusting where you place the corners of your lips and shaping the vowels with your tongue (refer to the pitch tendencies page). Use alternate fingerings and try raising your eyebrows. Trust your ears and listen for waves. Our goal is perfection. Remember that if you find that you're working really hard to make adjustments, it's not you, it's the instrument. Push in or pull out. See the next page for knowing where to push in or pull.

Style Drone:

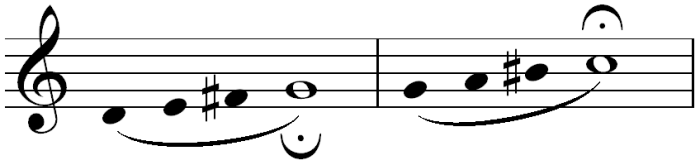
A *Tuning Drone* is for playing along with constant pitch or harmony to help you develop tone and intonation. A *Style Drone* is when you play along with any kind of music. You can even use your favorite pop songs as a metronome and tuner. Listen to the musicians' style and match them as you play along. Playing in this way is fun and will help you improve—Play with the pros!

TUNING YOUR CLARINET

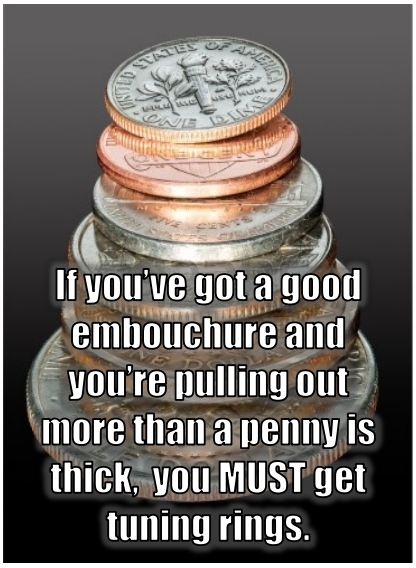
Most, if not all, clarinets are made so that when every joint is pushed in, the clarinet plays sharp. To play in tune to the standard A440, the clarinet is made so that it will need to be adjusted to play in tune for most people. Most band books and even teachers only talk about tuning from the barrel. What most books don't tell you is that you should tune the whole instrument! You will need your tuner!

PART 1 Tuning at the Barrel

After warming up. With the barrel pushed all the way in, play the following:



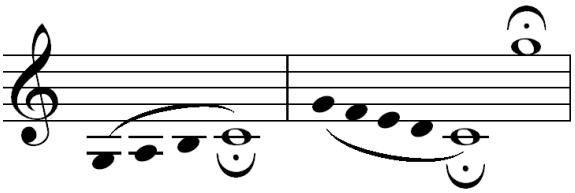
Pay attention to the tuning of the held note. These notes should be a bit sharp. If the tuner reads sharp, pull the barrel out then play again. Visualize pulling out as far as the thickness of a dime (1.35mm), a cent (1.52mm), a nickel (1.95mm), quarter (1.75mm), dollar coin (2.00), half dollar (2.15mm). If you are dollar-coin-sharp, check to see if you have a longer barrel. When you get to penny sharp (over 1.5mm) you might want to make yourself some tuning rings out of a rubber hose washer, or buy some legit tuning rings. Without the rings, the intonation problems are magnified and many more notes will be out of tune. If you are penny sharp, though, check your embouchure and tone quality, lower/drop your jaw forward.



If pitch was flat, then your embouchure needs to be adjusted. Think more of an "oo" shape firming up around the mouthpiece.

PART 2 Tuning at the Middle Joint

Play the following and check the tuning, as you did in Part 1 with the barrel. If the C is sharp, pull out at the Middle Joint. If needed, get tuning rings.



PART 3 Tuning the Bell

Play the descending line to the C and if it's sharp after all we've been doing, adjust at the bell.

Reference guide to common pitch tendencies

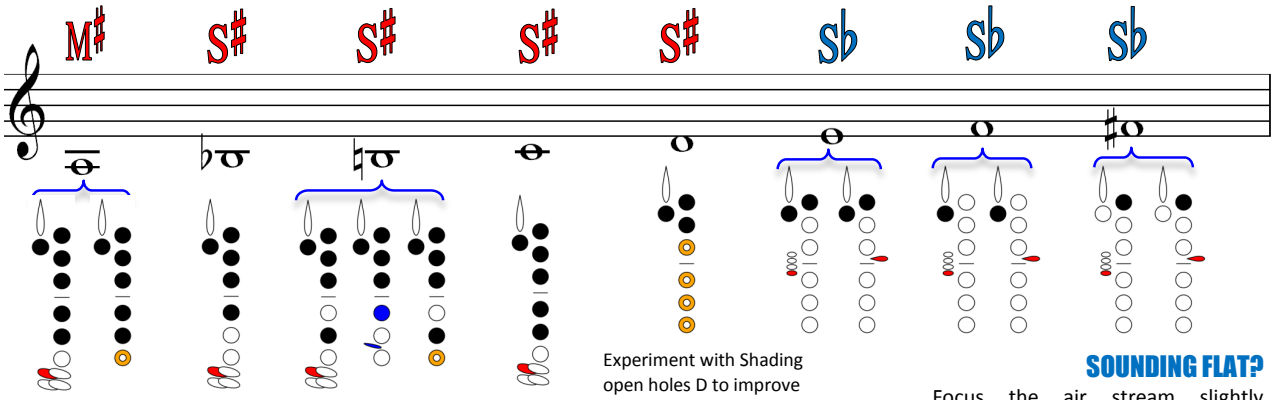
Common things that affect tuning—So much depends on the condition of the instrument, like make/model, the key height and action, mouthpieces, ligatures, reeds, barrels, etc. But much more depends on the condition of the player. Good tone and intonation requires consistent embouchure formation, amount of mouthpiece in the mouth and quality air support. Now some things that influence pitch & tone….

	#	or b
Embouchure	The firmer the lips, the sharper the pitch. Avoid biting, pinching, or bunching.	The looser the lips, the flatter the pitch. Embouchure must support the reed in all registers. Avoid overcompensating.
Mouthpiece (mpc)	Not enough in the mouth. Closed-lay (small tip opening) Small-chamber, Small-bore High-baffles, Plastic	Too much in the mouth. Open-lay (bigger tip opening) Large-chamber, Large-bore Low-baffles, Hard Rubber **The bore of the mpc must match the bore of the clarinet. If not, then the pitch is much more challenging to control.**
Angle	Bell too close=bad tone + pitch	Bell held too far away=bad tone + pitch
Reeds	Too hard. Try rubbing or sanding.	Too soft. Try clipping the reed. **Reed ratings are different for every brand. Ex. Rico 2.5 = Vandoran 3. No two reeds are the same!**
Dynamics	Soft playing and/or while performing a diminuendo (by decreasing air speed) tends to raise the pitch. Aim air stream slightly downward to adjust.	Loud playing and/or while performing a crescendo (by increasing air speed) tends to drop the pitch. Aim air stream slightly upward to adjust pitch.
Temperature & Humidity	Heat and dry thin air cause wind instruments to play sharper than usual. ***Wood is VERY sensitive to climate and requires special care.***	Cold and thicker, more humid, air causes winds to play flat. Percussion, strings and pianos react to climate the opposite way than winds do. **Inside & Outside changes can seriously affect your tuning. Never leave it in the car! Always let your instrument reach room temperature in cold weather. Blowing hot air will heat the inside faster than the outside causing cracks.**

PITCH TENDENCY REFERENCE GUIDE

Common Specific Pitch Tendencies and Alternate Fingerings

IMPORTANT Listen while playing, because EVERY clarinet setup is different! Using an alternate fingering will change the tone (some better, some worse). Alternate fingerings often negate the need to change embouchure/air stream. Some are more open sounding. Some are more sharp or flat.

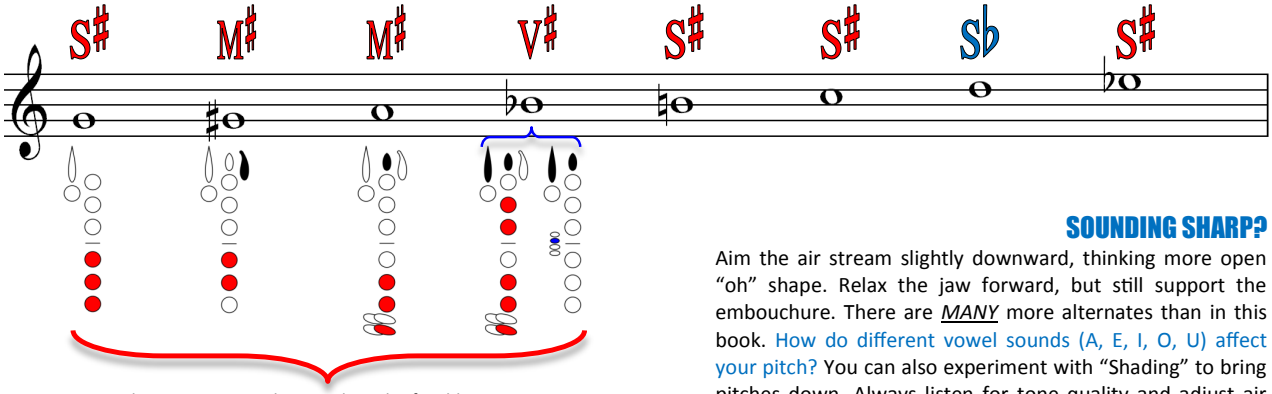


"Shading" is keeping your fingers close to open holes to partially block some of the air coming out of them, causing pitch to lower.

Experiment with Shading open holes D to improve tuning.

SOUNDING FLAT?

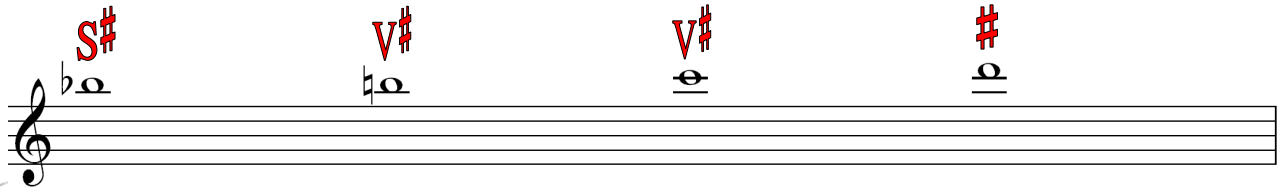
Focus the air stream slightly upward, thinking "oo" or "ee" while keeping the embouchure firm. **Avoid** pinching, bunching, and biting.

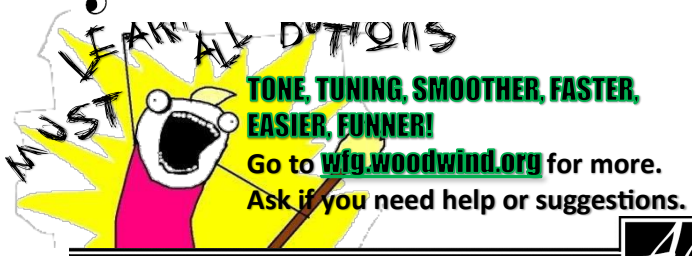


Throat Tones are sharp and can be fixed by using RH fingerings and alternates. Experiment with different combinations of RH 4, 5, 6, and pinkie while keeping the LH fingering. Find the best one for your music.

SOUNDING SHARP?

Aim the air stream slightly downward, thinking more open "oh" shape. Relax the jaw forward, but still support the embouchure. There are *MANY* more alternates than in this book. How do different vowel sounds (A, E, I, O, U) affect your pitch? You can also experiment with "Shading" to bring pitches down. Always listen for tone quality and adjust air speed for dynamics, accordingly.





LOUD & SOFT

Many players overcompensate with embouchure instead of adjusting with air speed, and focus. As dynamics go up, so does the angle of the air stream. As dynamics go down, air goes down. Always support the stream with your abdominal muscles.

JUST GETTING' STARTED

Important: These studies will need to be played only on the days that you eat. For maximum effectiveness, you will play through these things first and then add on whatever else your private teacher and your band director assigns you. As the weeks progress, and you build your chops, you'll start "stacking" these exercises as they become memorized, cleaner, faster, more focused, and best of all, more musical!

PART 1 Directions for these first lessons:

Getting a tone on the mouthpiece and barrel. The fastest way to sounding your *very* best is to start each day with some mouthpiece playing.

What you need: A pencil to write with, a mirror to watch your embouchure, a good Mouthpiece and Barrel setup (reed, ligature, mouthpiece assembled correctly).

Go ahead and take the mouthpiece and barrel and play. Just play! Change the angle of your mouthpiece and change the pressure of your lips on the mouthpiece. Curl your lip out, curl it back in, puff your cheeks, don't puff your cheeks, play with your chin bunched up, play with your chin flat, like you were to shave your chin, cover the hole with your hand, less mouthpiece, no mouthpiece etc. No need to get too crazy!

Review the correct way to produce a sound (you can use your band book or any other resource available to you) and write out in your own words in the lines below the best way to form an embouchure. Answer the questions below:

How do we know how much mouthpiece goes inside the mouth?

What words can we say to make the seal on the mouthpiece?

Where does the bottom lip go?

Where do the top teeth go?

What does the chin look like?

Do we puff our cheeks when we play?

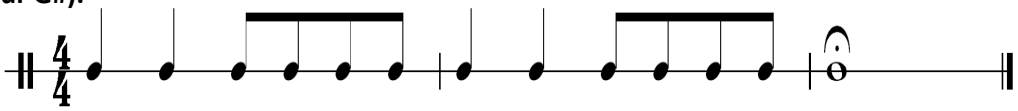
The very tip of the tongue goes to the tip of the what?

PART 2 Mouthpiece and Barrel Pitch

What you need: Tuner, mirror, mouthpiece and barrel setup as before.
Your goal is to play a steady Concert F# (your G#) with your mouthpiece and barrel. Your goal is to "Keep it Green" and always in tune.

IMPORTANT

- The top of the tip of the tongue touches the bottom of the tip of the reed.
- Tongue, very lightly, says, "Dee"
- Flex your abs and use lots of air.
- Don't cover the barrel with your hand. Do like the ginger's taught you (see illustration below).
- **Play this with and watch the tuner on the last whole note. Play it until you can sustain the Concert F# (your G#).**



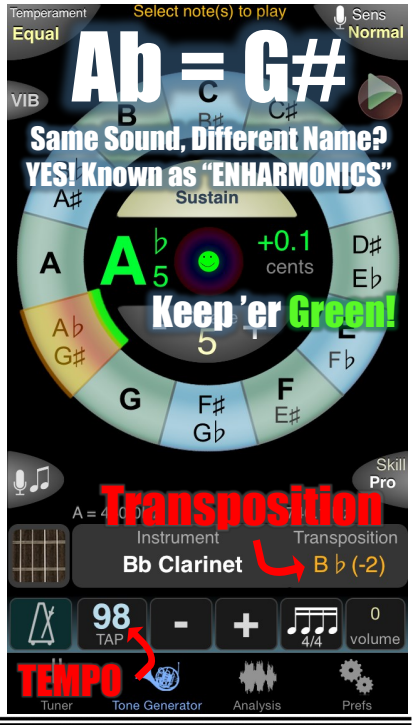
Get a friend and have them write down your +/- pitch. A + means you are too high, - means you're too low. You want to be as close to zero as possible. Try to remember how it feels each time you play in tune. See if you or your friend can hold it in tune the longest. Write down your time.

	Day 1	Day 2	Day 2	Day 3	Day 4	Day 5	Day 6
1st try							
2nd try							
3rd try							
4th try							

Photo Courtesy of Kjos Music Press, San Diego, CA
Tradition of Excellence Book 1 for Clarinet, p 3.

Having trouble?

To keep the pitch steady, visualize blowing THROUGH the mouthpiece and not DOWN the mouthpiece. Aim your air straight in front of you, but keep the 45-degree angle. If you keep playing too high (+), try using more mouthpiece and think more of a warm "oh" shape in your mouth, as if you were to really fog up your mirror, like a relaxed "sigh." Playing too low (-)? Try firming up the bottom lip pressure, taking less mouthpiece into the mouth, and blowing more air through the instrument!
Use the mirror to check your setup.

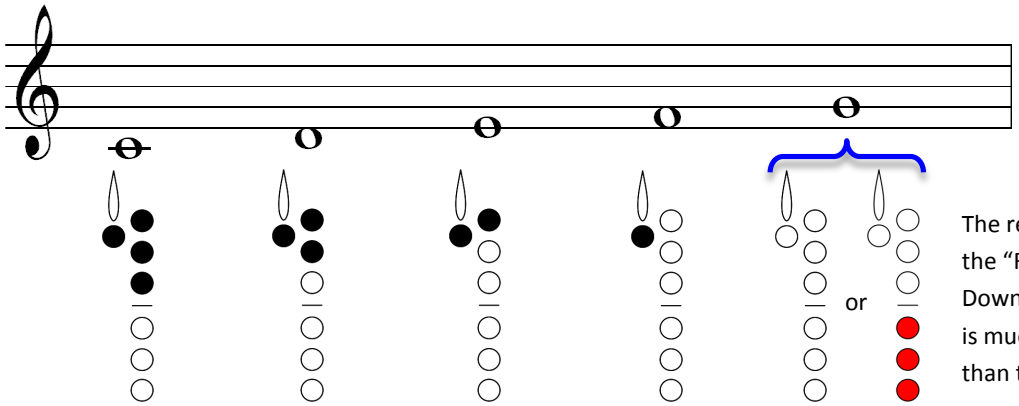


PART 3 TUNE UP!

What you need: Tuner, mirror, mouthpiece and barrel setup as before. You have two goals for Part 3: First—Play in tune. Second—Learn the patterns and write down the tempos you start and end with each day. Keep 'em clean and keep 'er green!

TUNE UP! Do the things you just did on the mouthpiece and barrel, but now do them with each pitch. Have a friend help and see who can play the most in tune.

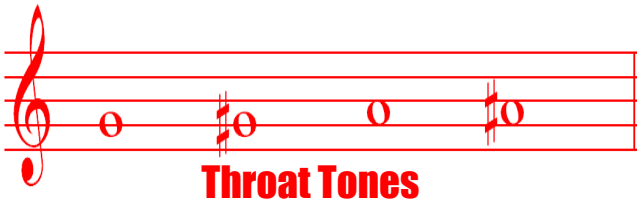
IMPORTANT—Yes TWO ways to play G. One is called "Open G" and the other is "Right Hand G." This note is a "throat tone."



The red fingering is the "Right Hand Down" fingering and is much more in tune than the open G.

Day 1	C	D	E	F	Open G	RH G
1st try						
2nd try						
3rd try						
4th try						

Day 2	C	D	E	F	Open G	RH G
1st try						
2nd try						
3rd try						
4th try						



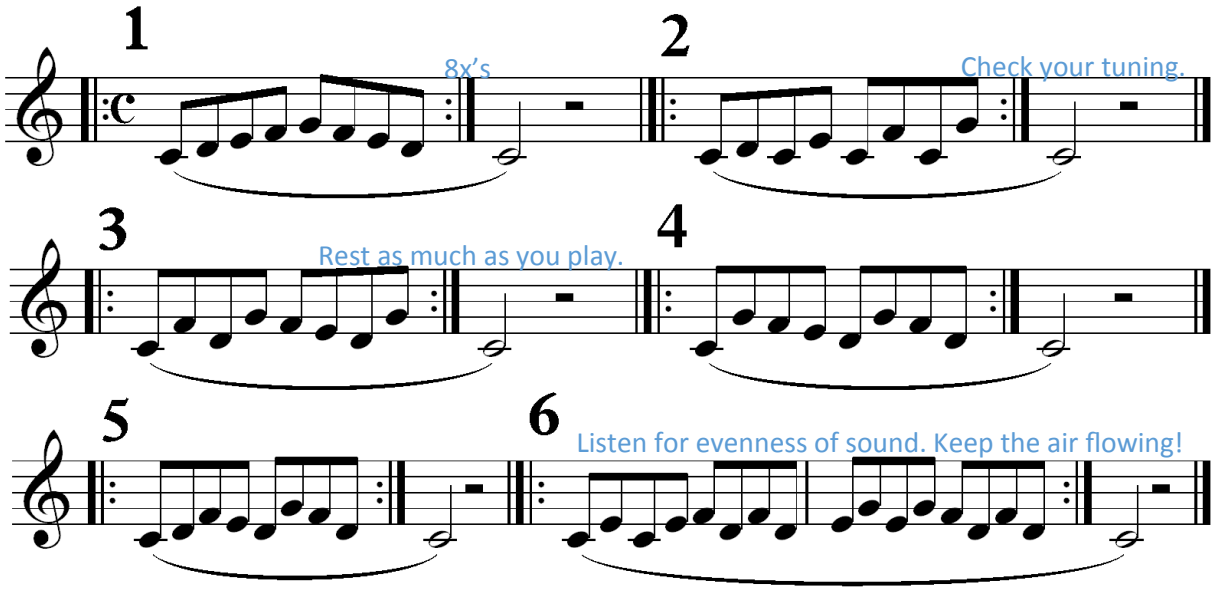
Throat Tones

These are all really sharp (it's how clarinets are made, in fact, every instrument has pitch tendencies). Use your RH and cover all the tone holes to play these in tune. But, you should be able to play the basic fingerings and "Right Hand Down" fingerings in tune. Most of the music you will be playing in your early career are going to be RH fingerings because they are easier to tune. Check out the section on pitch tendencies.

JUST GETTIN' STARTED

PART 4 FINGER DEXTERITY

Play the following finger trainers to teach your fingers how to move. Start with a slow tempo, repeat each eight times, check your tuning on the last note, and always listen for good tone. In the blanks, you will write down your starting and ending tempo for each day. Your goal is to get progressively faster. Notice there's a lot of stuff in this book. Start a "Playing Journal" so you can keep track of how much better you're getting. This will help you reach all your goals. If you need help setting one up, talk to your teachers and ask for help.



Do you have it mastered yet?

- Did you use both RH G and Open G?
- Changing the Articulation pattern and style? Try these then create your own!
- Play them all together. Make your own arrangement.
- Can you play them backwards yet, or just forwards?
- Mastered? *Good!* Now, faster, memorized and more in tune.

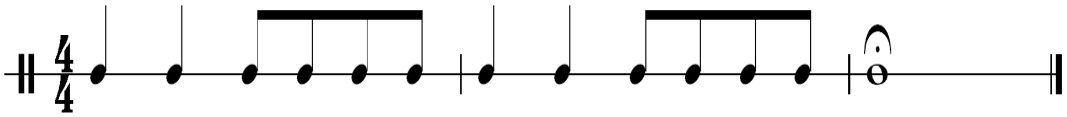
WRITE IT DOWN!

Day 1	C	D	E	F	Open G	RH G
1st try						
2nd try						
3rd try						
4th try						

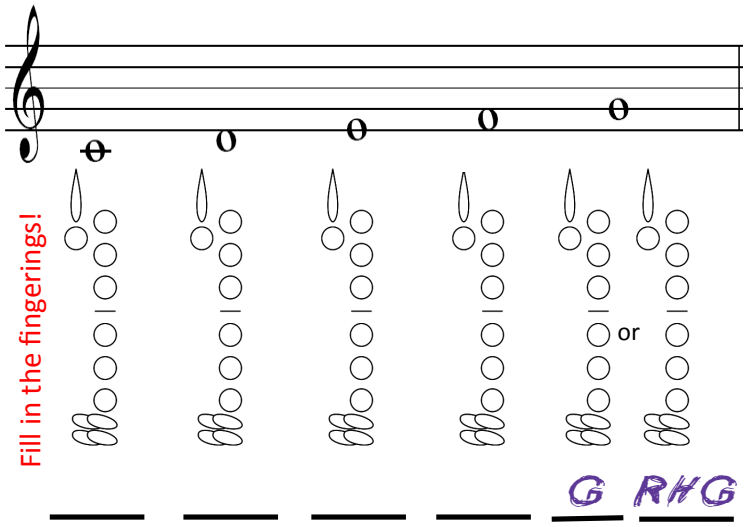
Just Gettin' Started Cheat Sheet: Play only on the days that you eat!

PART 1 REVIEW Setup and Embouchure

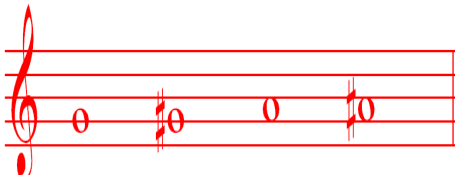
PART 2 MOUTHPIECE + BARREL = CONCERT F♯ with TUNER



PART 3 TUNE UP! C, D, E, F, Open and RH G

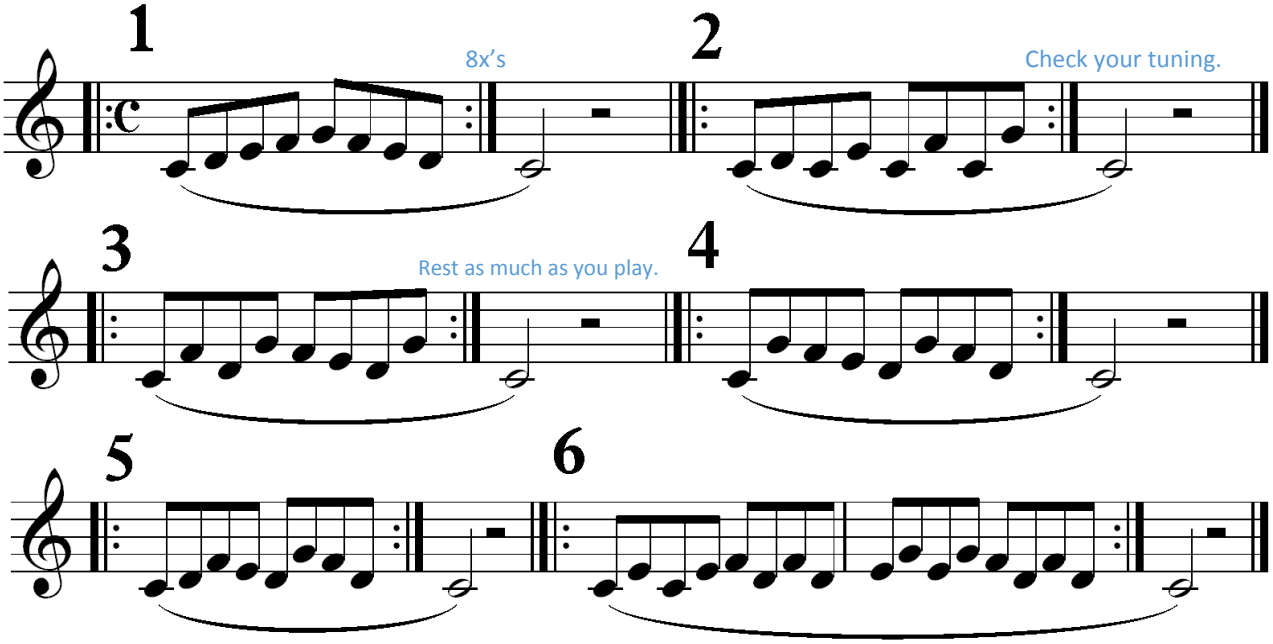


Fill in their pitch/note names.



These 4 notes on clarinet are called _____ tones and tend to be _____(sharp/flat) and can be played with the _____ hand down to bring them in tune.

PART 4 FINGER DEXTERITY



BW 2017

The American Band College

Where Are They Now?

Lisa Butts

Year of Graduation - 1998
Current Position - Director of Bands at Hanford West High School
Time in current position - 19 years. I helped open the school in 1998

Name some accomplishments or awards since graduation.

• 2004 California Music Educators Association Central Section Byron Hoyt Band Award
• 2005 California Music Educators Association Central Section Music Educator of the Year
• 2005 Wal-Mart Teacher of the Year for Kings County
• 2006 California Band Directors Association's Distinguished Service Award
• 2008 Tulare/Kings Music Educators Association Hall of Fame Award
• 2008 California Music Educators Association Central Section Jazz Educator of the Year
• 2008 California Music Educators Association Jazz Educator for the state
• 2011 Tulare/Kings Music Educators Association Outstanding Music Educator Award
• 2012 Inducted into the John Philip Sousa Legion of Honor
•2014 Hanford Joint Union High School District Teacher of the Year
• 2015 Kings County Teacher of the Year
• 2016 Grammy Quarterfinalist
• 2017 California Band Directors Lifetime Achievement Award

How did ABC help prepare you for these?

ABC helped me by giving me the tools that I needed to become a better music teacher. My listening skills improved by the projects that I had to complete as well as the exams that I took. My skills at evaluating performance were also improved, and I was given the tools that I needed by learning from the clinicians to be able to diagnose and correct poor playing and performance issues of my students.

What was your most memorable ABC experience?

Being able to talk with Alfred Reed at the after concert party at Max's house. He was standing there all by himself because everyone was in awe of him, so I went over and spoke with him. During our conversation, he told me that he was a trumpet player that was not making it as a player, so he began composing. It was a wonderful conversation that I will never forget. He was very kind to all of us that night. Also being able to play under the batons of Frederick Fennell and Colonel John Bourgeois was a highlight of my career.

Who are your biggest influences/mentors?

My influences were my high school and college band directors, Lee McCullough and Duane Weston. My mentors were teachers that helped me at my first job and throughout my career, Susan Burley and Jim Kusserow. My biggest influence was Max McKee and the American Band College. Without his vision and creation of this outstanding program of study, I would not be the teacher that I have become today.

What advice do you have for young directors?

Seek out teachers that you respect and learn from them and attend your state music education conferences. Then, attend the American Band College. The clinics, performances, and coursework to which you will be exposed will change your life. You will also meet hundreds of other teachers just like you that you will bond with and continue to rely upon throughout your career.

Previous Grad | Next Grad

BW 2017

The American Band College

Where Are They Now?

Daniel Davey

Year of Graduation - 2011

Current Position - I am the Director of Jazz Studies at Mt. Hood Community College in Gresham, OR. I teach Aural Skills, Music Theory, all Jazz and Chamber Ensembles and I oversee the Individual Lesson Program

Time in current position - 2nd Year

Name some accomplishments or awards since graduation.

I was elected as the Oregon Music Educators Association (OMEA) Jazz Chair and created the Inaugural Oregon State Jazz Championships. I presented a session at the last OMEA Conference on Jazz Piano Basics and am published regularly in JazzScene magazine. I am also working towards my certificate in Jazz Composition and Arranging from the Berklee College of Music.

How did ABC help prepare you for these?

ABC has allowed me to help each student in my ensembles, regardless of instrument. It has connected me professionally with colleagues around the globe and prepared me by giving me the tools to instantly evaluate and fix performance issues in my ensembles.

What was your most memorable ABC experience?

Each year at ABC has memorable moments that have changed me as an educator. Of course, my favorite part of ABC was meeting my wife! I also fondly remember each concert, conductor, and guest performer and the opportunity to make music with and learn from their mastery. My favorite memory was getting to play with Doc Severinsen, Allen Vizzutti, Bobby Shew, and Col. Arnold Gabriel in 2012 as an alum.

Who are your biggest influences/mentors?

My biggest influences as an educator are many of whom I met during my time at ABC - Anthony Maiello, Dr. Tim, Peter Boonshaft, Col. Graham, Col. Mike Bankhead, and Bob Ponto. My greatest mentors have been Ron Christianson (retired Director of Bands from Stoughton HS in Stoughton, MA) and Susie Jones (retired Jazz Director from Mt. Hood Community College). Without the guidance and influence of these people, I would not be the educator I am today.

What advice do you have for young directors?

There is no substitute for hard work and dedication. Hold your students and yourself to high standards. You do not need to have all of the answers, but you need to have resources to help you grow. For me, that was and continues to be the network of musicians, conductors, and educators I met at ABC!

Previous Grad | Next Grad

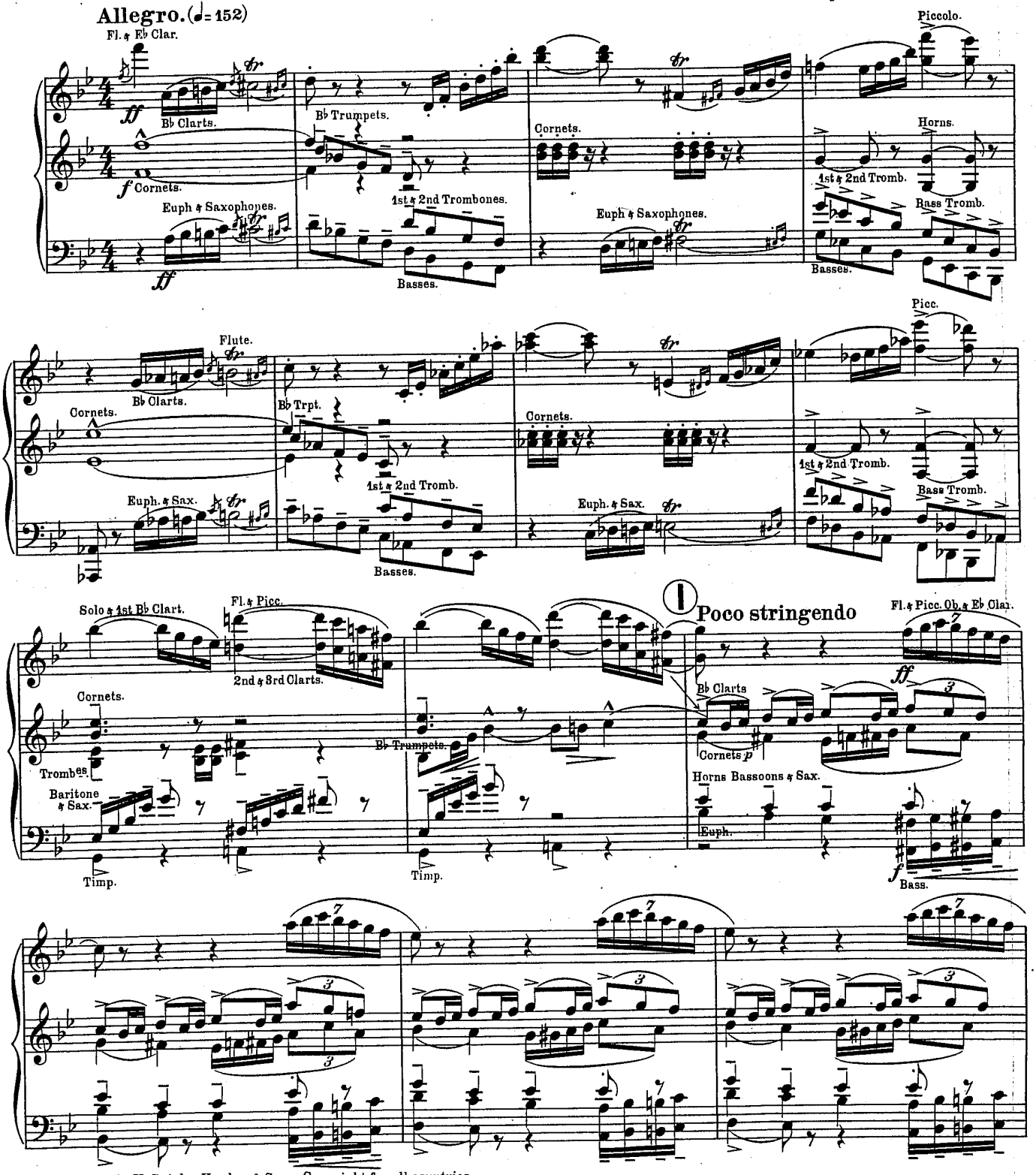
Hawkes & Son's M.B. Edition
No 390.

SUITE
THE CROWN OF INDIA

Conductor.

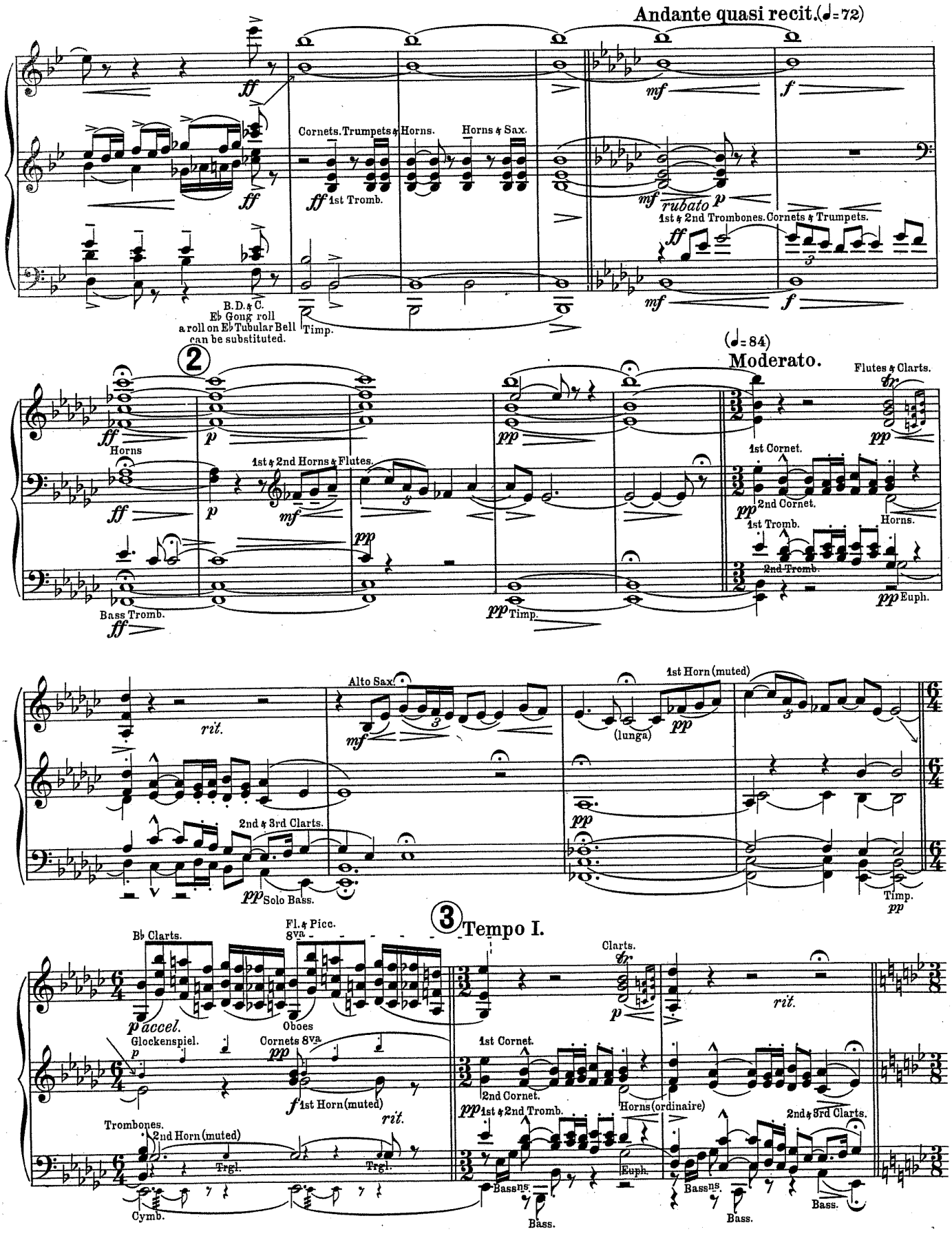
No 1. a) INTRODUCTION

EDWARD ELGAR, OP. 66.
Arranged for Military Band
by Frank Winterbottom.

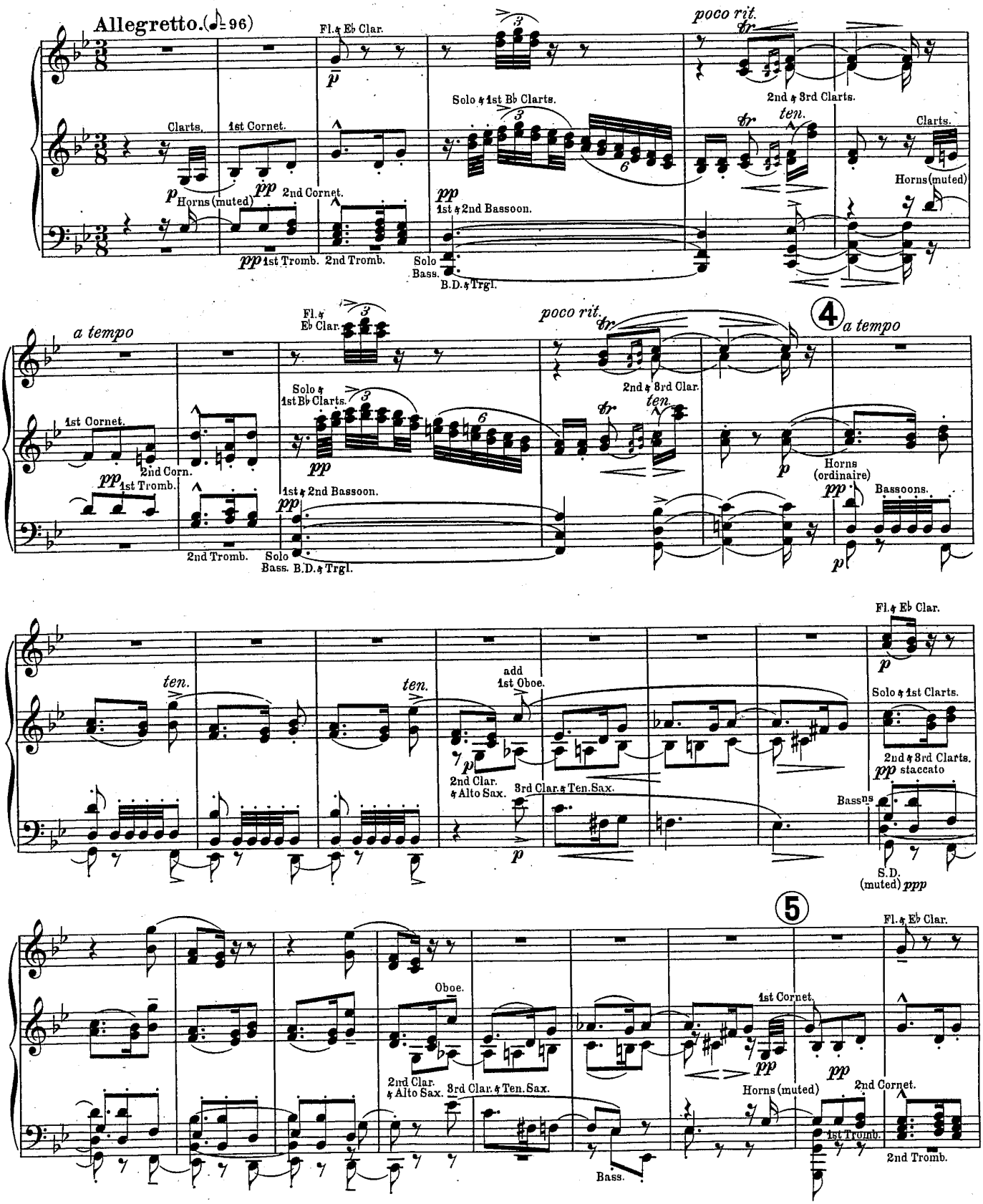


HAWKES & SON (London), Ltd. Denman Street, Piccadilly Circus, LONDON, W. I.
PARIS, 16 Rue Saulnier. IXe
Printed by Hawkes & Son (London), Ltd., Leipzig

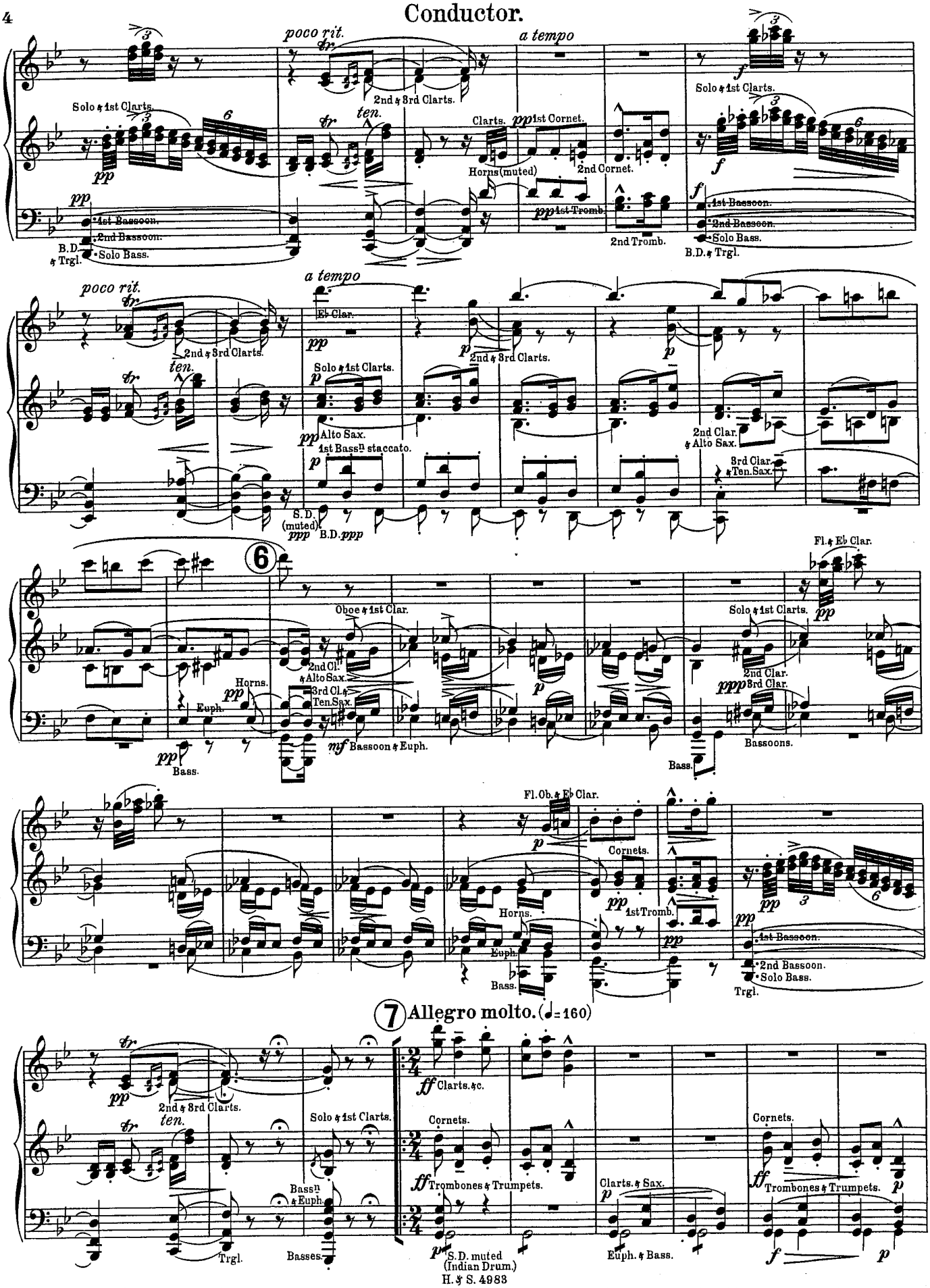
Conductor.


Andante quasi recit. (♩= 72)
Cornets. Trumpets & Horns.
Horns & Sax.
1st Tromb.
1st & 2nd Trombones. Cornets & Trumpets.
rubato
B. D. & C.
E♭ Gong roll
a roll on E♭ Tubular Bell
can be substituted.
Timp.
2
(♩= 84)
Moderato.
Flutes & Clarts.
Horns
1st & 2nd Horns & Flutes.
1st Cornet.
2nd Cornet.
1st Tromb.
2nd Tromb.
Horns.
Euph.
Bass Tromb.
Timp.
rit.
Alto Sax.
1st Horn (muted)
(lunga)
2nd & 3rd Clarts.
Solo Bass.
Timp.
3
Tempo I.
B♭ Clarts.
Fl. & Picc.
8va
Oboes
p accel.
Glockenspiel.
Cornets 8va.
1st Horn (muted)
rit.
Clarts.
1st Cornet.
2nd Cornet.
Horns (ordinaire)
2nd & 3rd Clarts.
1st & 2nd Tromb.
Trombones.
2nd Horn (muted)
Trgl.
Euph.
Basses.
Bass.
Cymb.

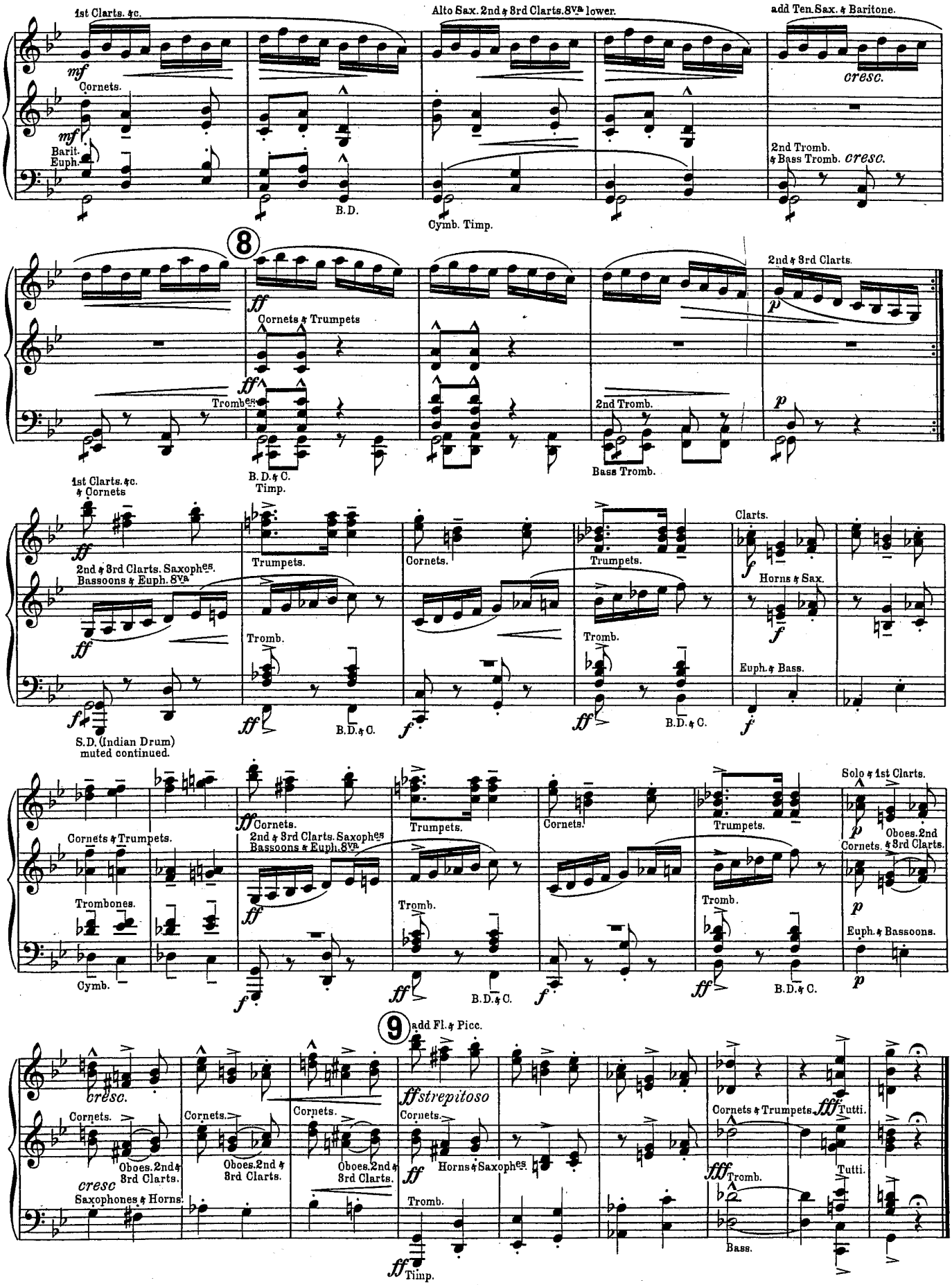
b) DANCE OF NAUTCH GIRLS



Conductor.

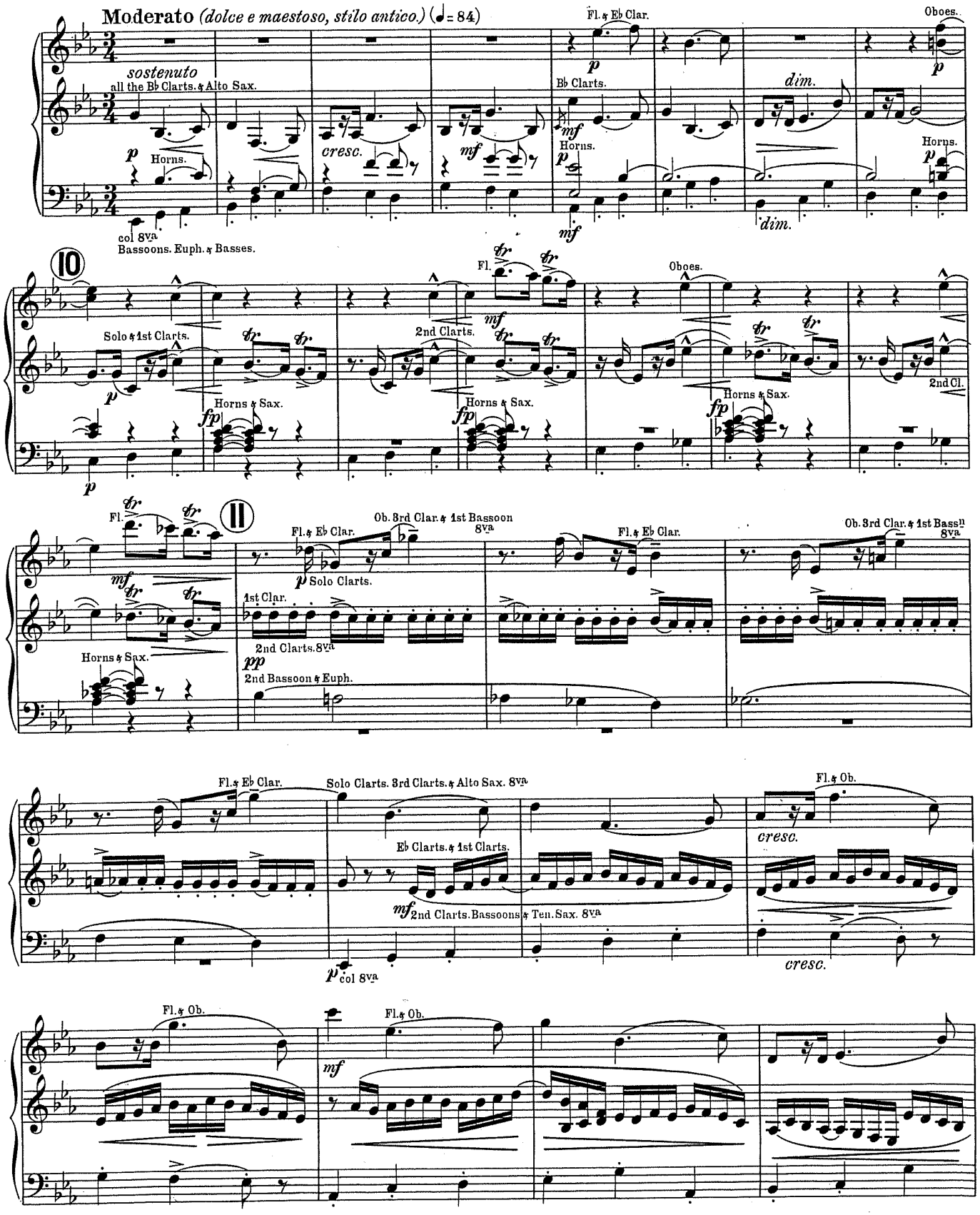


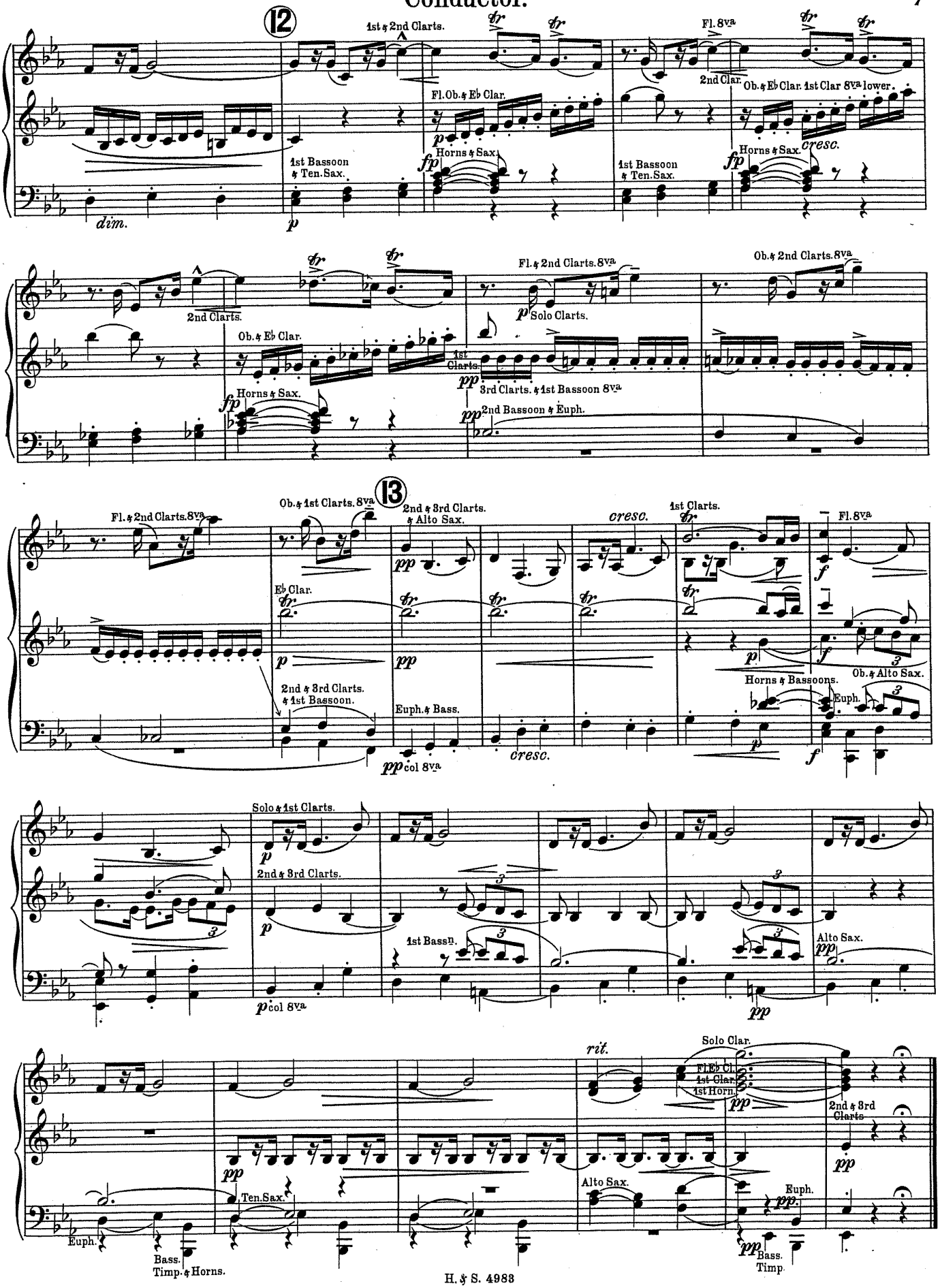
H. & S. 4983


1st Clarts. &c.
Alto Sax. 2nd & 3rd Clarts. 8va lower.
add Ten. Sax. & Baritone.
mf
Cornets.
cresc.
Barit.
Euph.
2nd Tromb.
& Bass Tromb. cresc.
B.D.
Cymb. Timp.
8
2nd & 3rd Clarts.
ff
Cornets & Trumpets
Trombes
p
2nd Tromb.
Bass Tromb.
1st Clarts. &c.
& Cornets
B. D. & C.
Timp.
2nd & 3rd Clarts. Saxophes.
Bassoons & Euph. 8va
Trumpets.
Cornets.
Clarts.
Horns & Sax.
Tromb.
Euph. & Bass.
B.D. & C.
S.D. (Indian Drum)
muted continued.
Cornets & Trumpets.
Trombones.
Cymb.
Solo & 1st Clarts.
Oboes. 2nd
Cornets. & 3rd Clarts.
Euph. & Bassoons.
9
add Fl. & Picc.
cresc.
Oboes. 2nd &
3rd Clarts.
Saxophones & Horns.
ff strepitoso
Horns & Saxophes.
fff Tutti.
Tutti.
Timp.
Bass.

Conductor.

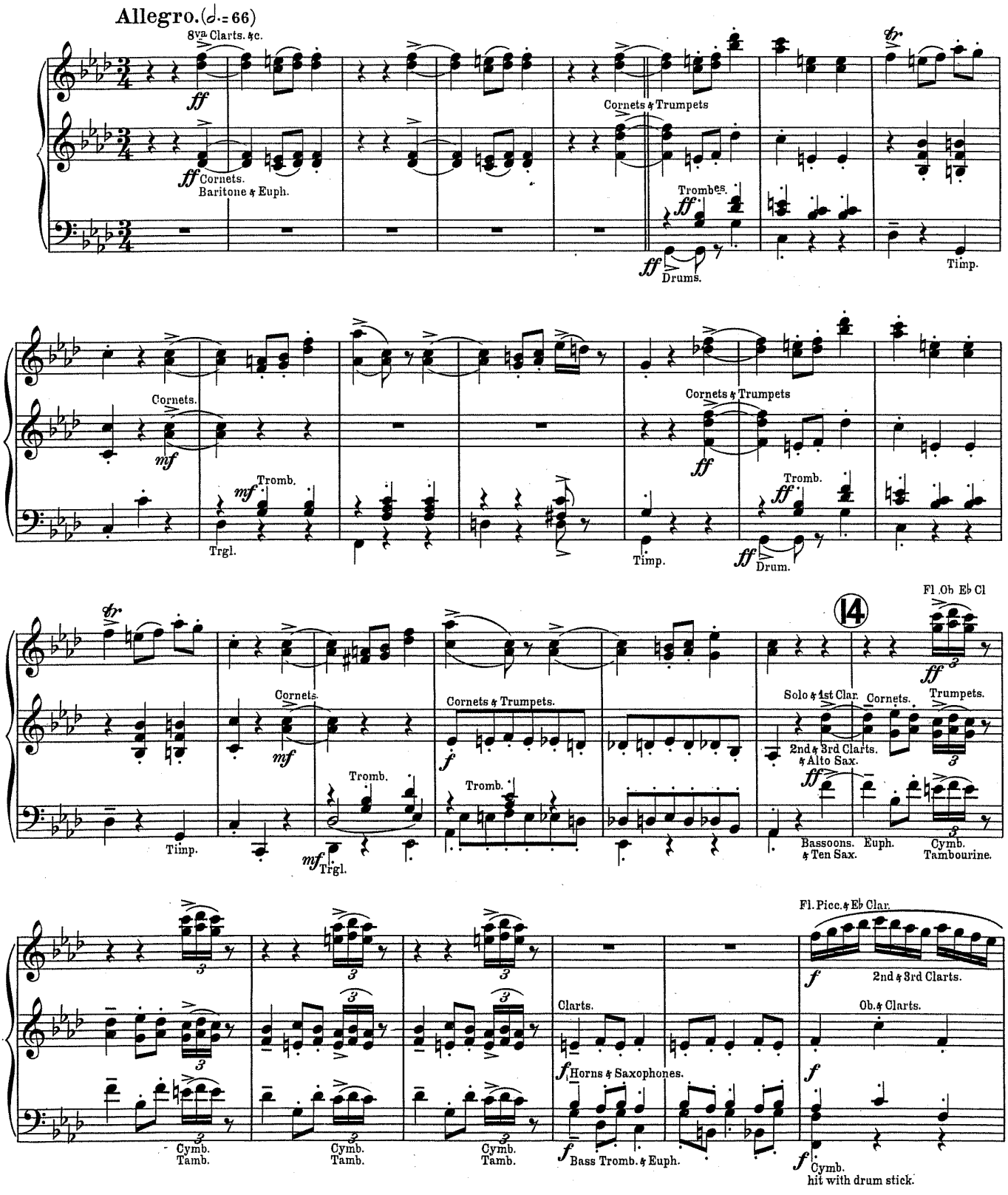
No 2. MENUETTO

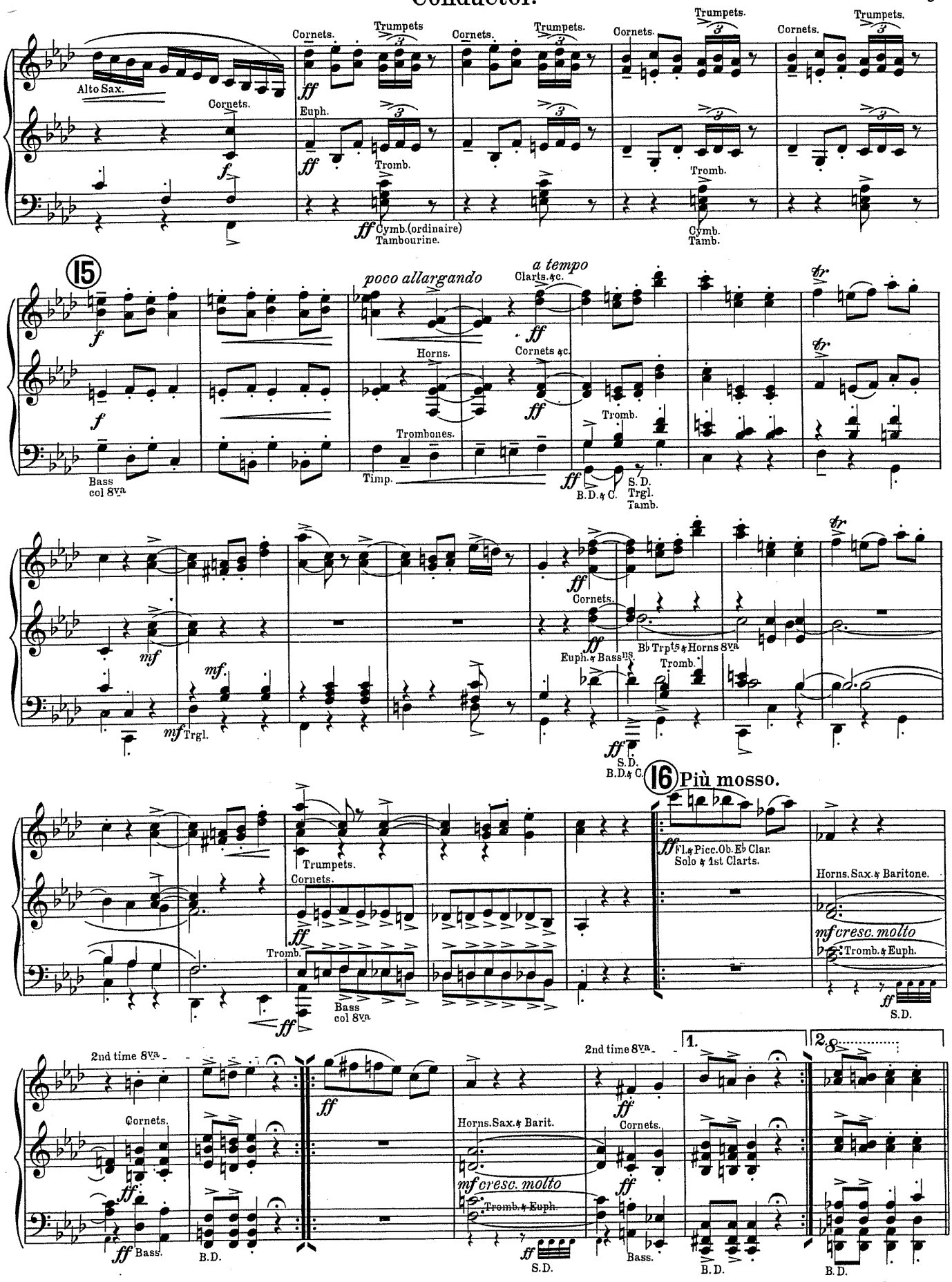



12
1st & 2nd Clarts.
Fl. 8va
2nd Clar.
Fl. Ob. & Eb Clar.
Ob. & Eb Clar. 1st Clar 8va lower.
cresc.
1st Bassoon & Ten. Sax.
Horns & Sax.
dim.
2nd Clarts.
Ob. & Eb Clar.
Fl. & 2nd Clarts. 8va
Solo Clarts.
Ob. & 2nd Clarts. 8va
1st Clarts.
3rd Clarts. & 1st Bassoon 8va
2nd Bassoon & Euph.
13
Fl. & 2nd Clarts. 8va
Ob. & 1st Clarts. 8va
2nd & 3rd Clarts. & Alto Sax.
cresc.
1st Clarts.
Fl. 8va
Eb Clar.
2nd & 3rd Clarts. & 1st Bassoon.
Euph. & Bass.
col 8va
Horns & Bassoons.
Euph.
Ob. & Alto Sax.
Solo & 1st Clarts.
2nd & 3rd Clarts.
1st Bassn.
Alto Sax.
rit.
Solo Clar.
Fl. Eb Cl.
1st Clar.
1st Horn.
2nd & 3rd Clarts
Ten. Sax.
Euph.
Bass.
Timp. & Horns.
Timp.

H. & S. 4983

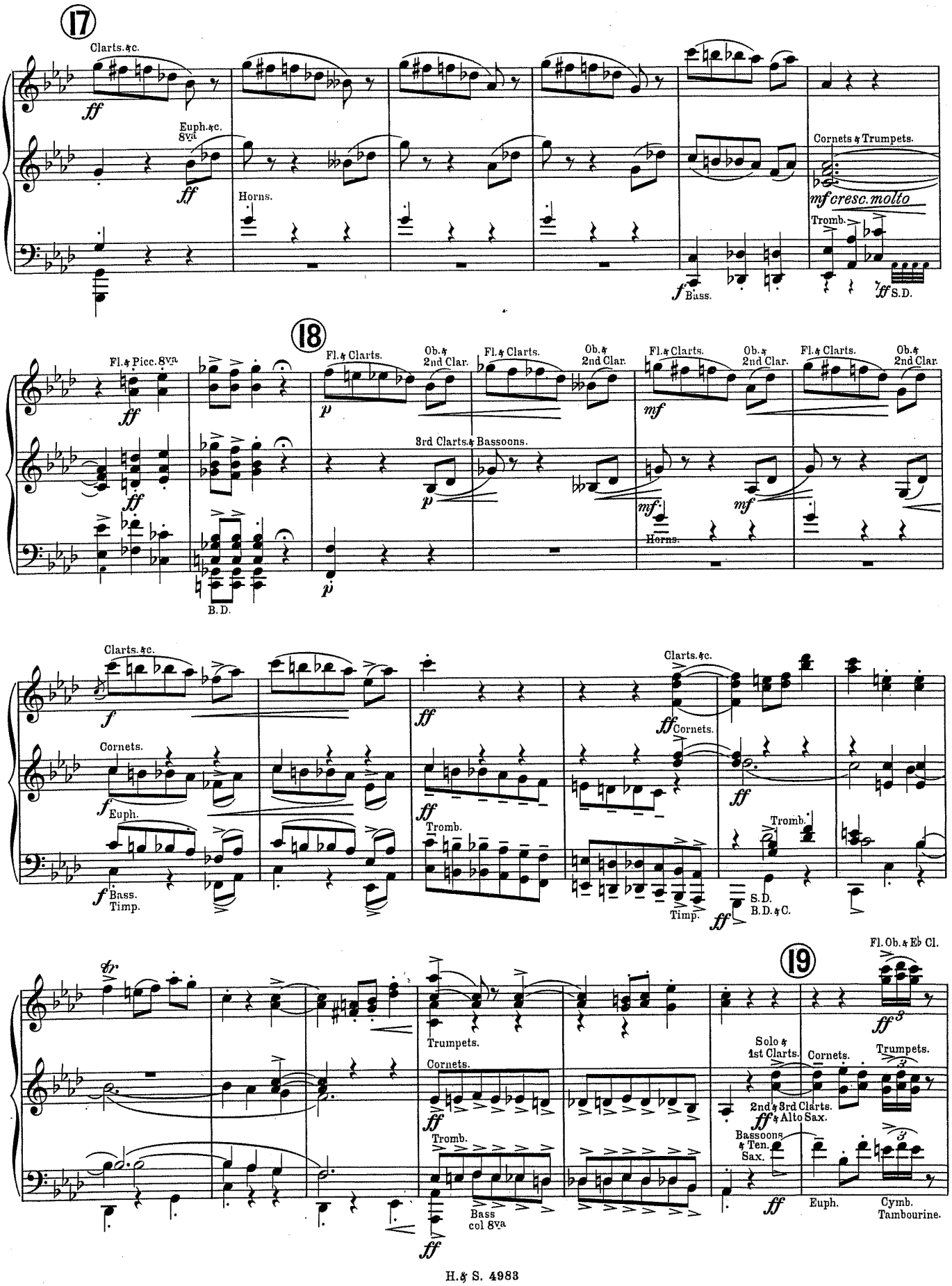
No 3. WARRIORS' DANCE.

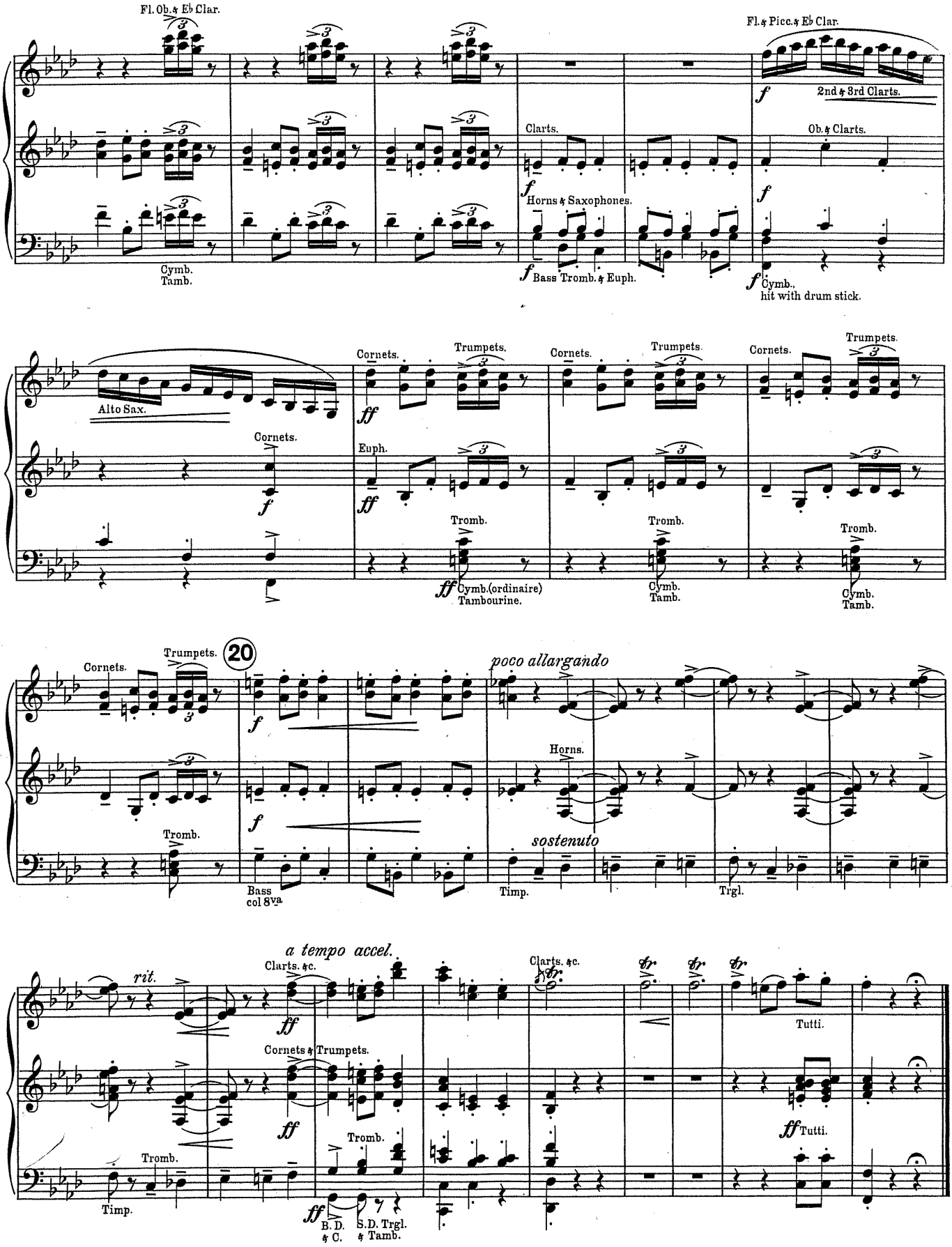



Alto Sax.
Cornets.
Trumpets
Euph.
Tromb.
Cymb.(ordinaire)
Tambourine.
Cymb.
Tamb.
15
poco allargando
a tempo
Clarts.&c.
Cornets &c.
Horns.
Trombones.
Timp.
Bass
col 8va
B.D.& C.
S.D.
Trgl.
Tamb.
Trgl.
Euph.& Bass
Bb Trpts & Horns 8va
16 Più mosso.
Fl.& Picc.Ob.Eb Clar.
Solo & 1st Clarts.
Horns.Sax.& Baritone.
mf cresc. molto
Tromb.& Euph.
2nd time 8va
Horns.Sax.& Barit.
Bass.
1.
2.

H.& S. 4983

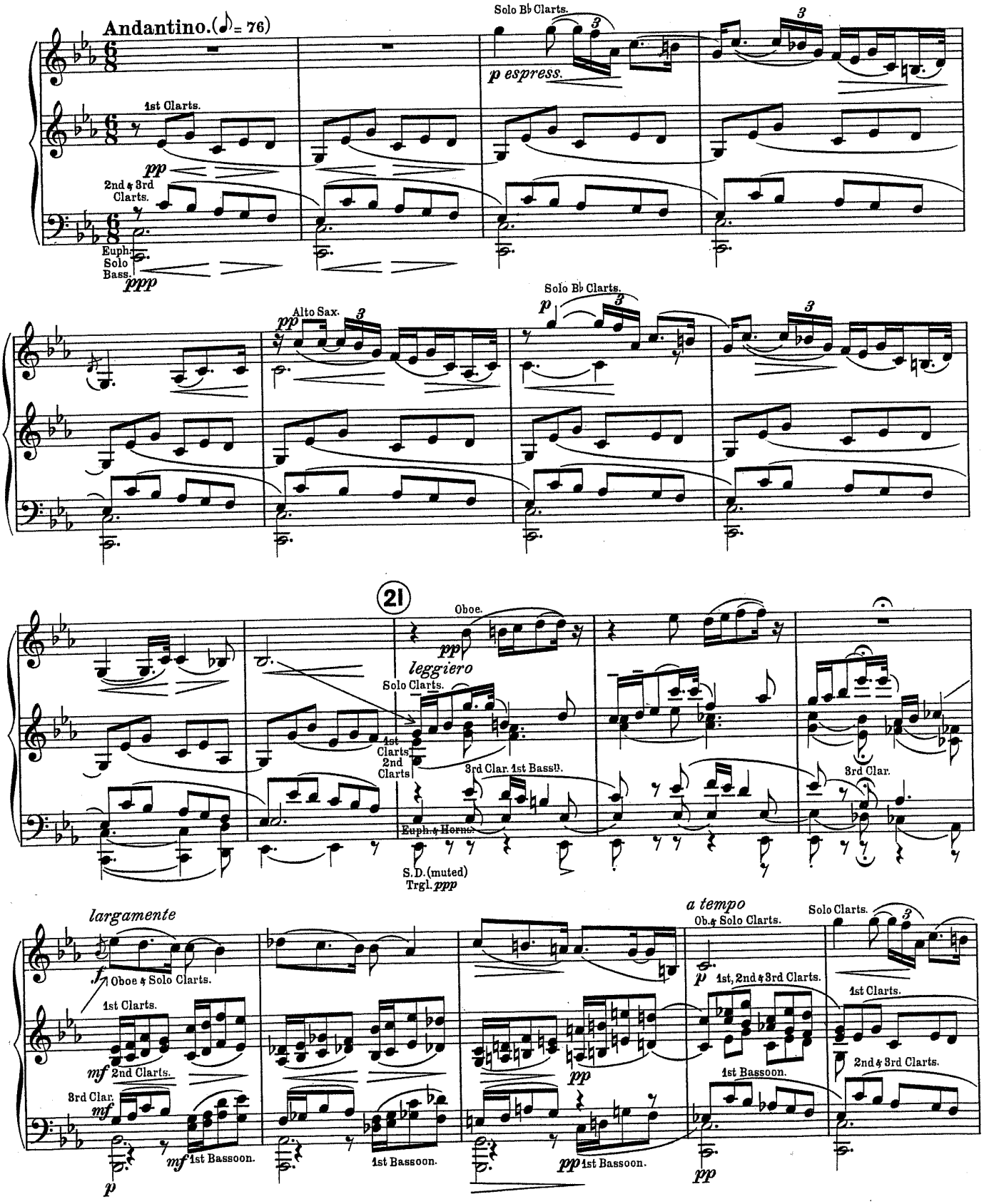
Conductor.

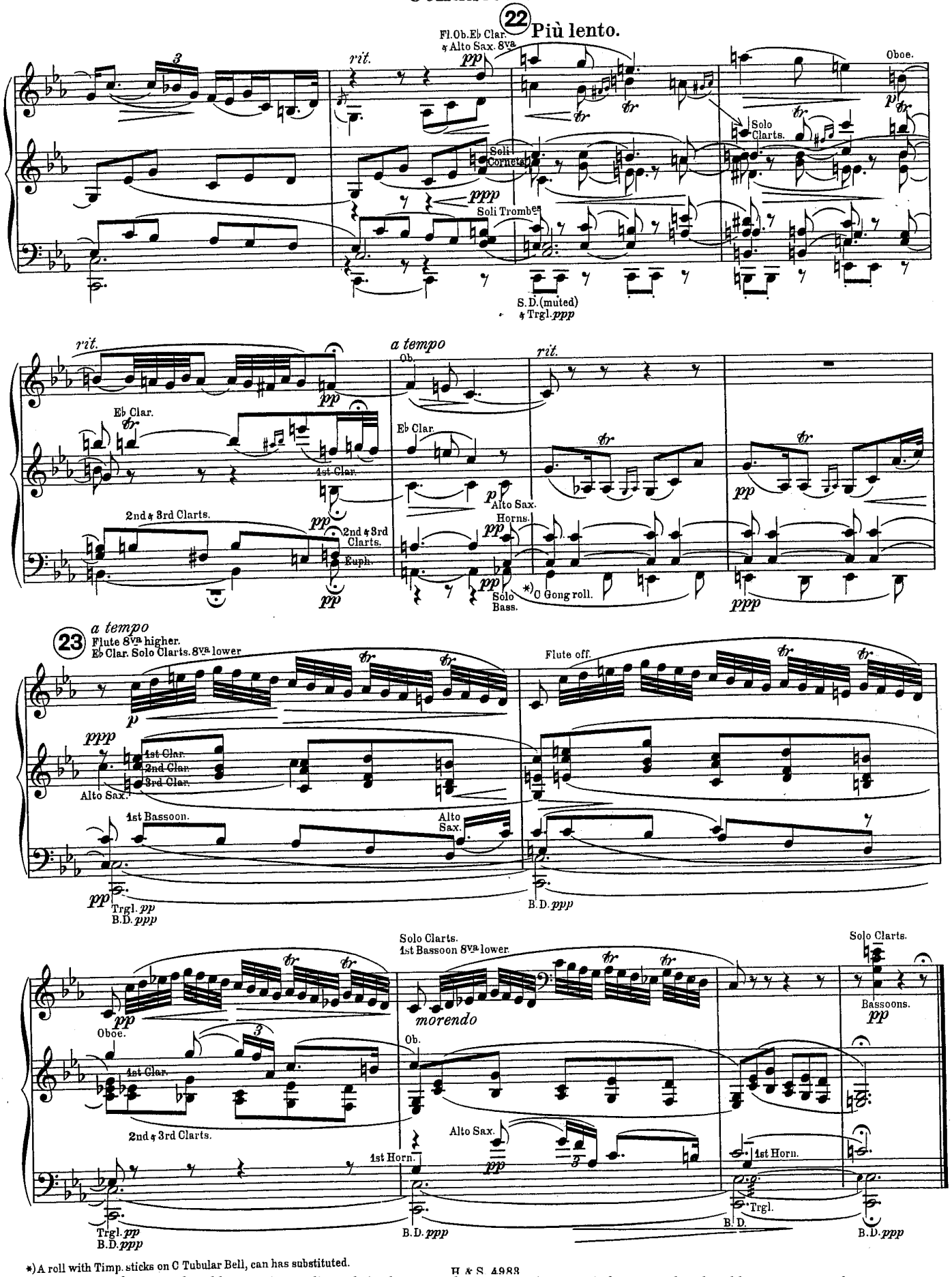

17
Clarts. &c.
ff
Euph. &c.
8va
ff
Horns.
Cornets & Trumpets.
mf cresc. molto
Tromb.
f Bass.
ff S.D.
18
Fl. & Picc. 8va
ff
Fl. & Clarts.
Ob. & 2nd Clar.
p
3rd Clarts. & Bassoons.
p
Fl. & Clarts.
Ob. & 2nd Clar.
mf
mf
Horns.
mf
Fl. & Clarts.
Ob. & 2nd Clar.
mf
B. D.
Clarts. &c.
f
Cornets.
f
Euph.
f Bass.
Timp.
ff
Tromb.
Clarts. &c.
ff Cornets.
ff
Timp.
Tromb.
ff S.D.
B.D. & C.
tr
Trumpets.
Cornets.
ff
Tromb.
Bass
col 8va
ff
19
Fl. Ob. & Eb Cl.
ff
Solo & 1st Clarts.
Cornets.
Trumpets.
2nd & 3rd Clarts. & Alto Sax.
ff
Bassoons & Ten. Sax.
ff
Euph.
Cymb.
Tambourine.


Fl. Ob. & E♭ Clar.
Cymb.
Tamb.
Clarts.
Horns & Saxophones.
Bass Tromb. & Euph.
Fl. & Picc. & E♭ Clar.
2nd & 3rd Clarts.
Ob. & Clarts.
Cymb.,
hit with drum stick.
Alto Sax.
Cornets.
Trumpets.
Euph.
Tromb.
Cymb. (ordinaire)
Tambourine.
Cymb.
Tamb.
20
poco allargando
Horns.
sostenuto
Bass
col 8va
Timp.
Trgl.
a tempo accel.
rit.
Clarts. &c.
Cornets & Trumpets.
Tutti.
B. D.
& C.
S.D. Trgl.
& Tamb.

Conductor.

No4. INTERMEZZO





*) A roll with Timp. sticks on C Tubular Bell, can has substituted.

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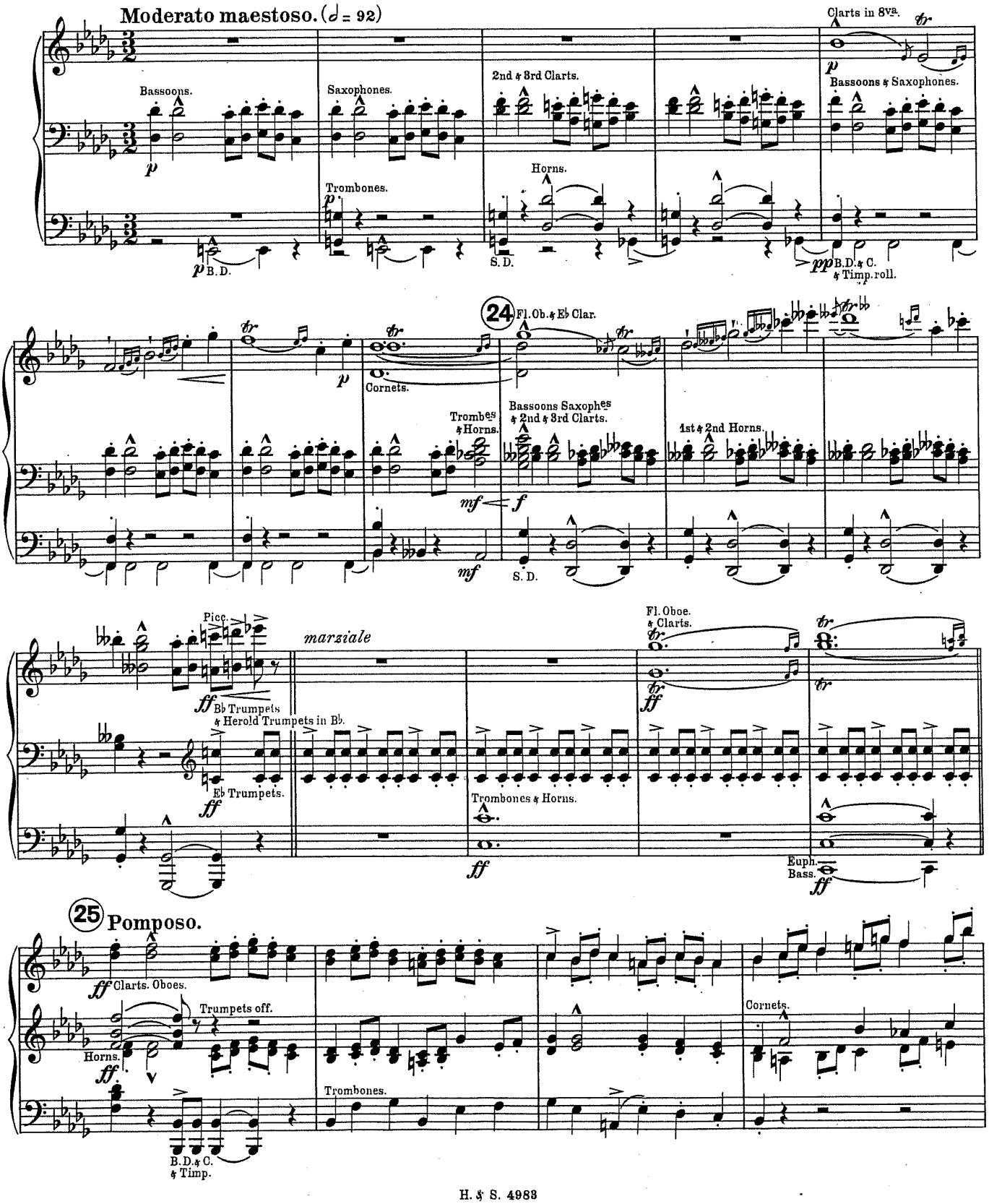
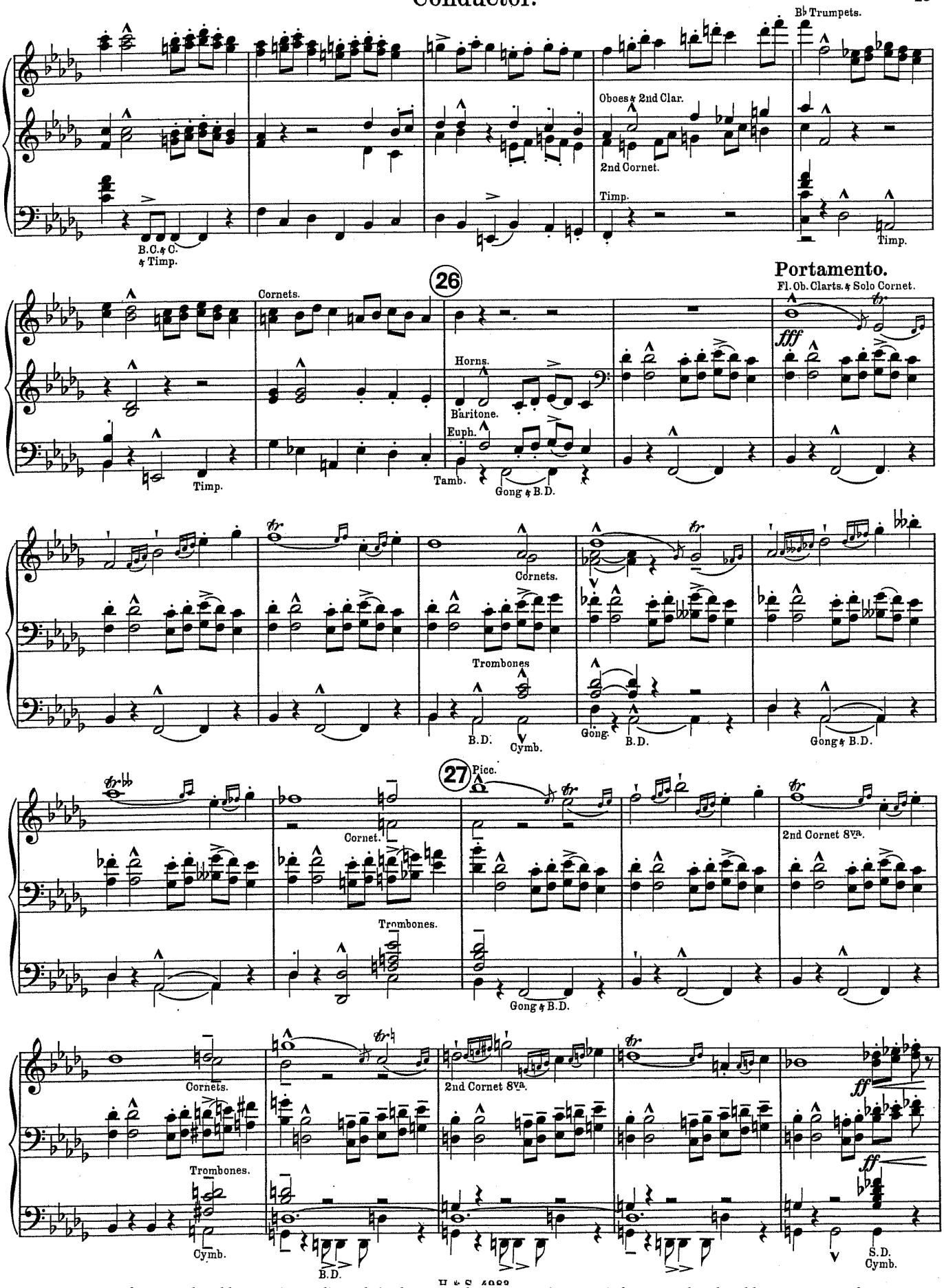
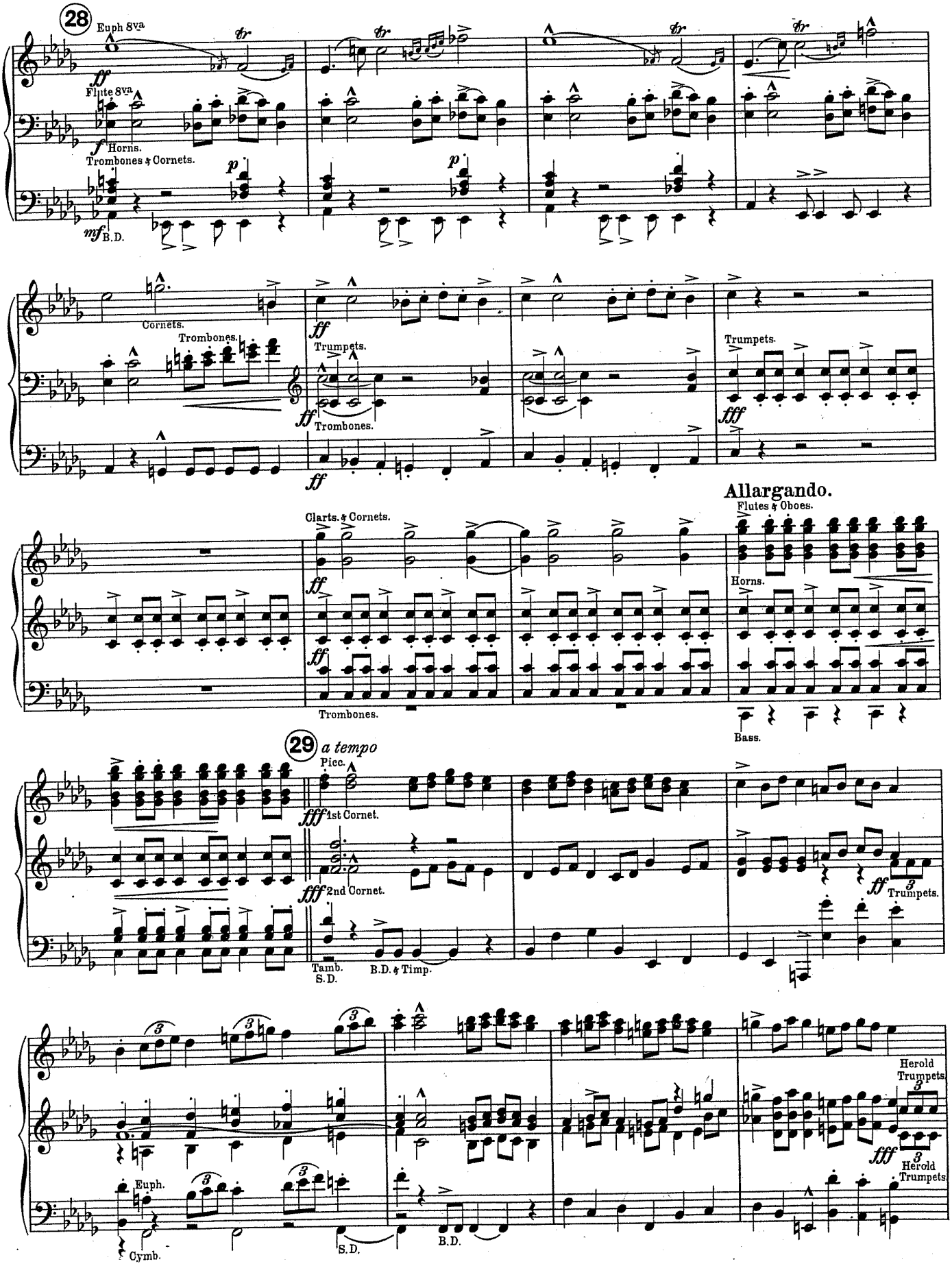
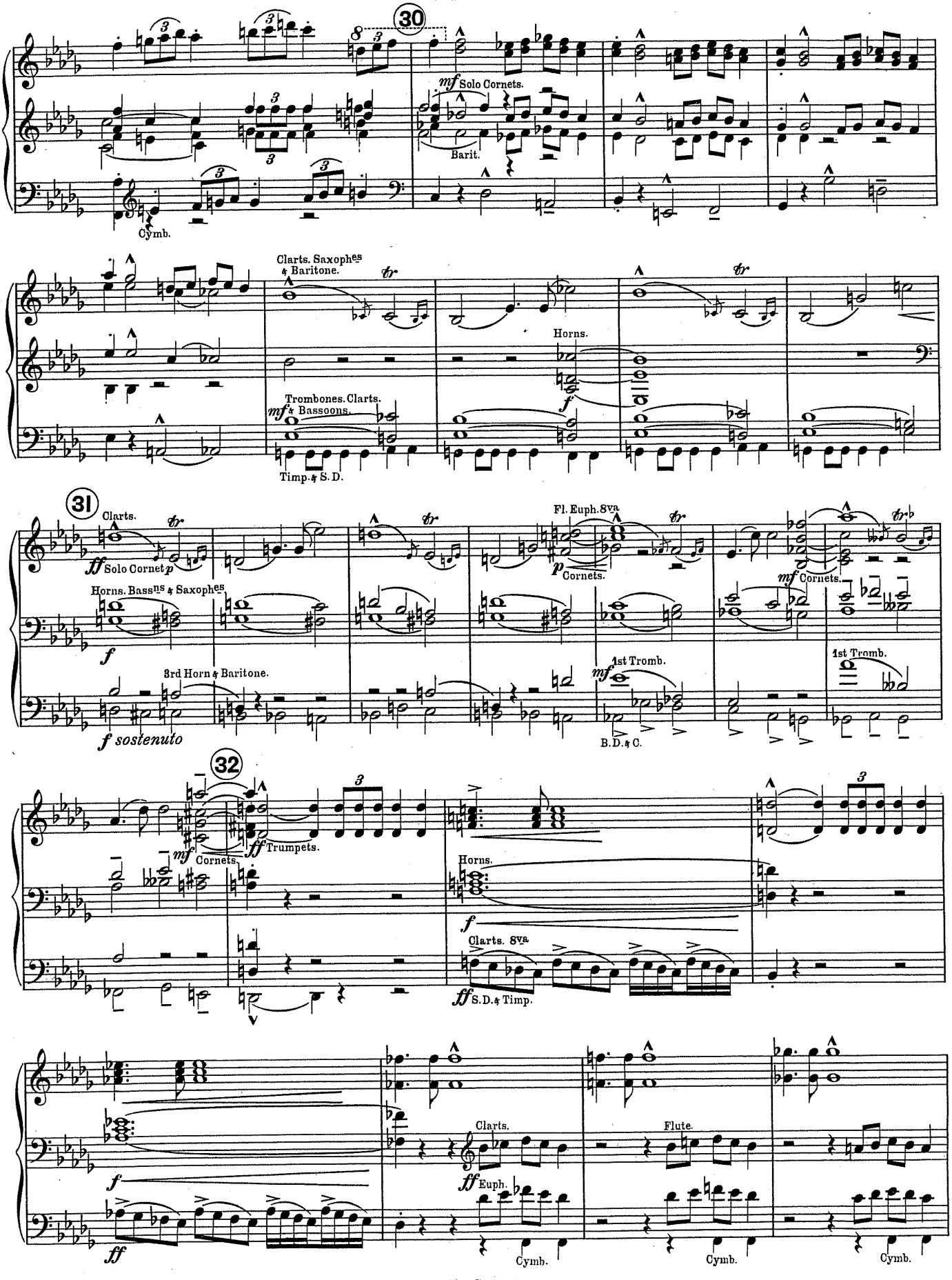
No5. MARCH OF THE MOGUL EMPERORS

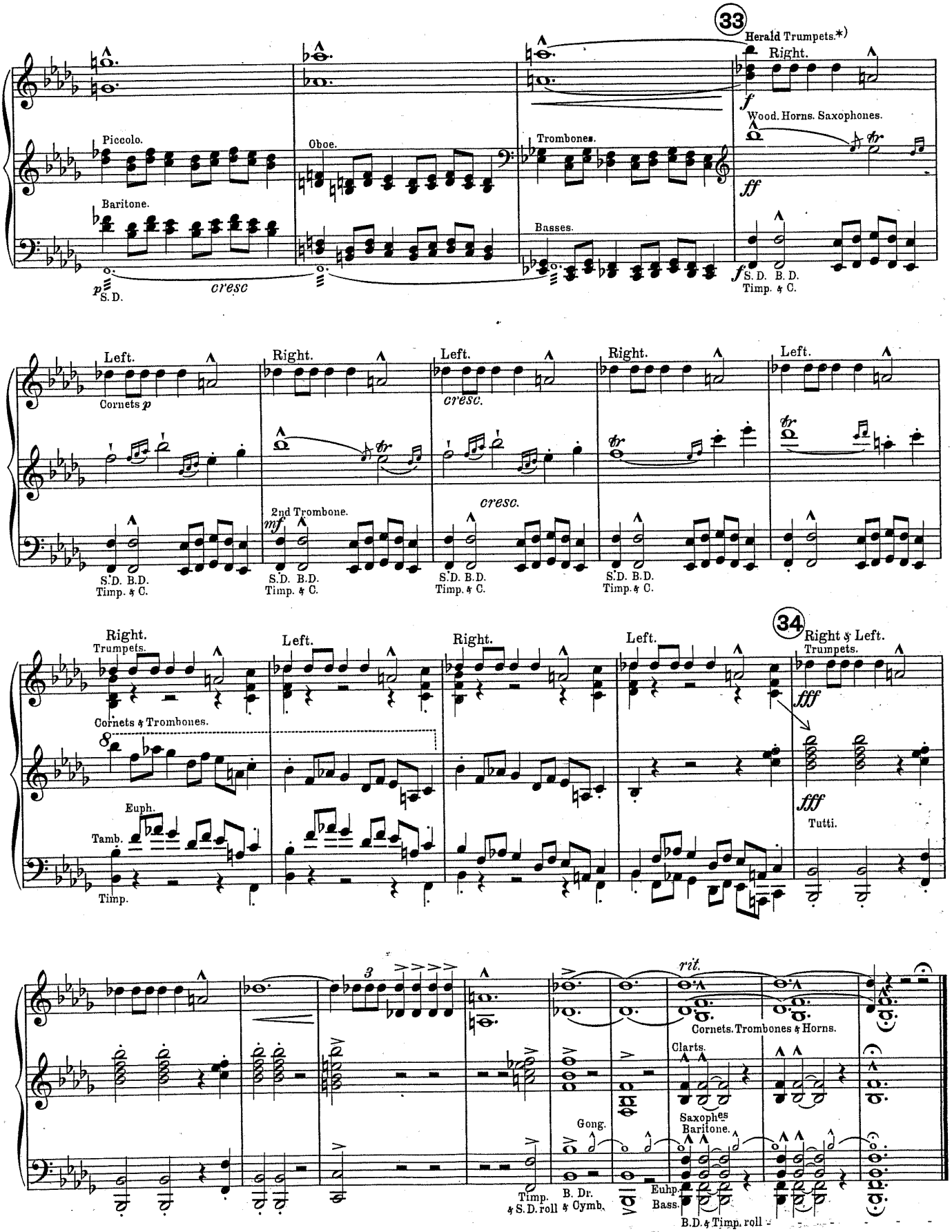



B♭ Trumpets.
Oboes & 2nd Clar.
2nd Cornet.
Timp.
B.C. & C. & Timp.
Timp.
26
Portamento.
Fl. Ob. Clarts. & Solo Cornet.
Cornets.
Horns.
Baritone.
Euph.
Timp.
Tamb.
Gong & B.D.
fff
Cornets.
Trombones
B.D.
Cymb.
Gong.
B.D.
Gong & B.D.
27
Picc.
Cornet.
Trombones.
Gong & B.D.
2nd Cornet 8va.
Cornets.
Trombones.
Cymb.
B.D.
2nd Cornet 8va.
ff
ff
S.D.
Cymb.

Conductor.




30
mf Solo Cornets.
Barit.
Cymb.
Clarts. Saxophes & Baritone.
tr
Horns.
Trombones. Clarts.
mf & Bassoons.
f
Timp. & S. D.
31
Clarts.
ff Solo Cornet p
Fl. Euph. 8va
p Cornets.
mf Cornets.
Horns. Basses & Saxophes
f
3rd Horn & Baritone.
f sostenuto
1st Tromb.
mf
B.D. & C.
32
mf Cornets.
ff Trumpets.
Horns.
f
Clarts. 8va
ff S.D. & Timp.
Clarts.
Flute.
ff Euph.
Cymb.
ff



*) Note: When several Herald Trumpets are available they should be equally divided Right & Left of the Band & play alternately.

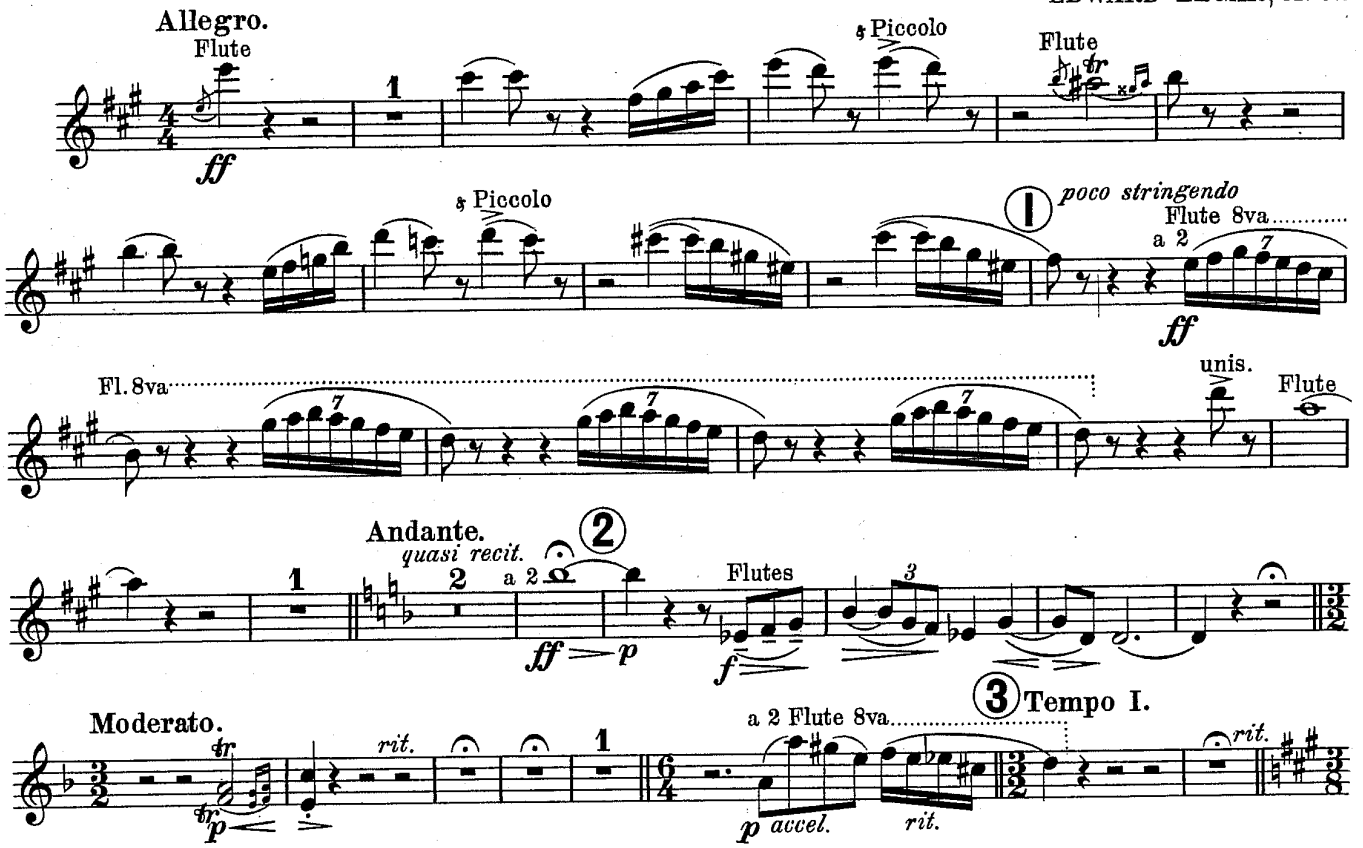
SUITE

THE CROWN OF INDIA

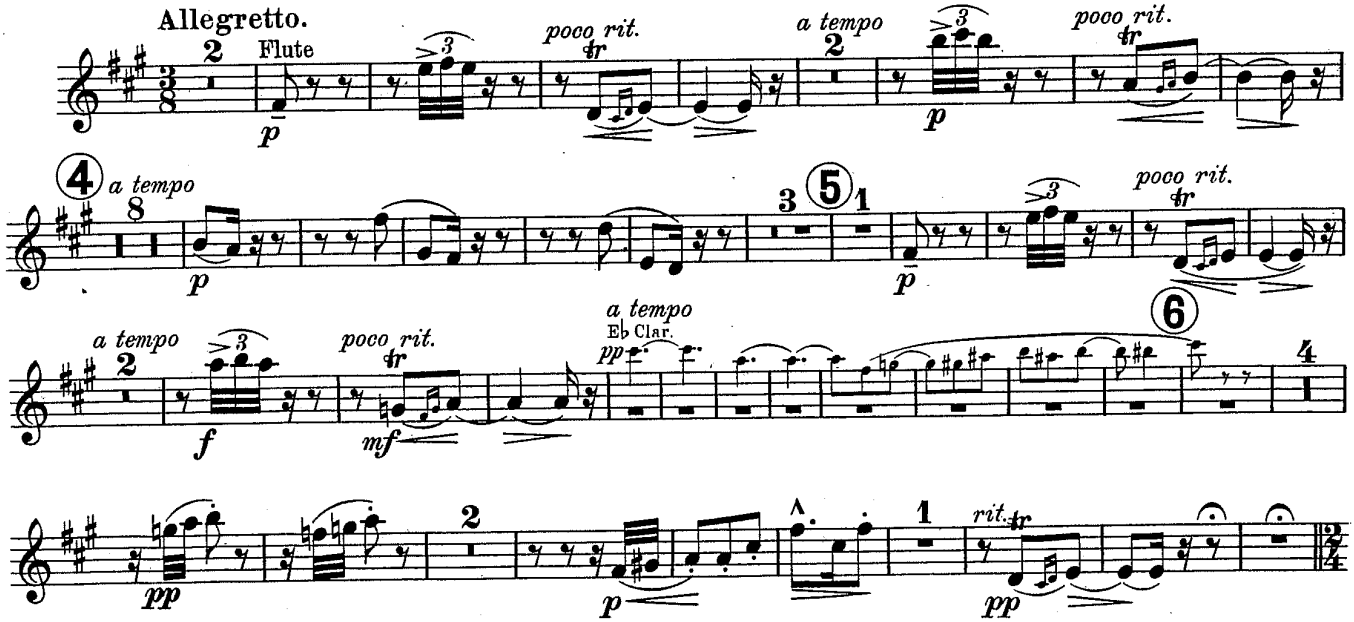
D♭ Flute & Piccolo.

Nº 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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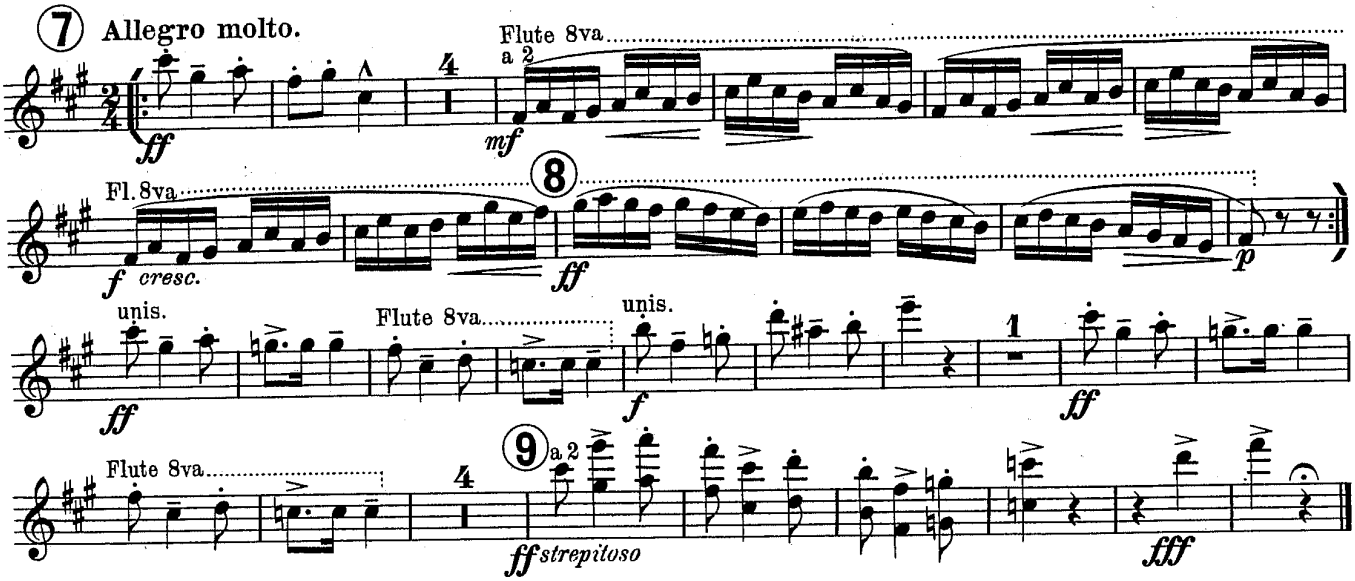
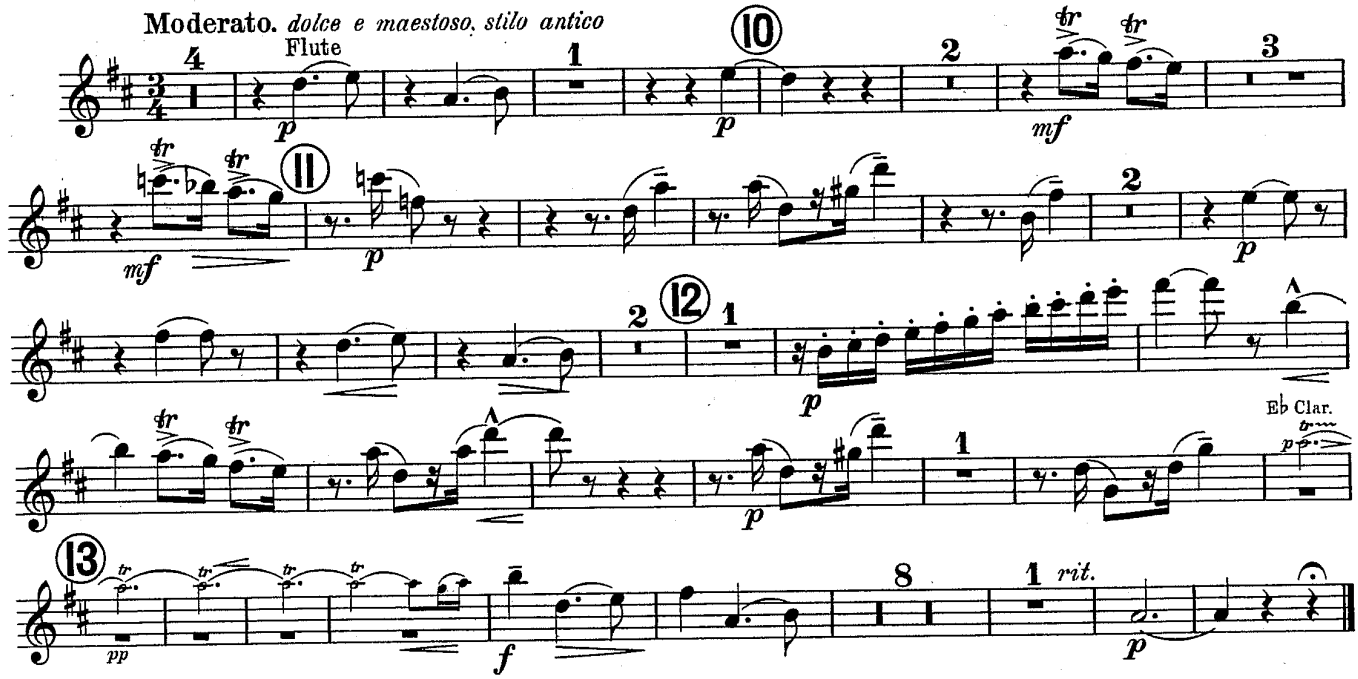
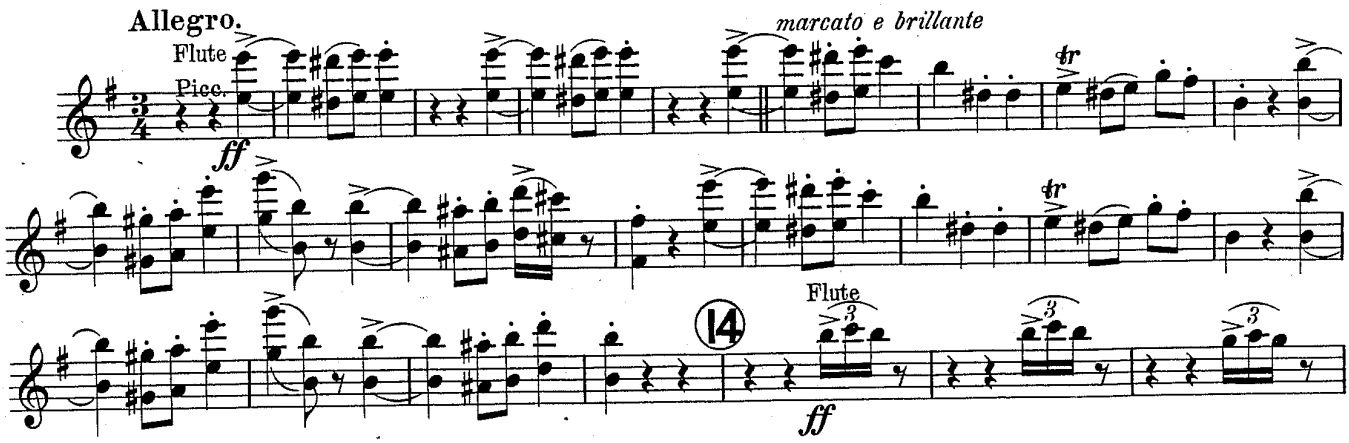
H. & S. 4983
Printed by Hawkes & Son (London), Ltd., Leipzig.
Printed in Leipzig.



Nº 2. MENUETTO



Nº 3. WARRIORS' DANCE



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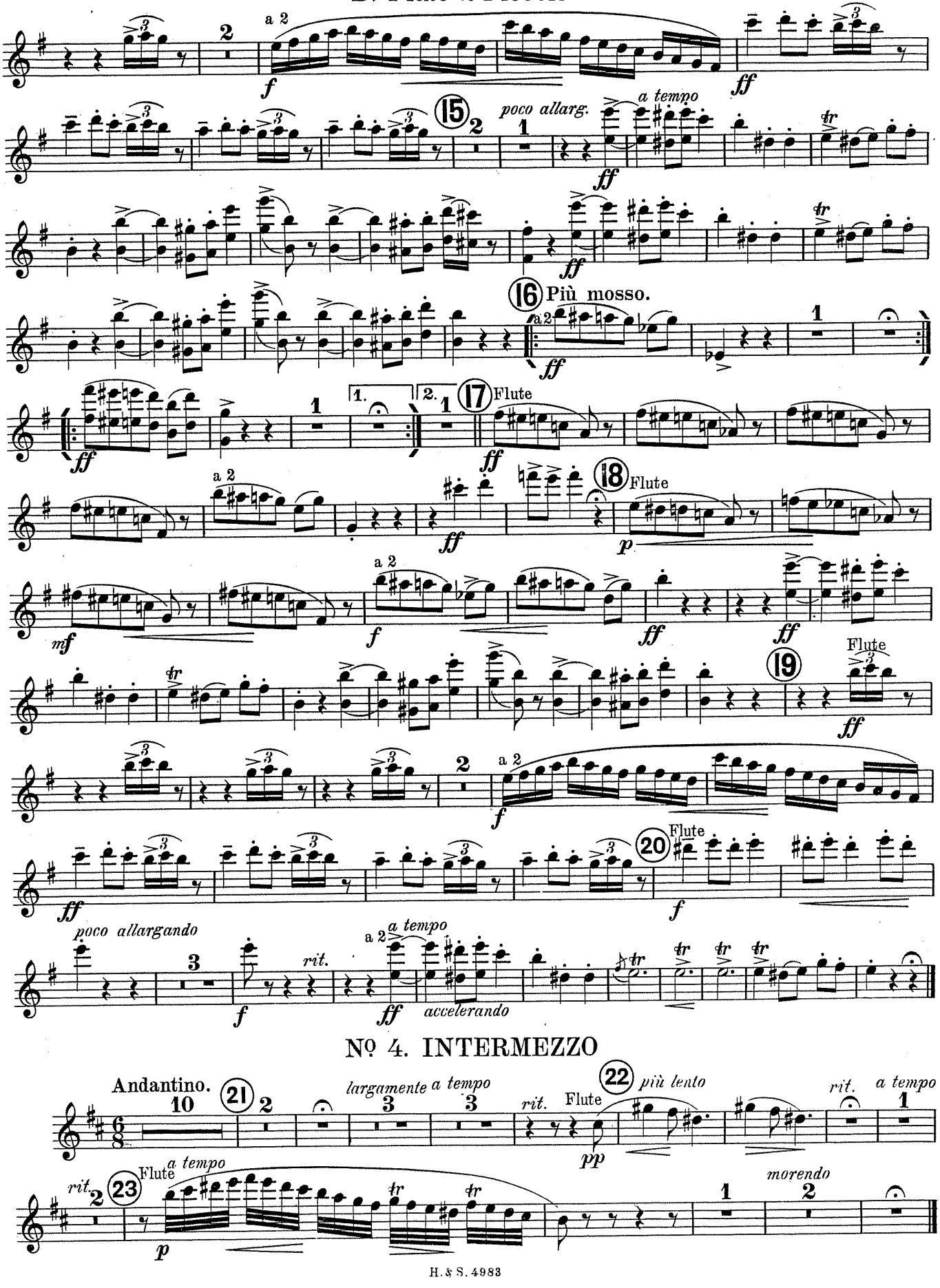
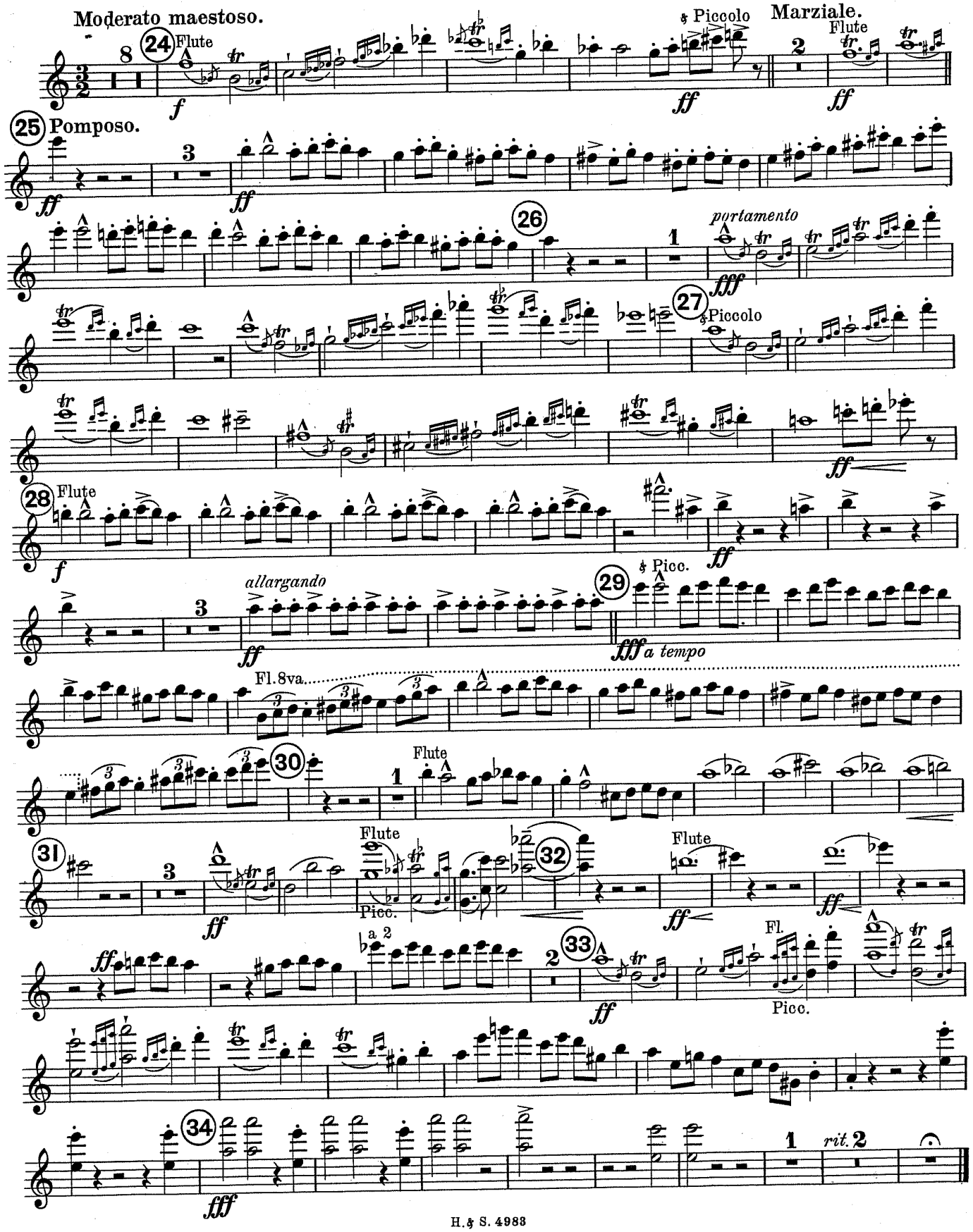


Nº 4. INTERMEZZO

H. & S. 4983

D♭ Flute & Piccolo

No 5. MARCH OF THE MOGUL EMPERORS



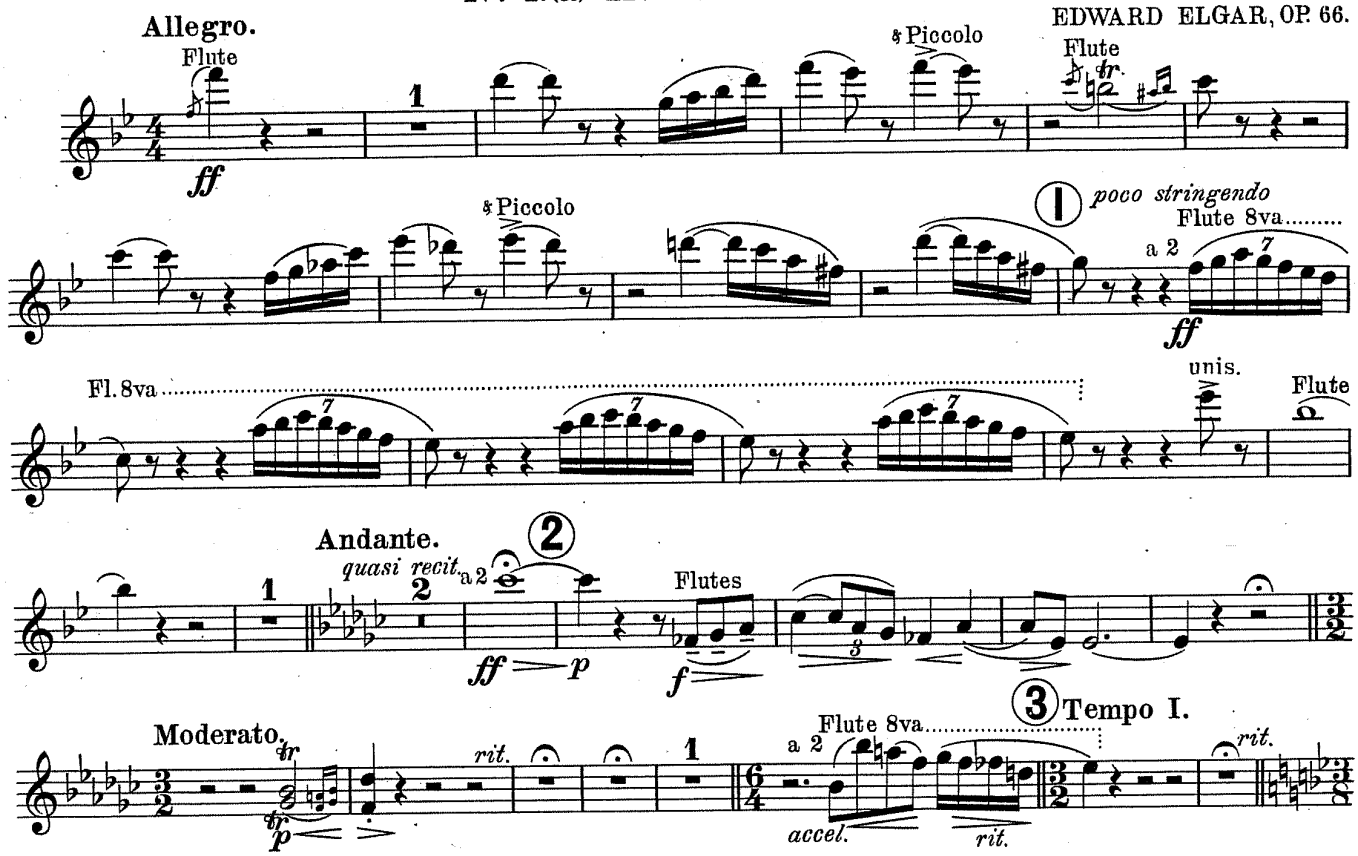
H. & S. 4983

SUITE
THE CROWN OF INDIA

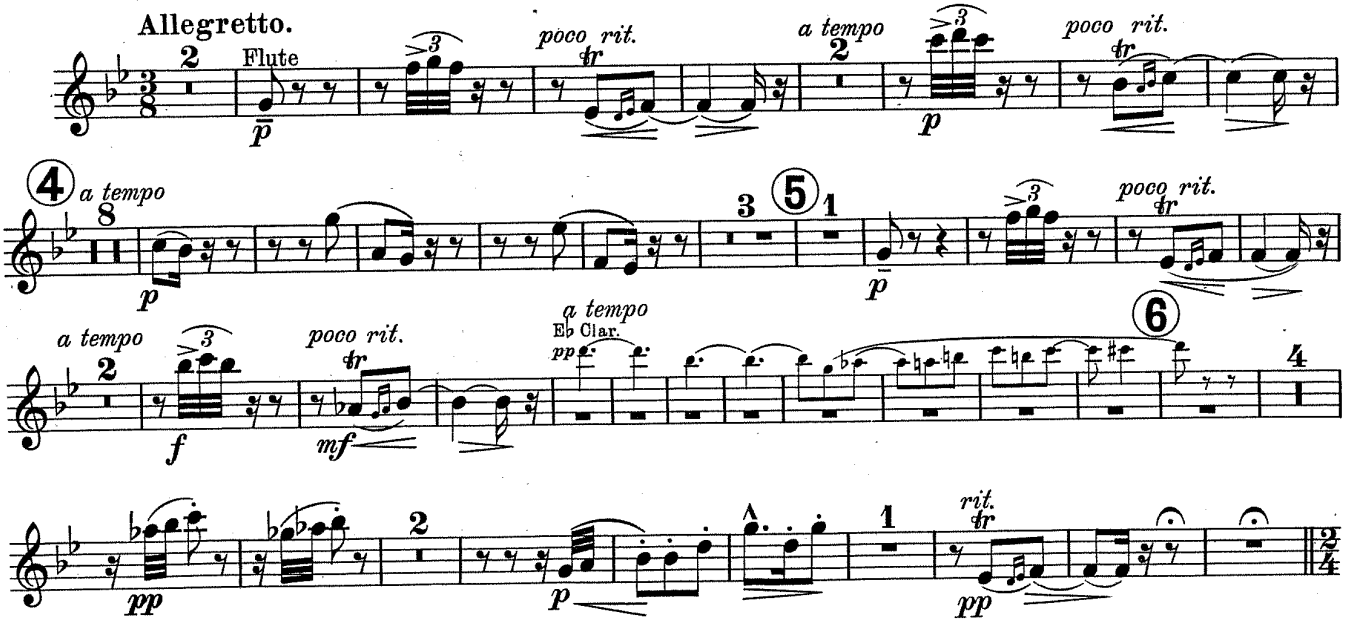
Concert Flute & Piccolo

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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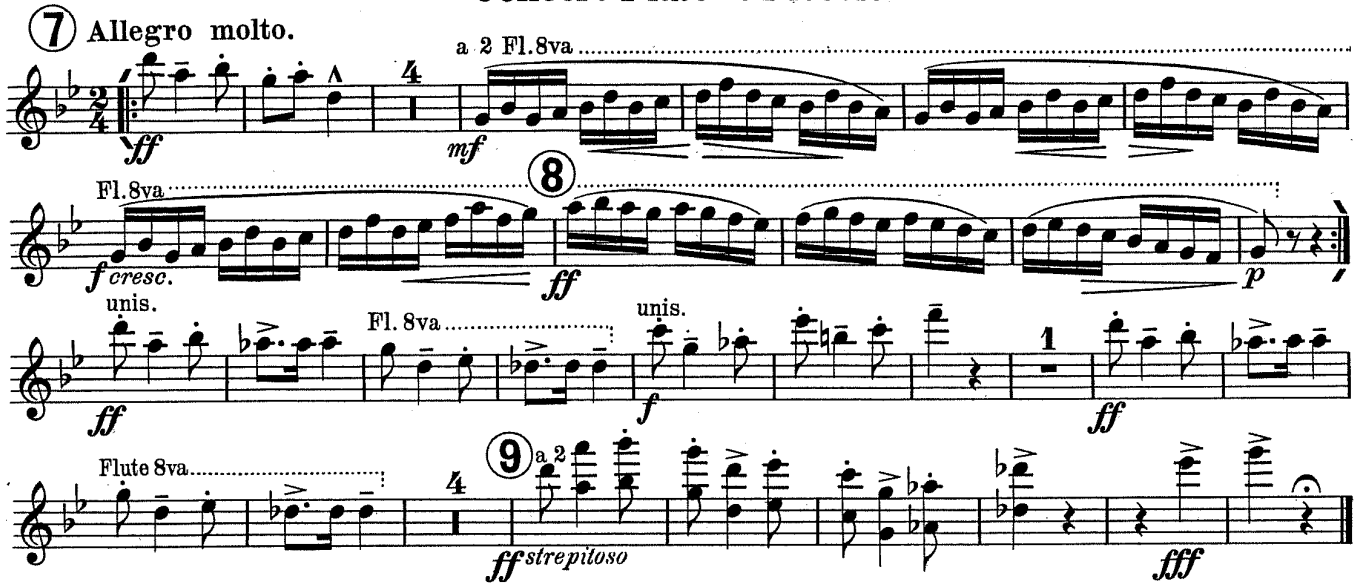
PARIS, 16 Rue Saulnier, IXe
Printed by Hawkes & Son (London), Ltd., Leipzig.
H. & S. 4983
Printed in Leipzig.

Concert Flute & Piccolo



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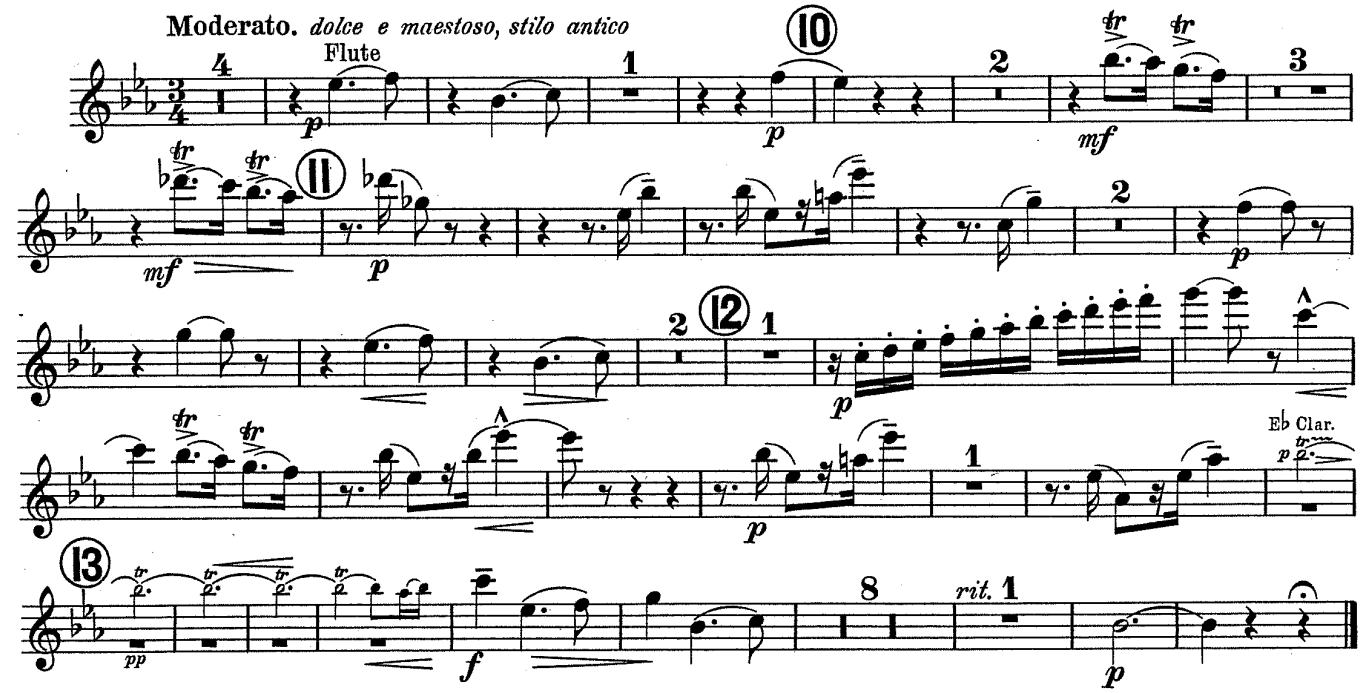
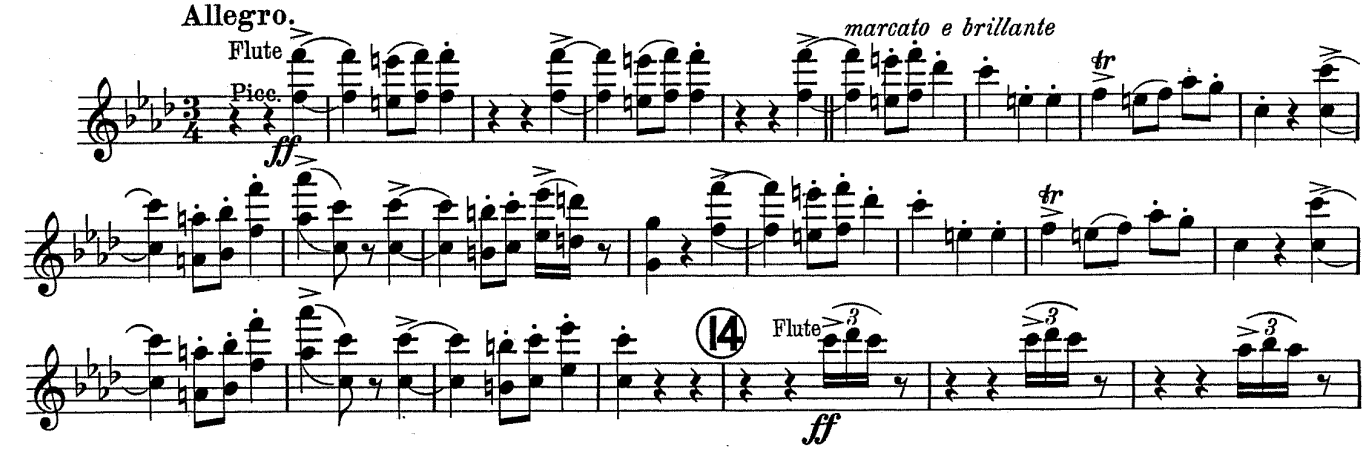


Nº 3. WARRIORS' DANCE



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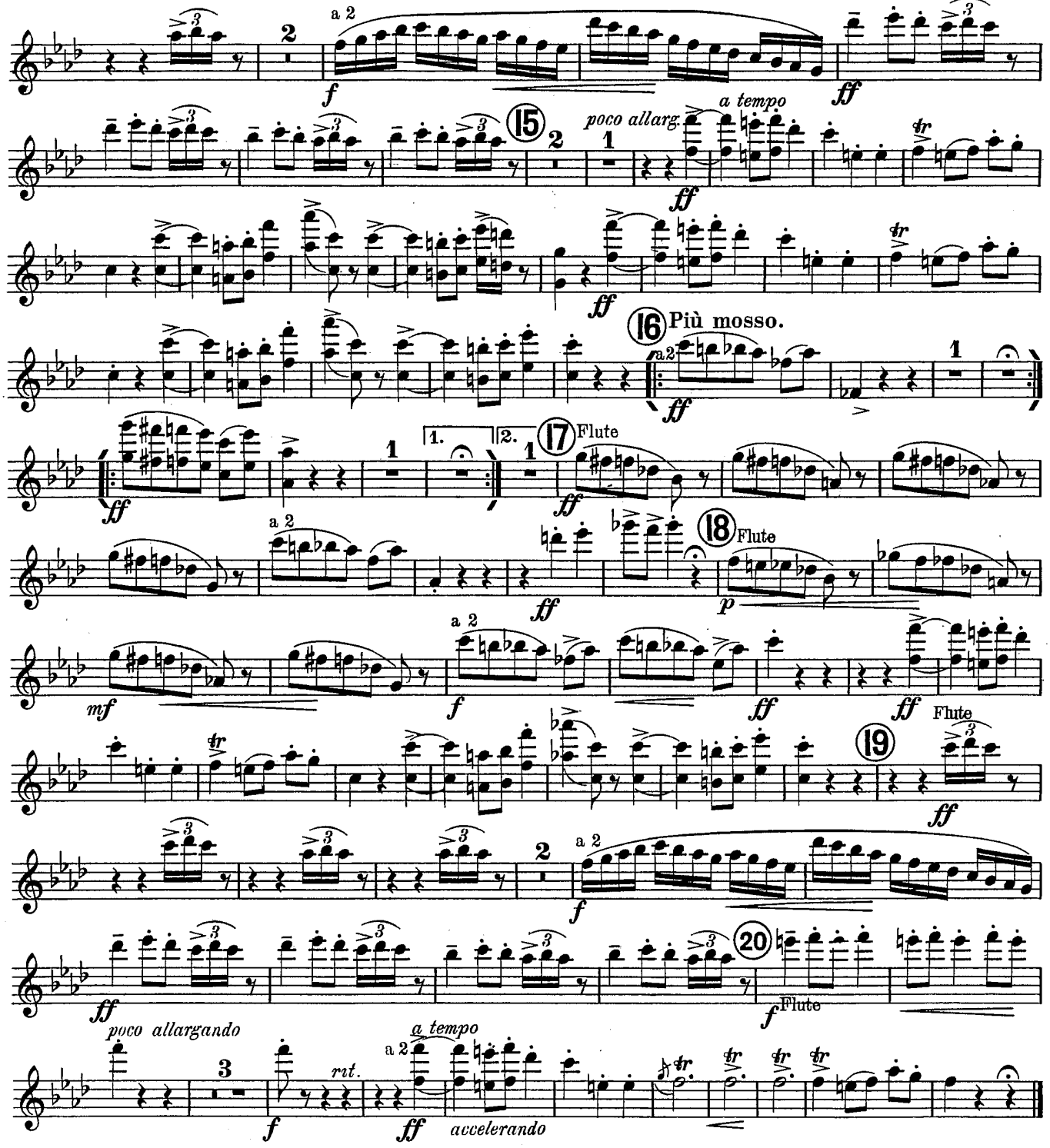

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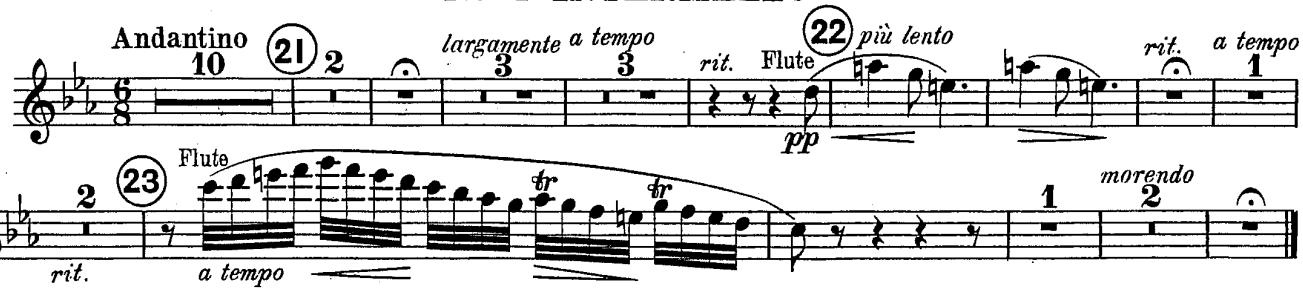
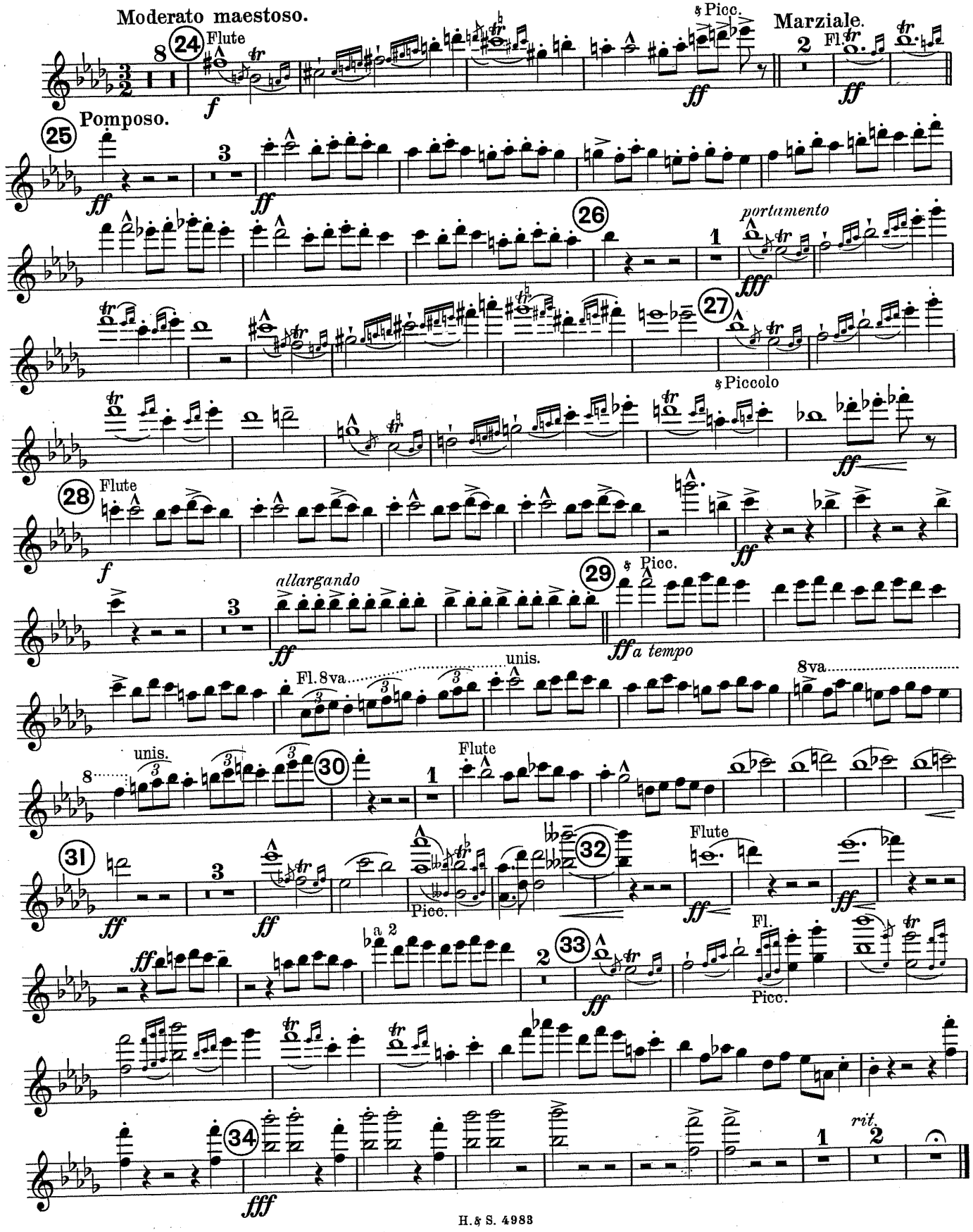


No. 5. MARCH OF THE MOGUL EMPERORS

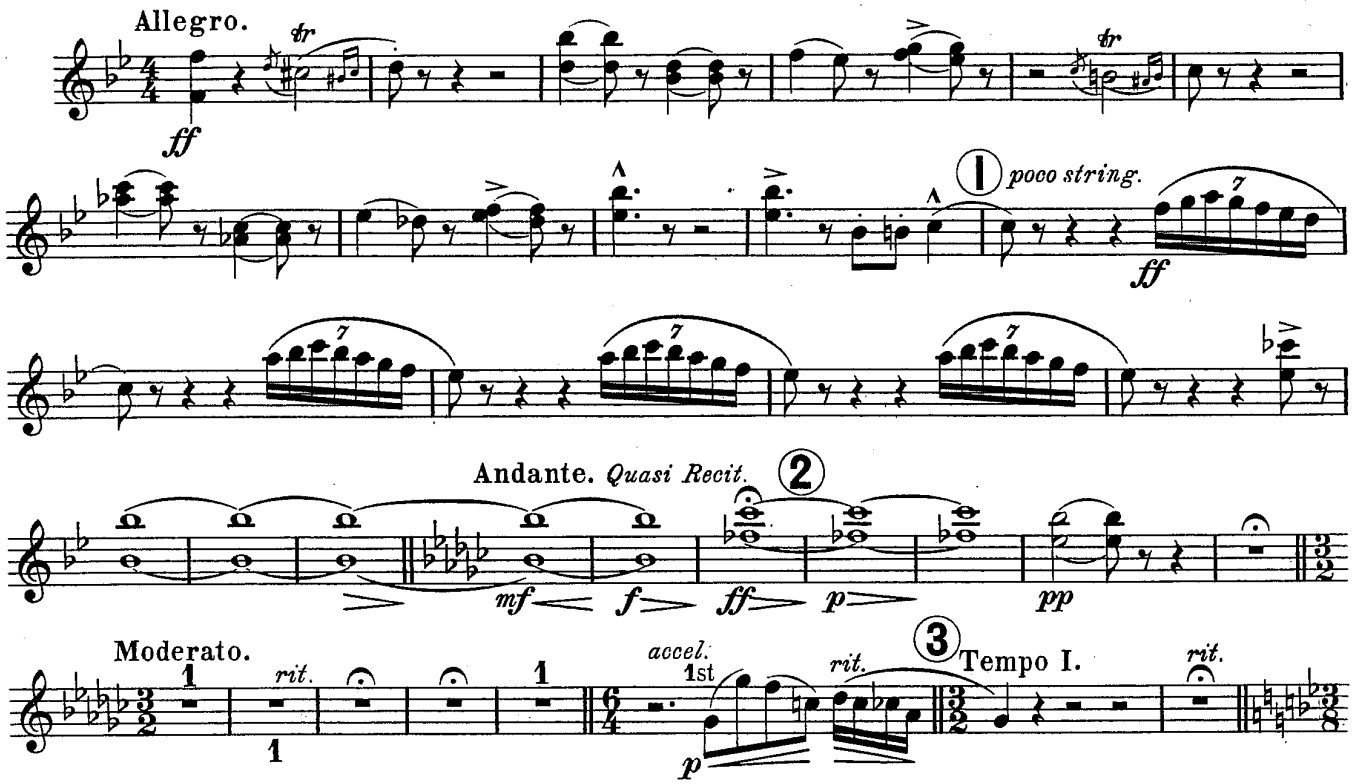


SUITE
THE CROWN OF INDIA

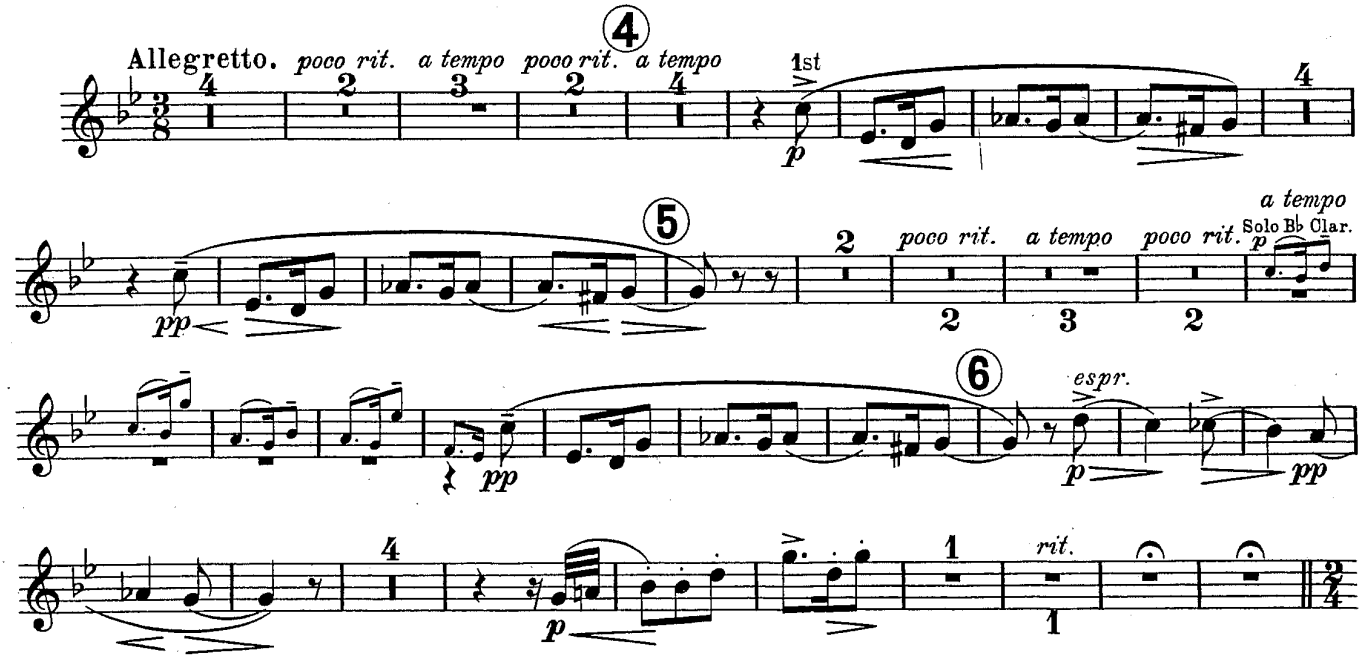
Oboes.

No 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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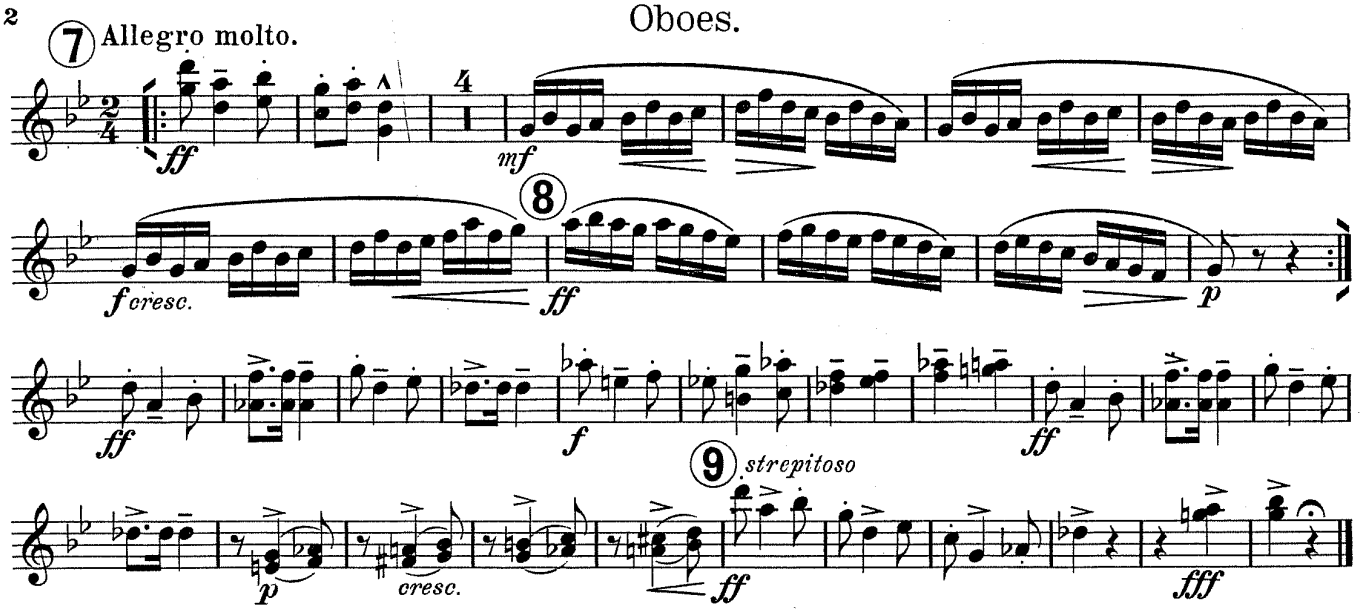
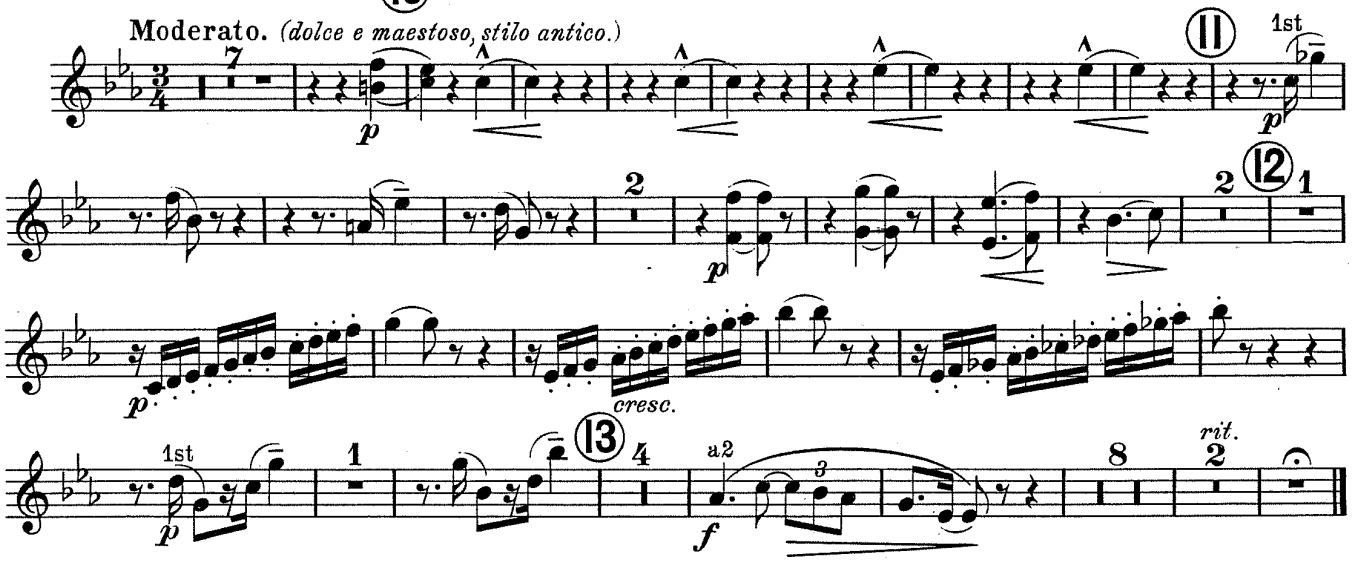
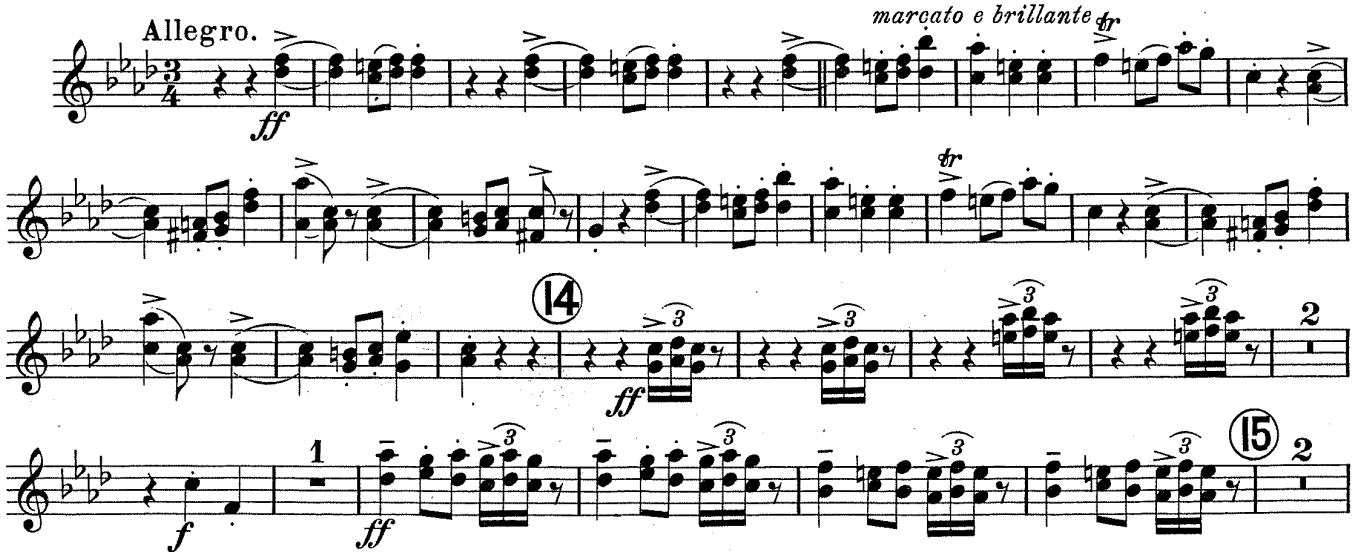
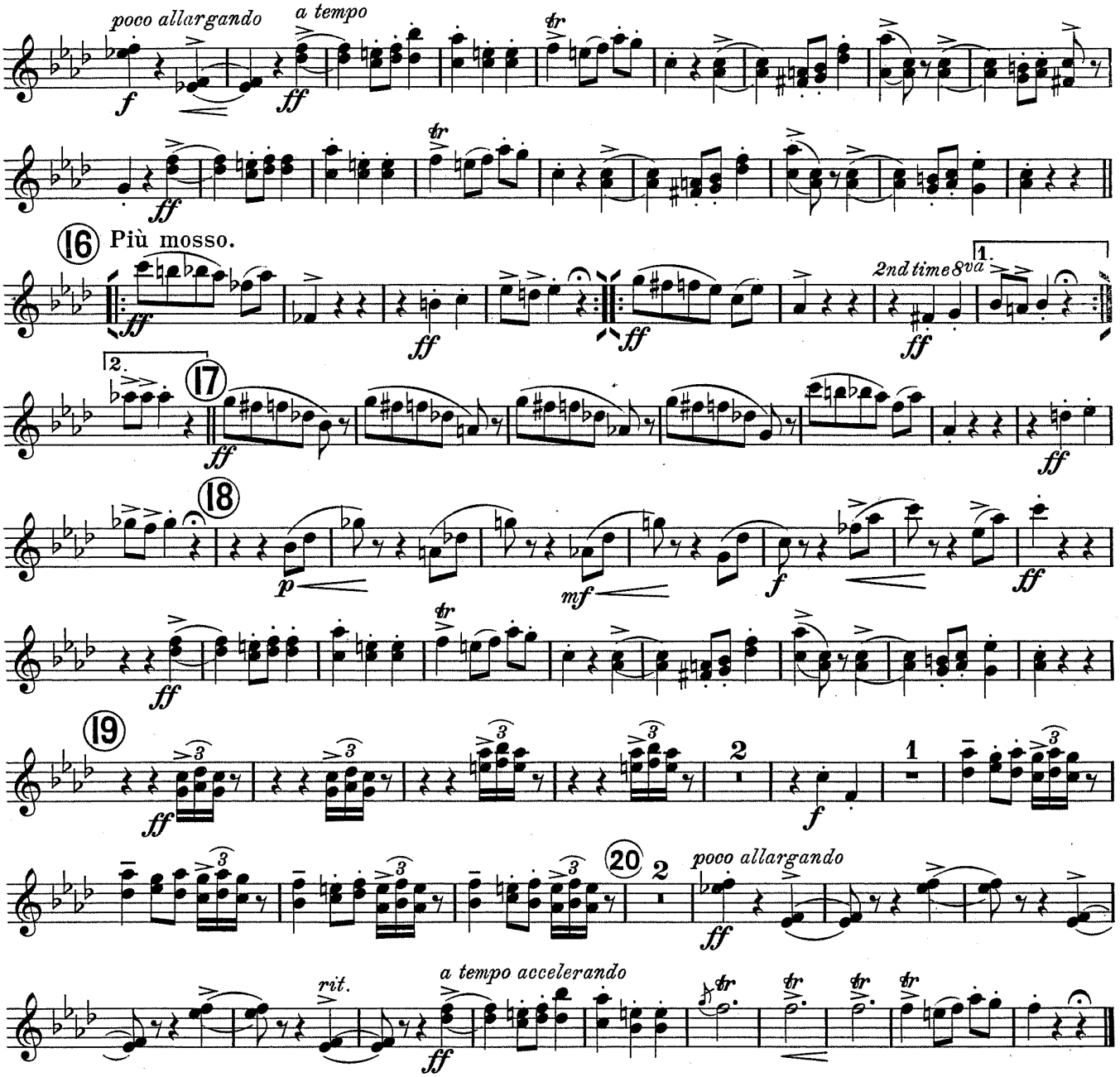


10 Nº 2. MENUETTO



Nº 3. WARRIORS' DANCE





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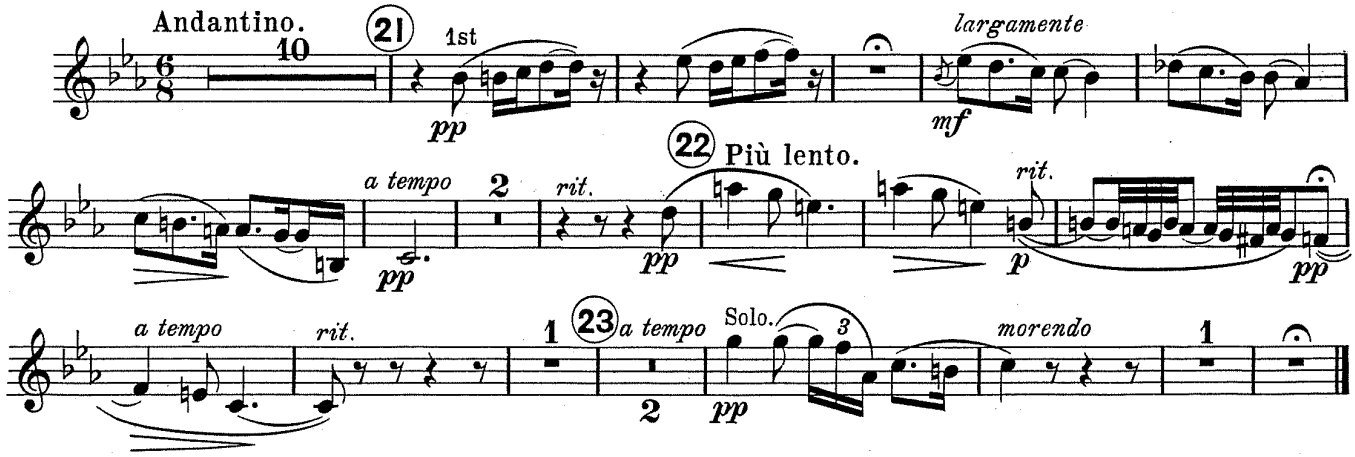
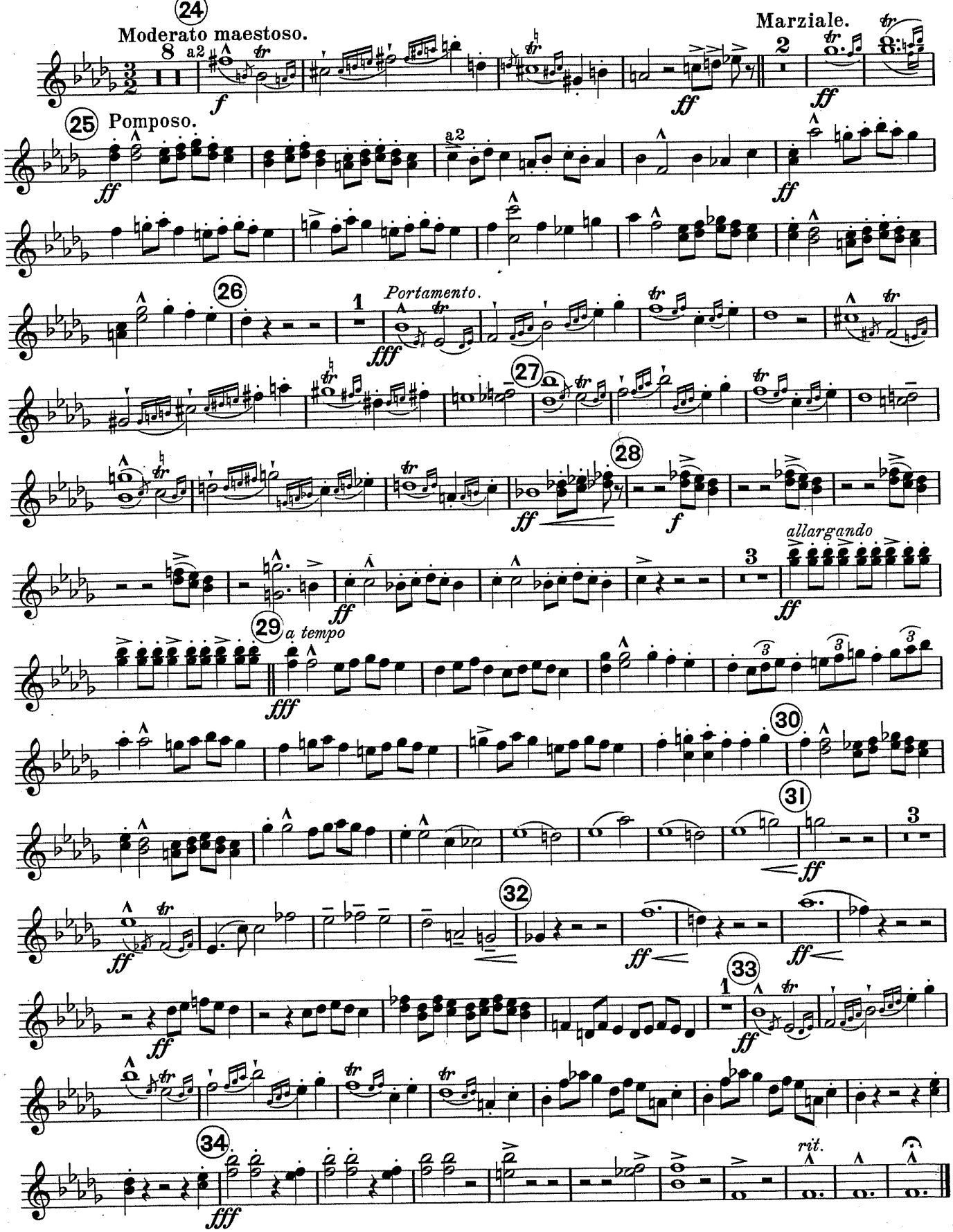


Oboes.

No. 5. MARCH OF THE MOGUL EMPERORS



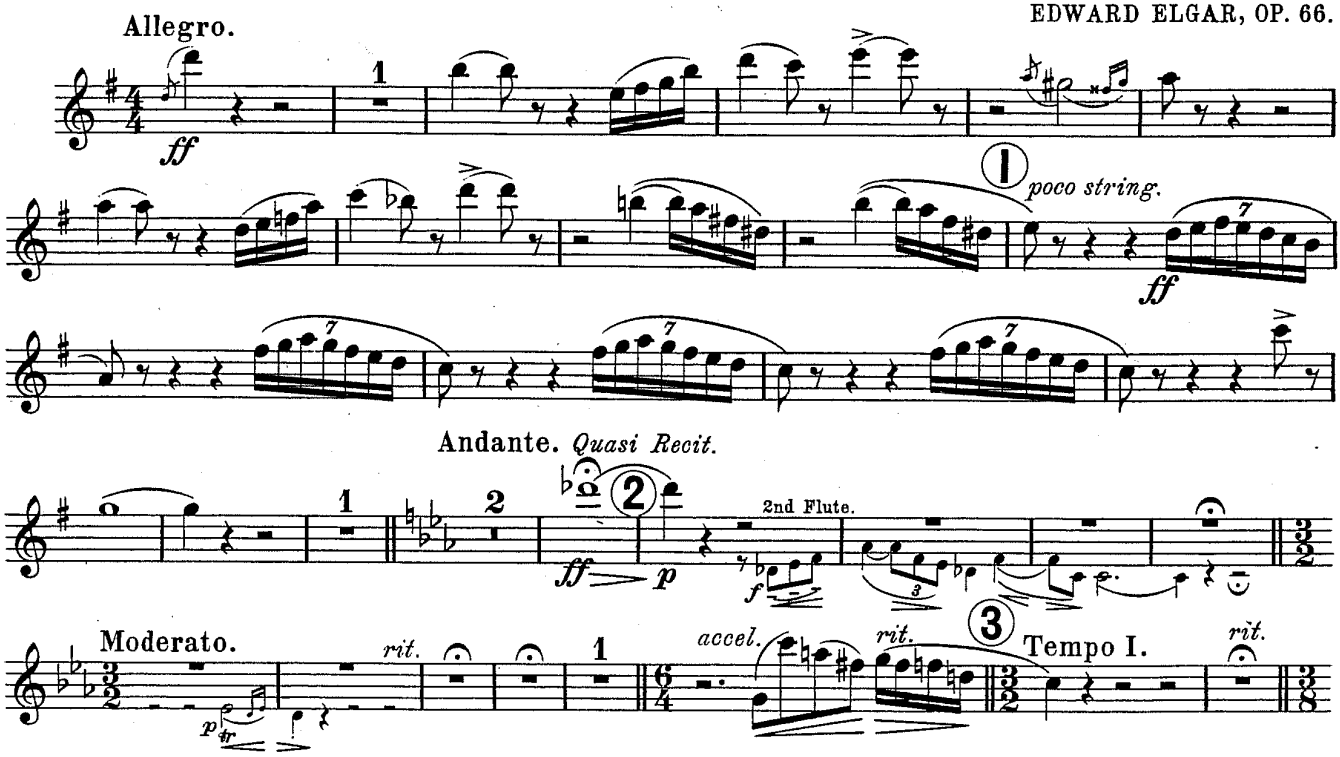
SUITE

THE CROWN OF INDIA

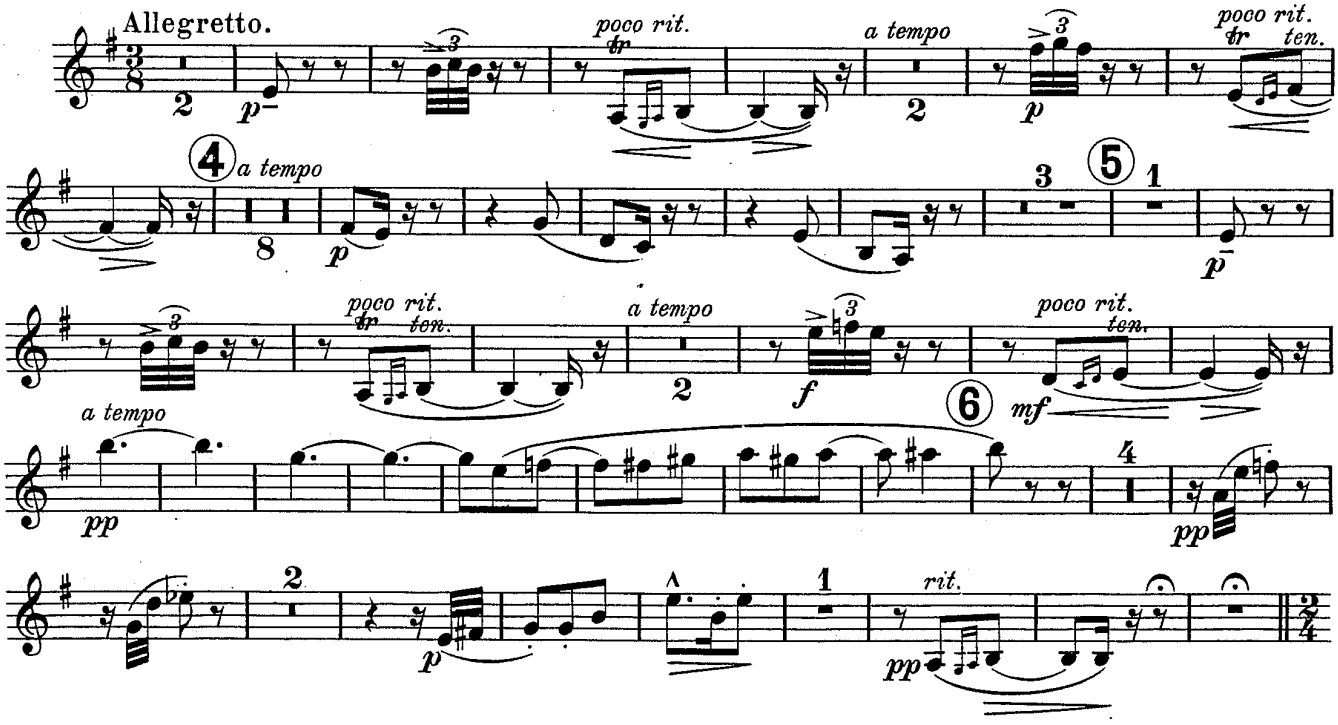
E♭ Clarinet.

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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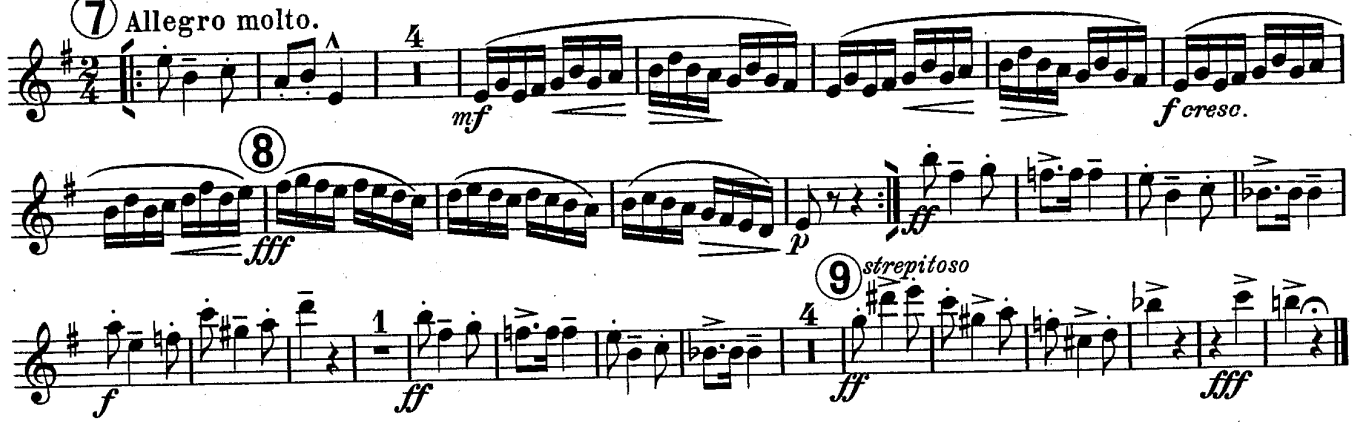
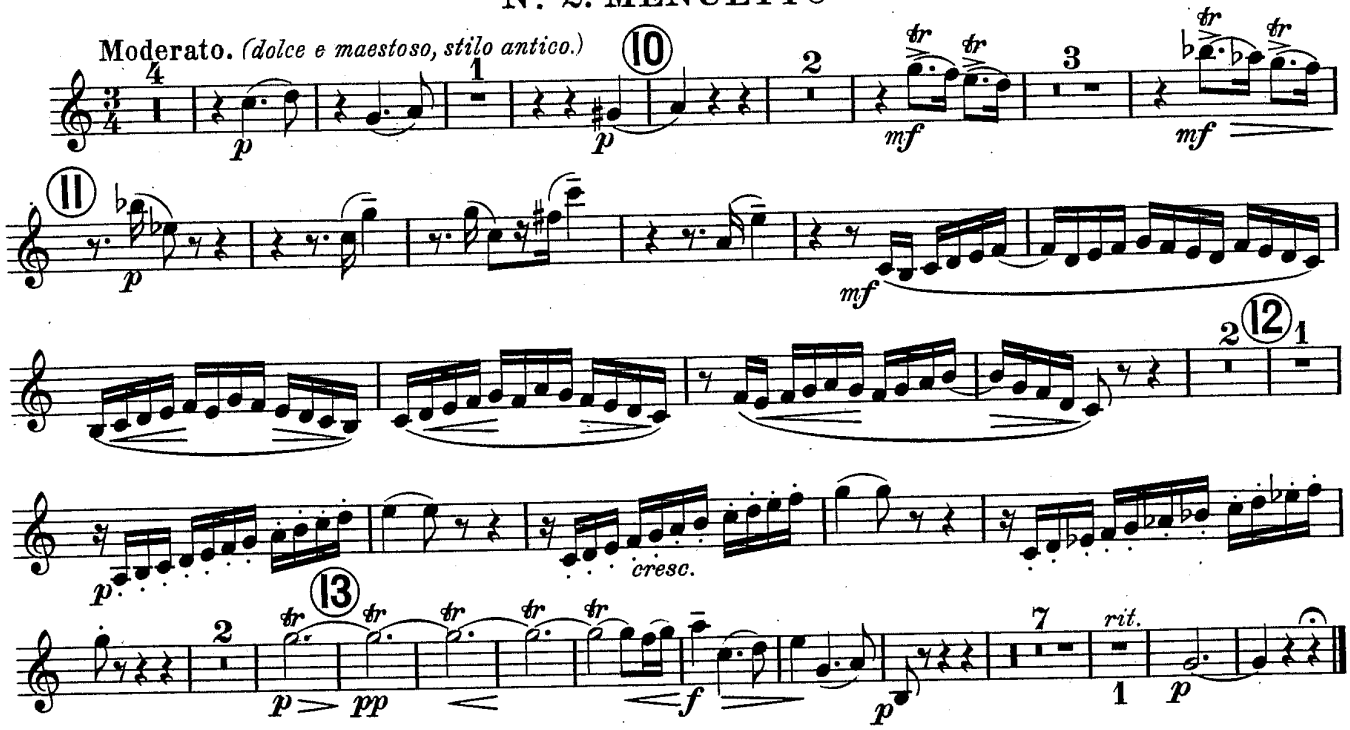
Printed in Leipzig.

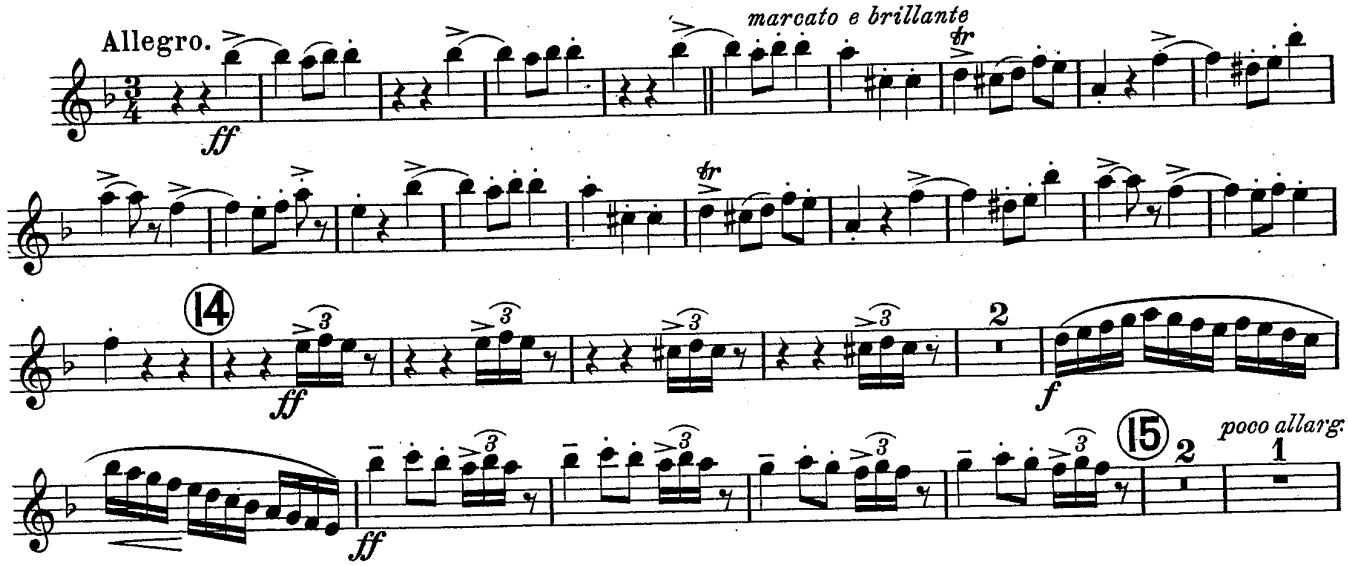
E♭ Clarinet.

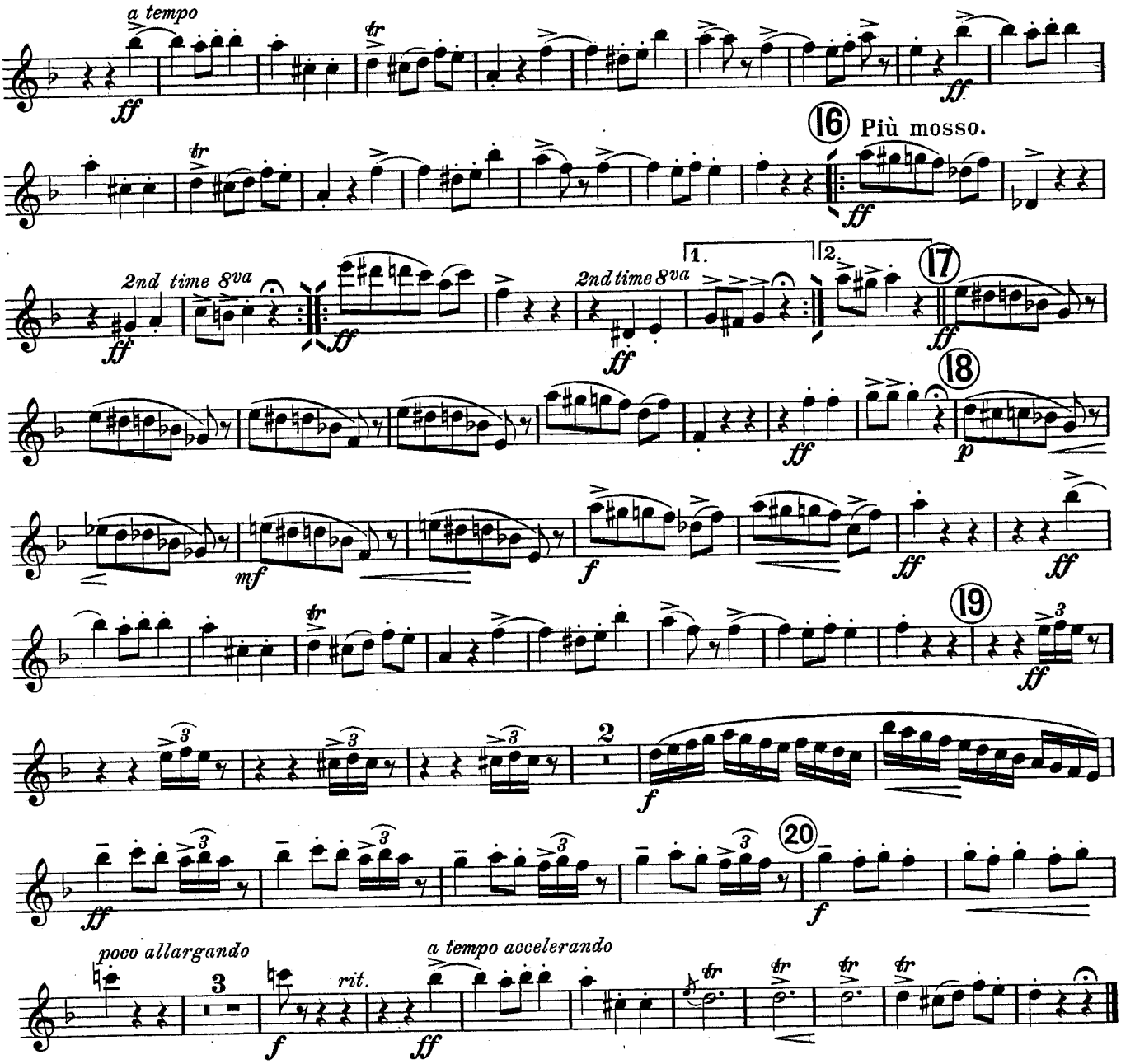


No. 2. MENUETTO

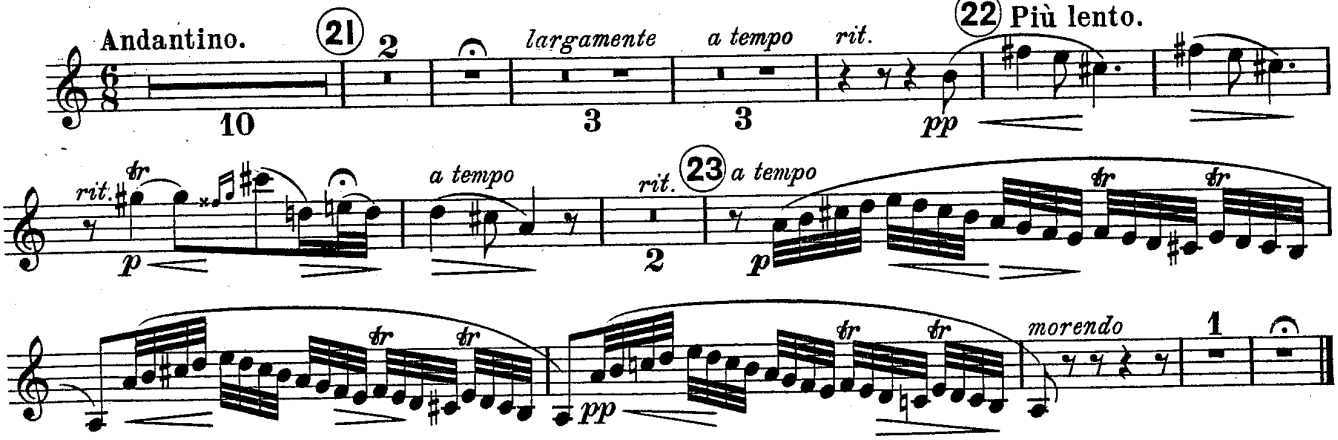


No. 3. WARRIORS' DANCE

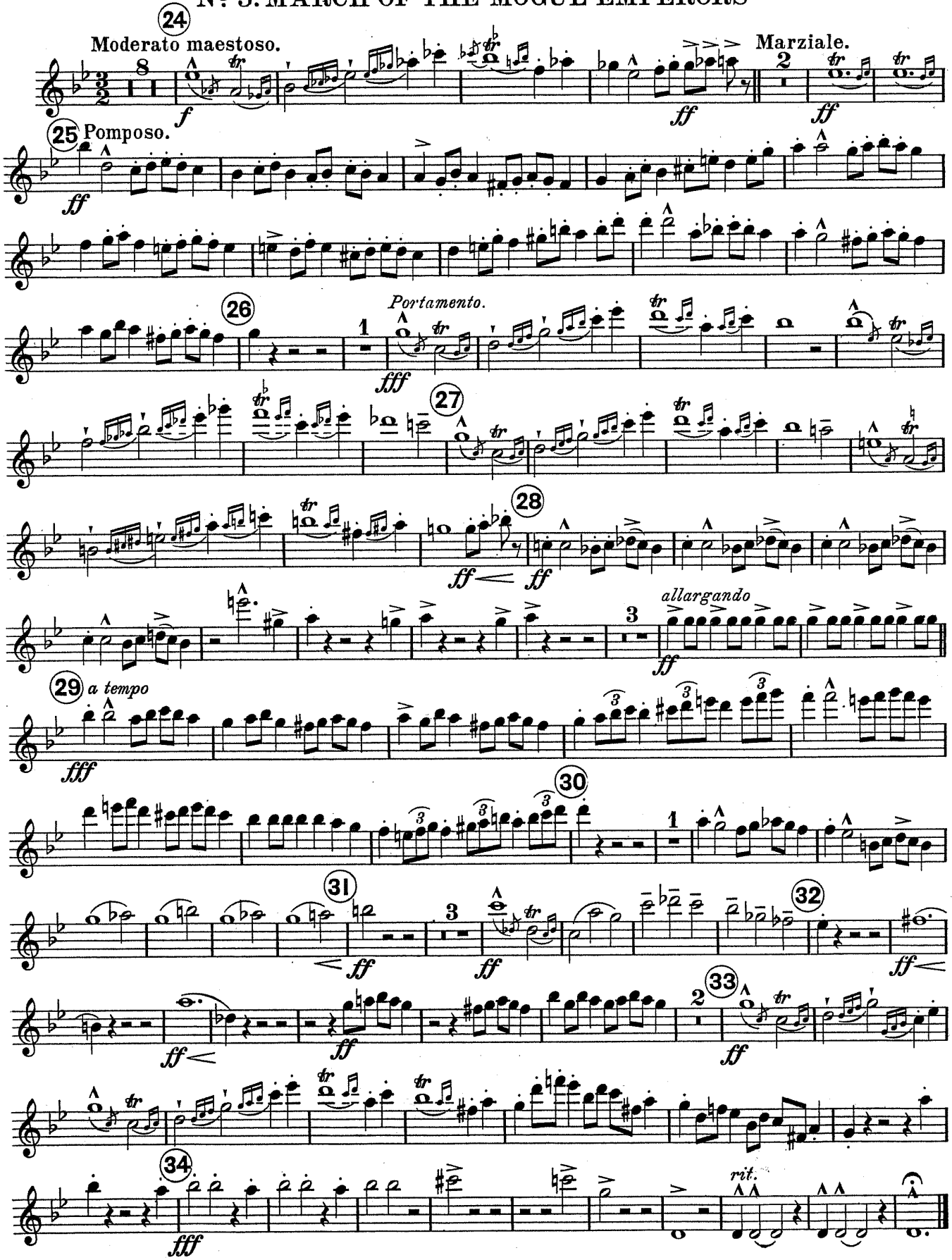




Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



Hawkes & Son's M. B. Edition
No 390.

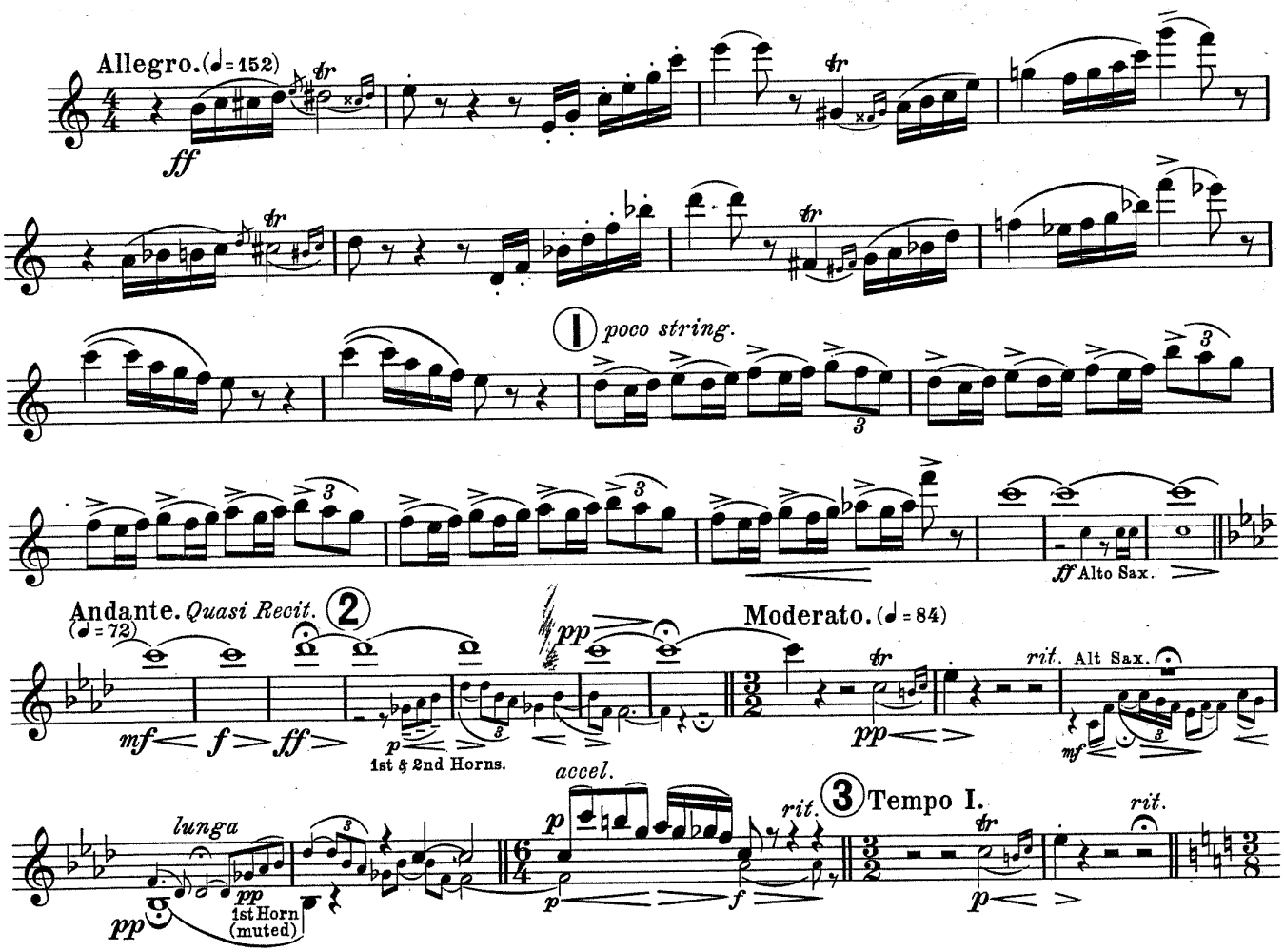
SUITE

THE CROWN OF INDIA

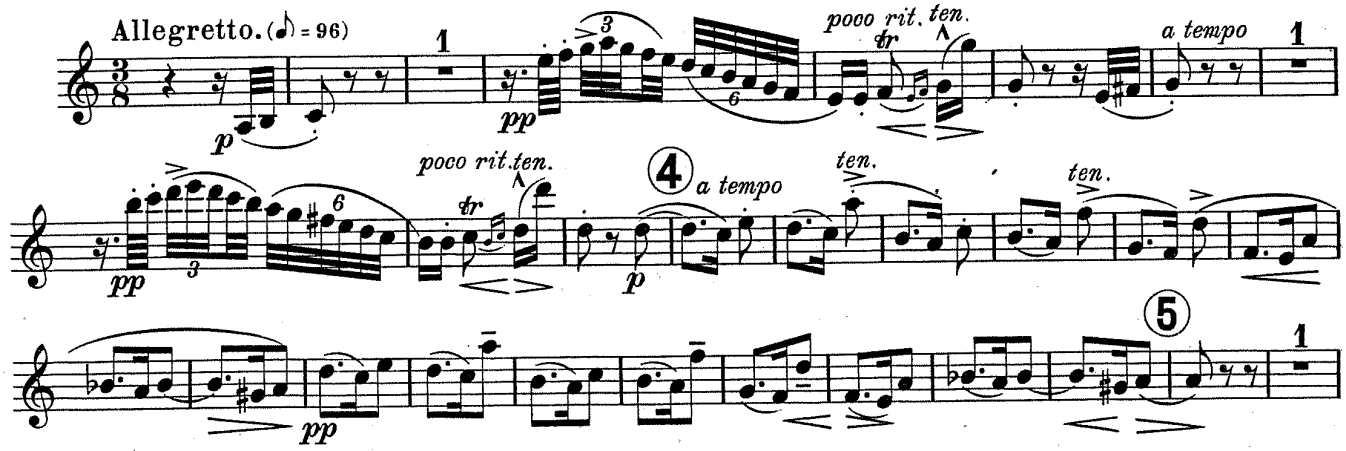
Solo B♭ Clarinet.

EDWARD ELGAR, OP. 66.
Arranged for Military Band
by Frank Winterbottom.

No 1. (a) INTRODUCTION



(b) DANCE OF NAUTCH GIRLS



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PARIS 16 Rue Saulnier, IXe
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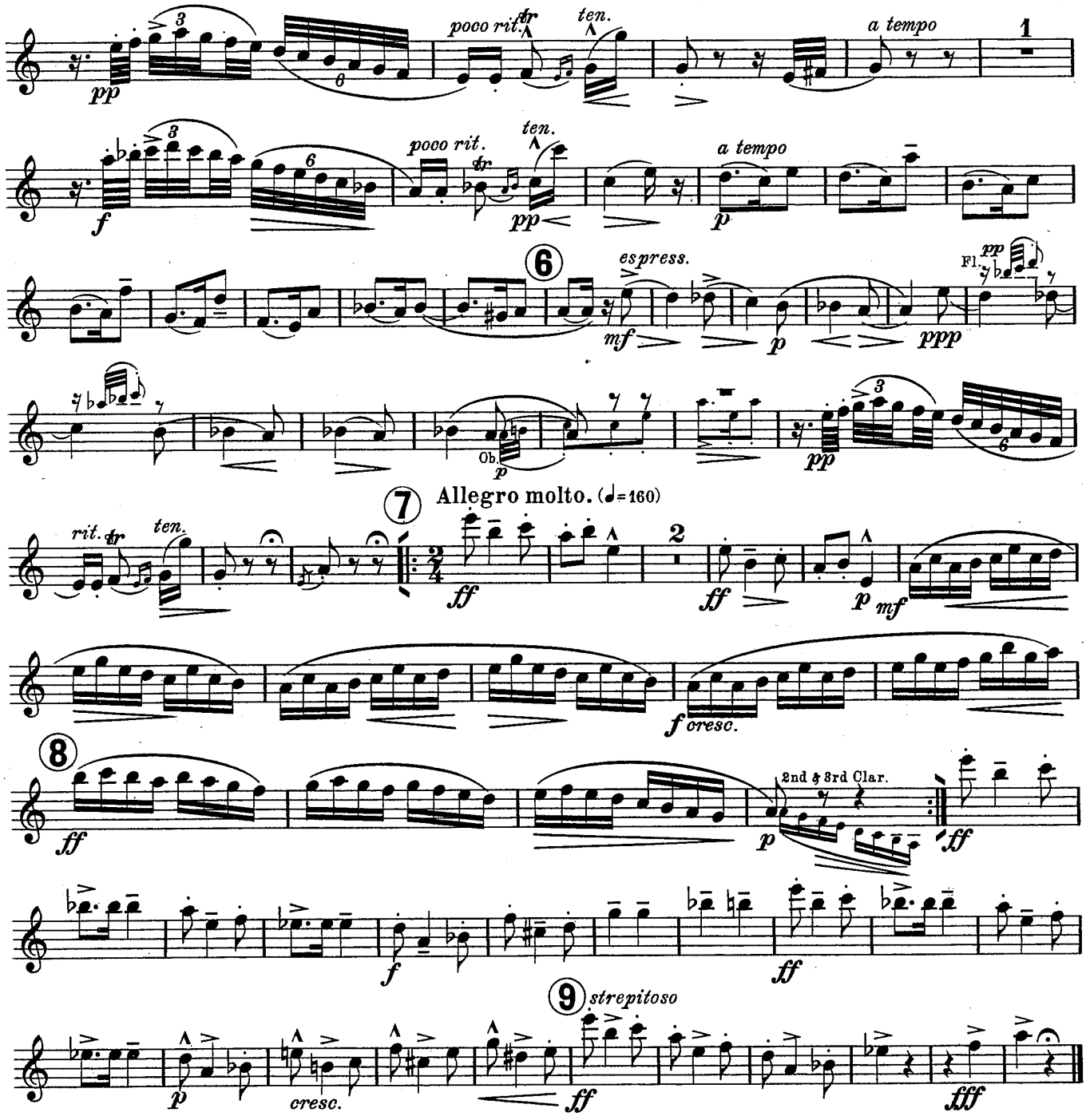
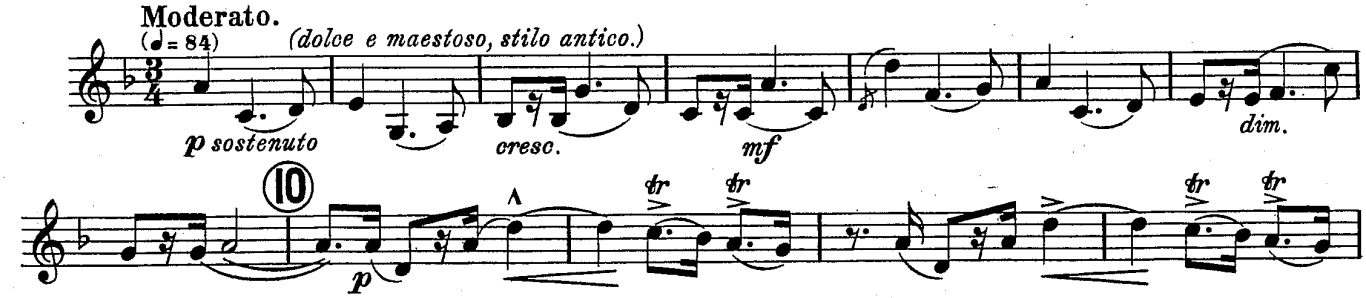
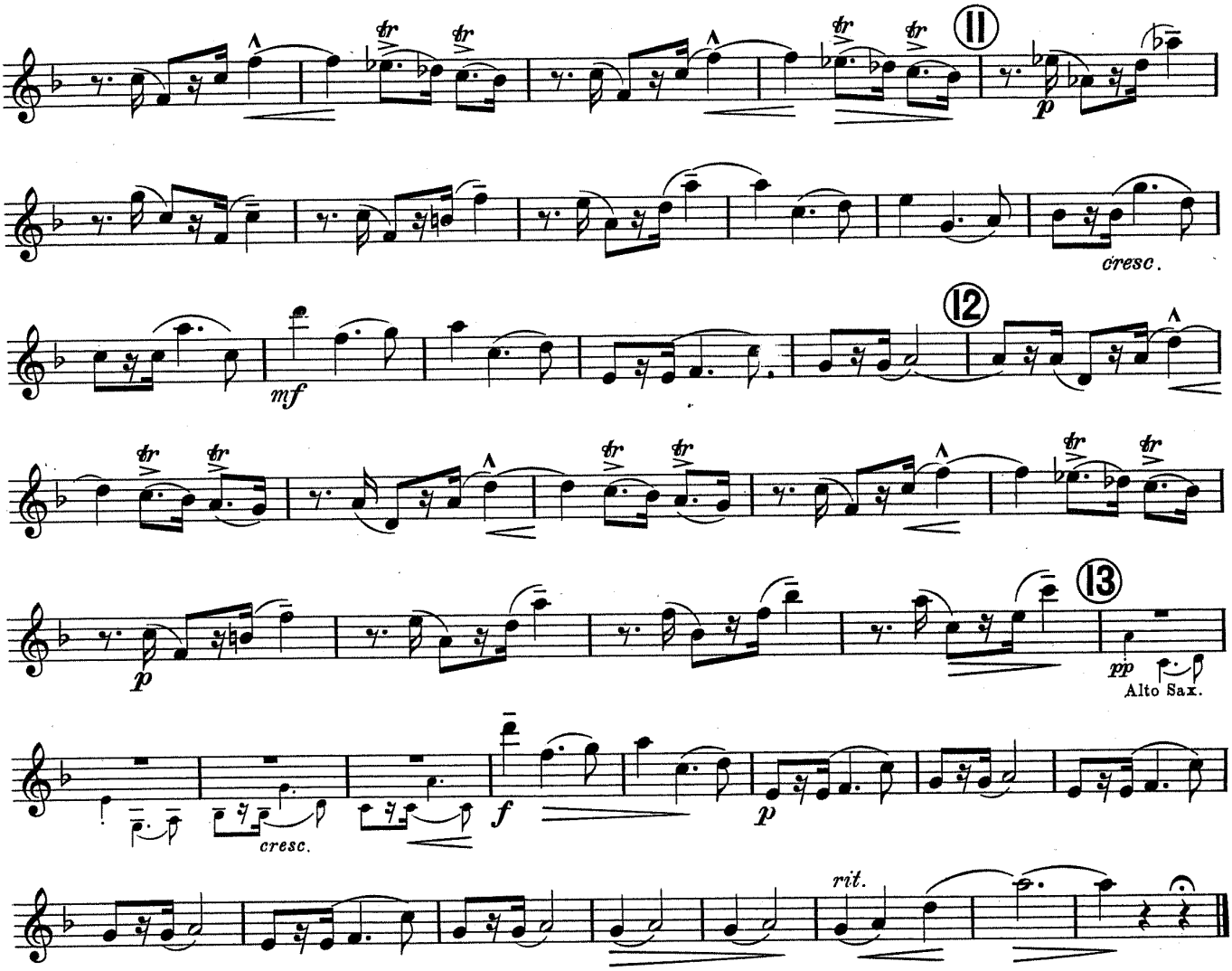
Solo B♭ Clarinet.

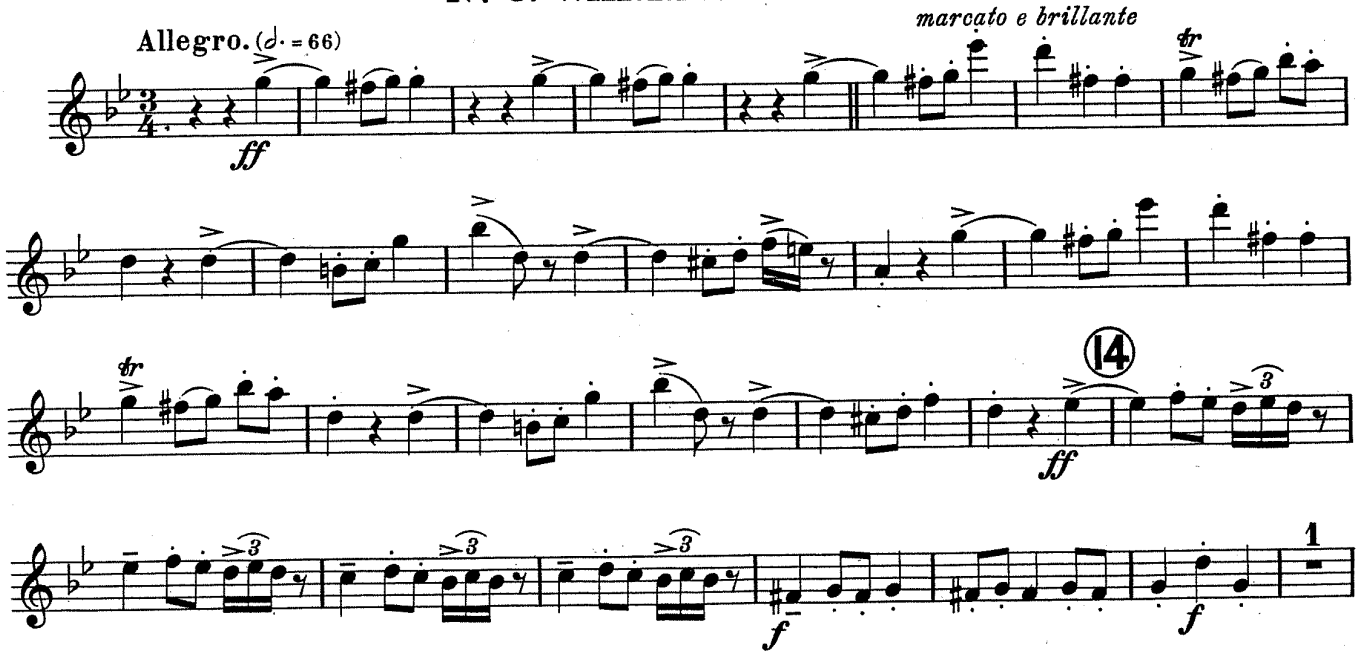


Nº 2. MENUETTO

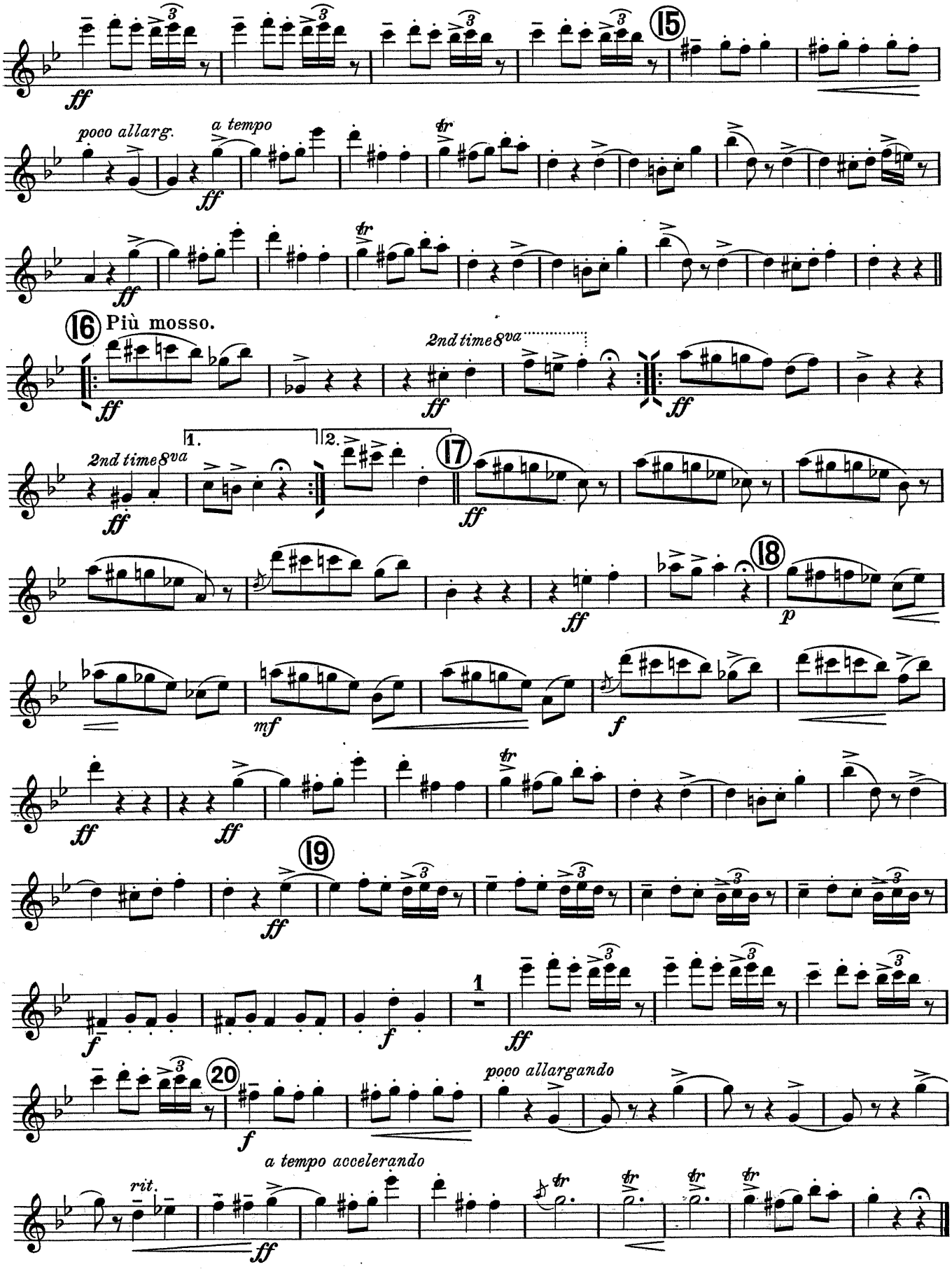




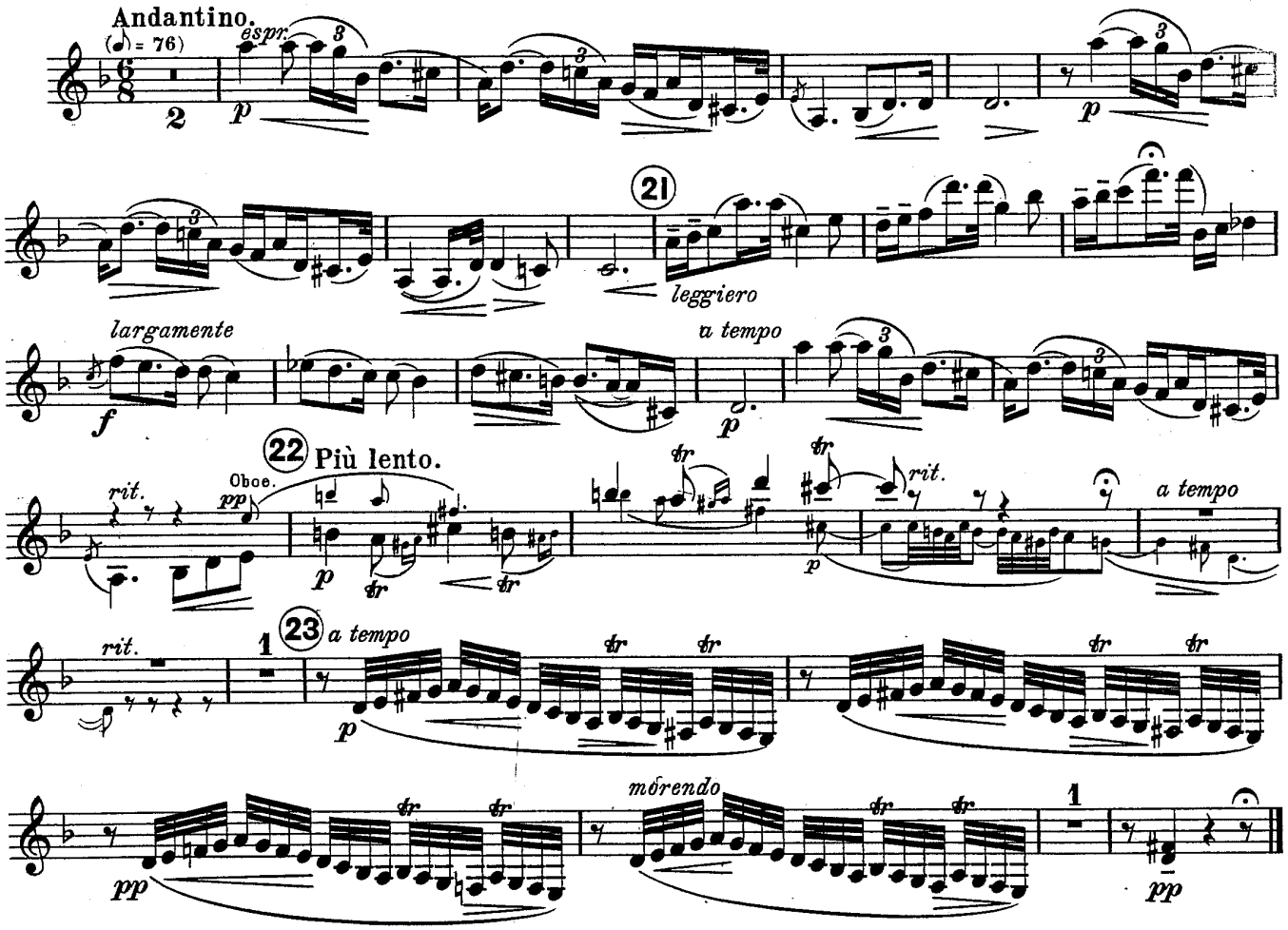
Nº 3. WARRIORS' DANCE



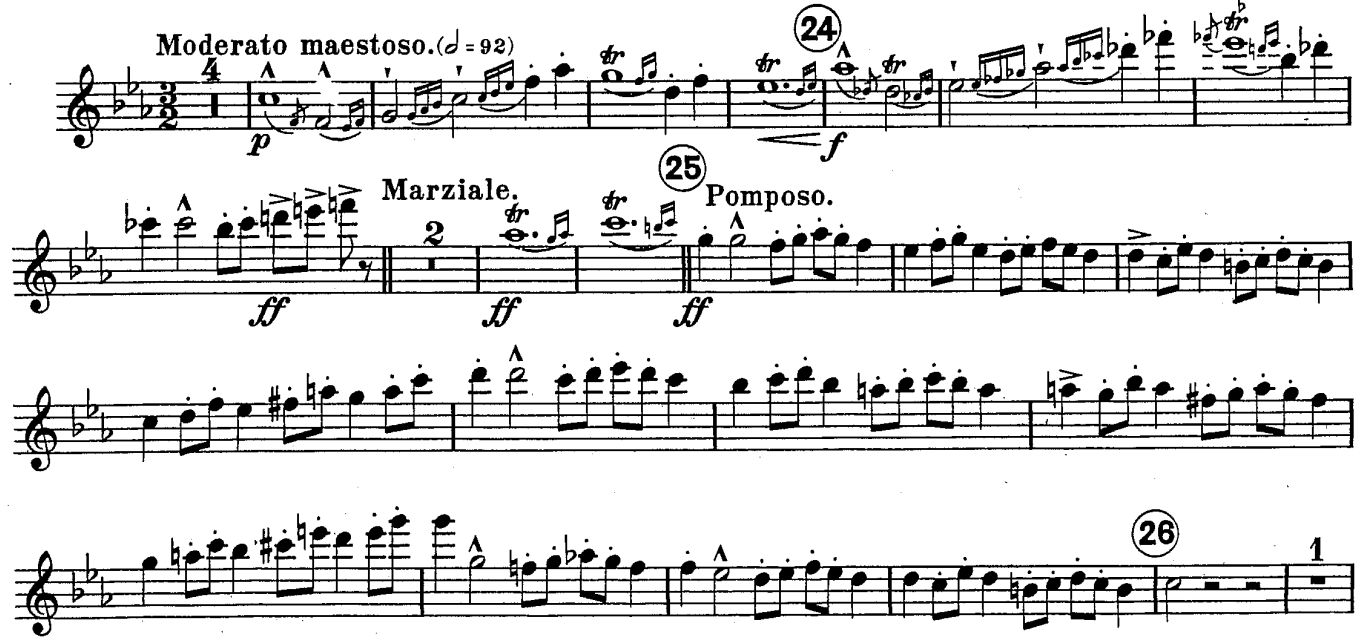
Solo B♭ Clarinet.



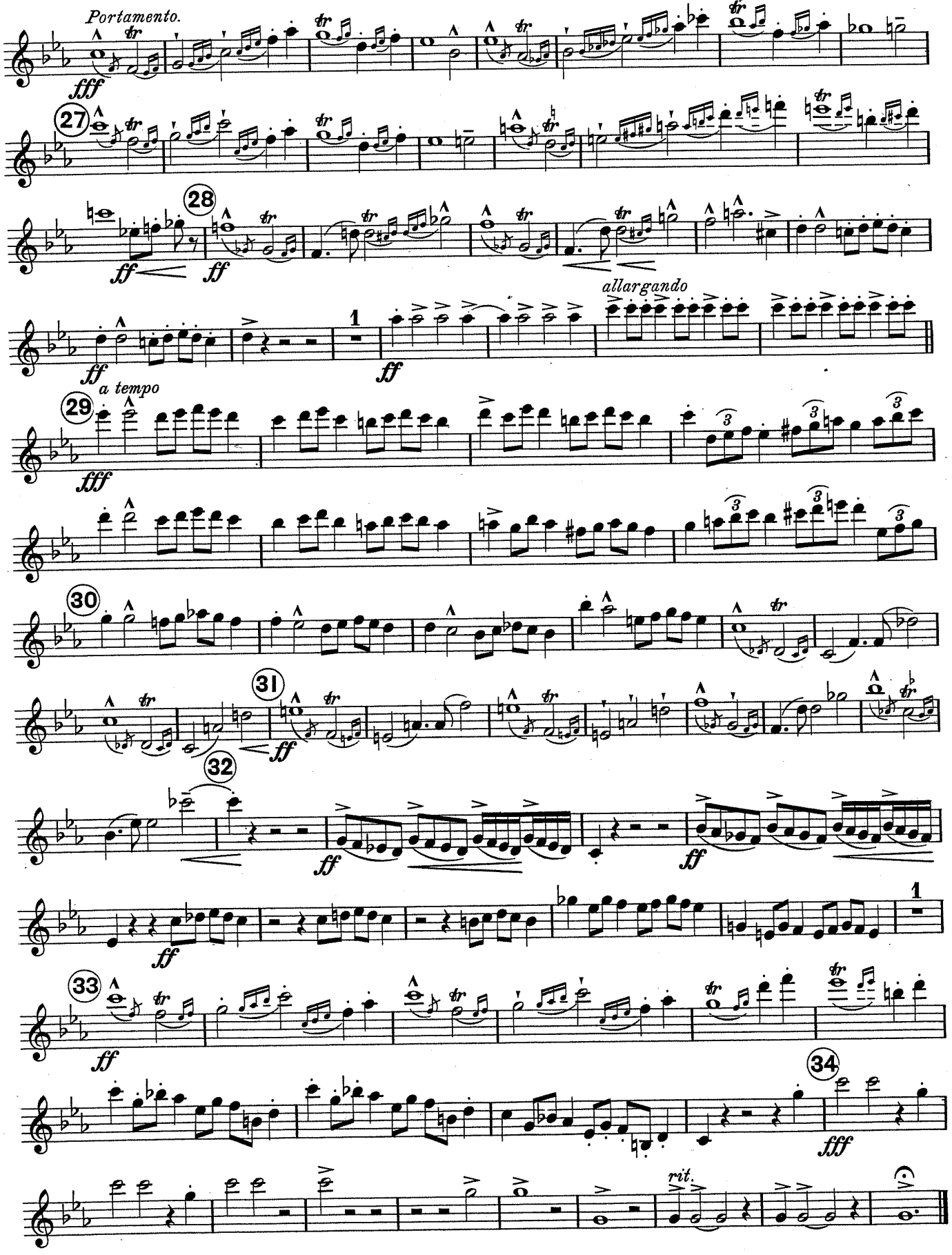
Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



Solo B♭ Clarinet.

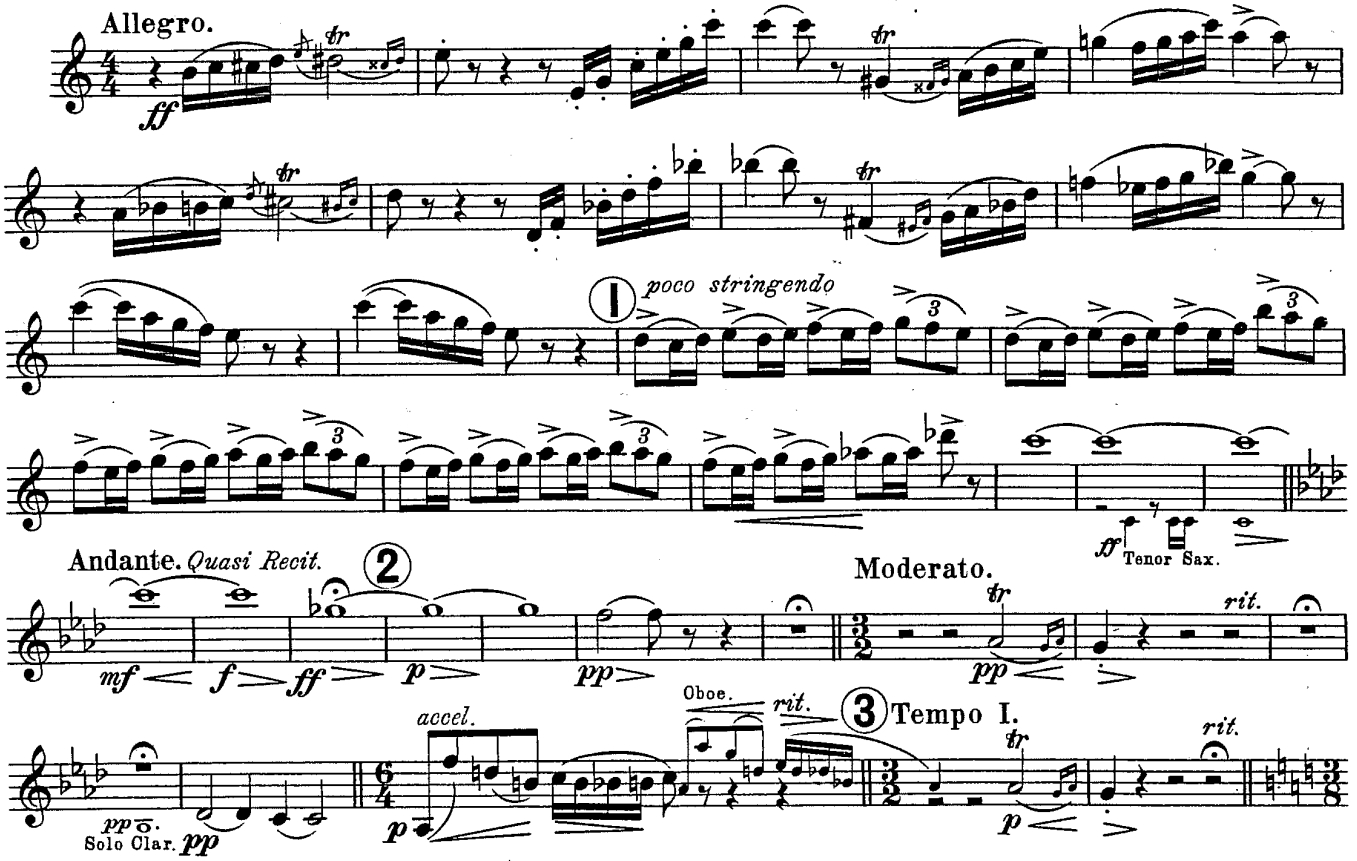


SUITE
THE CROWN OF INDIA

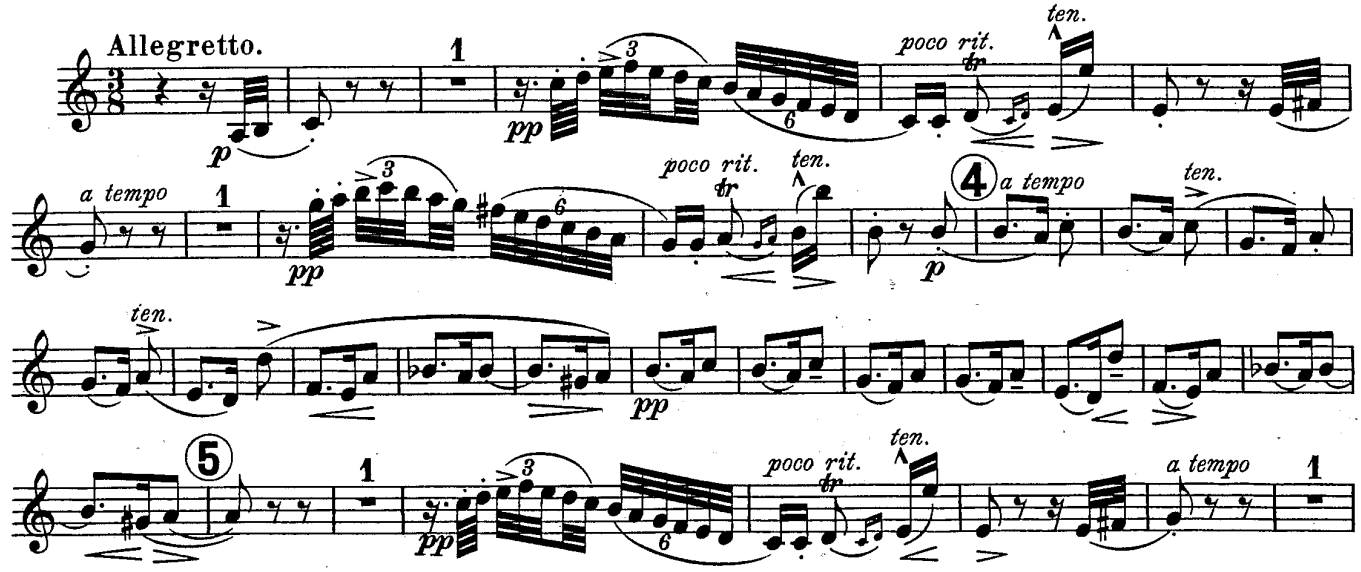
1st B♭ Clarinet.

Nº 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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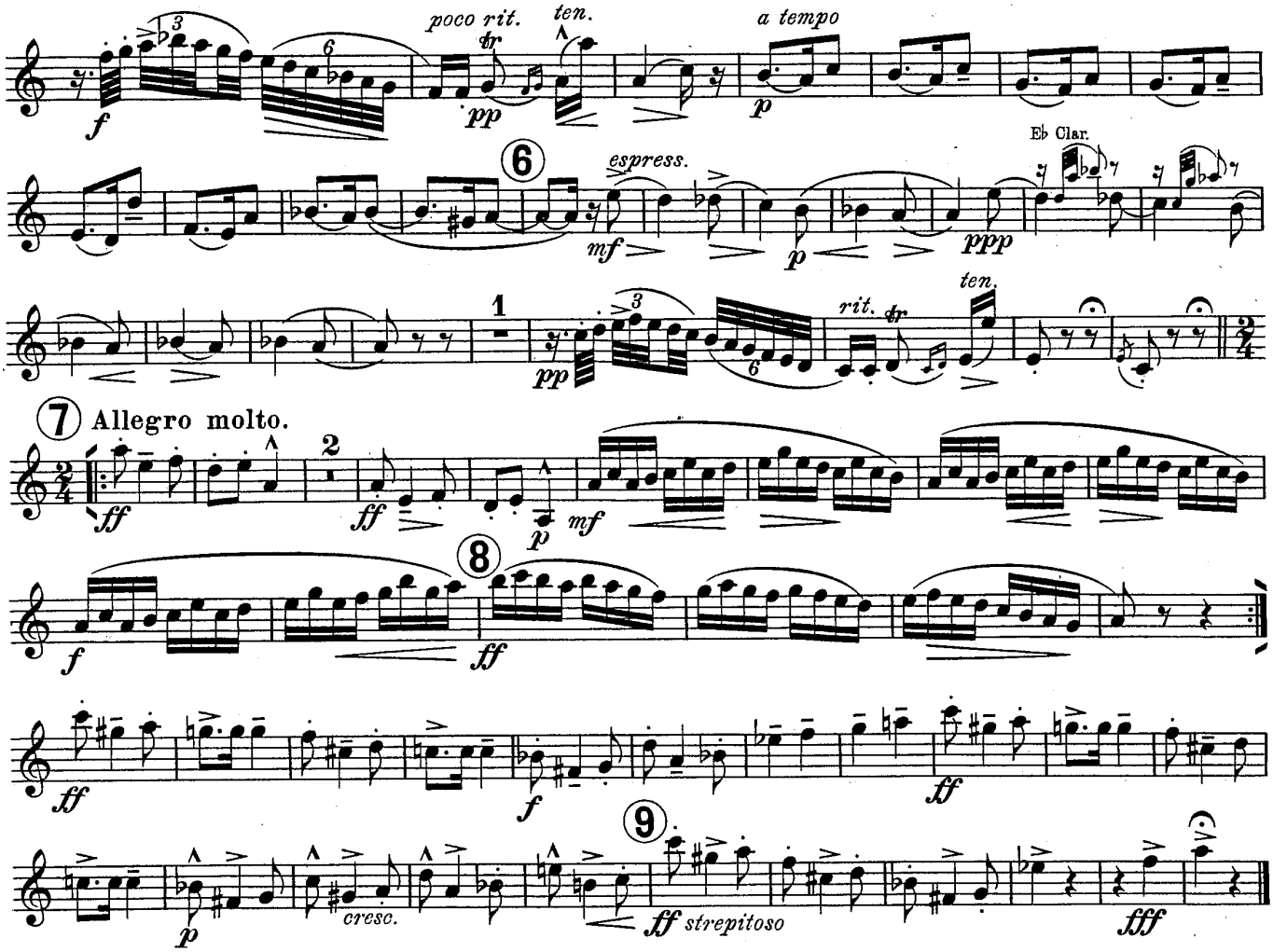
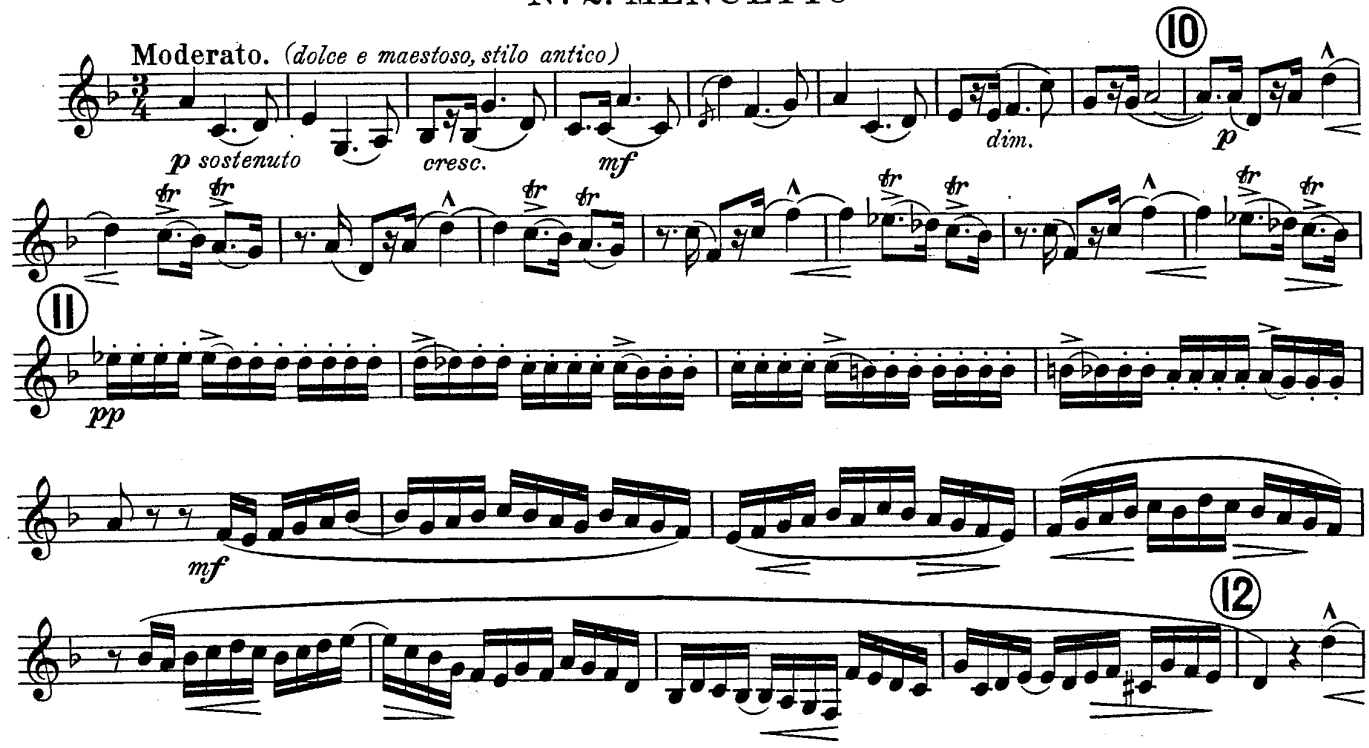
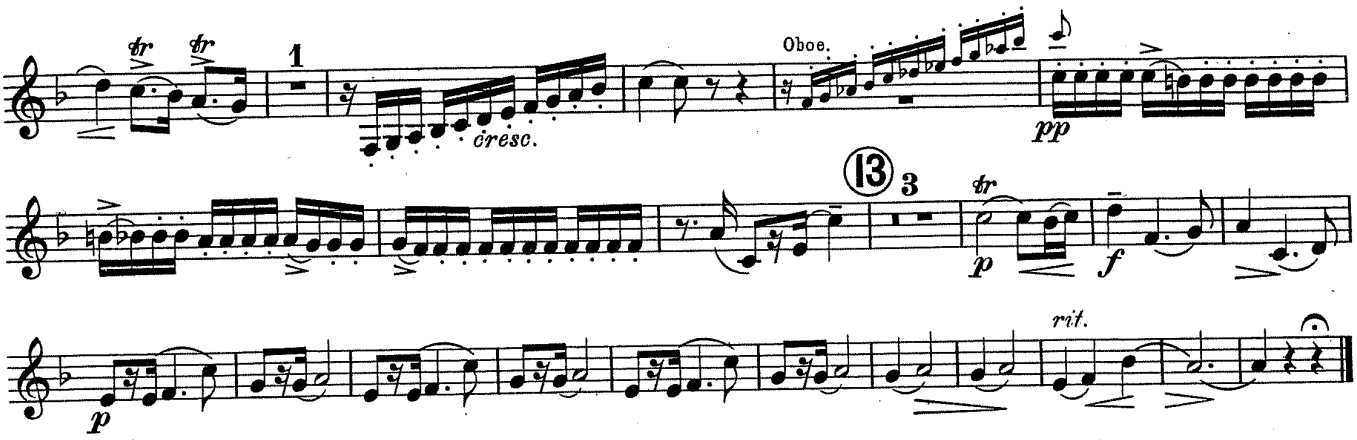
1st B♭ Clarinet.

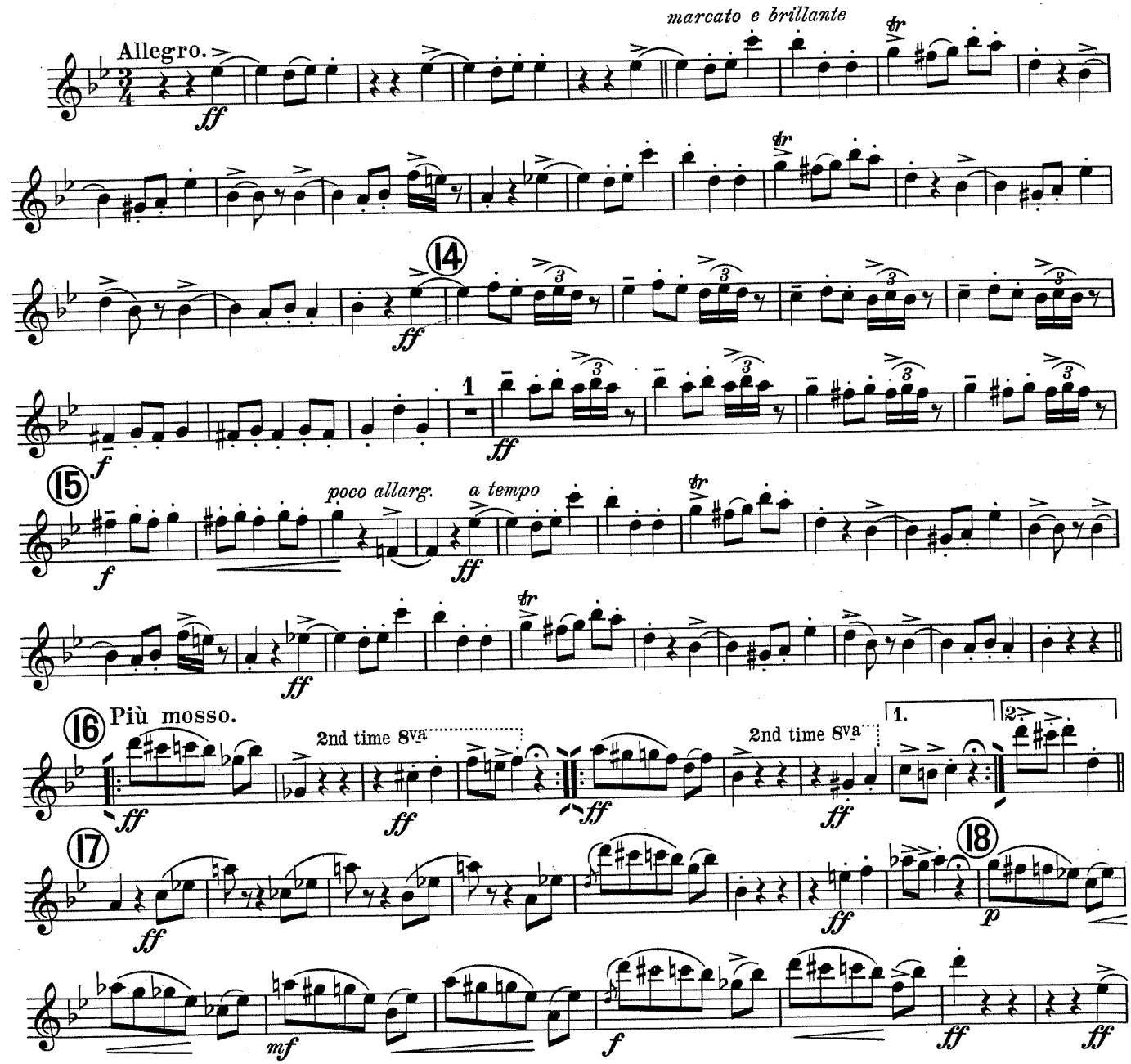


No 2. MENUETTO

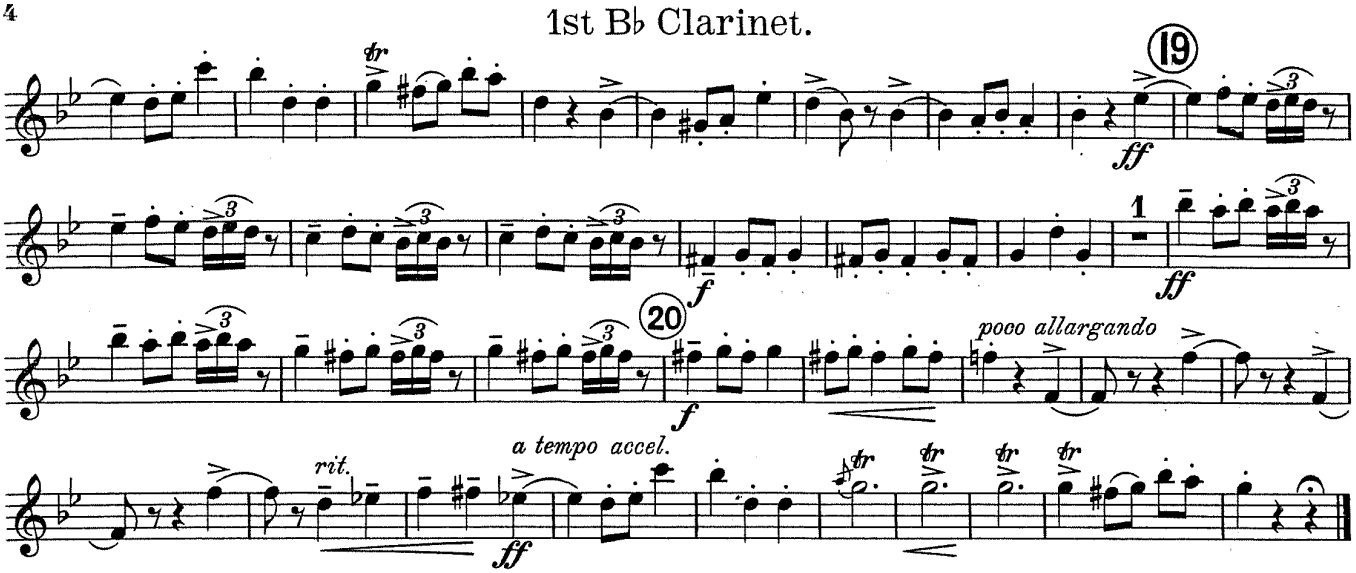




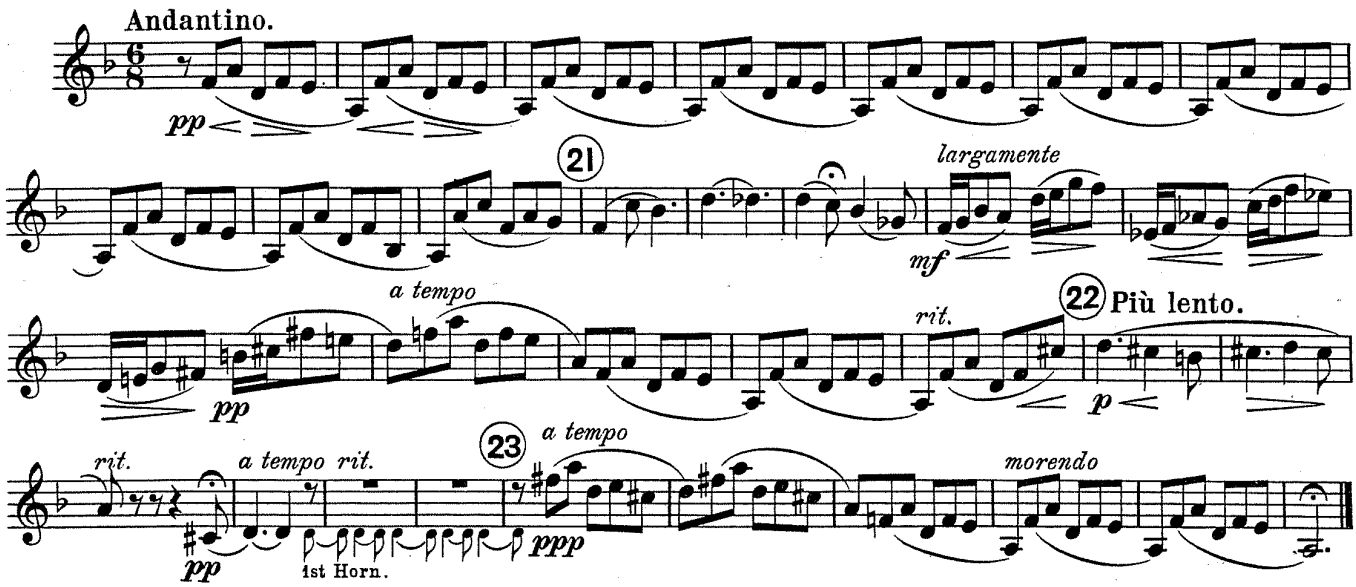
No. 3. WARRIORS' DANCE



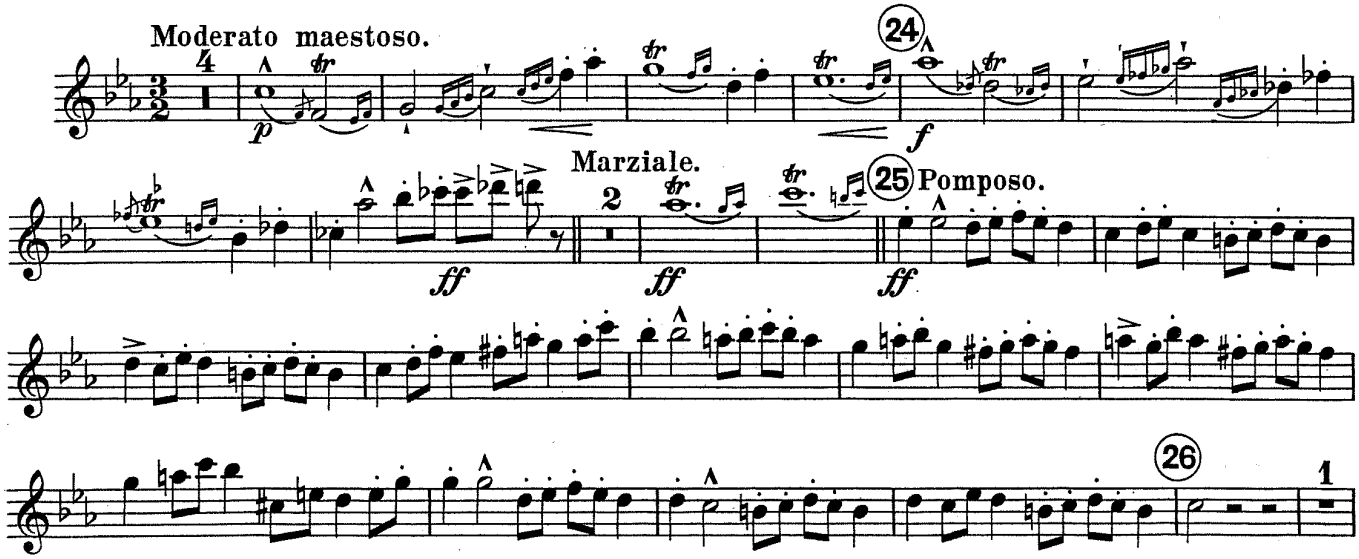
1st B♭ Clarinet.



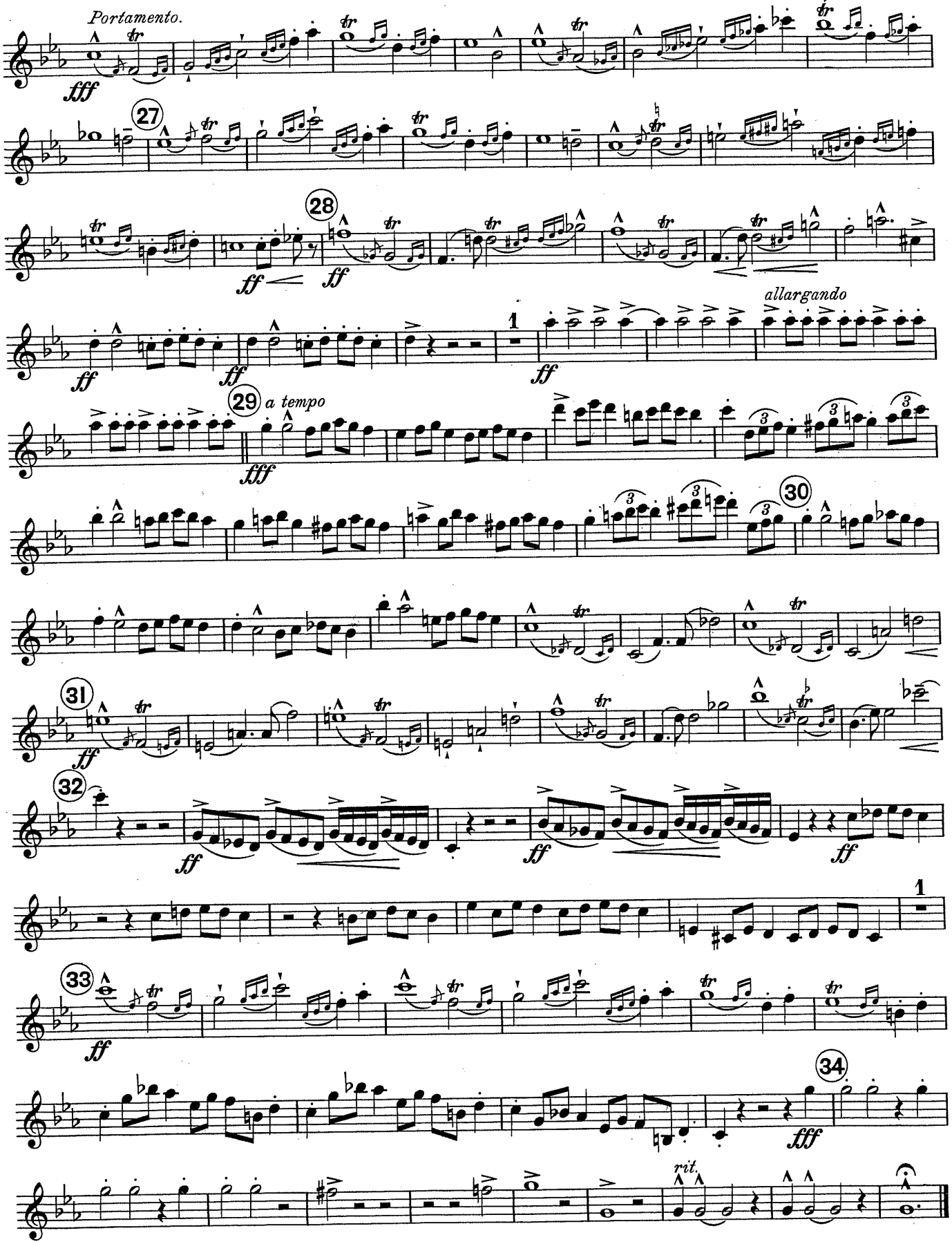
Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



1st B♭ Clarinet.

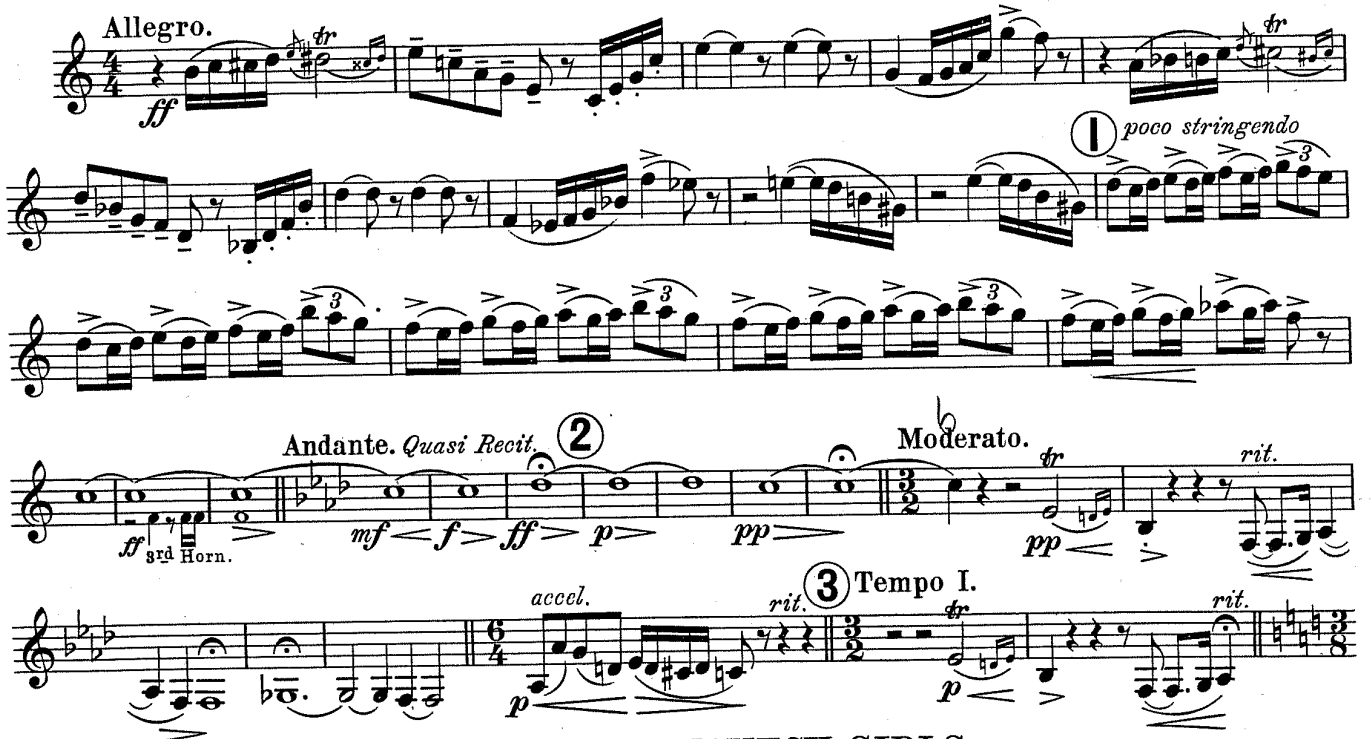


SUITE
THE CROWN OF INDIA

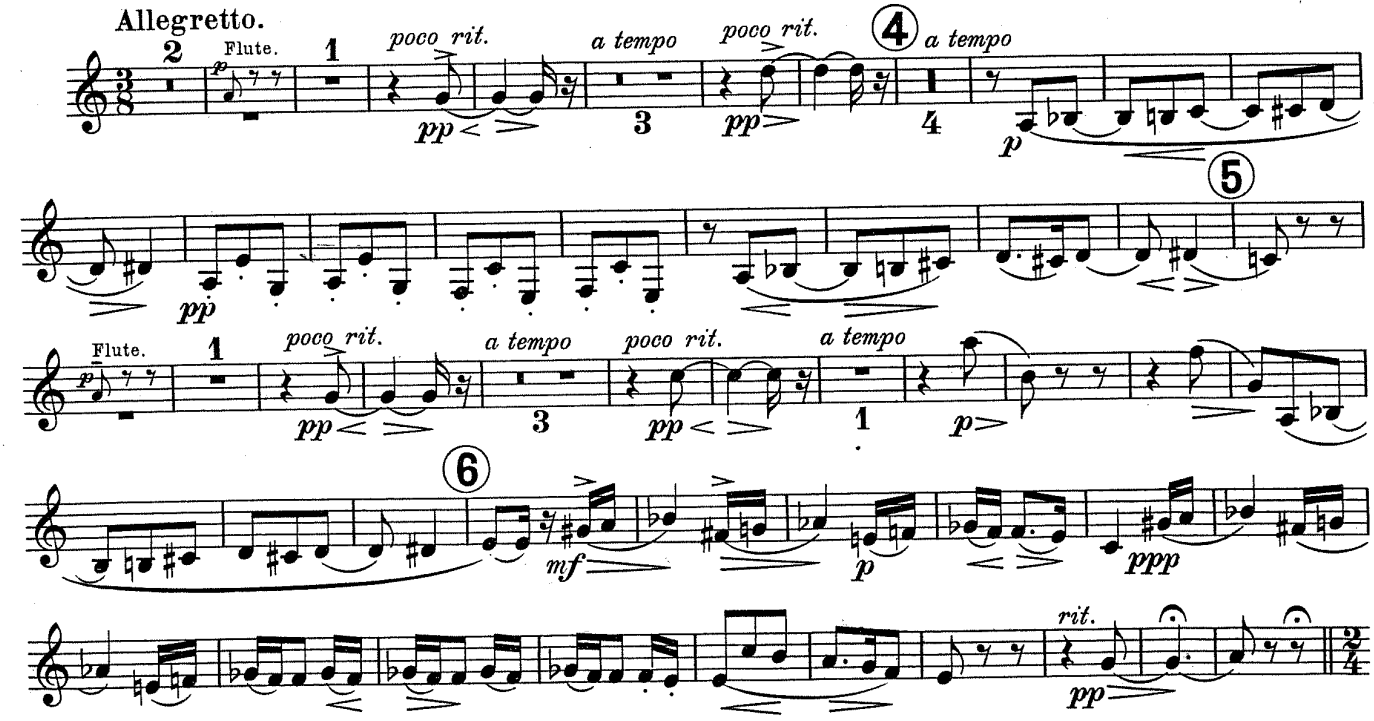
2nd B♭ Clarinet.

Nº 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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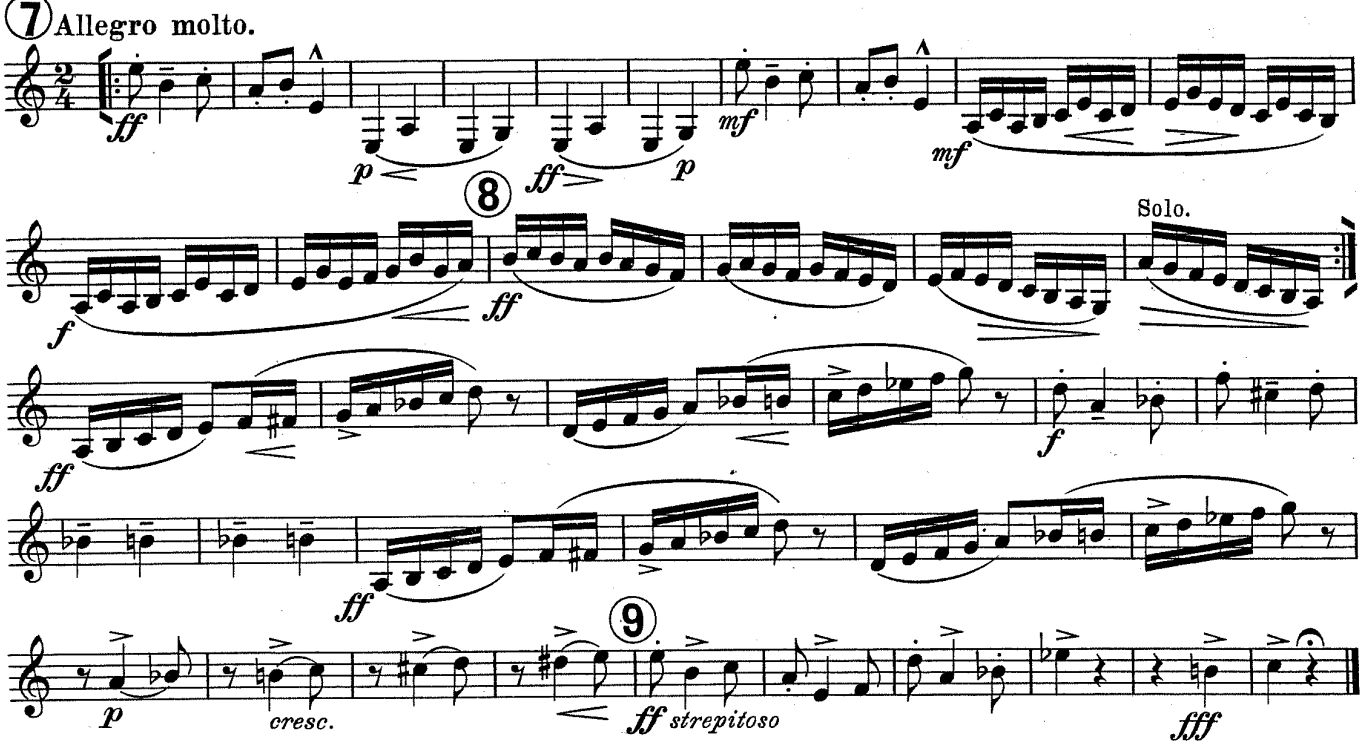
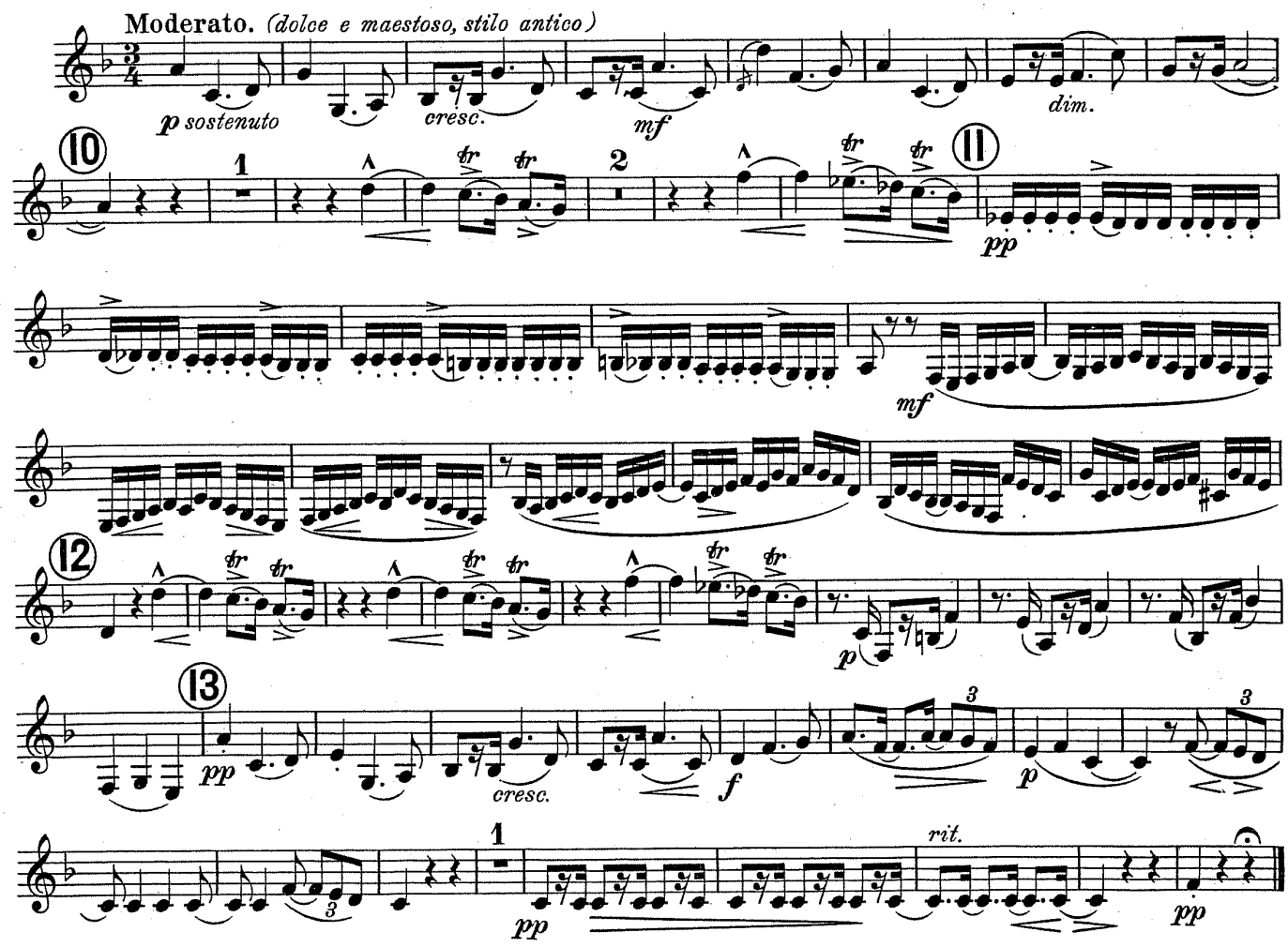
Printed by Hawkes & Son (London), Ltd., Leipzig.
H. & S. 4983
Printed in Leipzig.

2nd B♭ Clarinet.



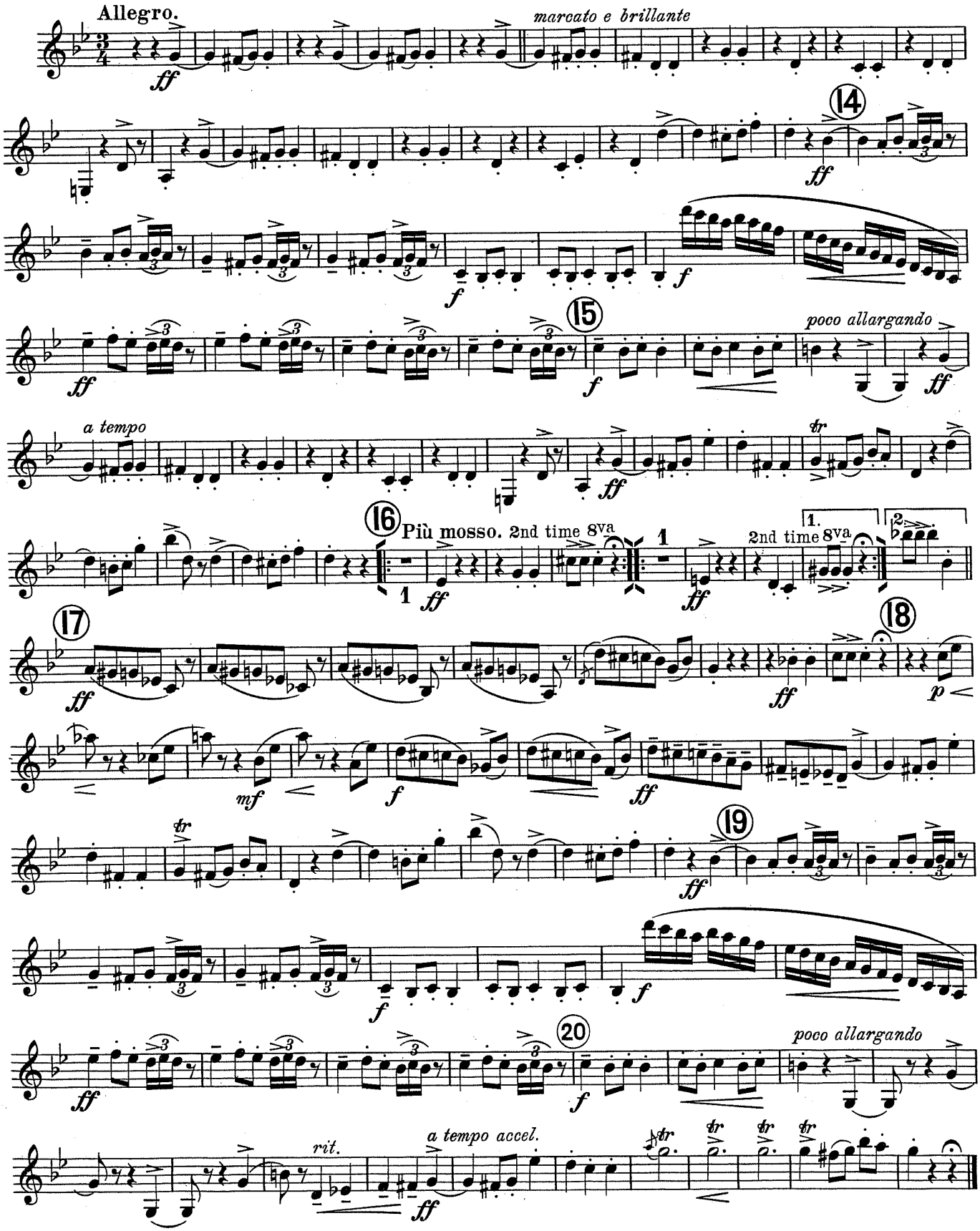
No 2. MENUETTO



H. & S. 4983

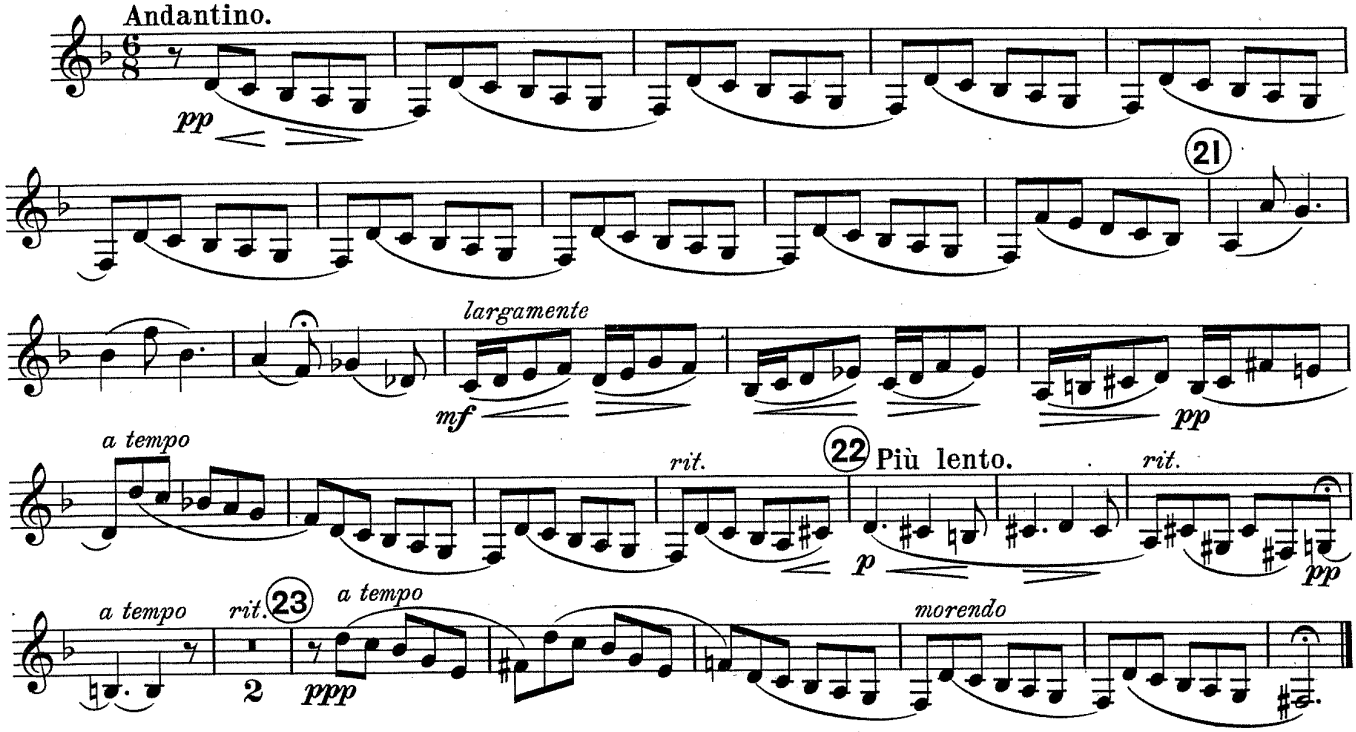
2nd B♭ Clarinet.

No 3. WARRIORS' DANCE

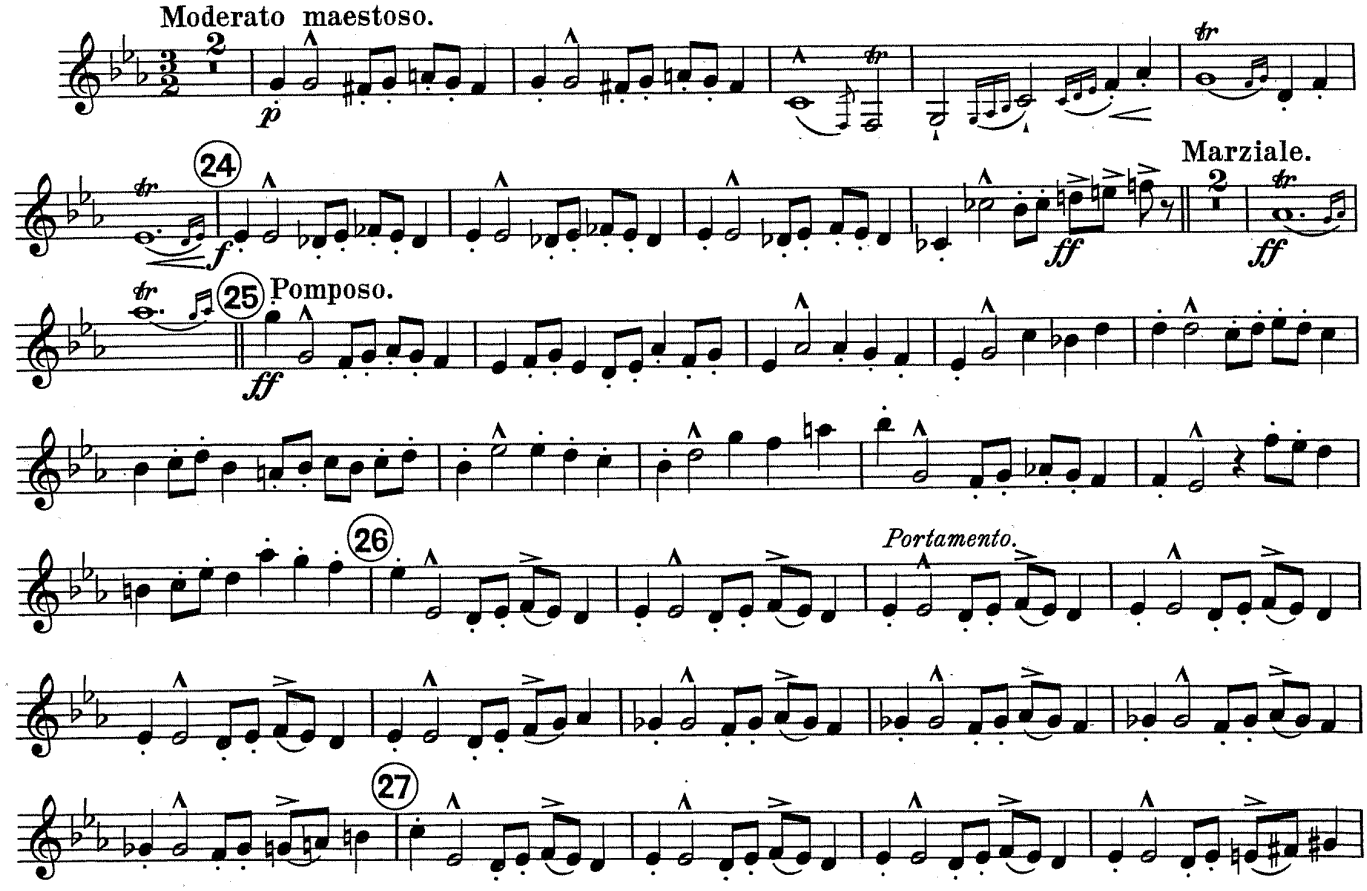


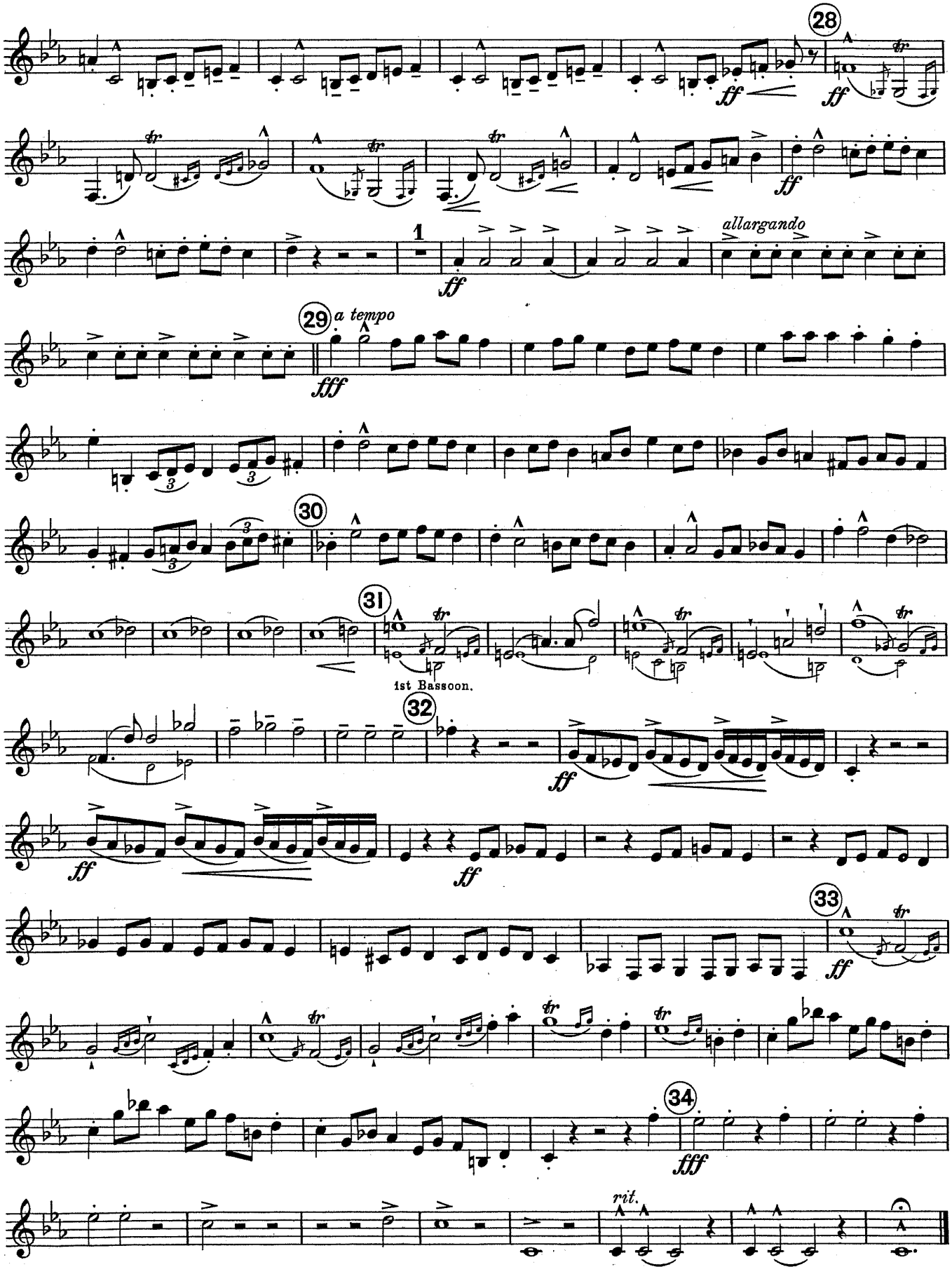
2nd B♭ Clarinet.

Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



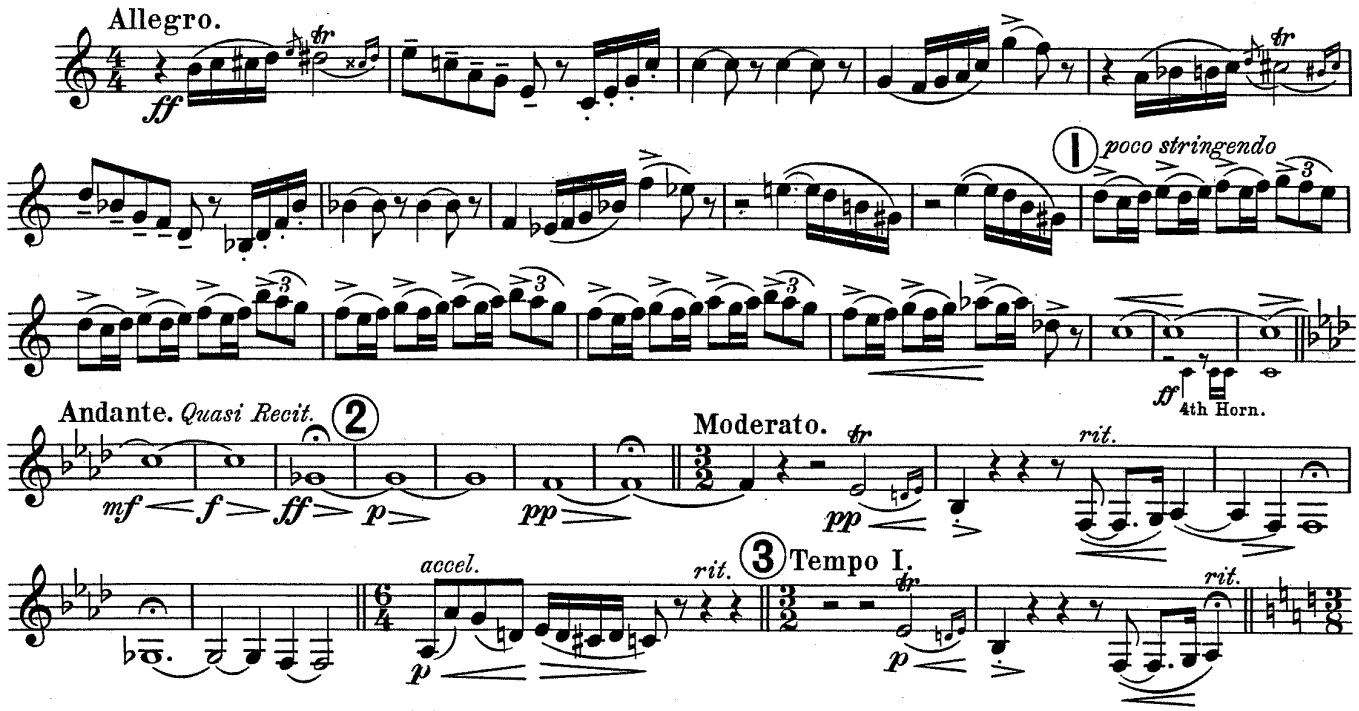

28
ff
ff
1
ff
allargando
29
a tempo
fff
30
31
1st Bassoon.
32
ff
ff
ff
33
ff
34
fff
rit.

SUITE
THE CROWN OF INDIA

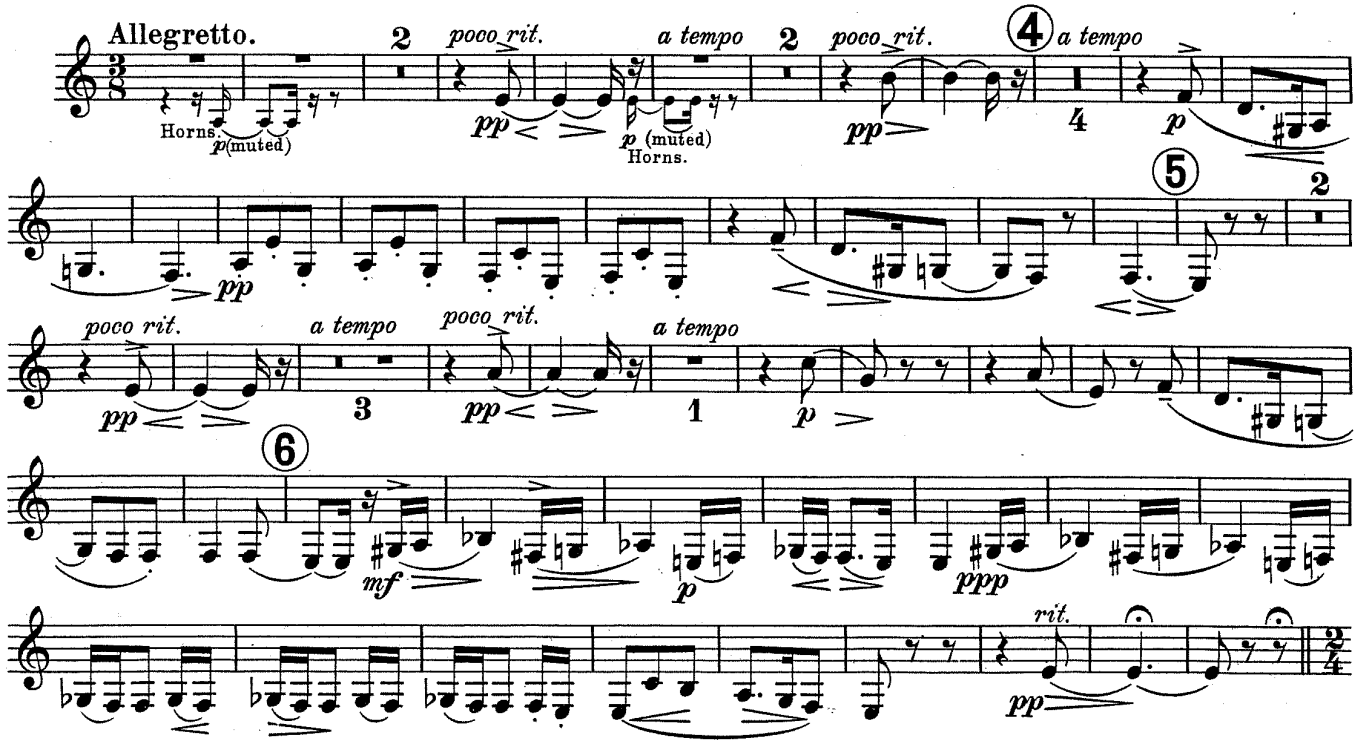
3rd B♭ Clarinet.

Nº 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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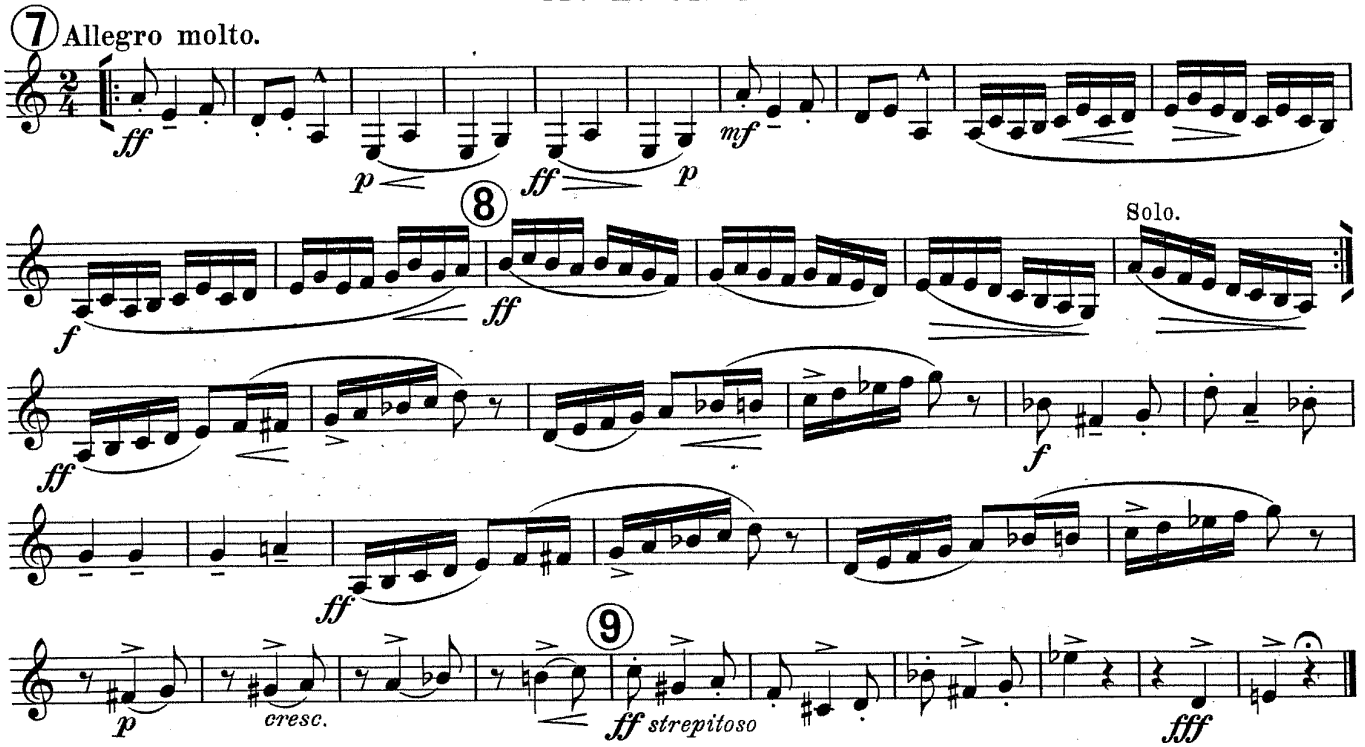
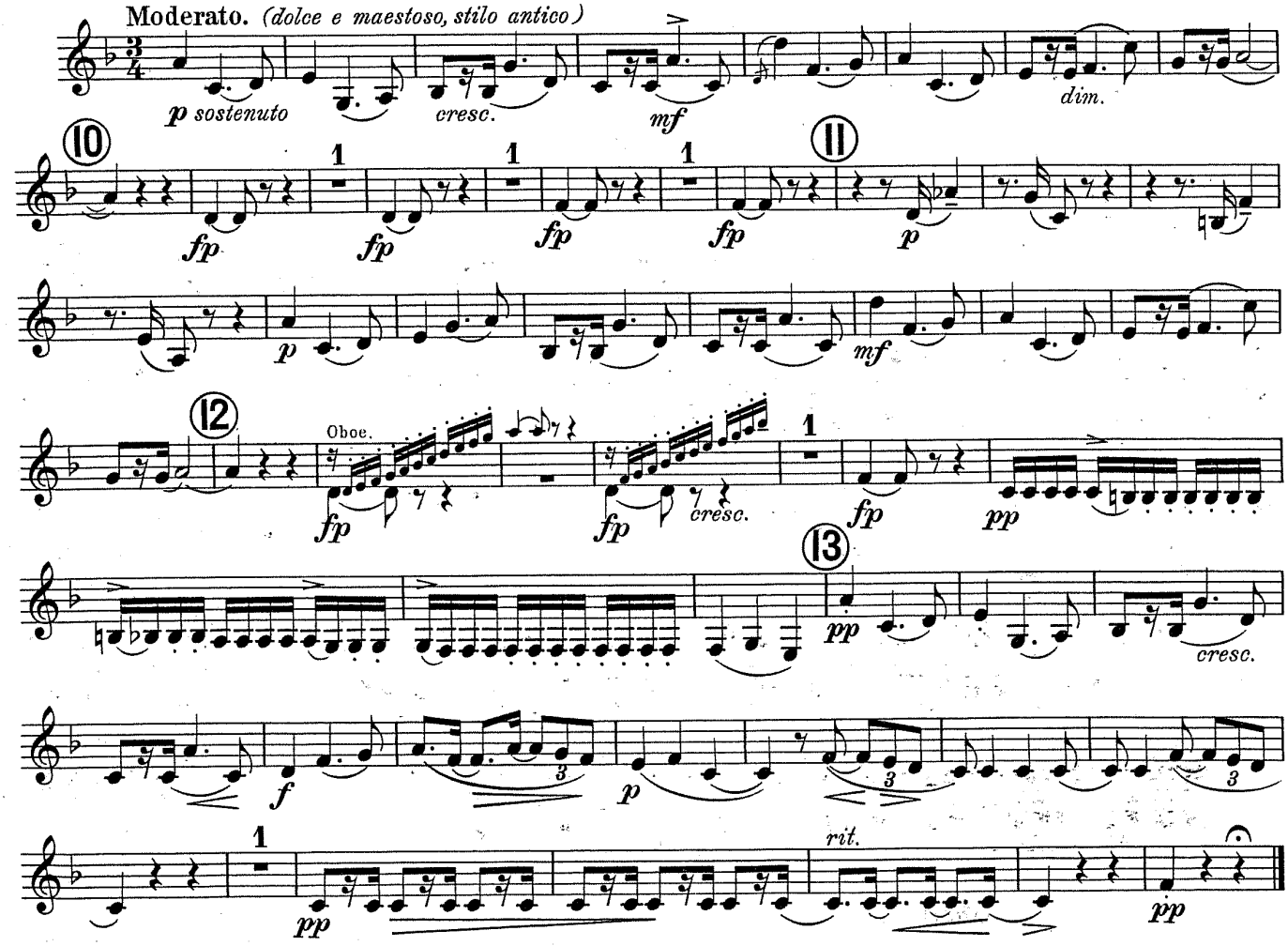
PARIS, 16 Rue Saulnier, IXe
H. & S. 4983
Printed by Hawkes & Son (London), Ltd., Leipzig.

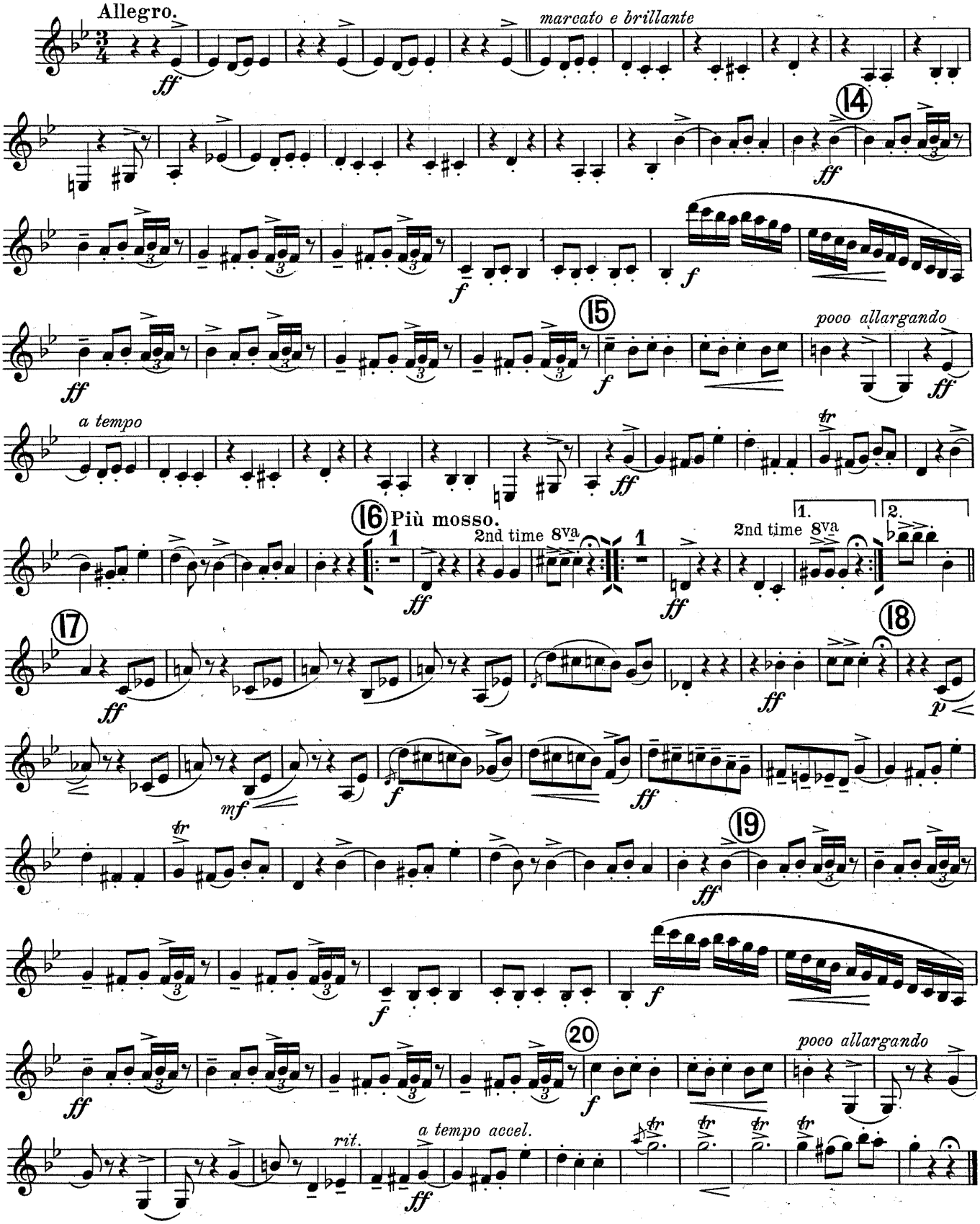
3rd B♭ Clarinet.



Nº 2. MENUETTO

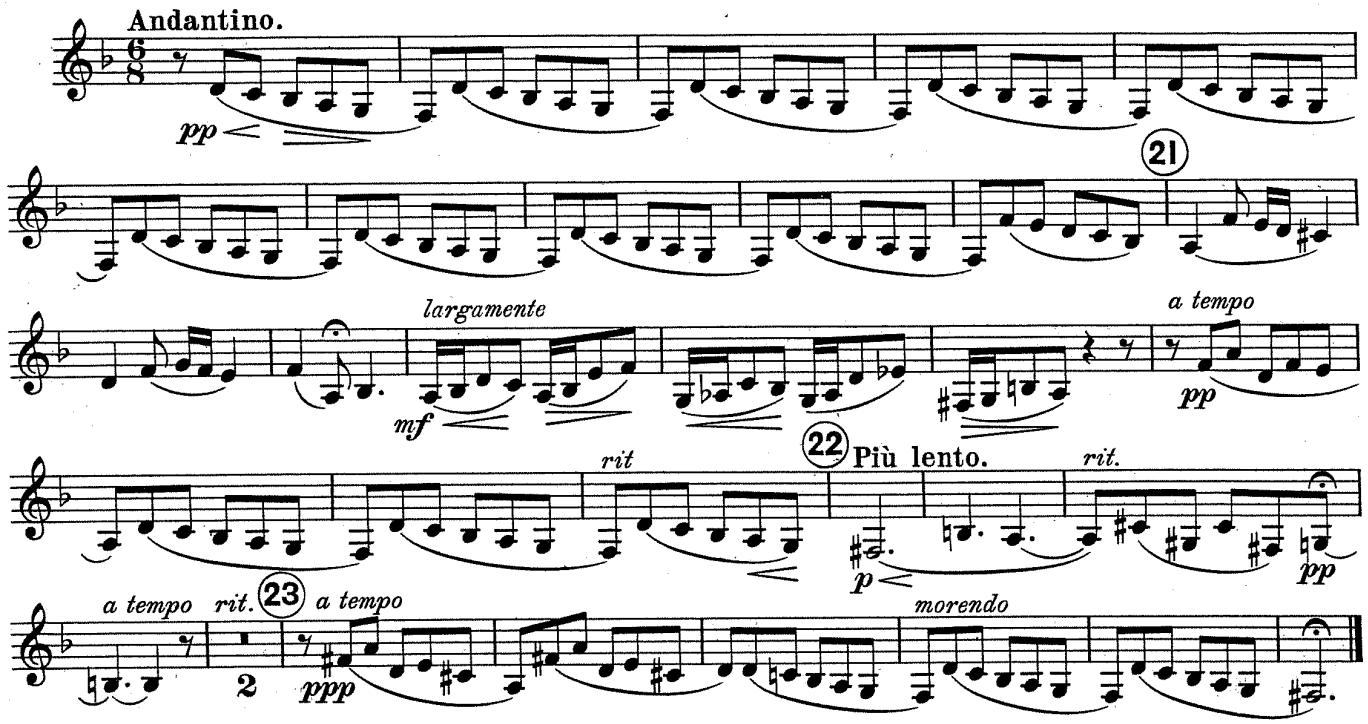


Nº 3. WARRIORS' DANCE

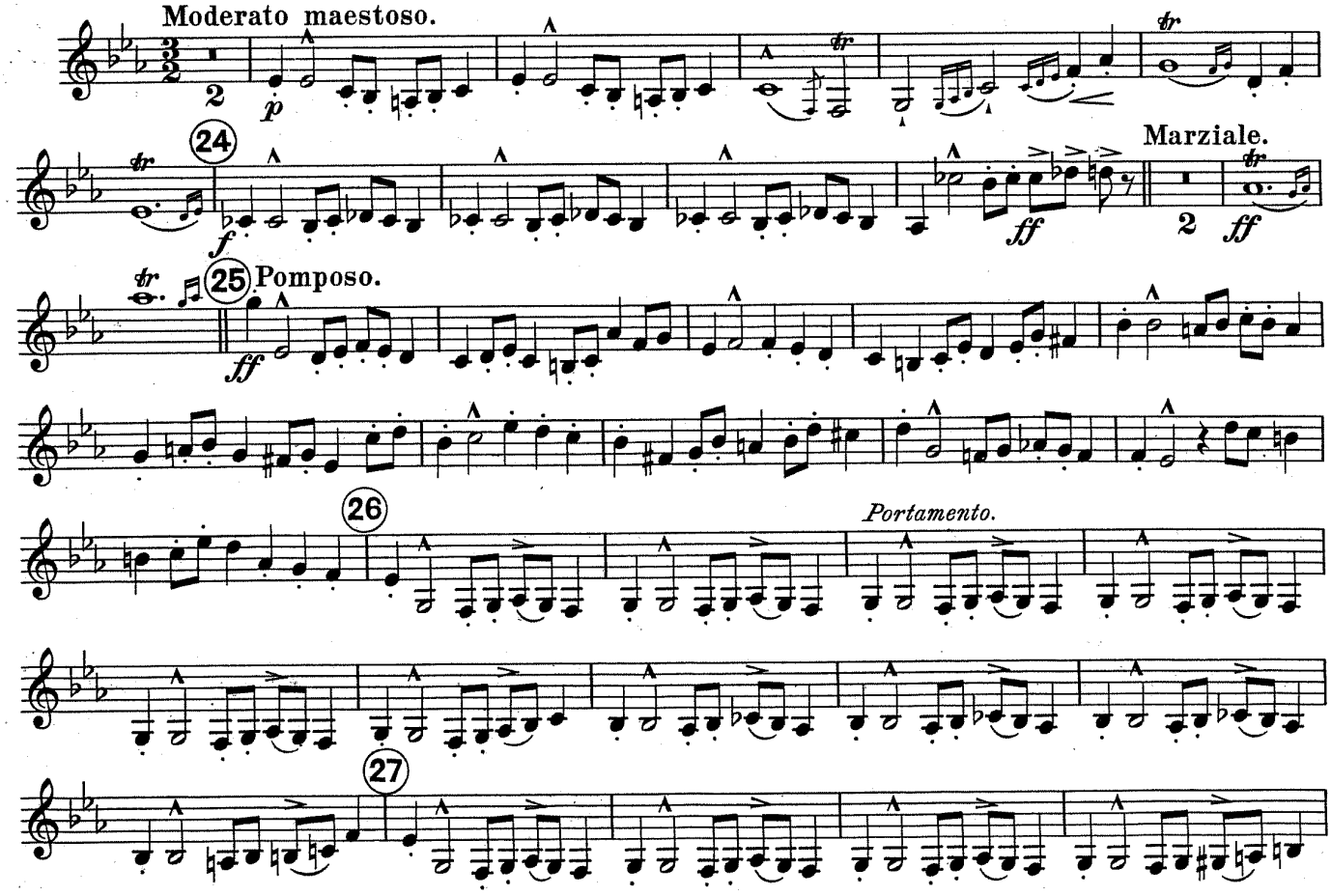


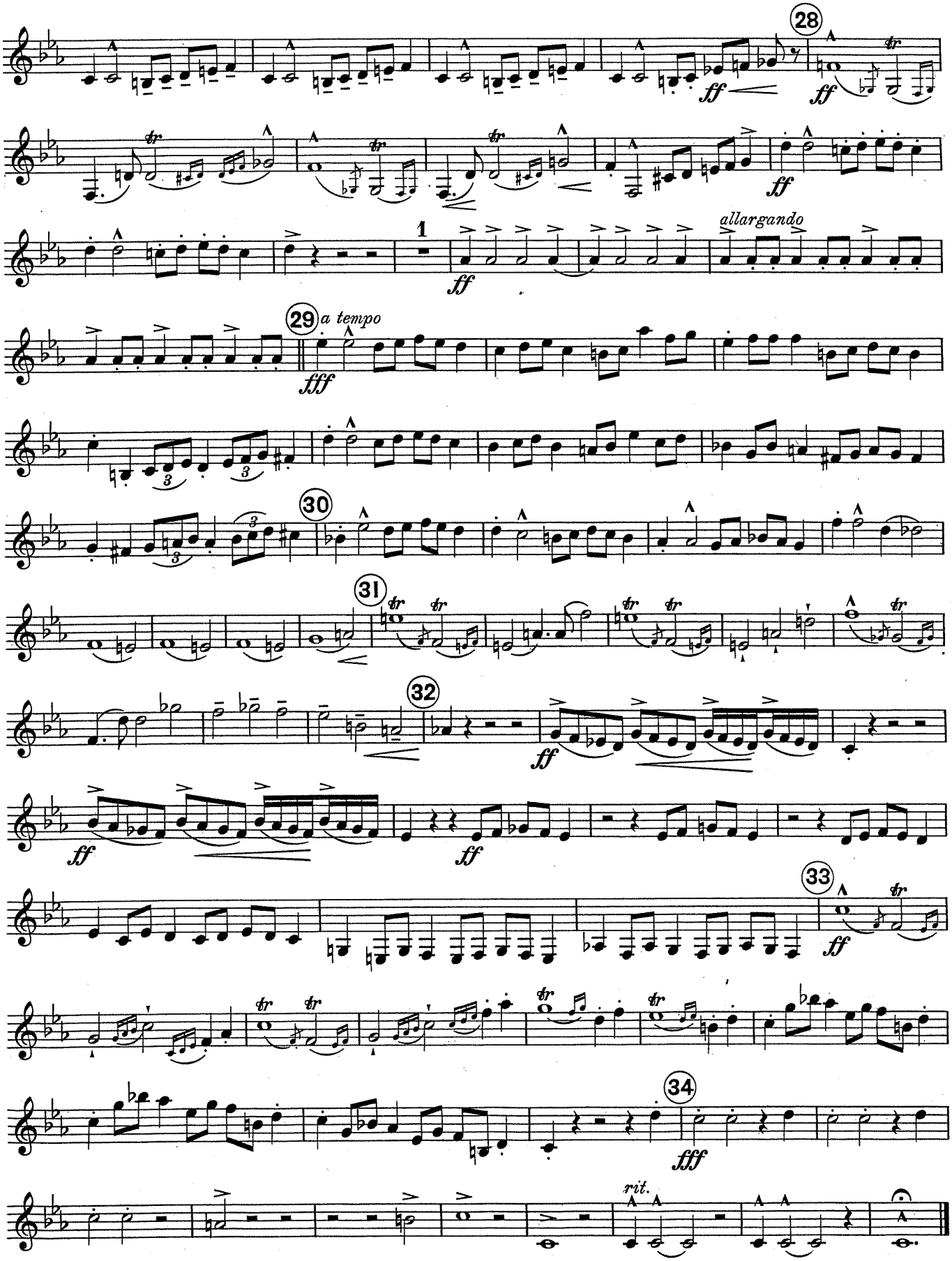
3rd B♭ Clarinet.

No 4. INTERMEZZO



No 5. MARCH OF THE MOGUL EMPERORS



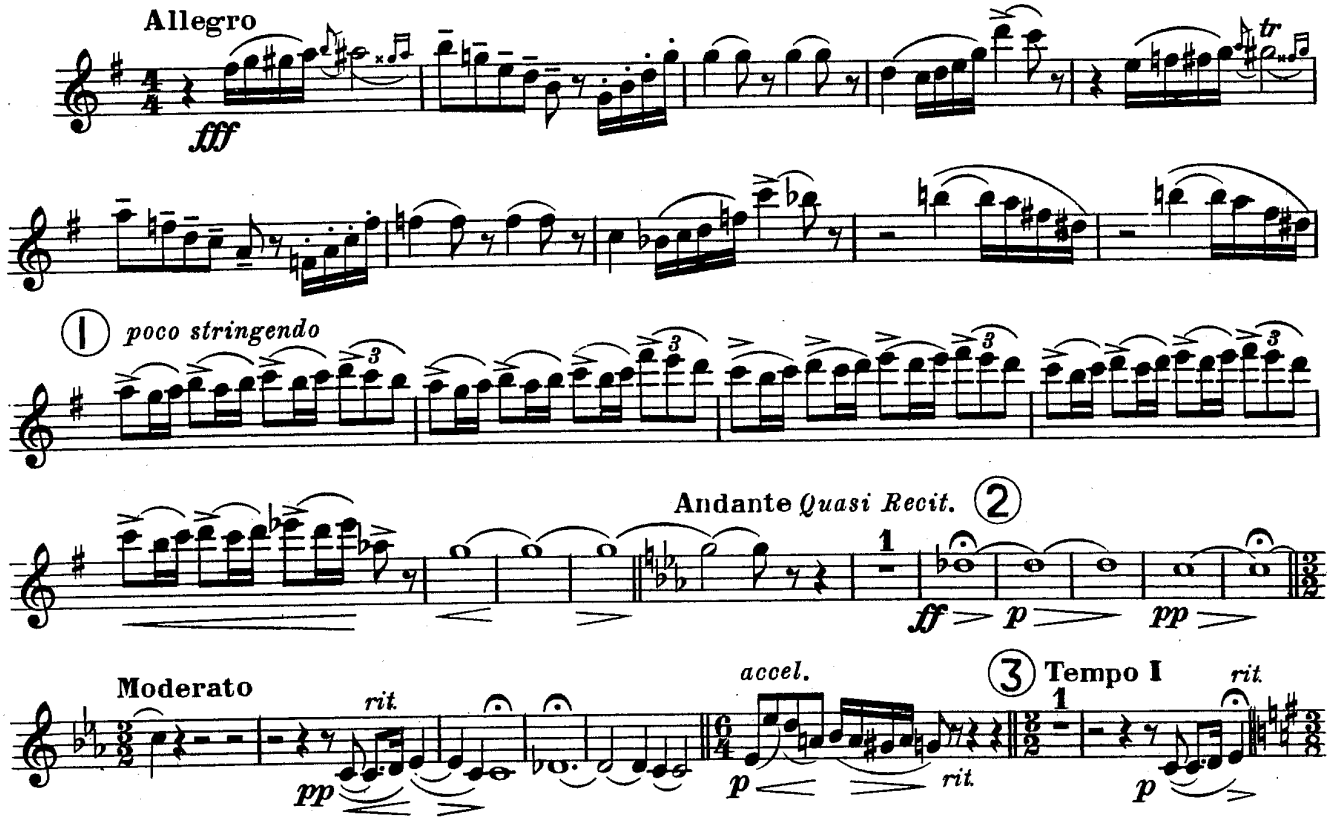

28
ff
ff
1
ff
allargando
29
a tempo
fff
30
31
32
ff
ff
ff
33
ff
34
fff
rit.

SUITE
THE CROWN OF INDIA

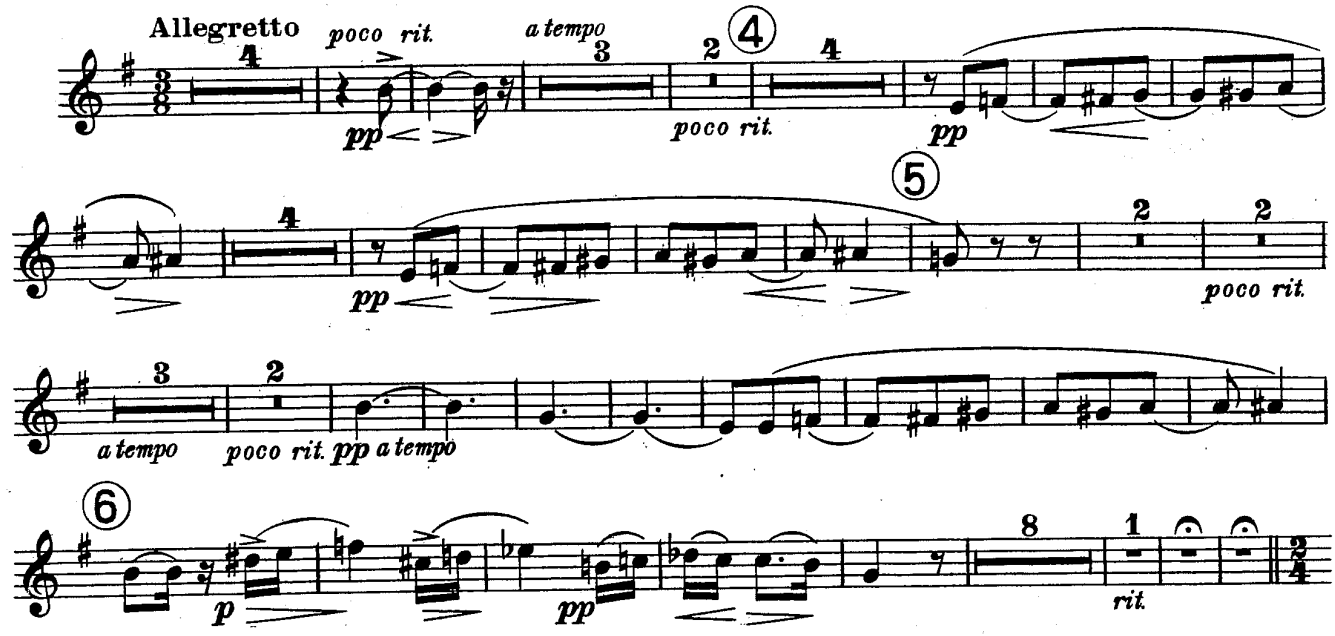
E♭ Alto Clarinet

EDWARD ELGAR, Op. 66

No. 1. (a) INTRODUCTION



(b) DANCE OF NAUTCH GIRLS



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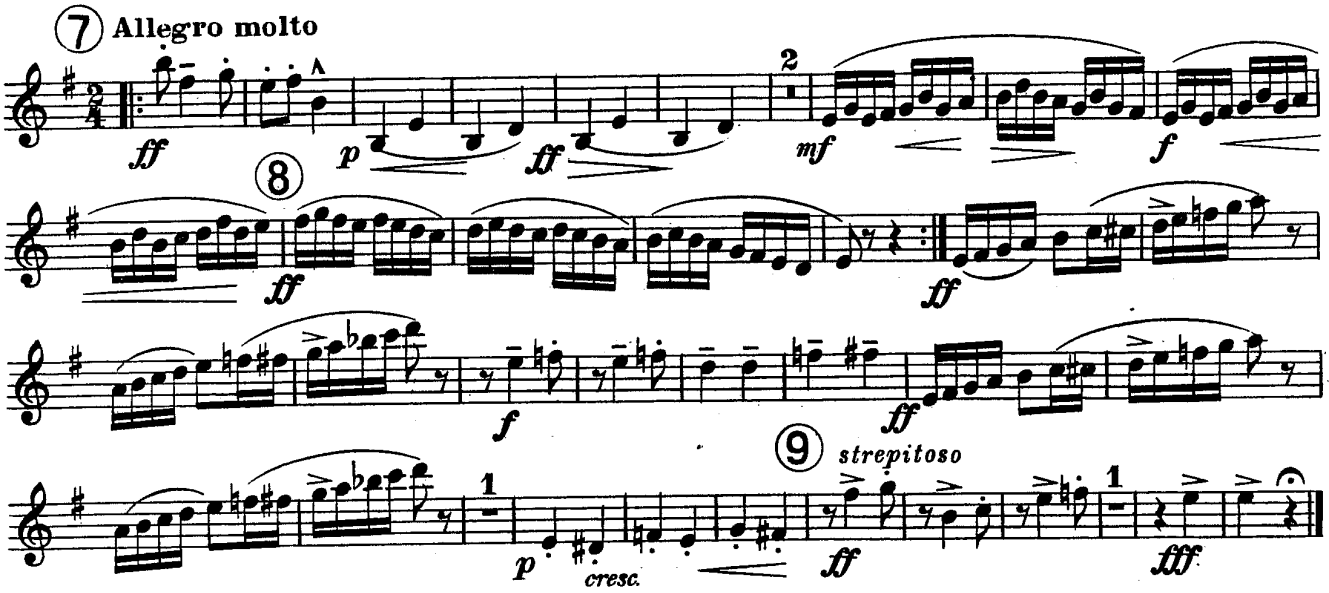
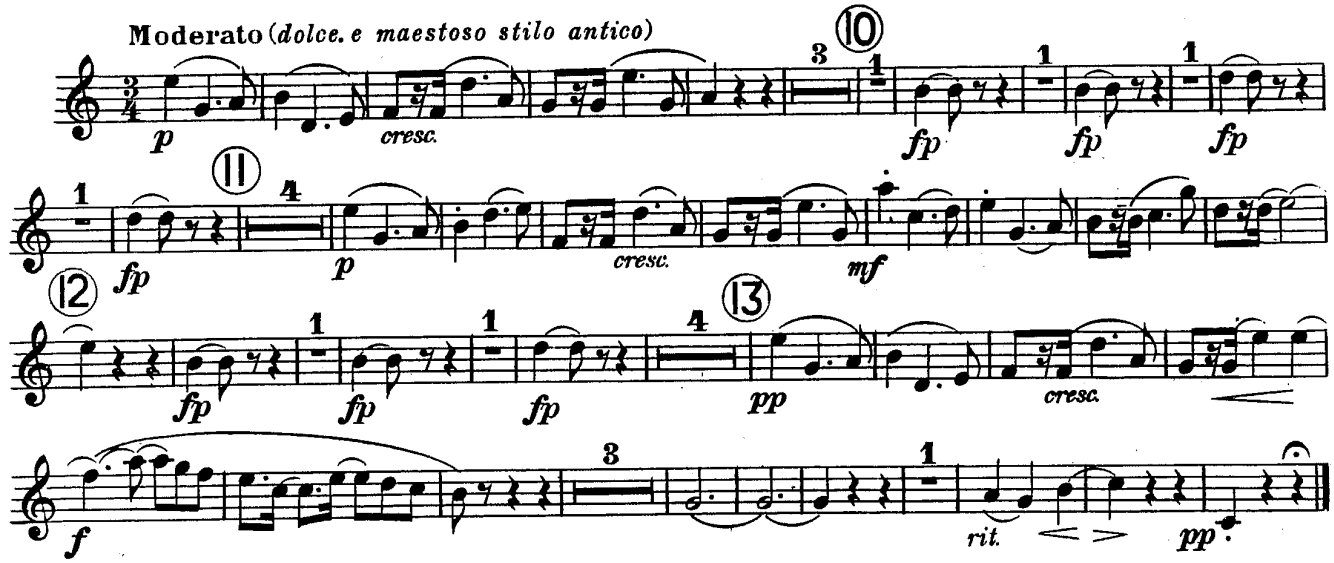
H. & S. A988

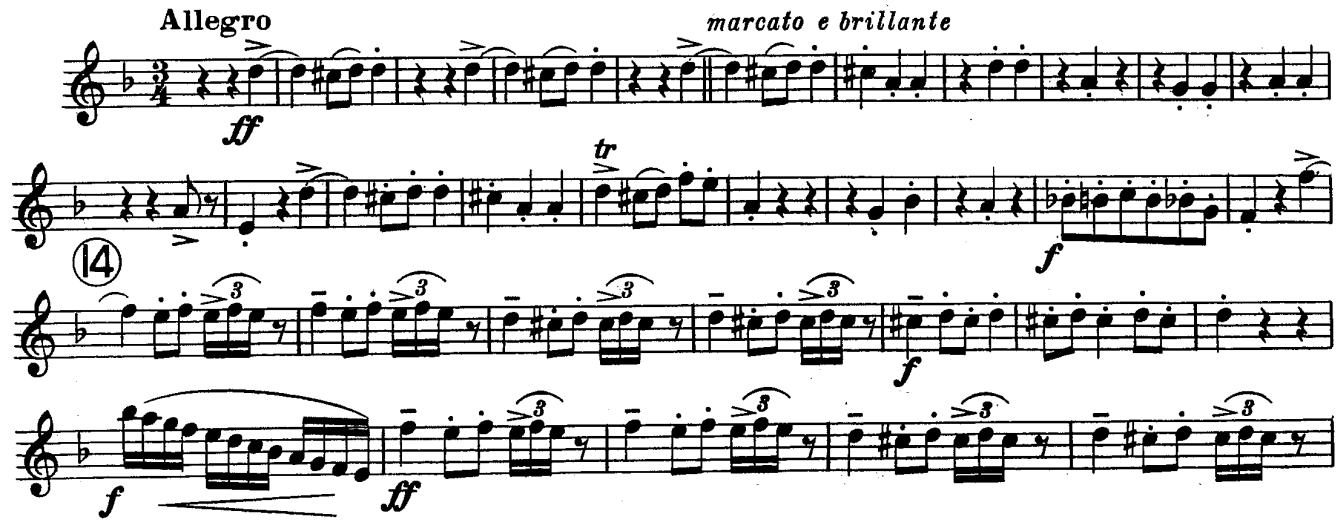
E♭ Alto Clarinet



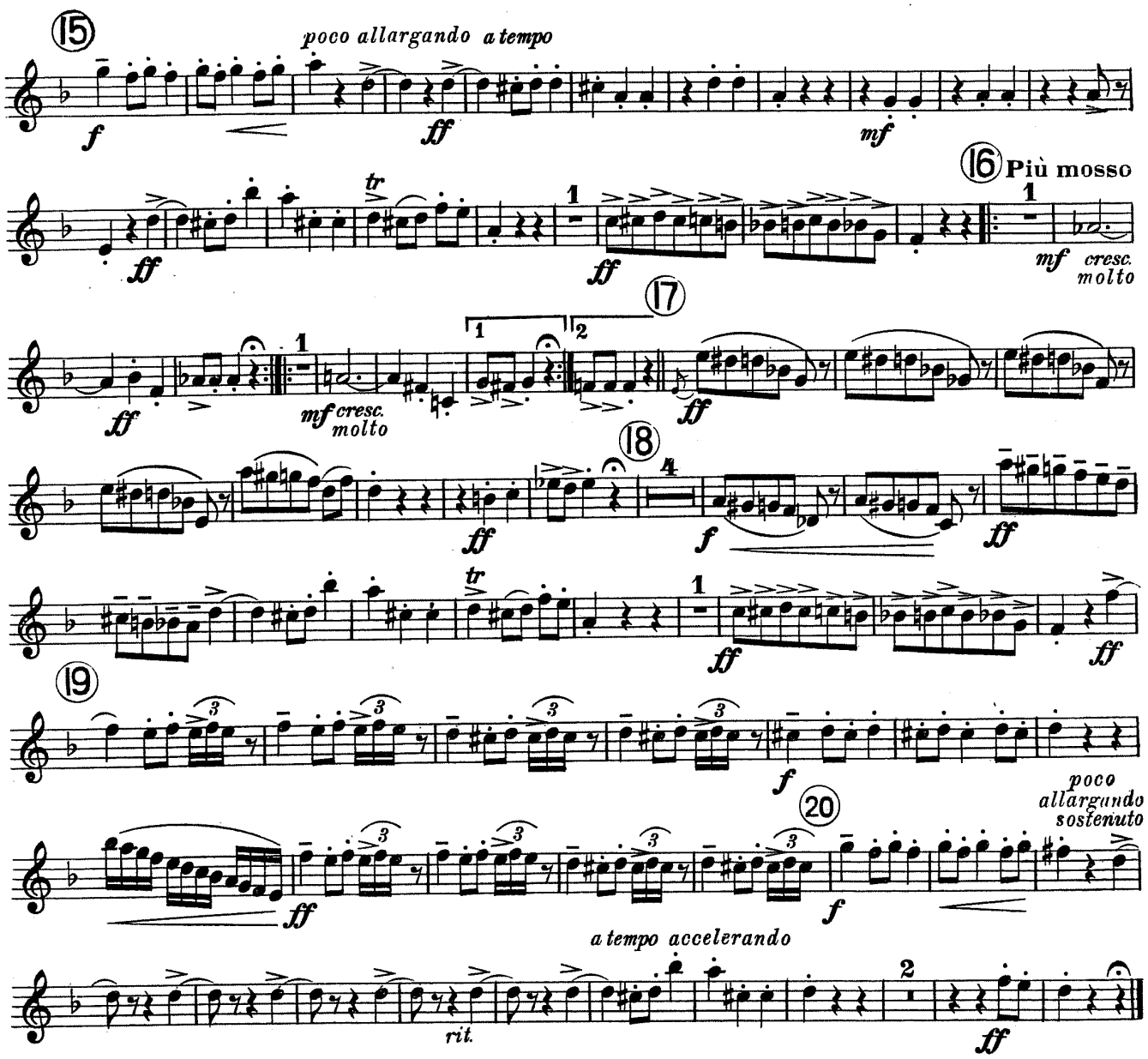
Nº 2. MENUETTO



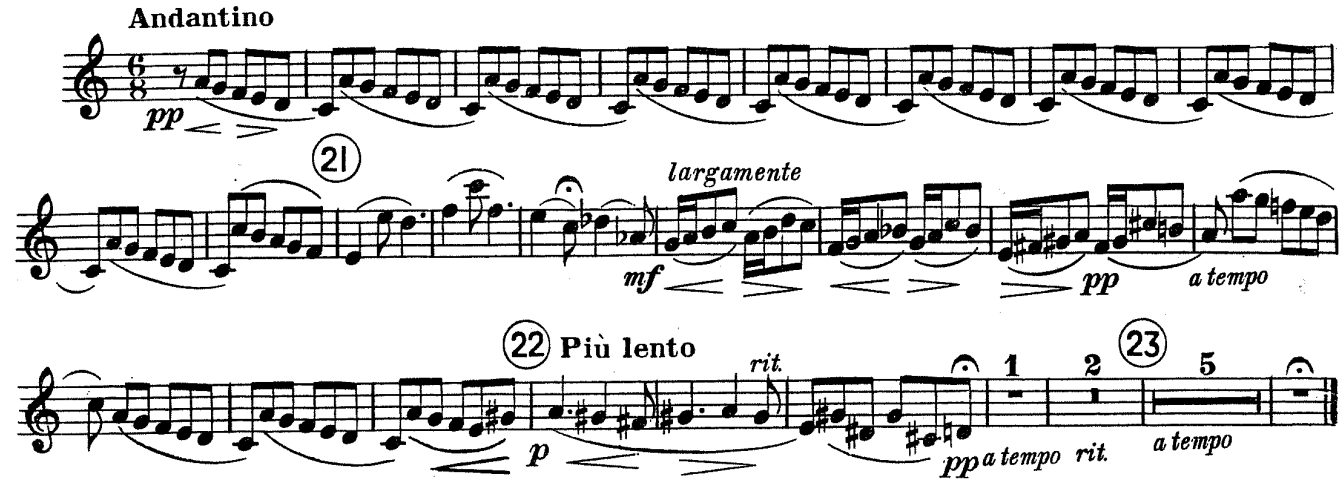
Nº 3. WARRIORS' DANCE



E♭ Alto Clarinet

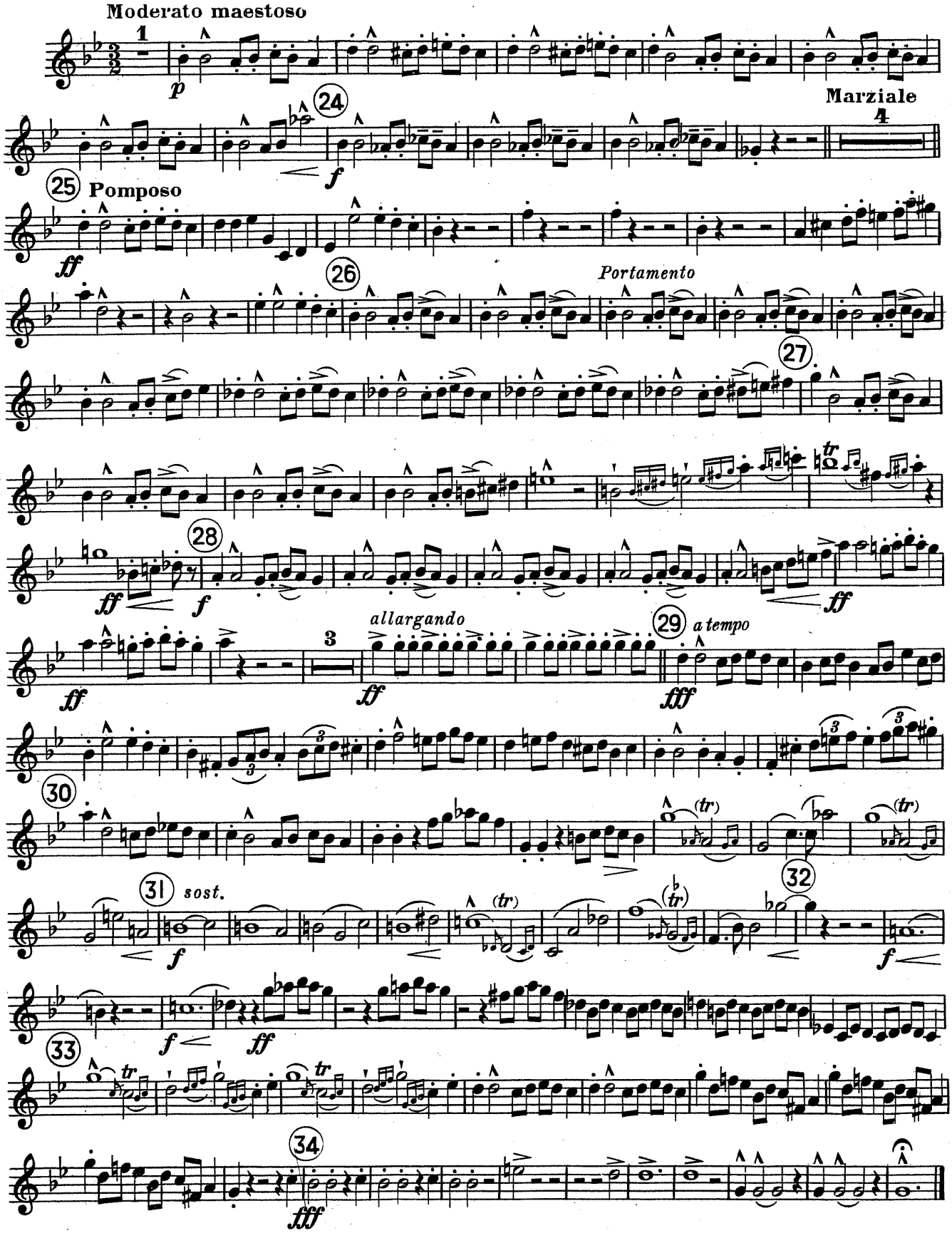


Nº 4. INTERMEZZO



E♭ Alto Clarinet

Nº 5. MARCH OF THE MOGUL EMPERORS

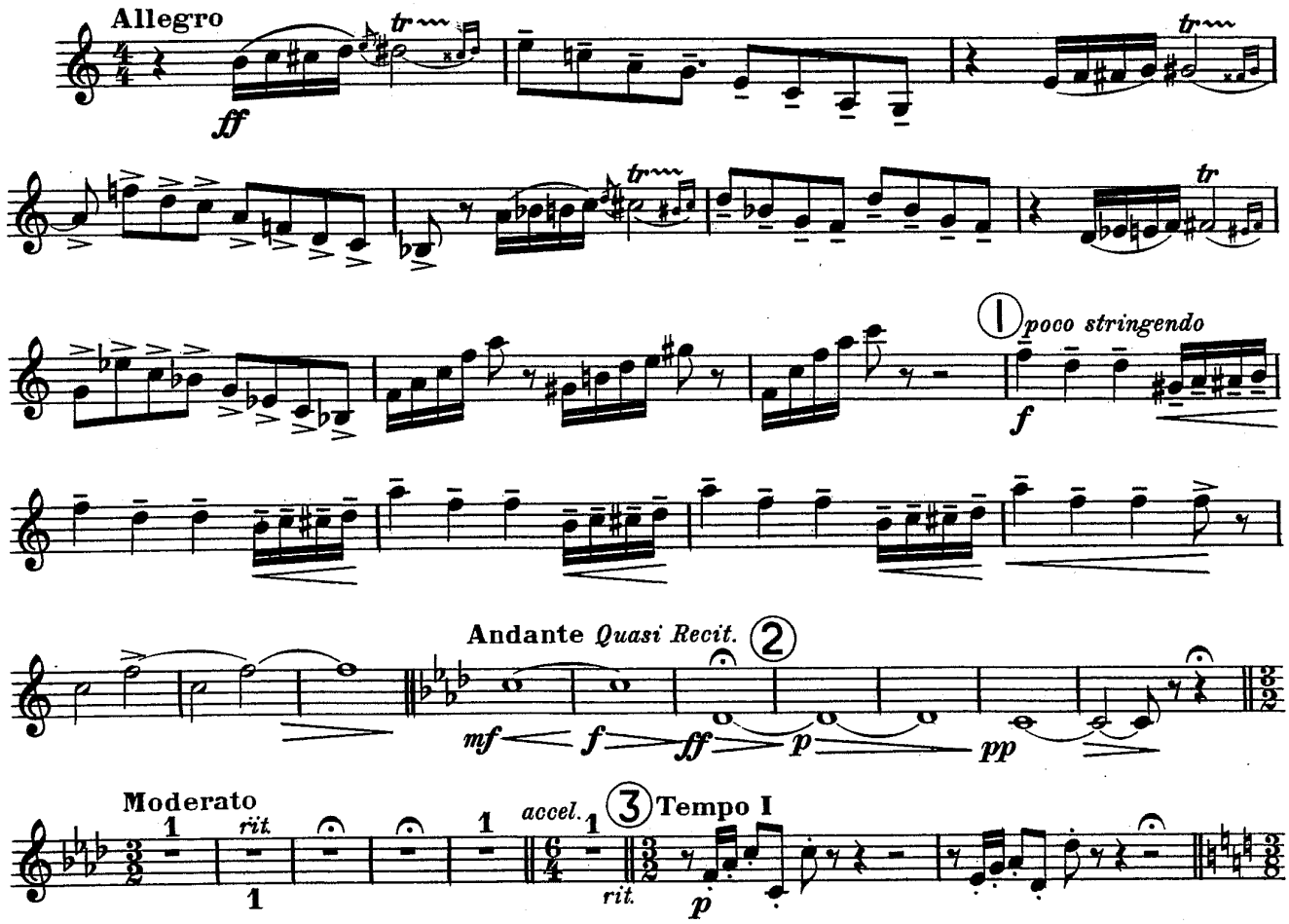


SUITE
THE CROWN OF INDIA

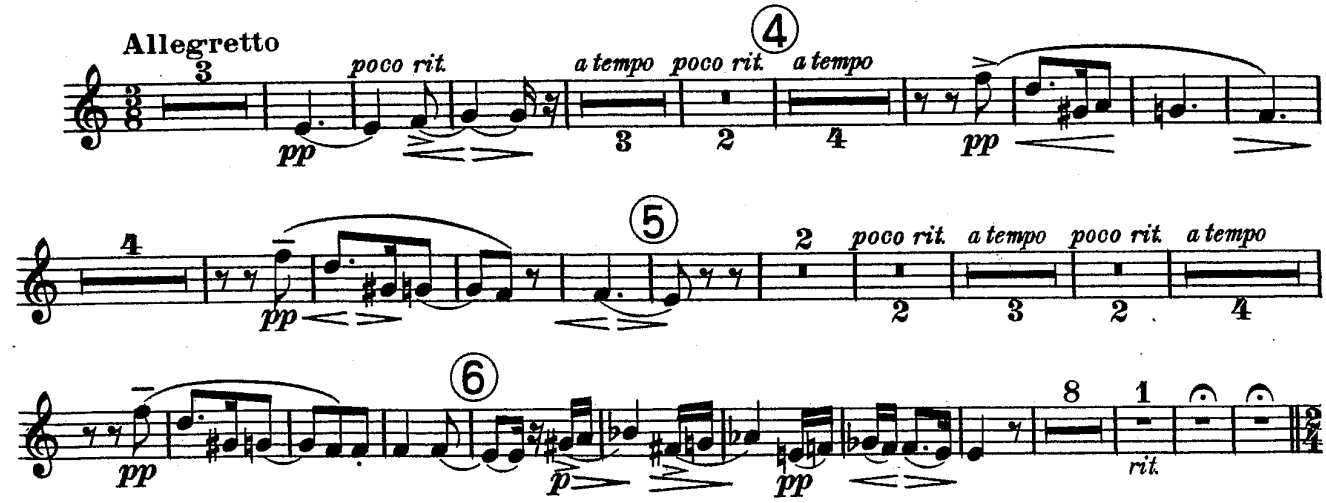
B♭ Bass Clarinet

EDWARD ELGAR, OP. 66

No. 1. (a) INTRODUCTION



(b) DANCE OF NAUTCH GIRLS



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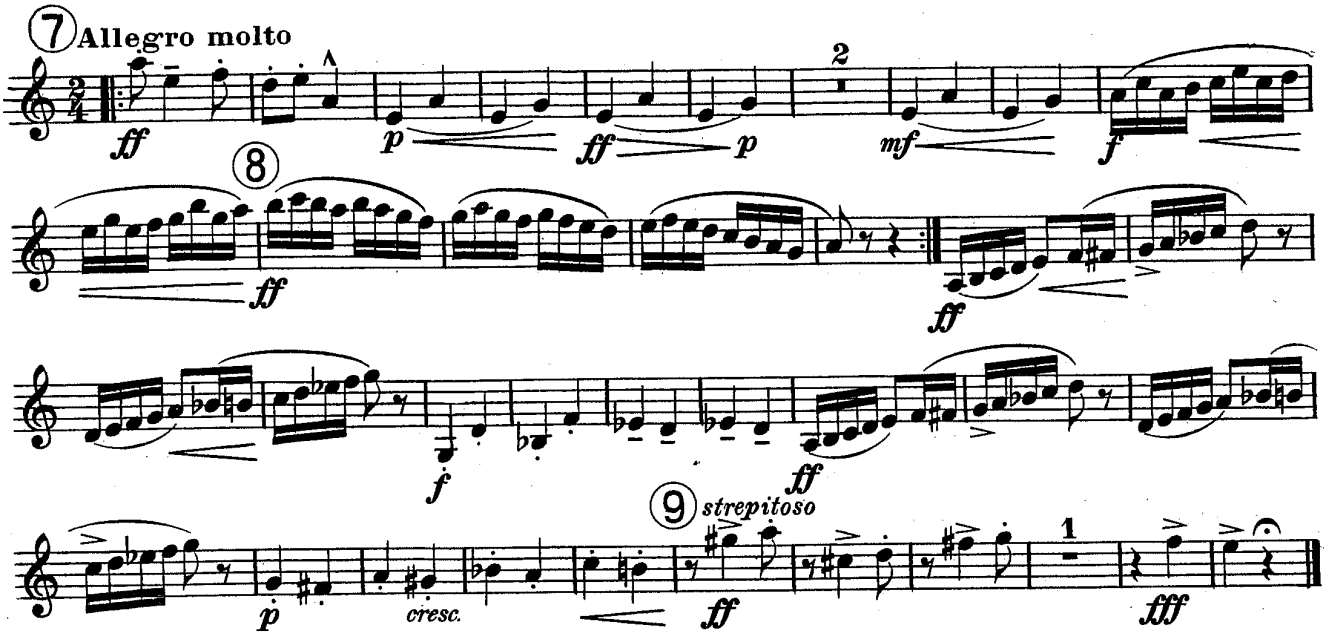
PARIS:- Editions Hawkes, 16 Rue du Faubourg St. Denis, Xe

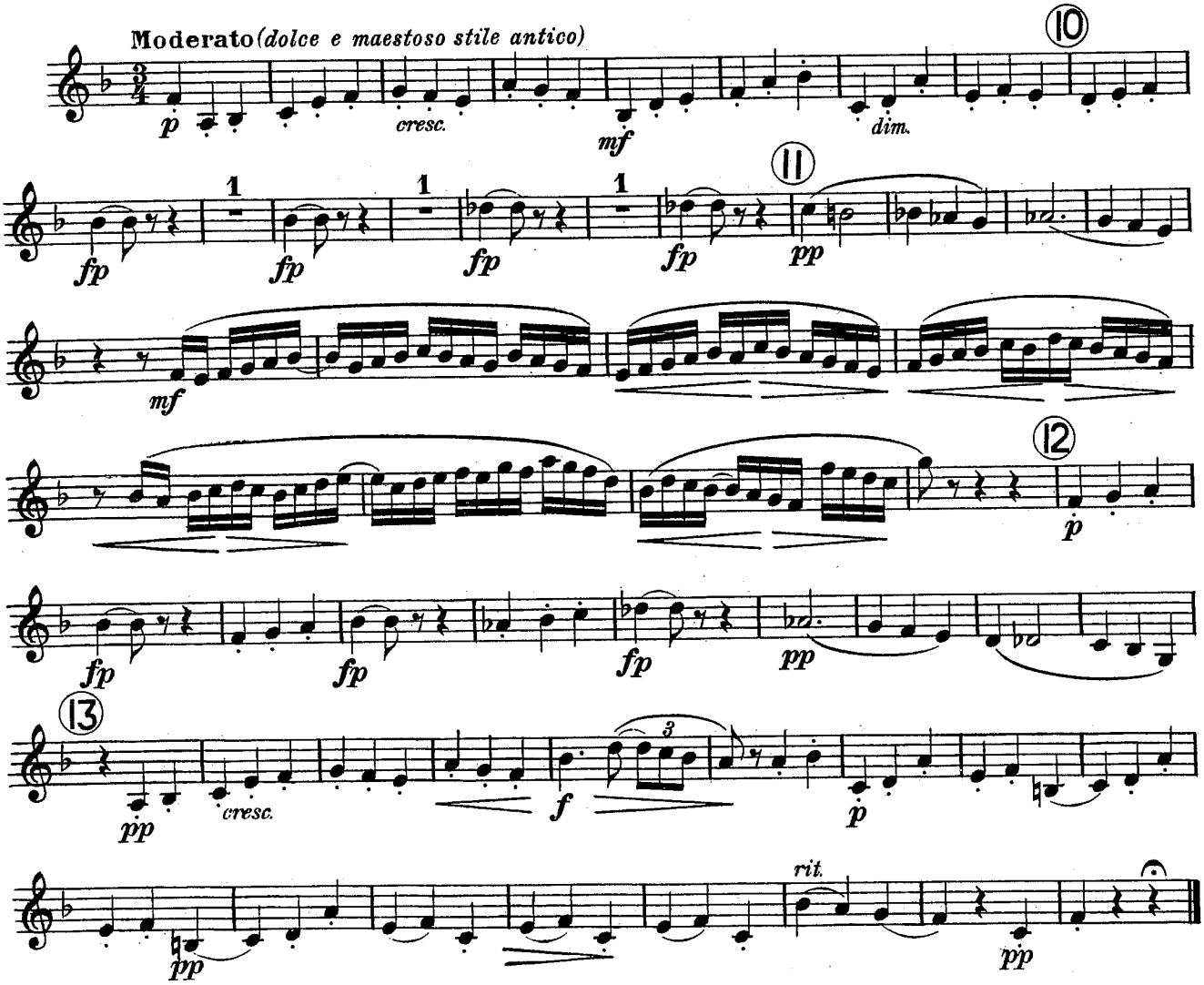
Printed in England

H. & S. 4983

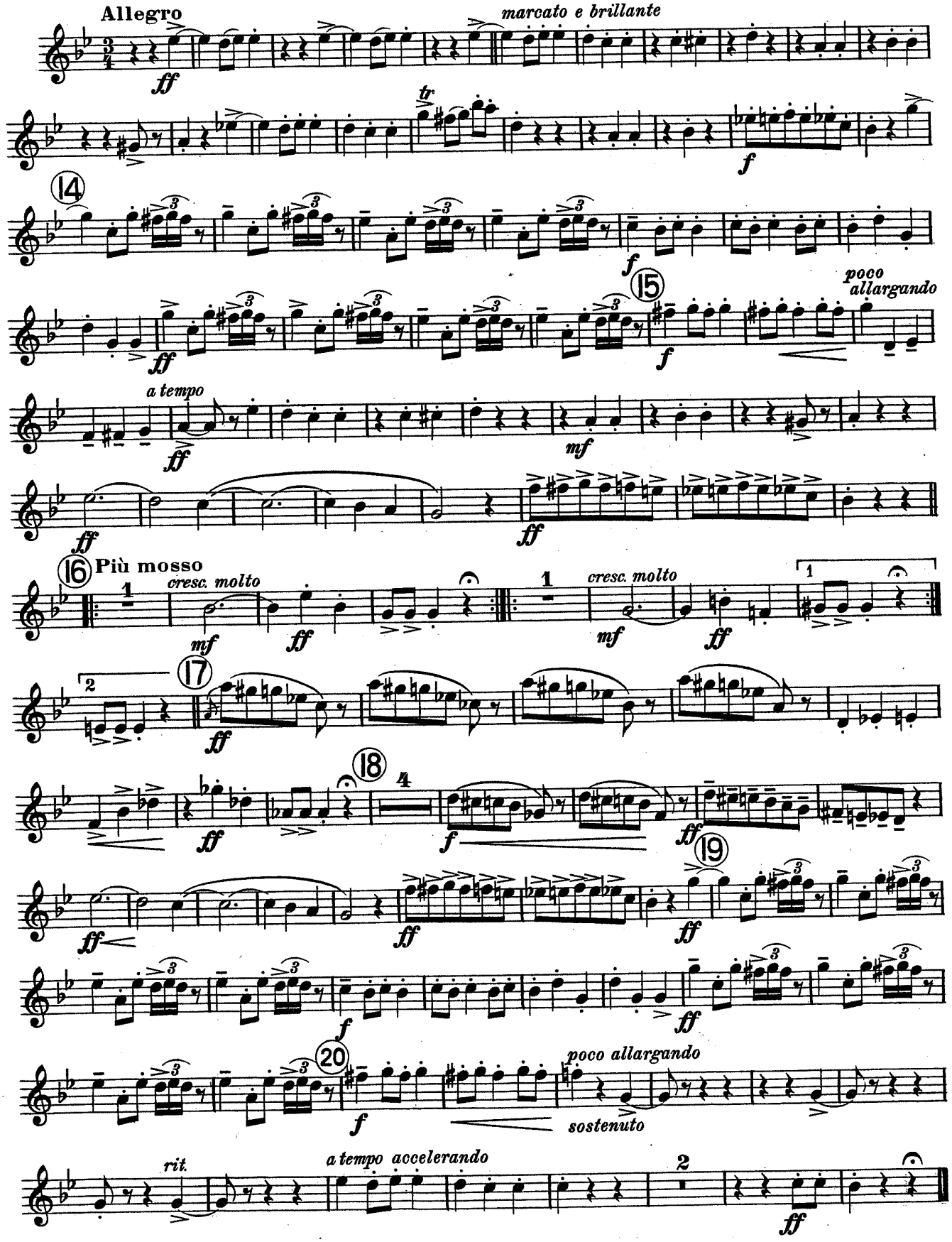
B♭ Bass Clarinet



Nº 2. MENUETTO

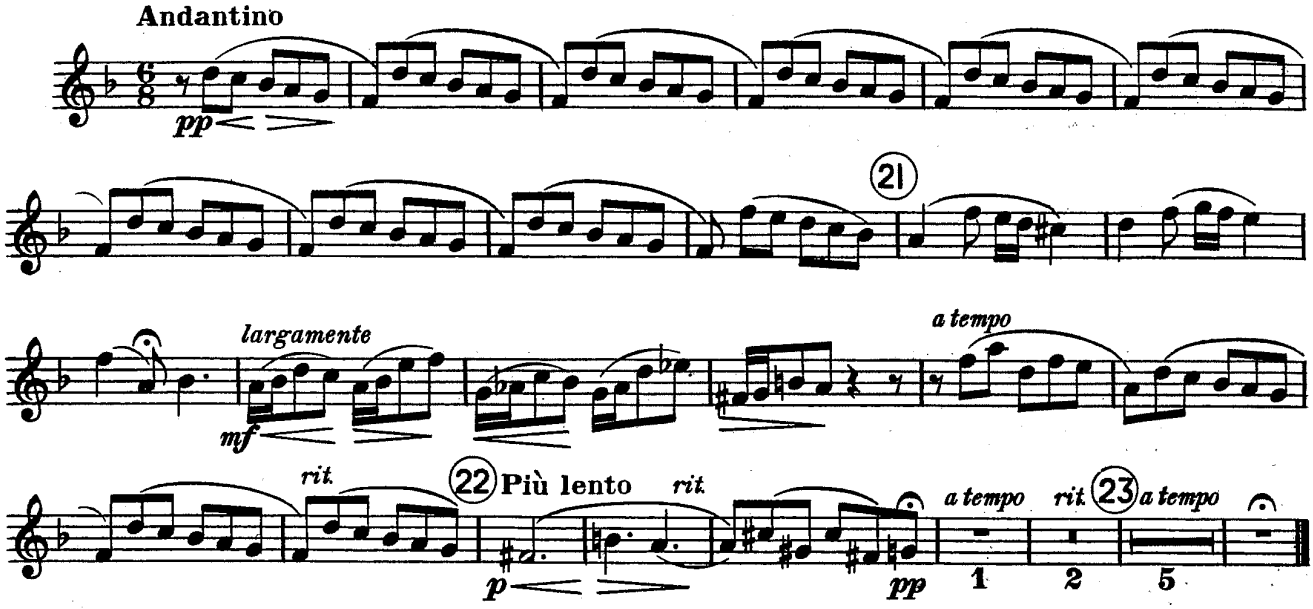


No. 3. WARRIORS' DANCE

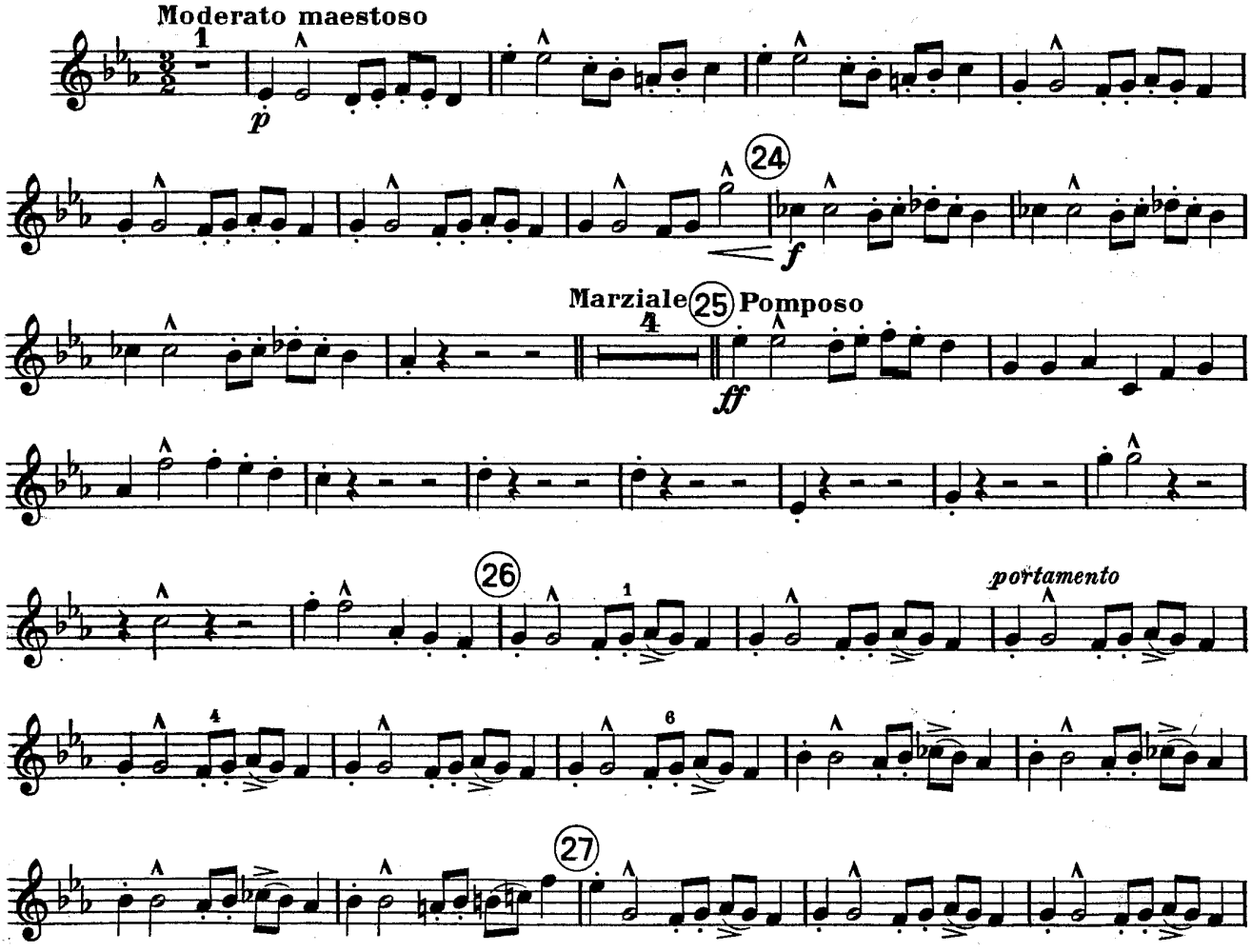


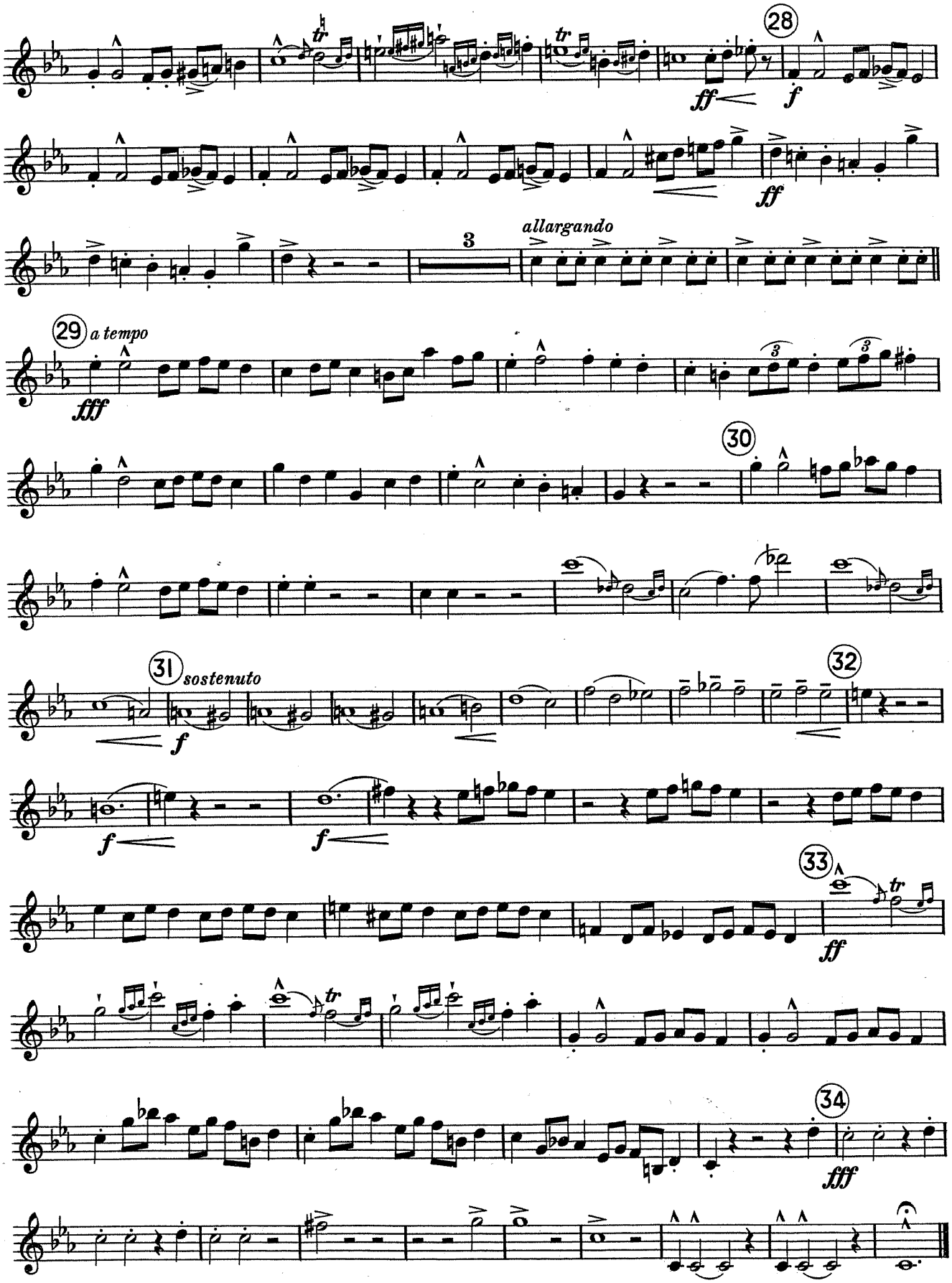
B♭ Bass Clarinet

Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



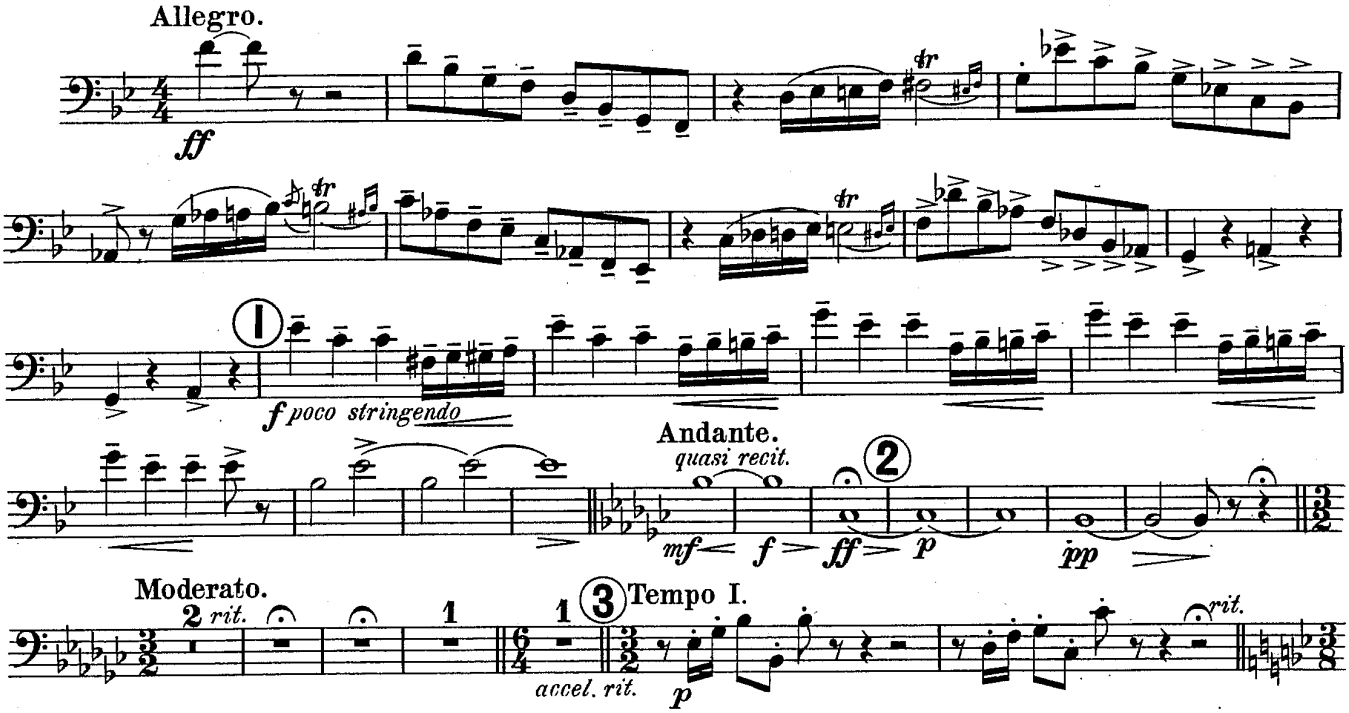

28
ff
f
ff
3
allargando
29
a tempo
fff
30
31
sostenuto
f
f
f
32
33
ff
34
fff

SUITE
THE CROWN OF INDIA

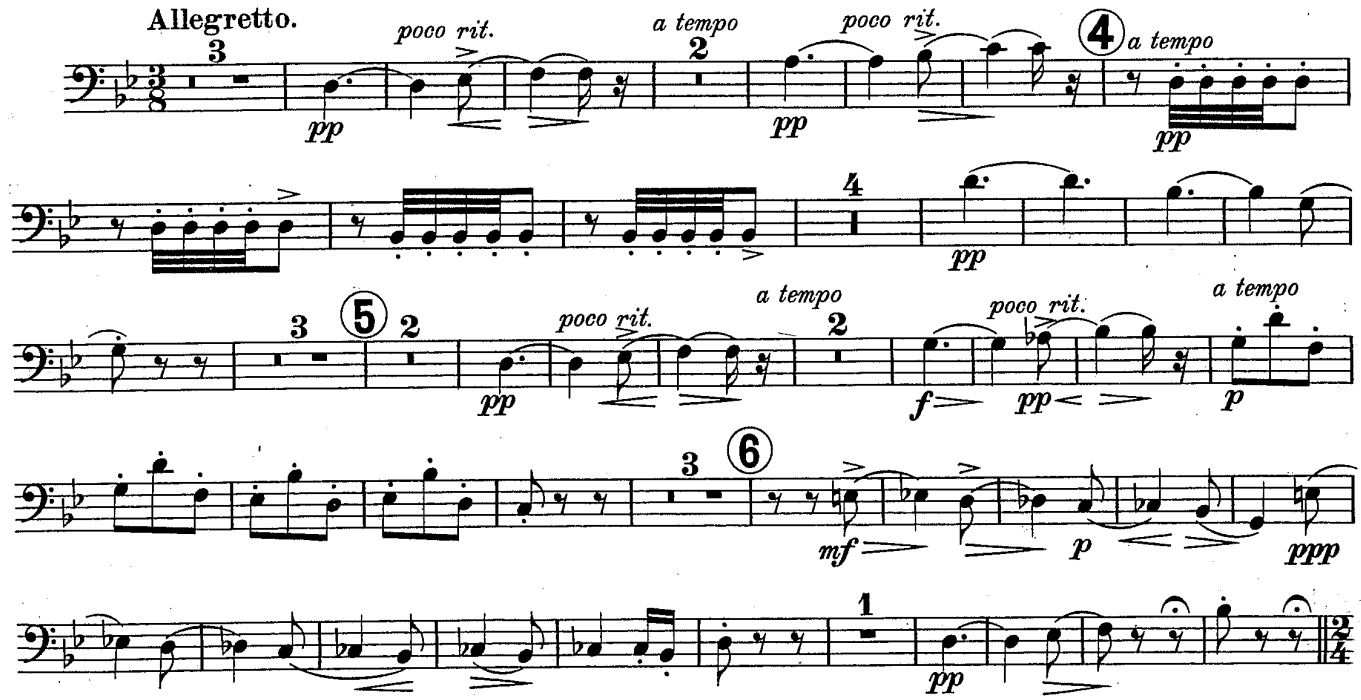
1st Bassoon

No 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66



(b) DANCE OF NAUTCH GIRLS



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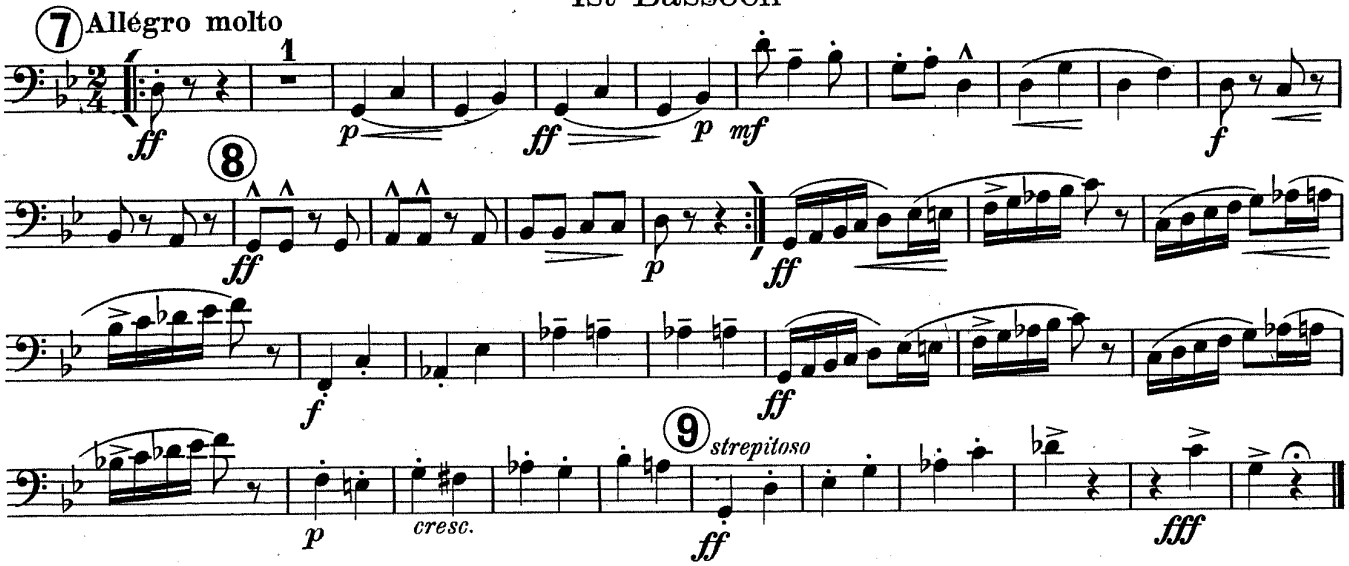
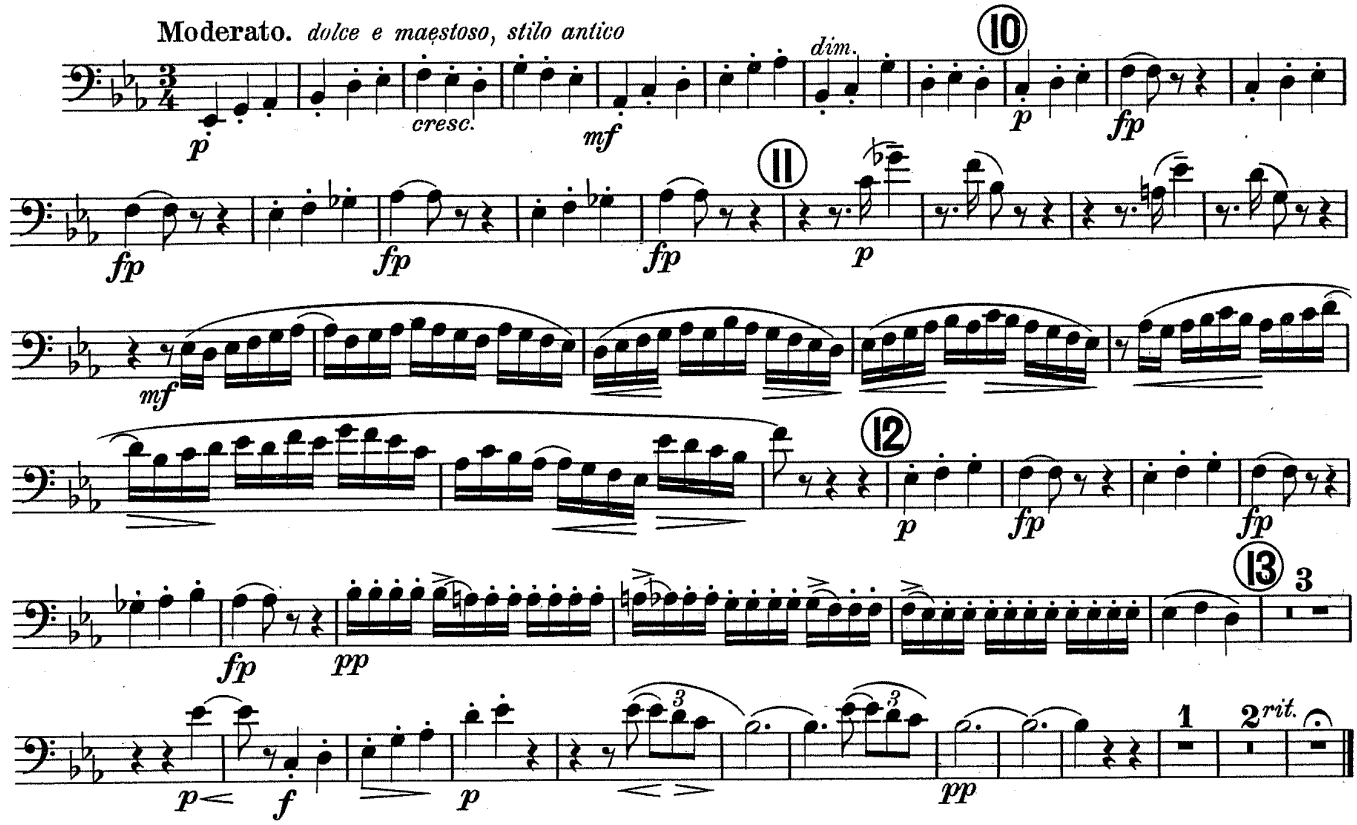
PARIS, 16 Rue Saulnier, IXe
H. & S. 4983
Printed by Hawkes & Son (London), Ltd., Leipzig.
Printed in Leipzig.

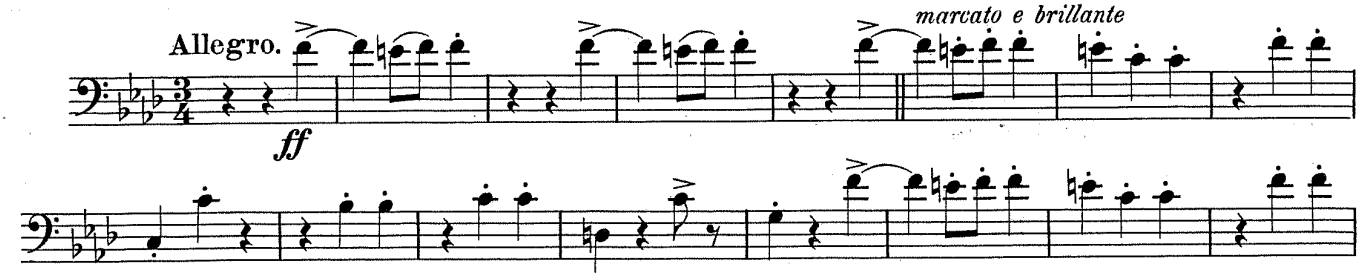
1st Bassoon

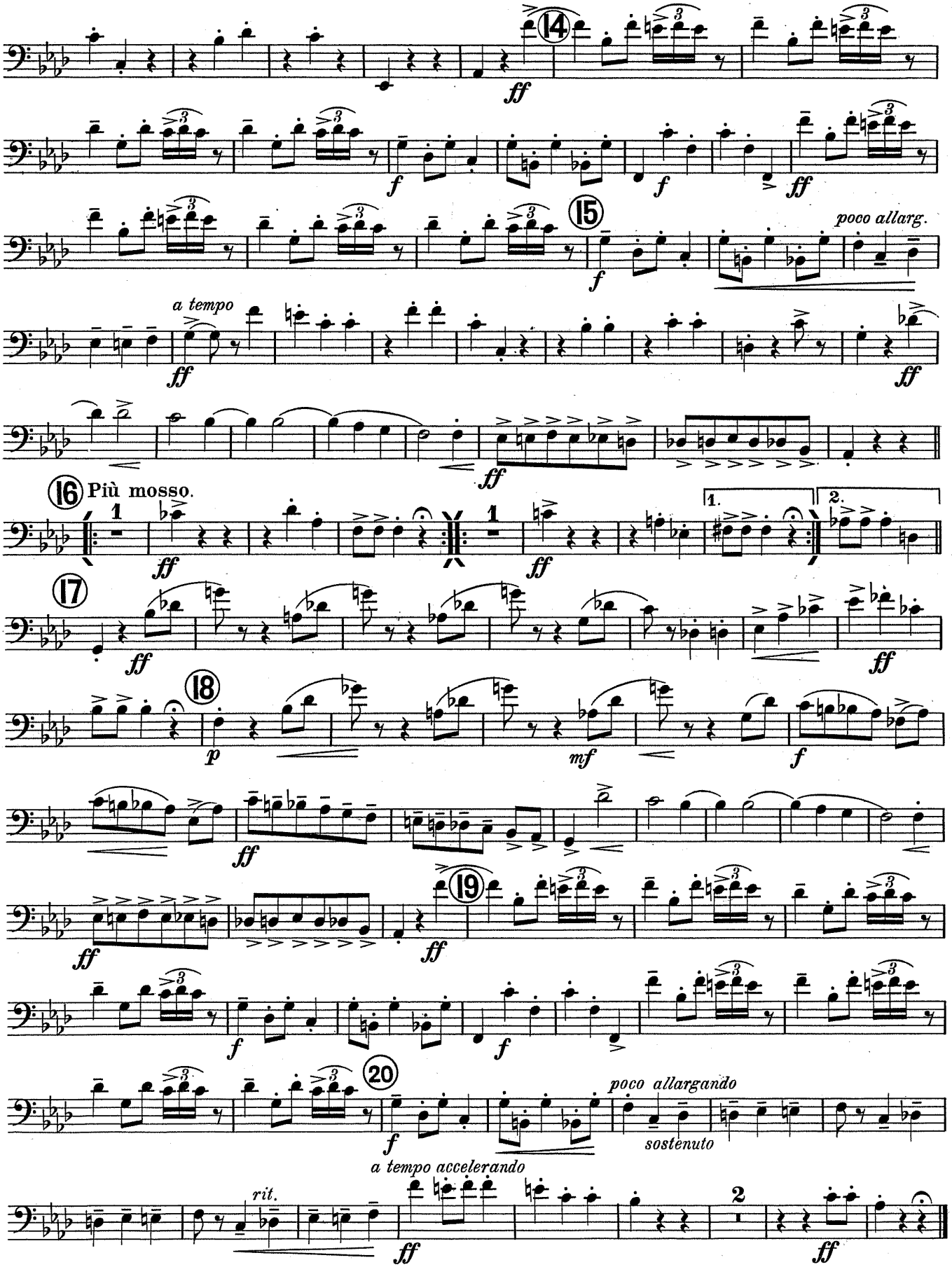


Nº 2. MENUETTO



Nº 3. WARRIORS' DANCE

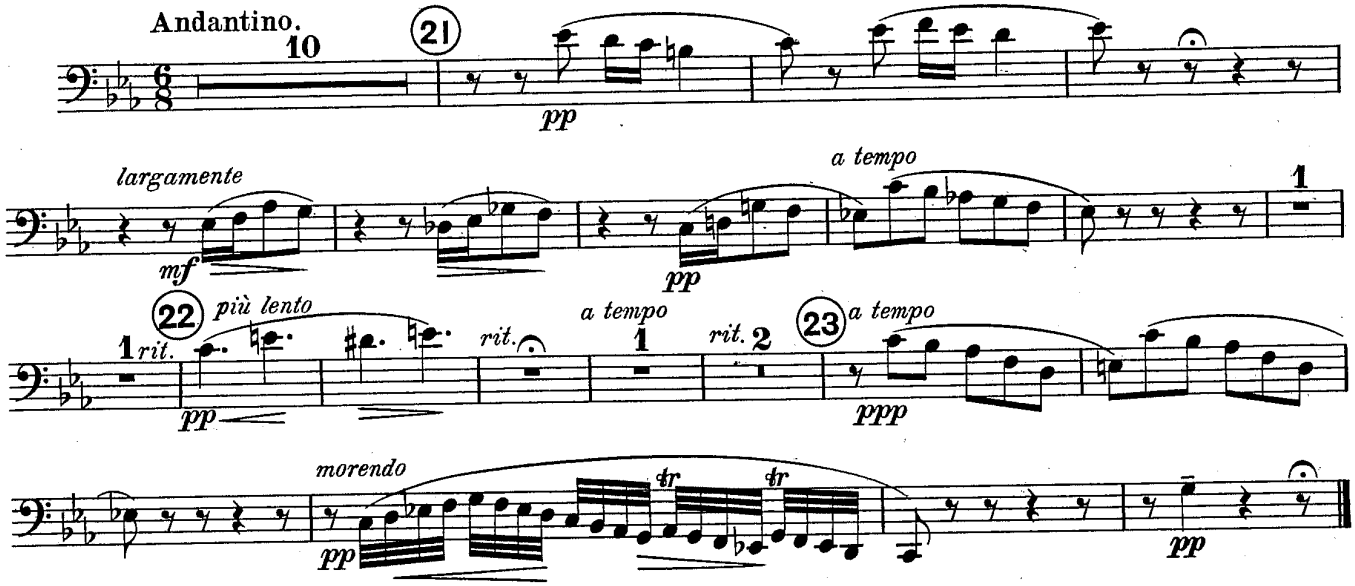



14
ff
f
ff
15
poco allarg.
a tempo
ff
ff
ff
16 Più mosso.
1
ff
1
ff
1.
2.
17
ff
ff
18
p
mf
f
ff
ff
19
ff
ff
f
f
20
f
poco allargando
sostenuto
a tempo accelerando
rit.
ff
2
ff

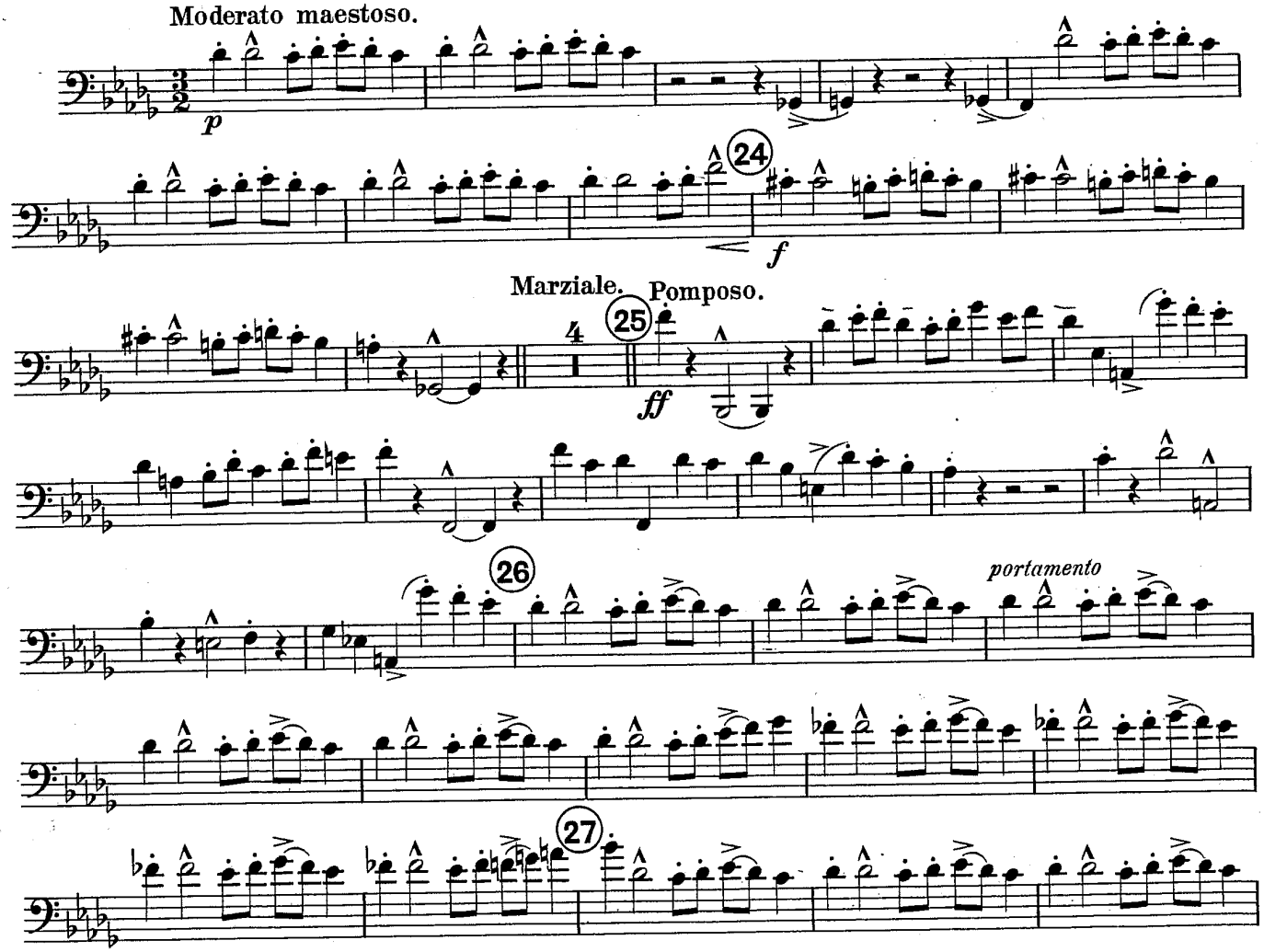
H. & S. 4983

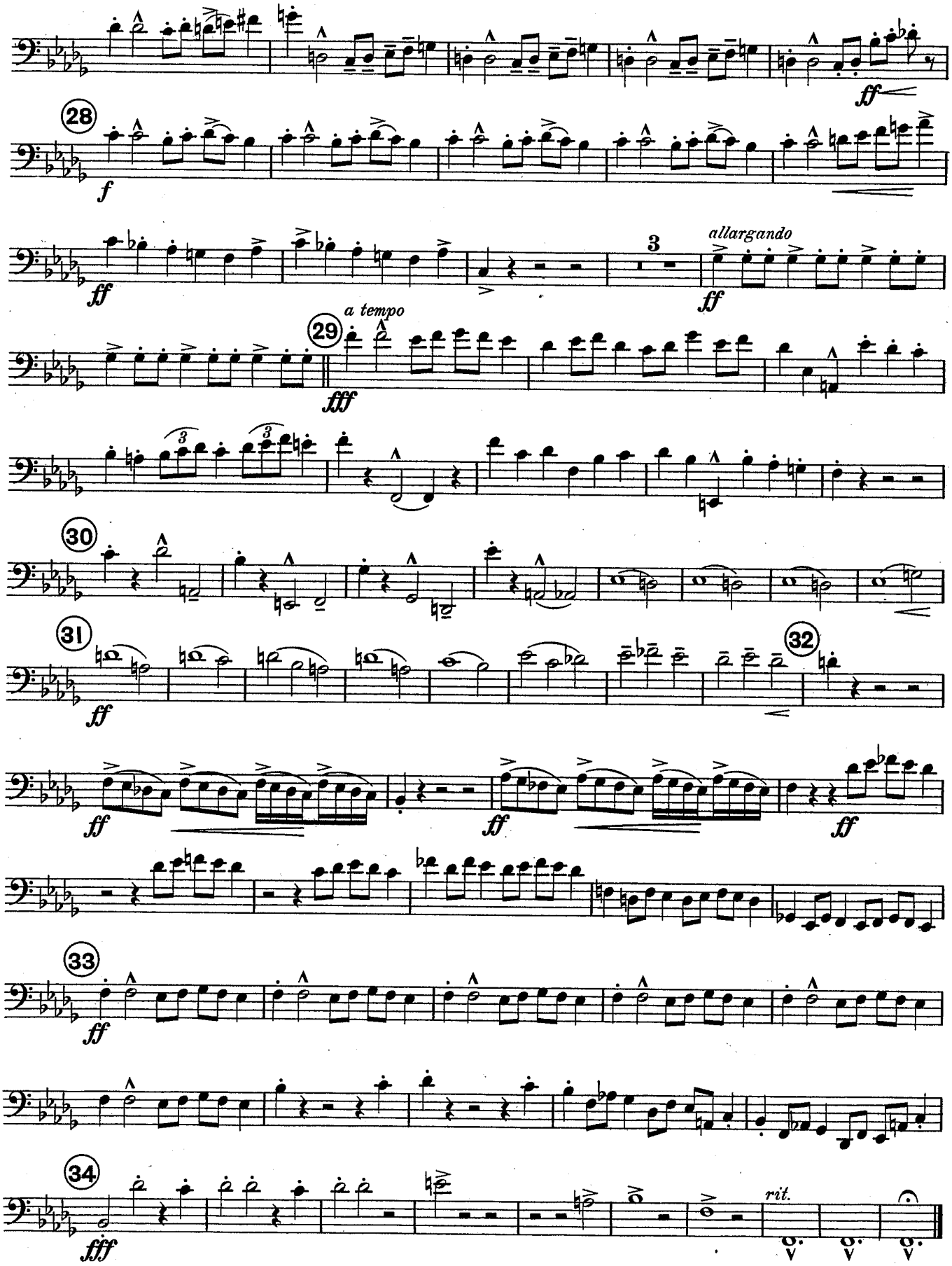
1st Bassoon

No. 4. INTERMEZZO



No. 5. MARCH OF THE MOGUL EMPERORS



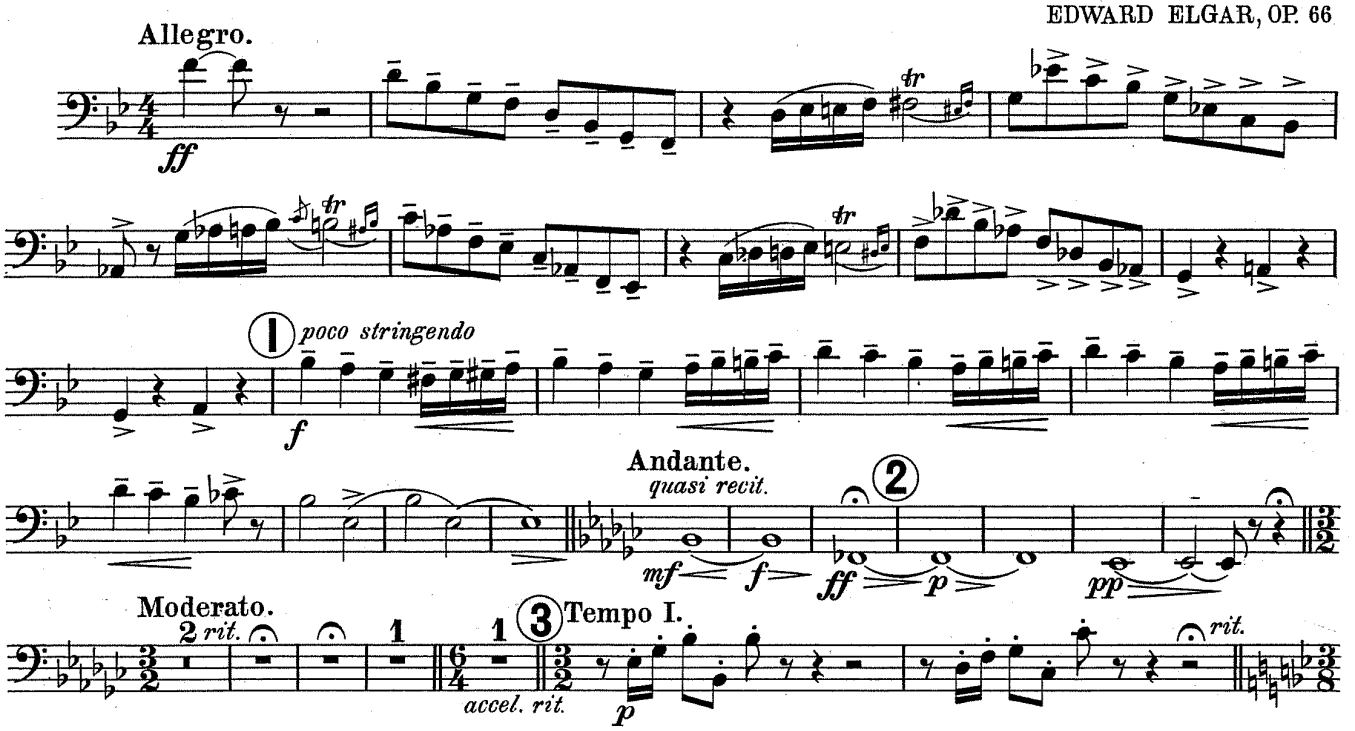

ff
28
f
ff
3
allargando
ff
a tempo
29
fff
30
31
ff
32
ff
ff
ff
33
ff
34
fff
rit.

SUITE
THE CROWN OF INDIA

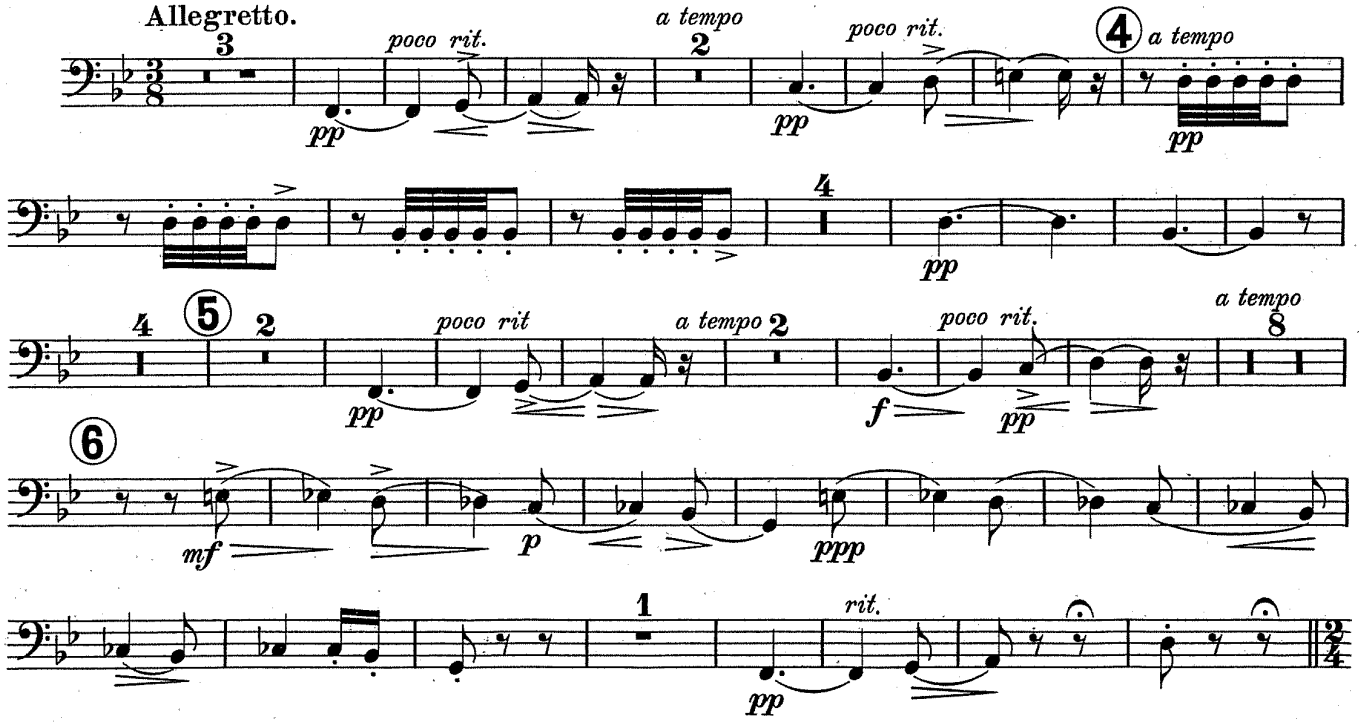
2nd Bassoon

Nº 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66



(b) DANCE OF NAUTCH GIRLS



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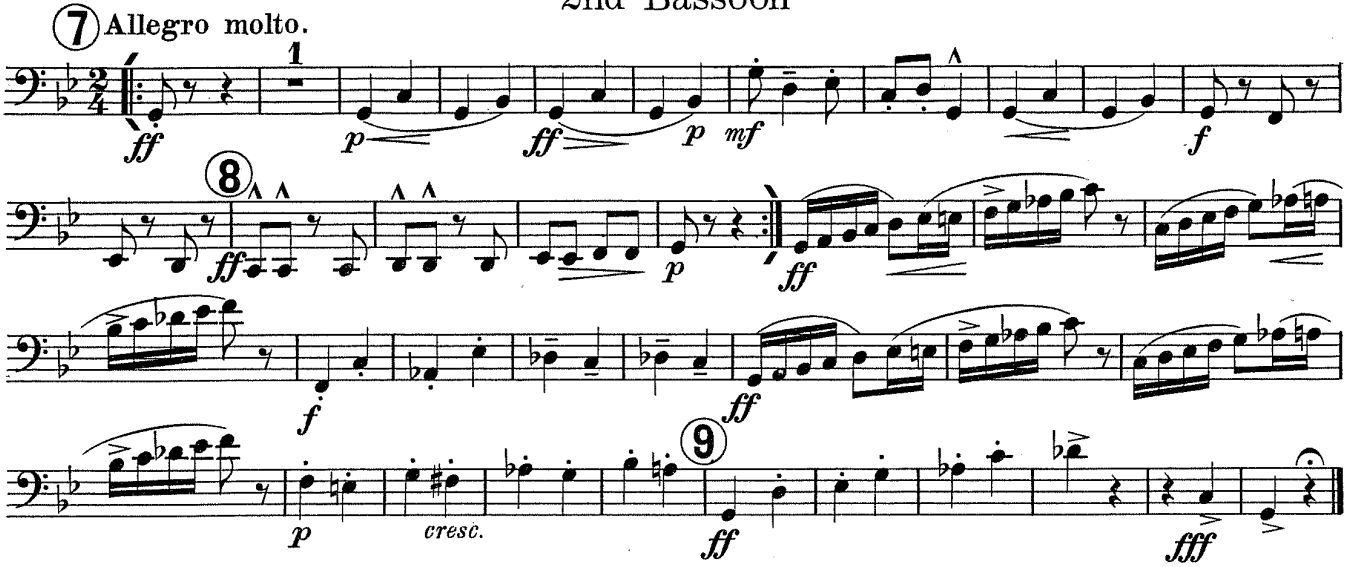
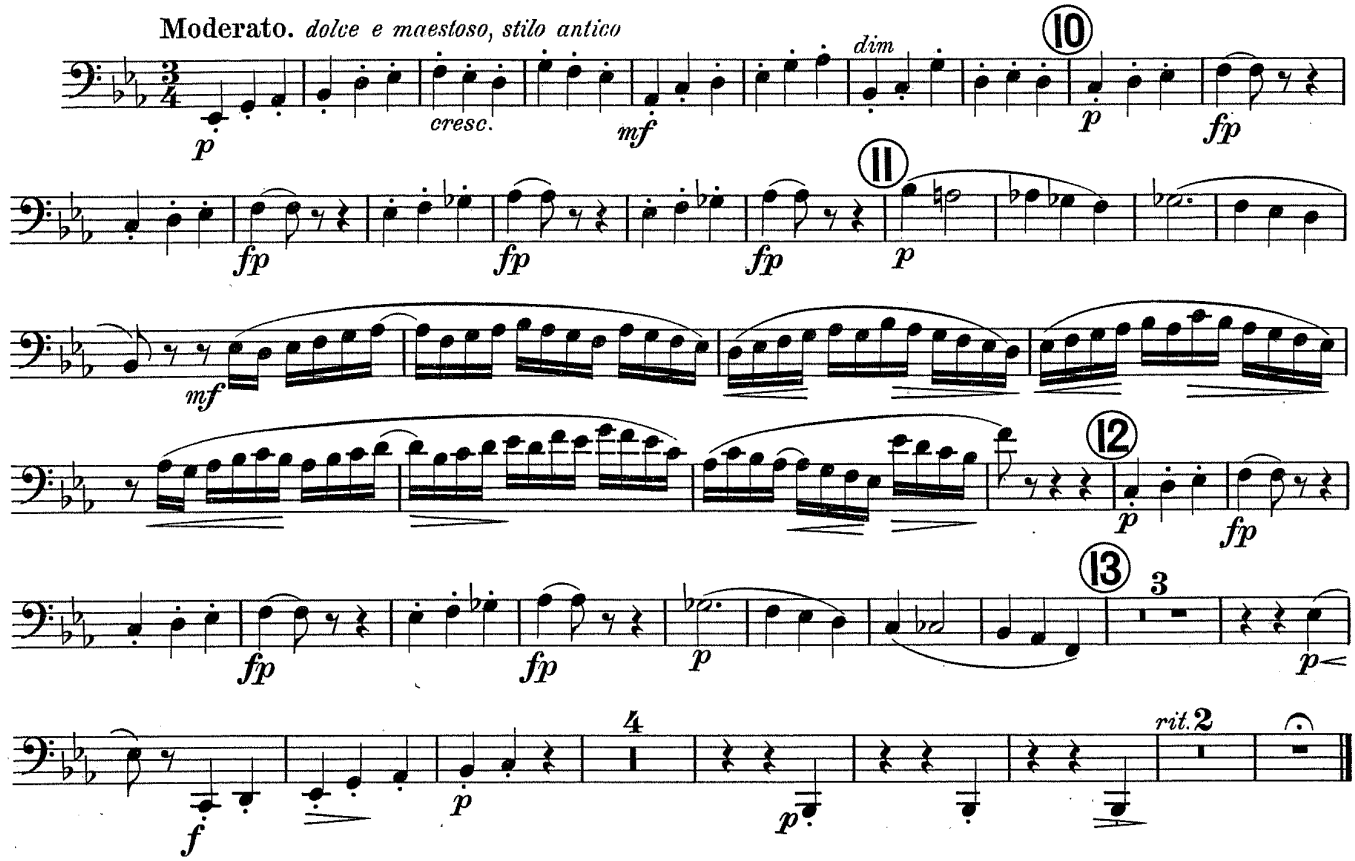
PARIS, 16 Rue Saulnier, IXe
Printed by Hawkes & Son (London), Ltd., Leipzig.
H. & S. 4983
Printed in Leipzig.

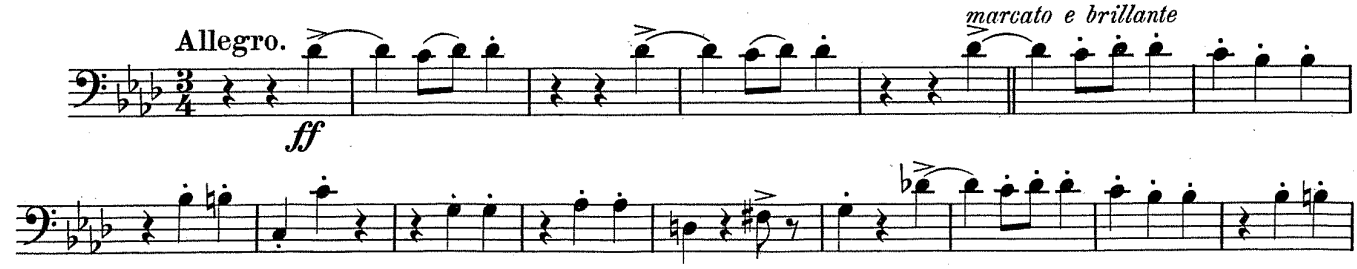
2nd Bassoon

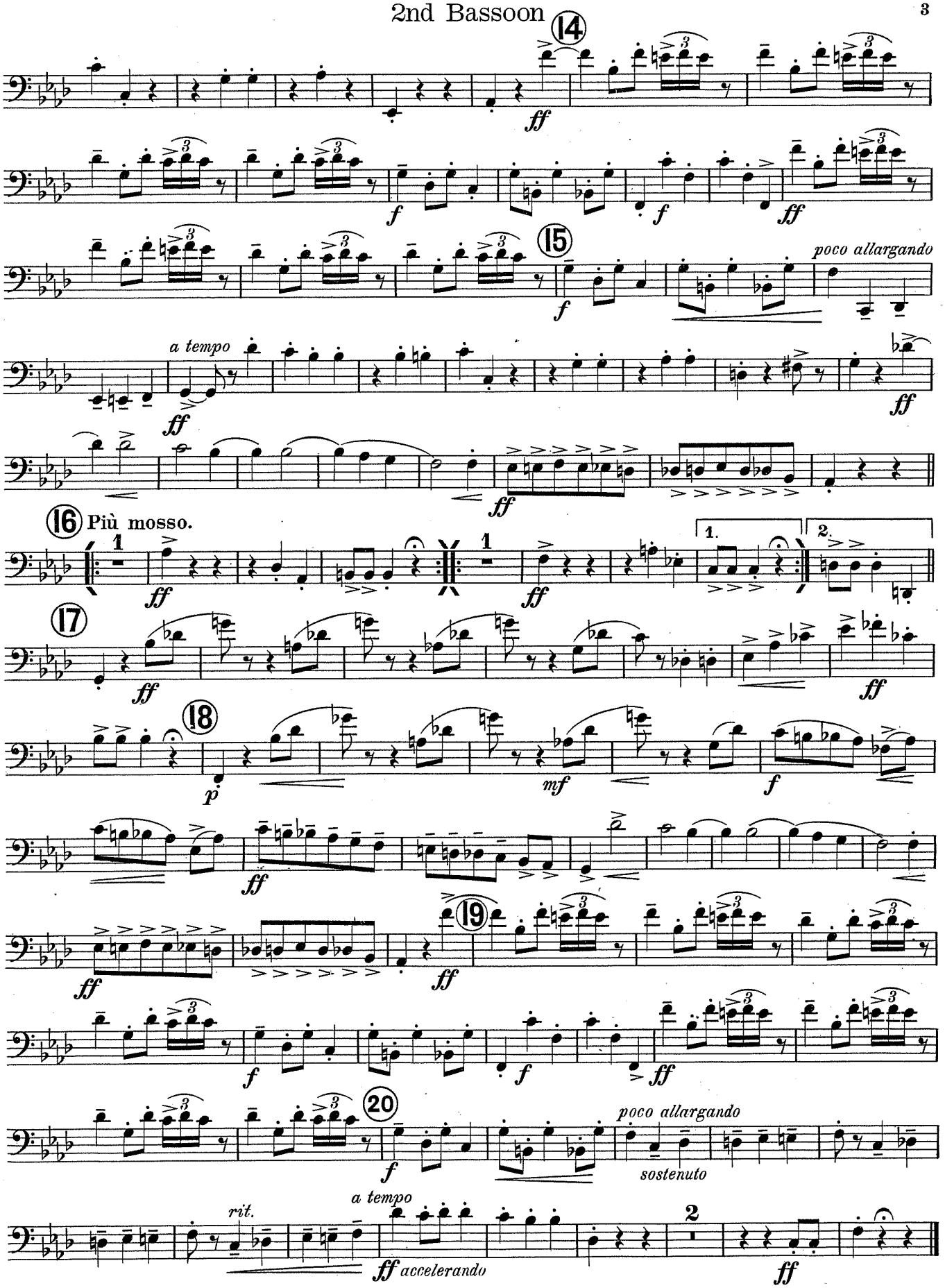


No 2. MENUETTO



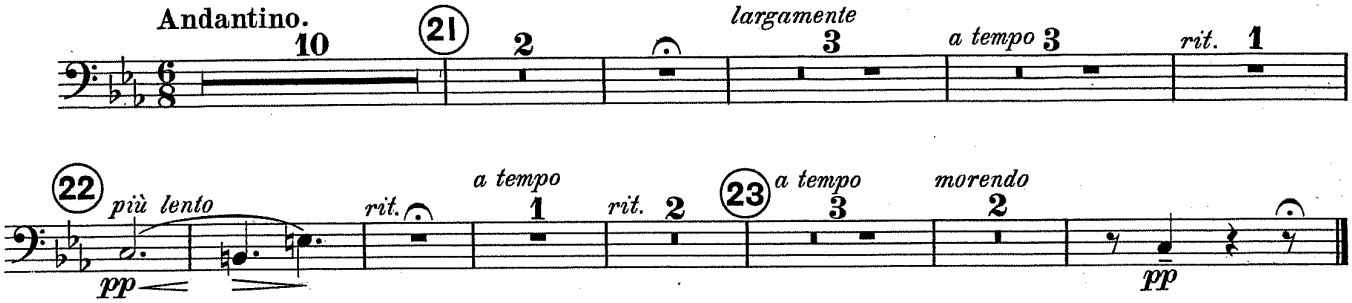
No 3. WARRIORS' DANCE



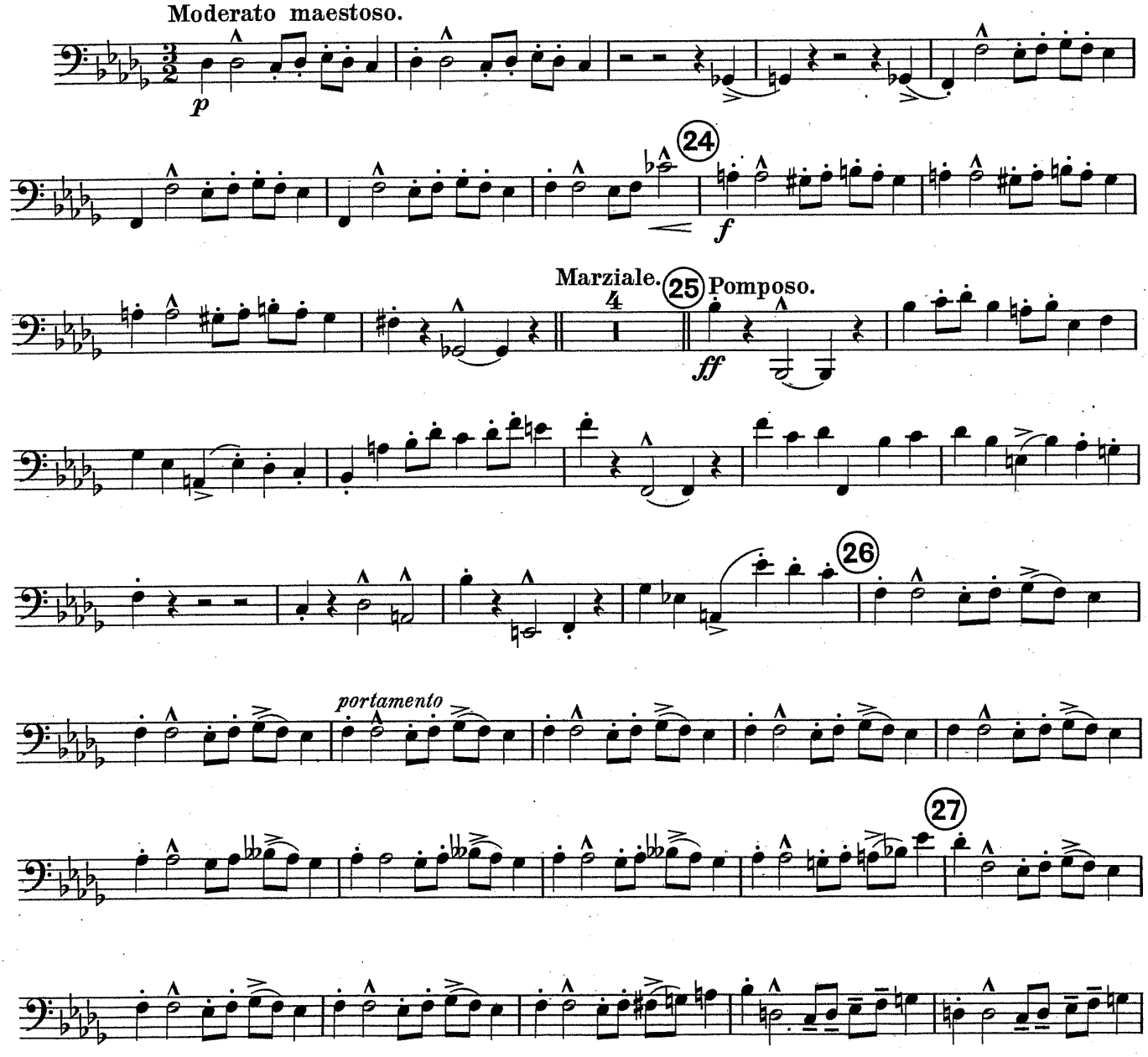

14
ff
f
ff
15
poco allargando
a tempo
ff
ff
16 Più mosso.
1
ff
1
ff
1.
2.
17
ff
ff
18
p
mf
f
ff
ff
19
ff
f
f
ff
20
f
poco allargando
sostenuto
rit.
a tempo
ff accelerando
2
ff

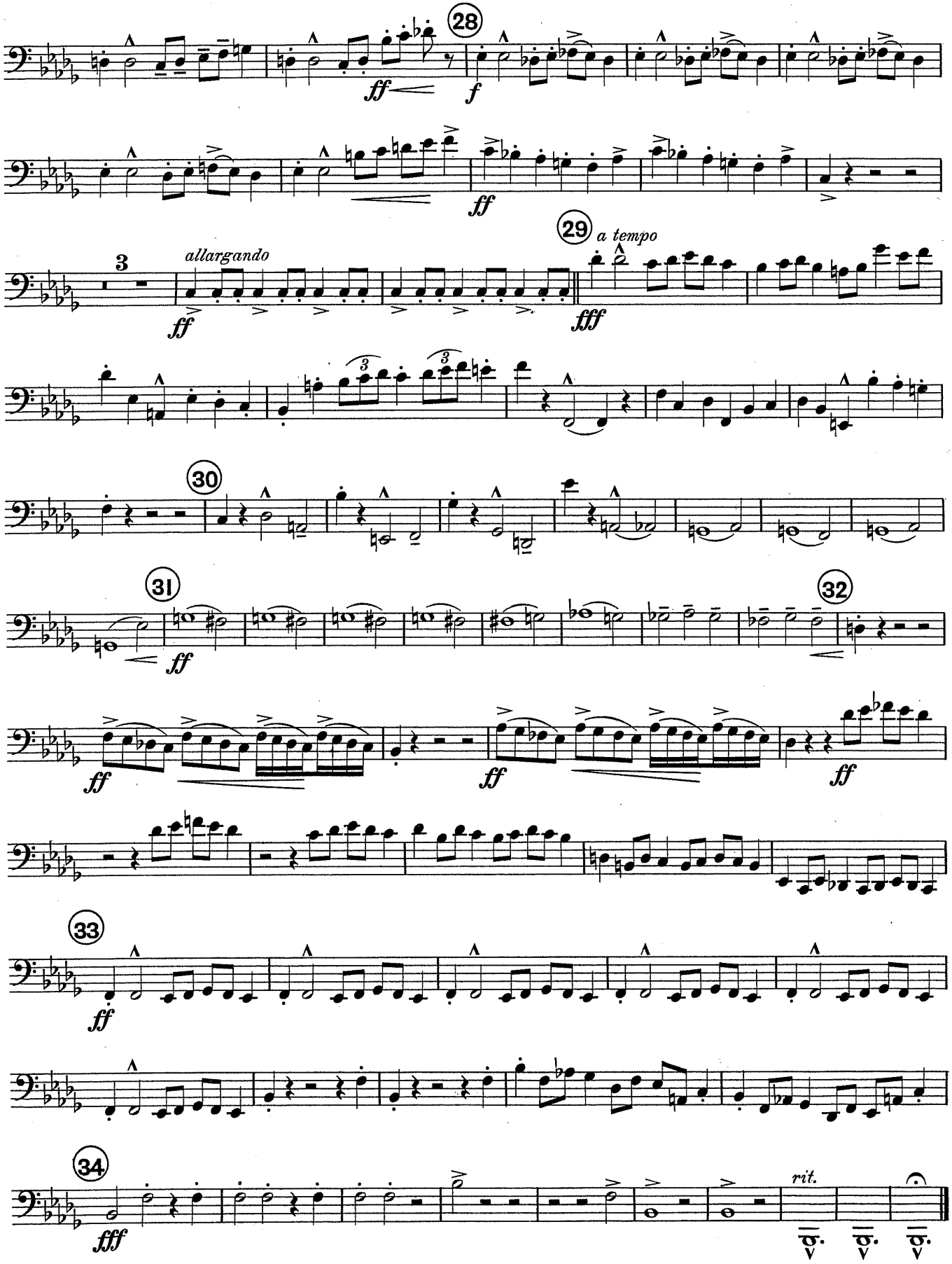
2nd Bassoon

No 4. INTERMEZZO



No 5. MARCH OF THE MOGUL EMPERORS




28
ff
f
ff
29
a tempo
allargando
3
ff
fff
30
31
ff
32
ff
ff
ff
33
ff
34
fff
rit.

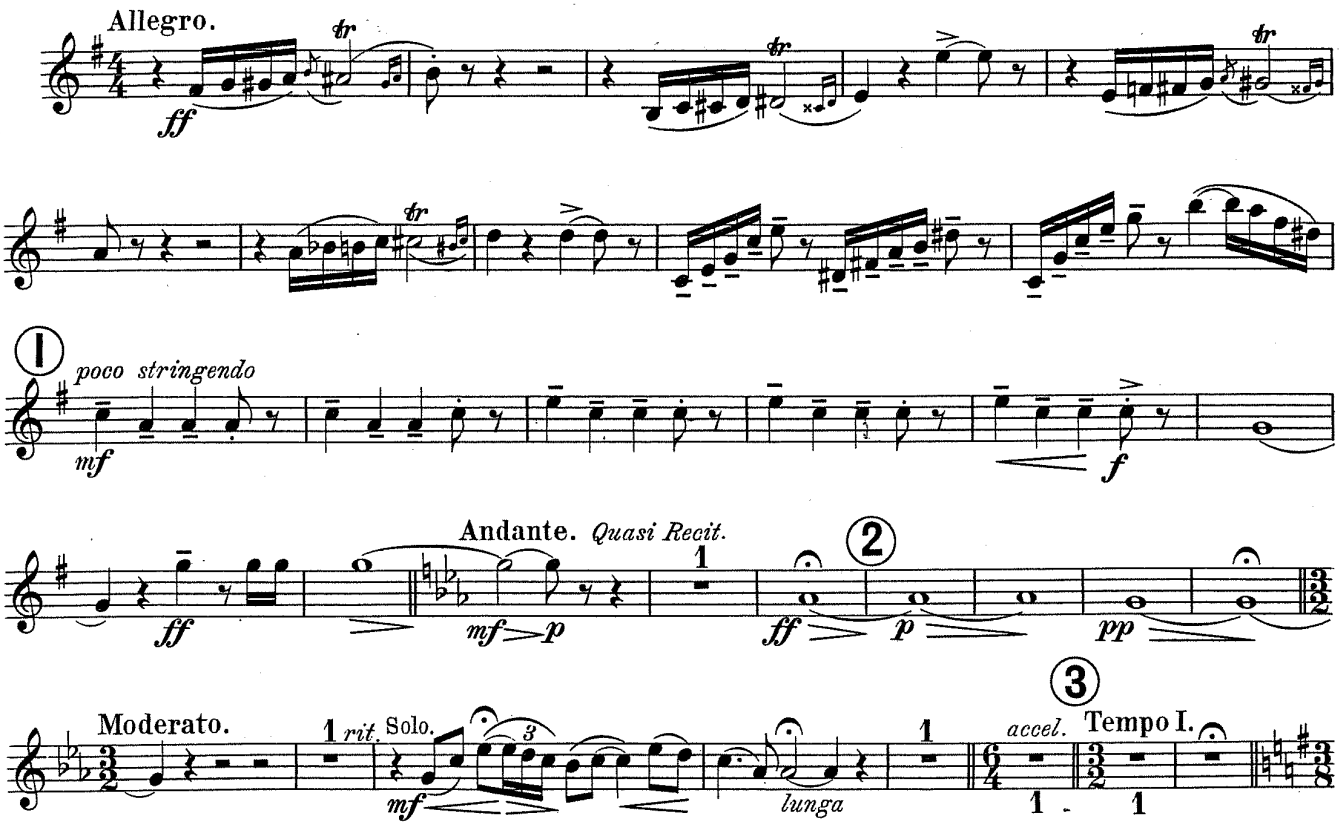
SUITE

THE CROWN OF INDIA

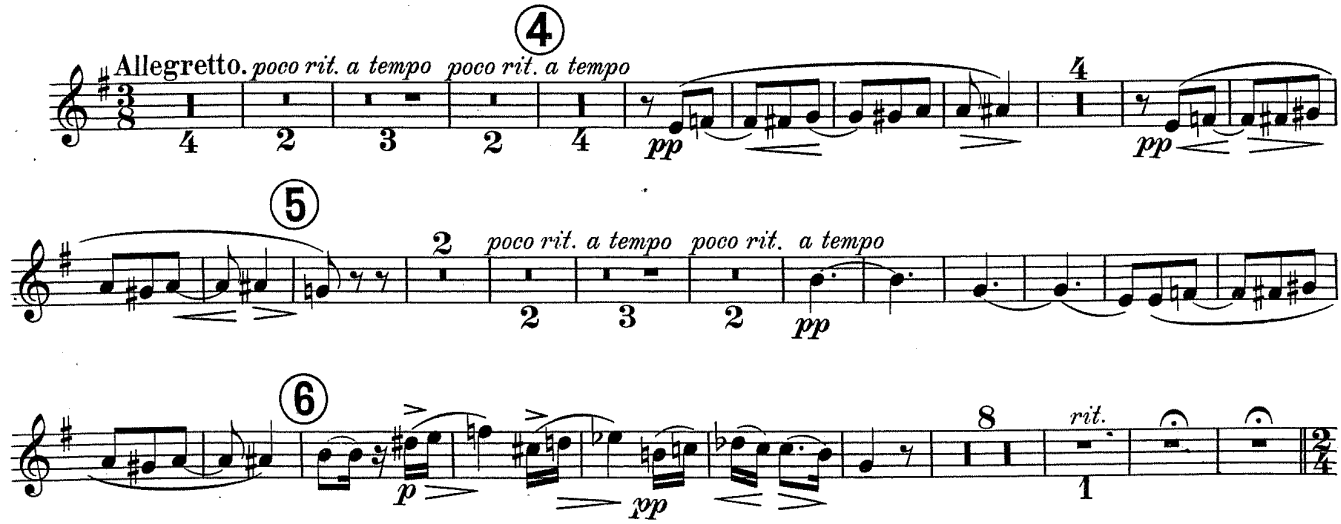
E♭ Alto Saxophone.

No. 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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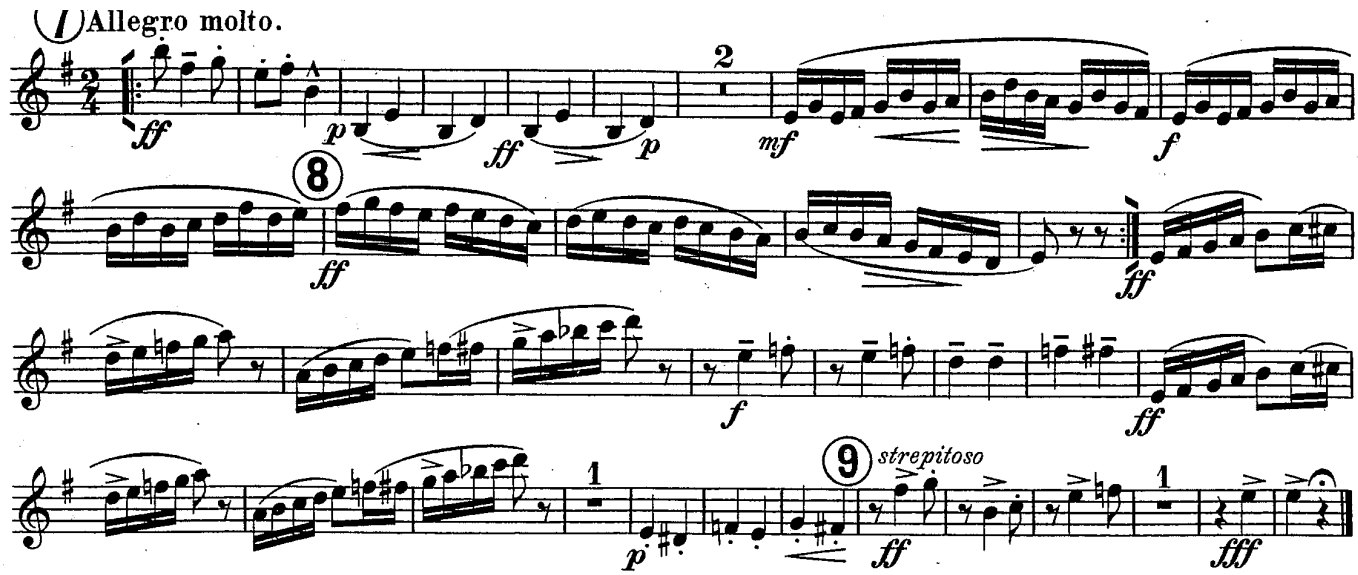
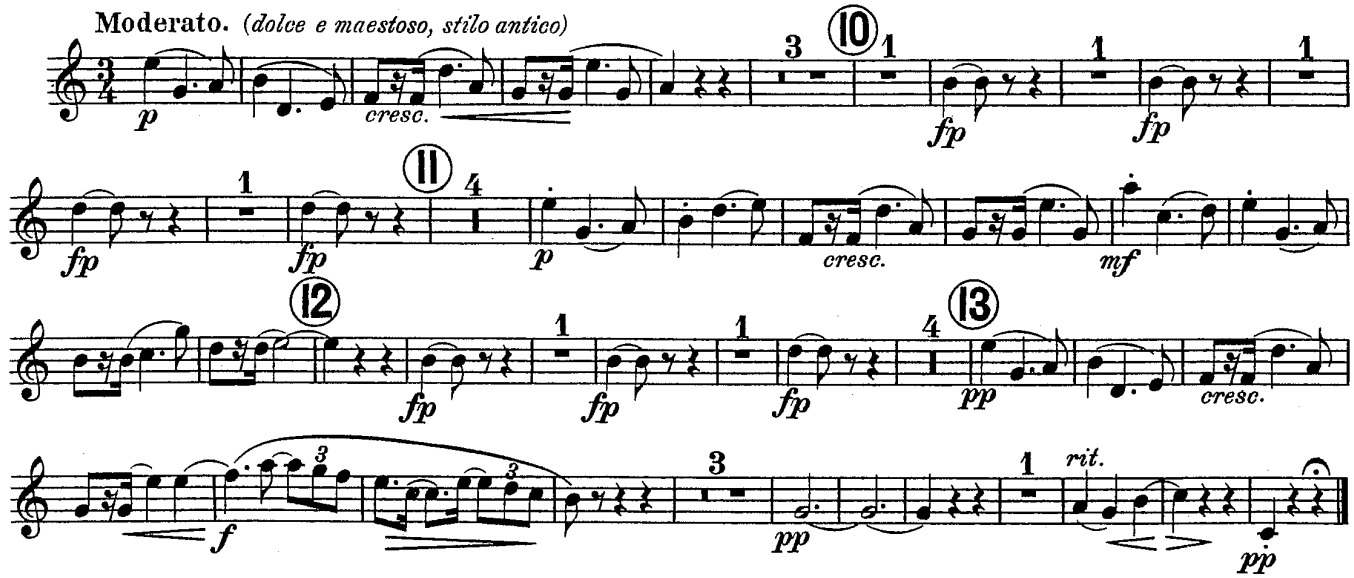
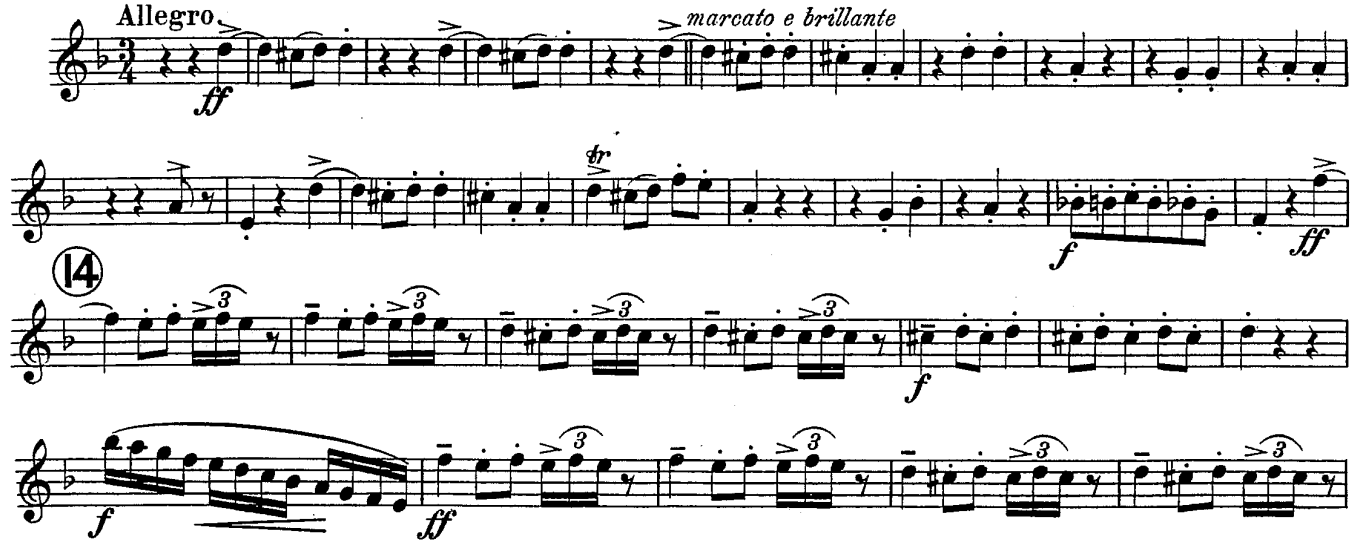
PARIS, 16 Rue Saulnier, IXe
H. & S. 4983
Printed by Hawkes & Son (London), Ltd., Leipzig.
Printed in Leipzig.

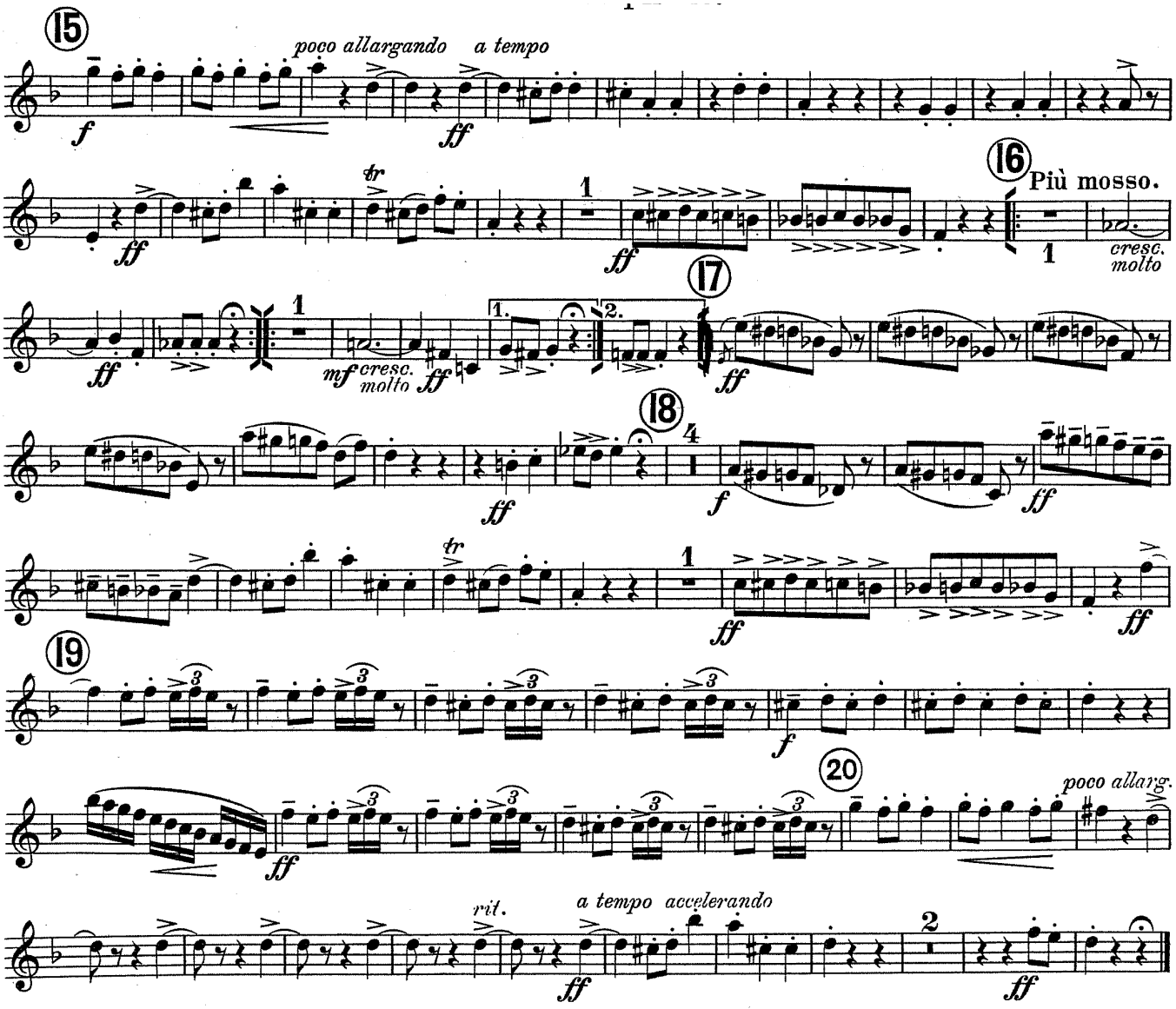


Nº 2. MENUETTO

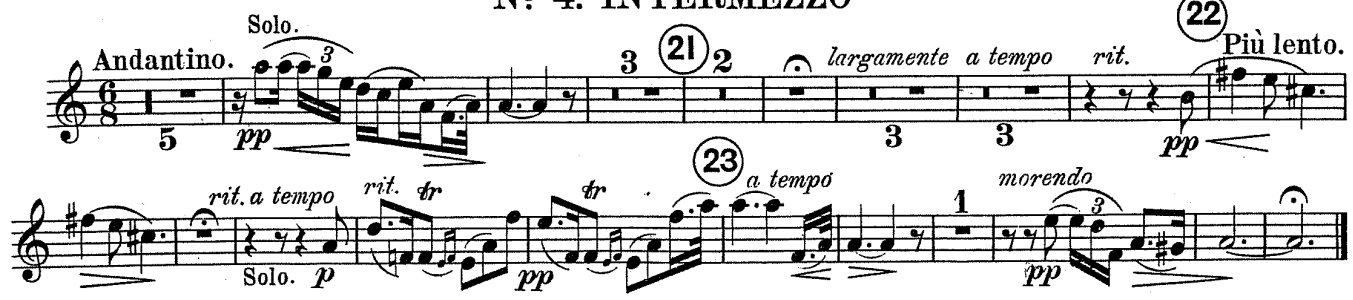


Nº 3. WARRIORS' DANCE

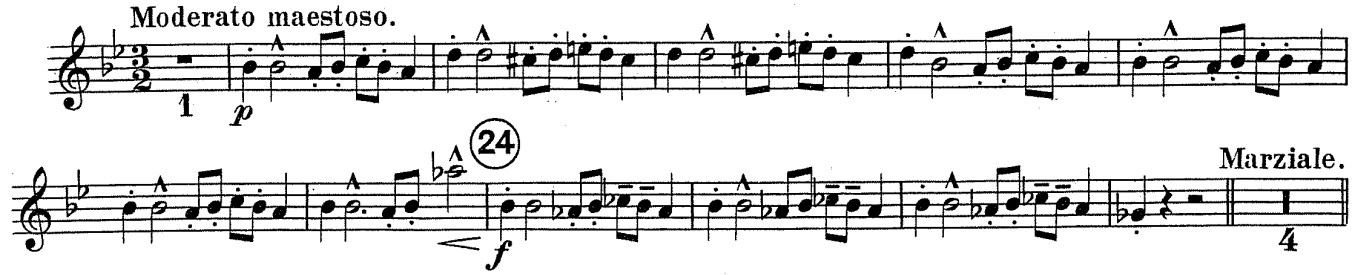


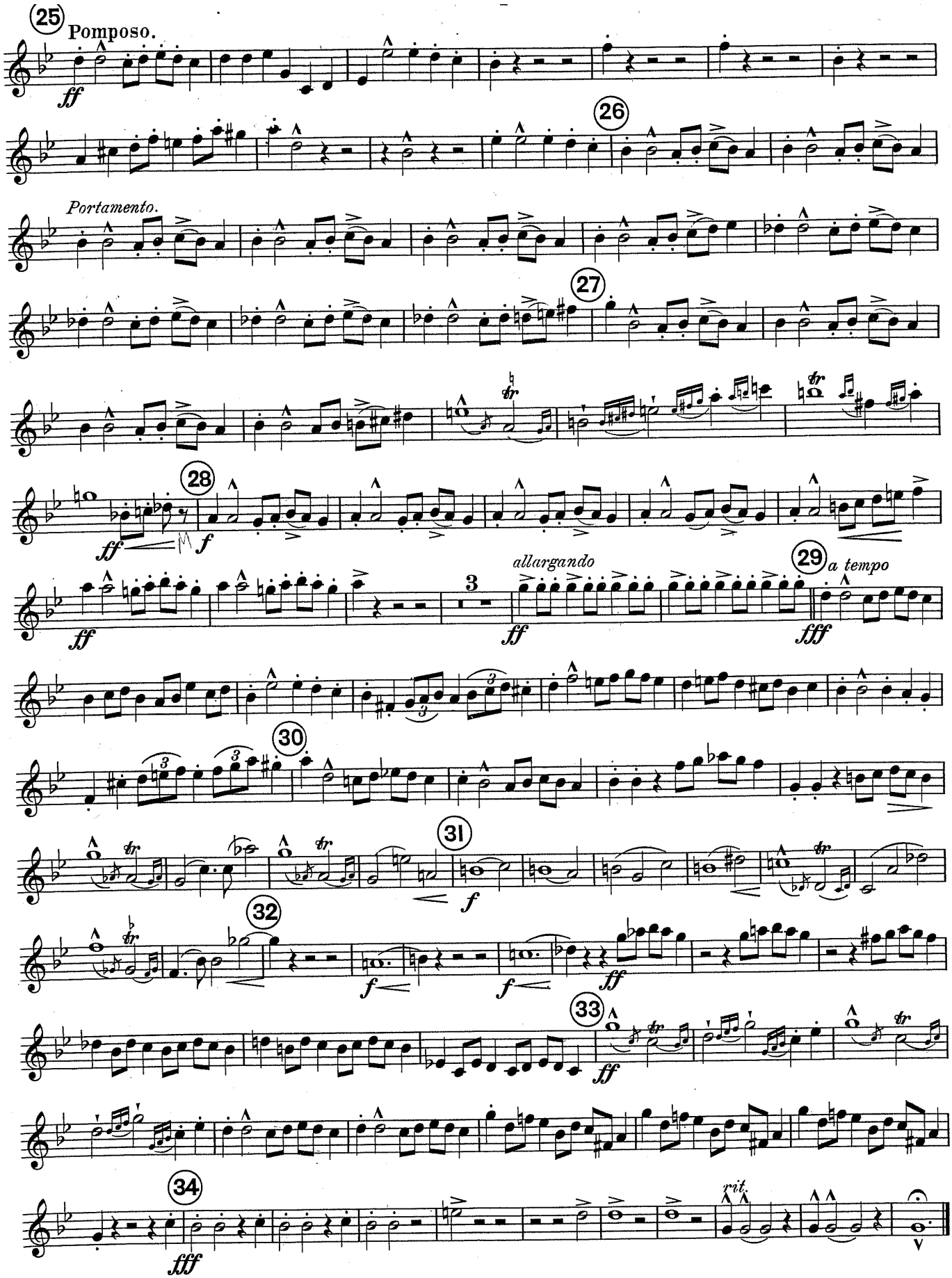


Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



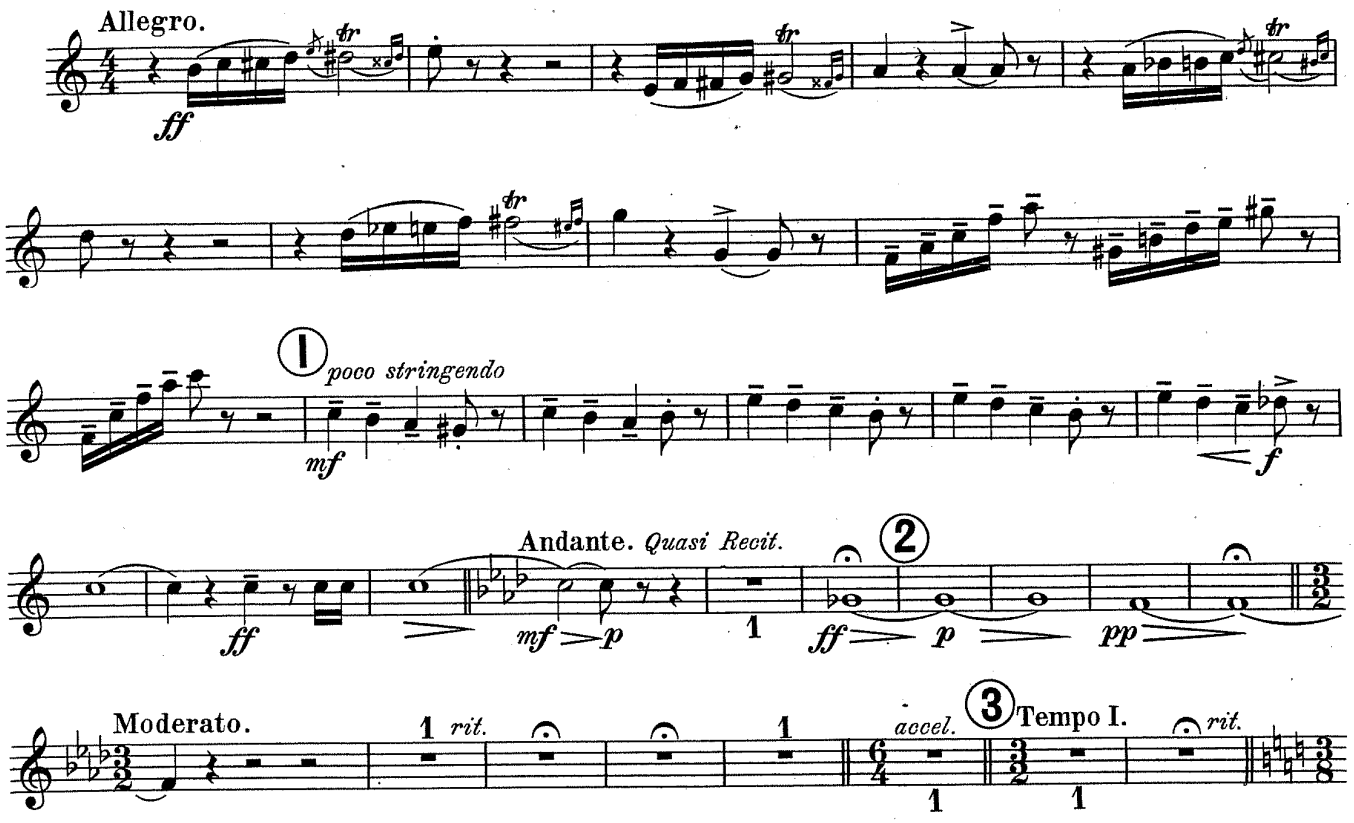

25
Pomposo.
ff
26
Portamento.
27
28
ff
f
allargando
29
a tempo
ff
fff
30
31
f
32
f
f
ff
33
ff
34
fff
rit.

SUITE
THE CROWN OF INDIA

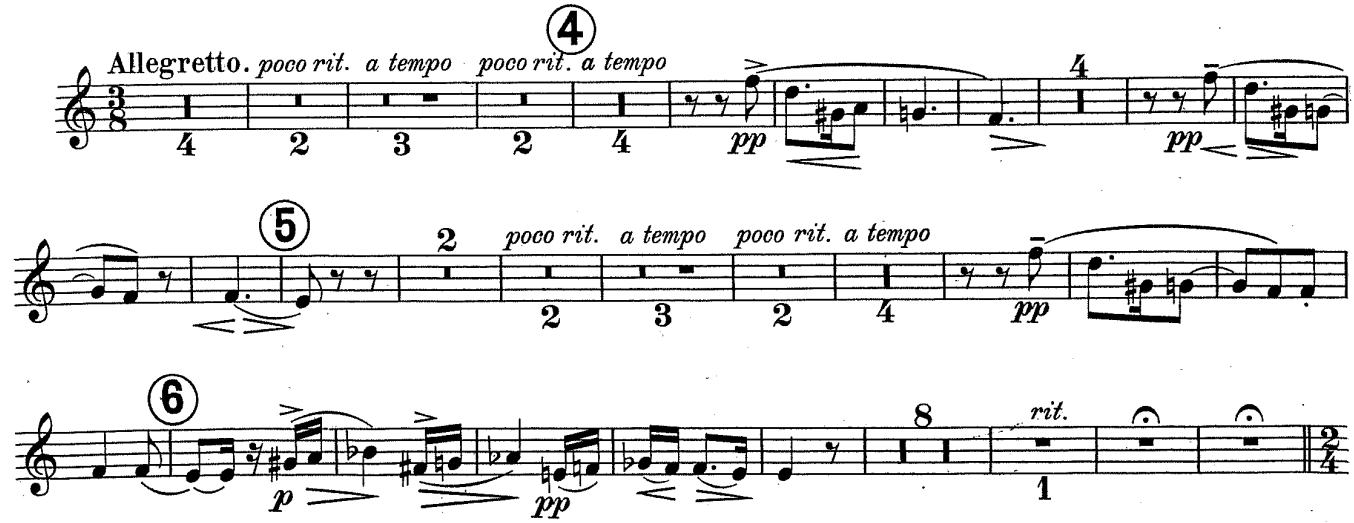
B♭ Tenor Saxophone.

No 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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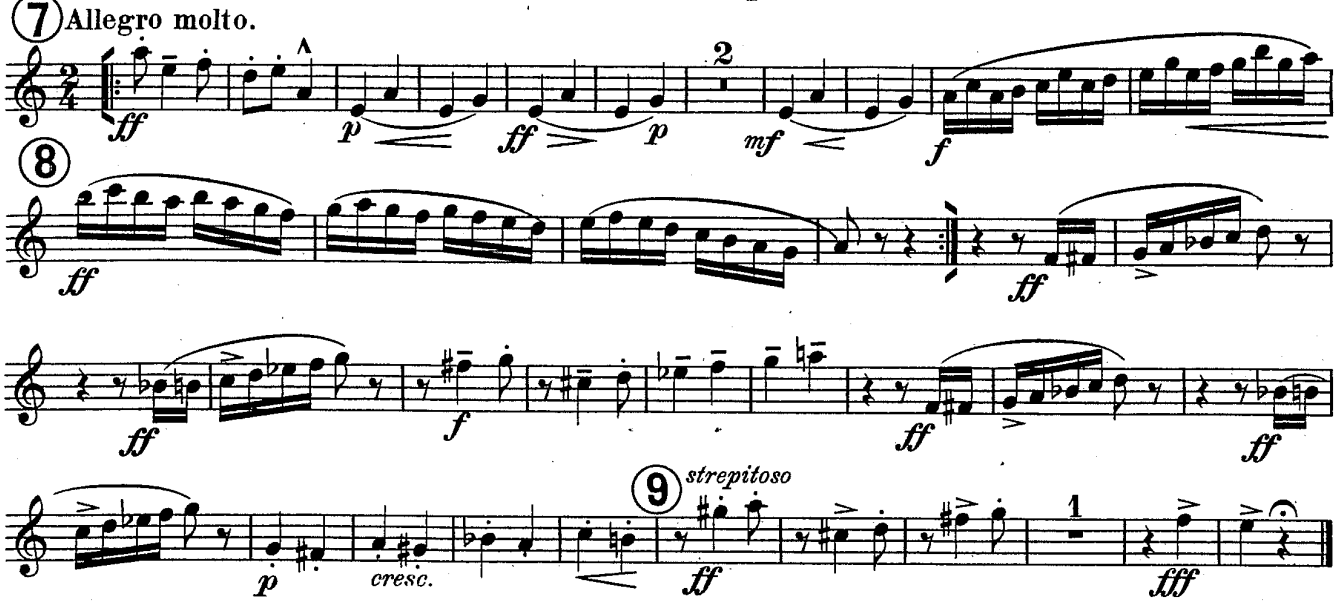
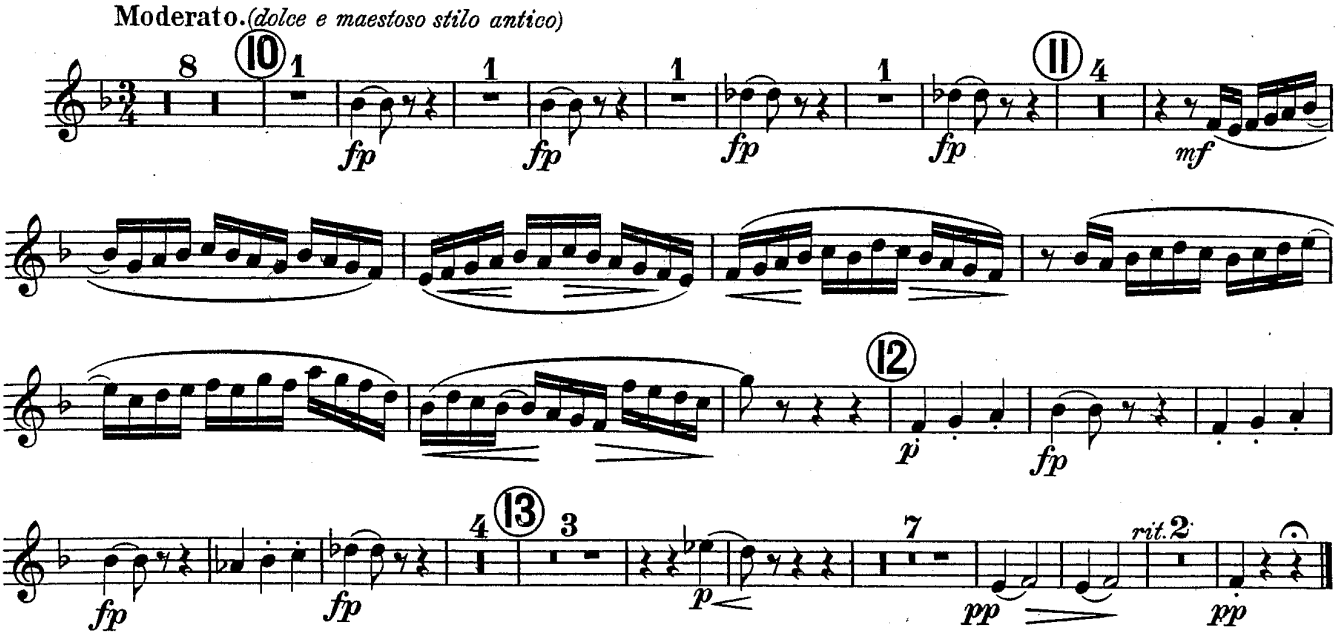
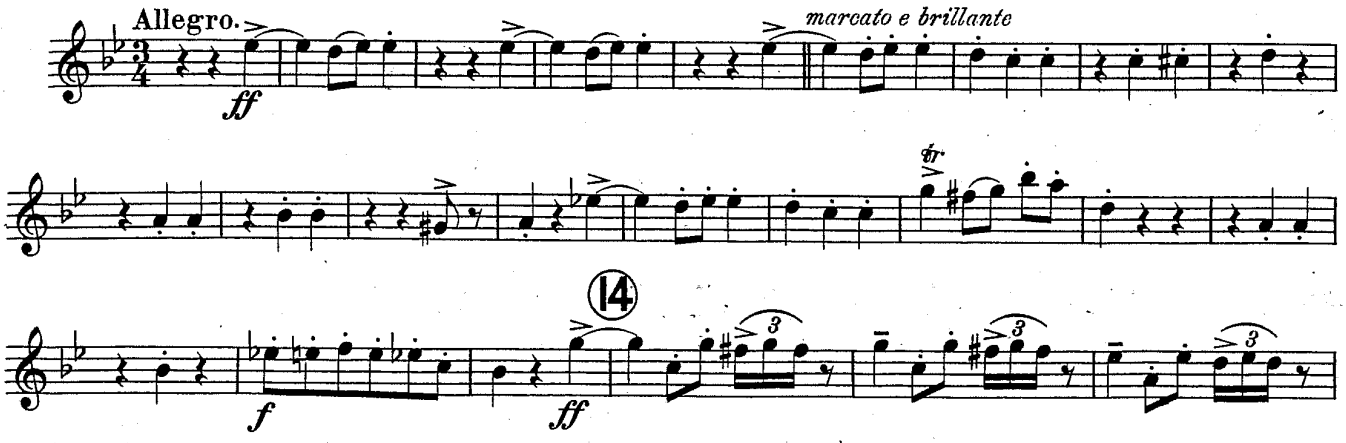
B♭ Tenor Saxophone.

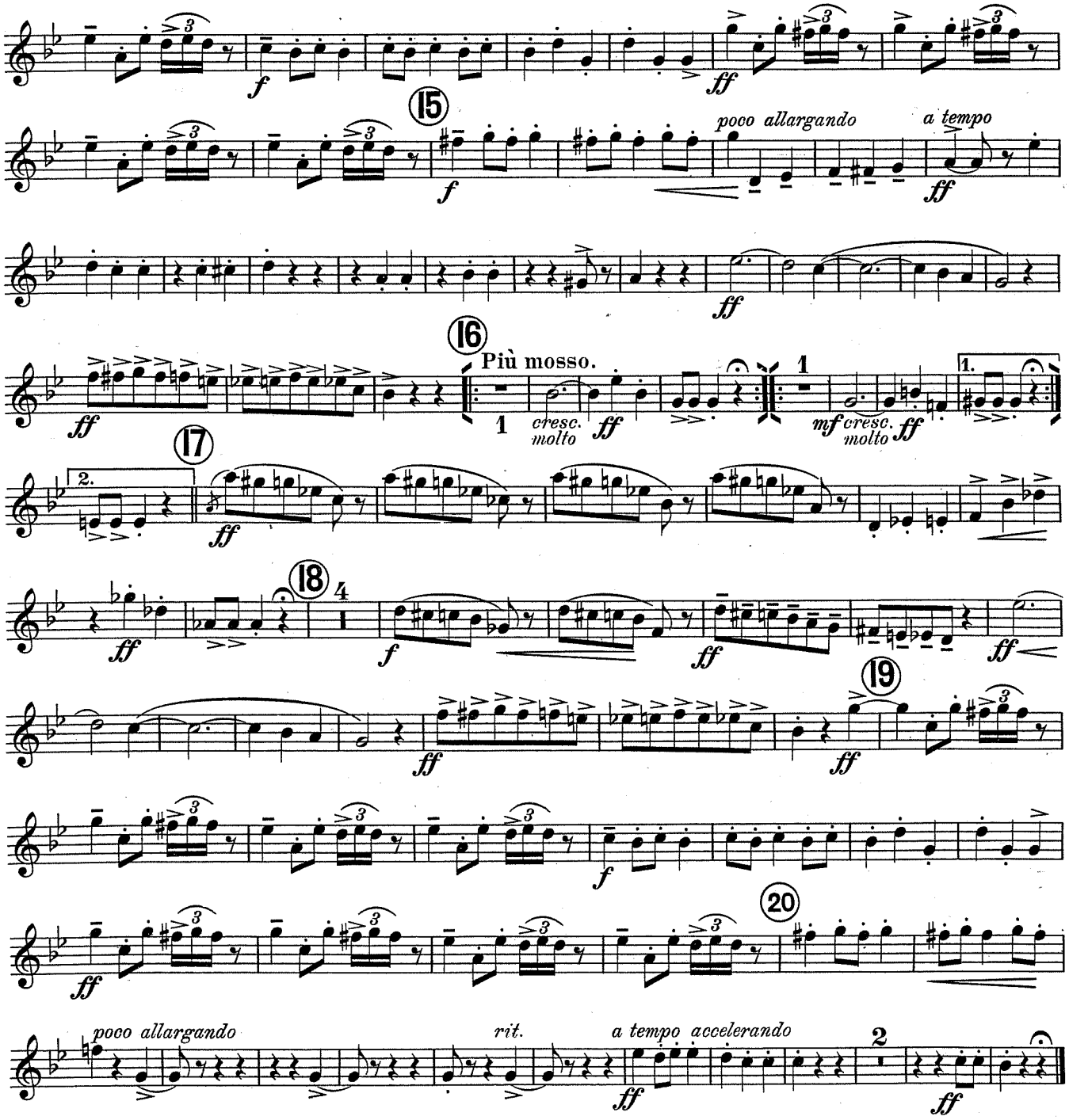


No. 2. MENUETTO



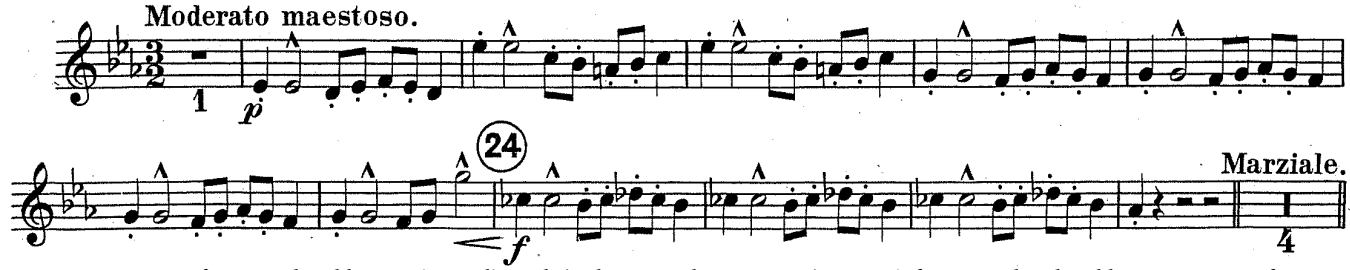
No. 3. WARRIORS' DANCE



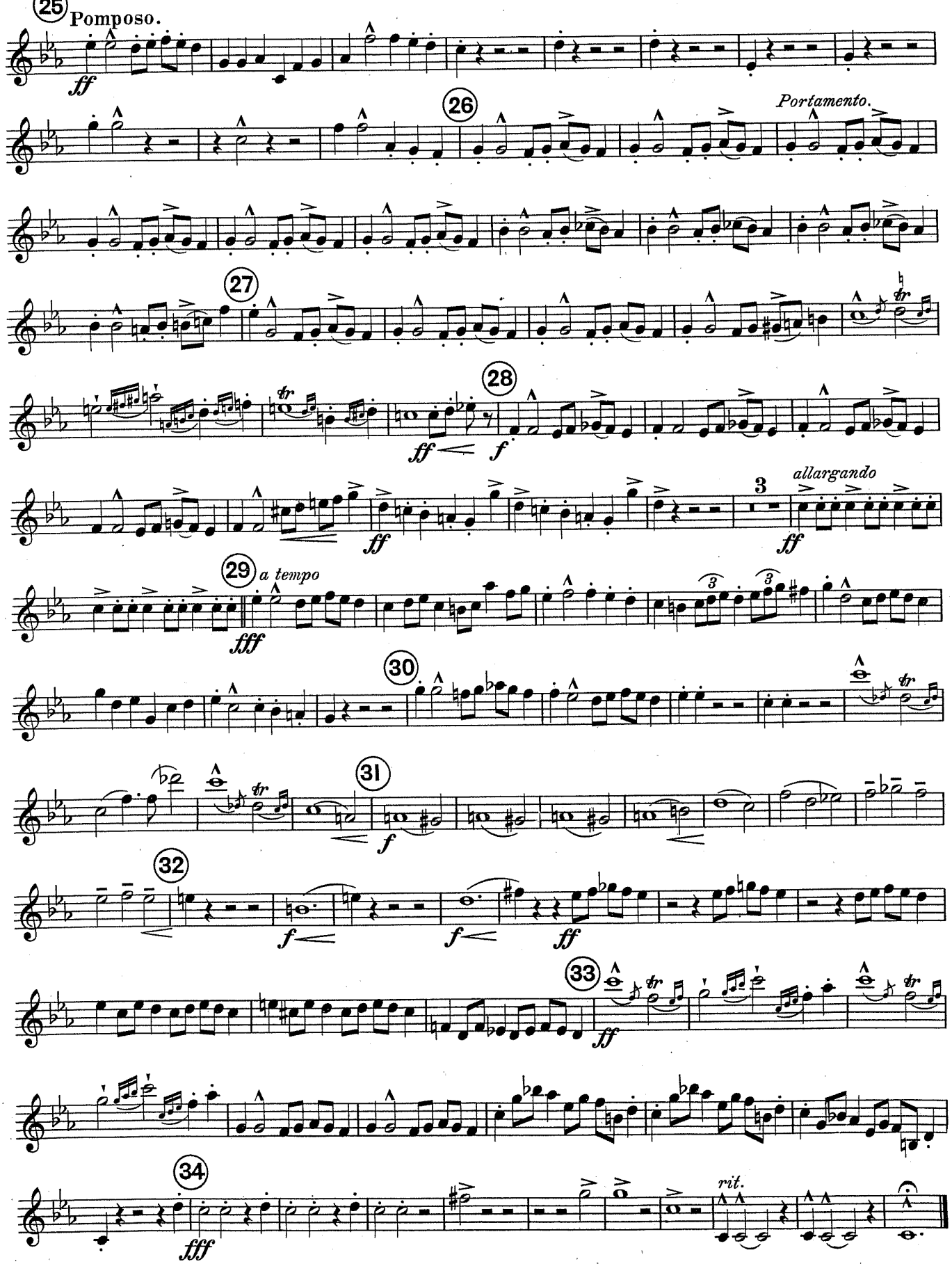


Nº 4. TACET

Nº 5. MARCH OF THE MOGUL EMPERORS



B♭ Tenor Saxophone.



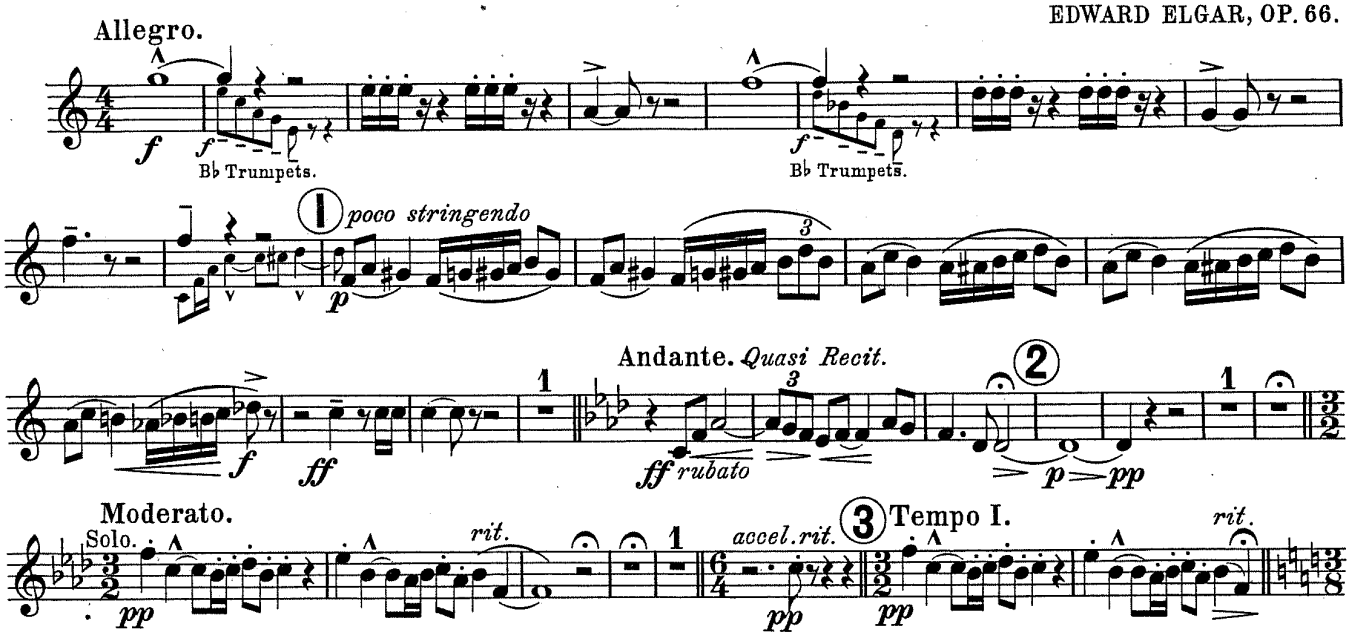
SUITE

THE CROWN OF INDIA

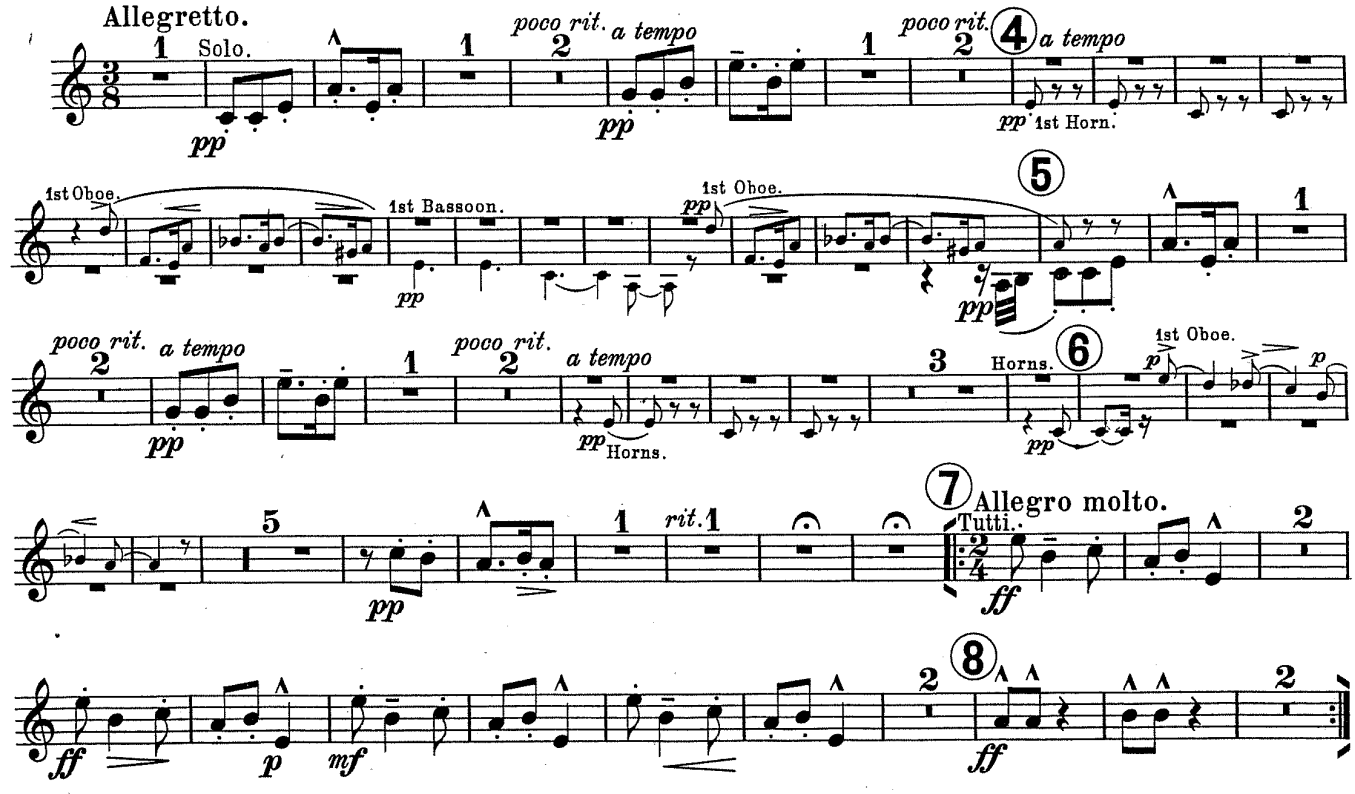
1st B♭ Cornet.

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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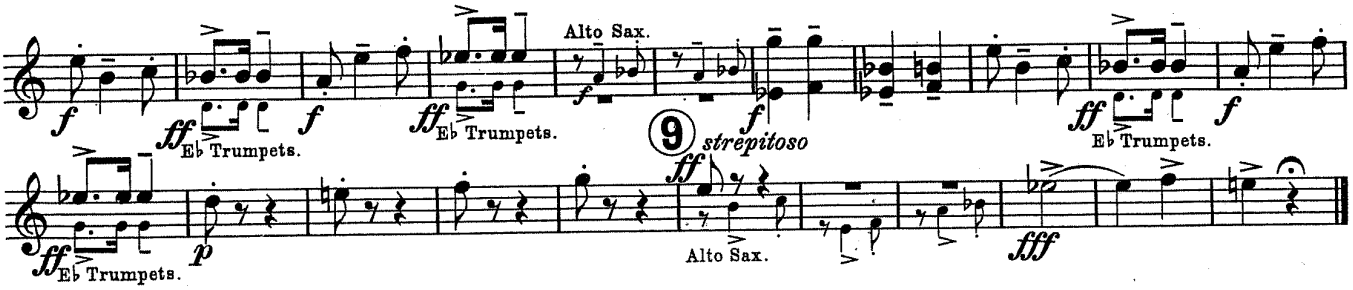
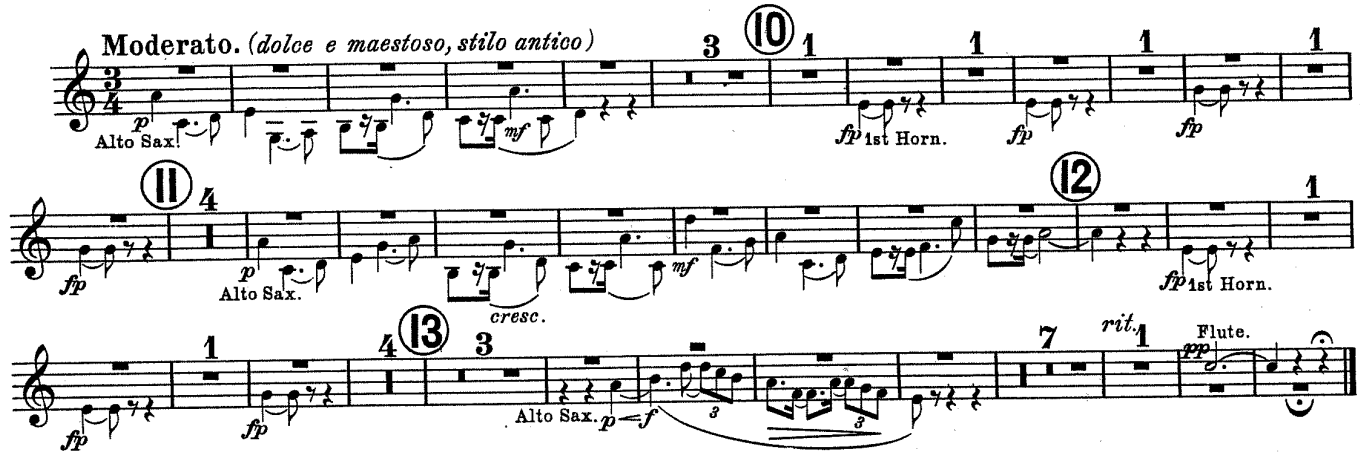
Printed in Leipzig.

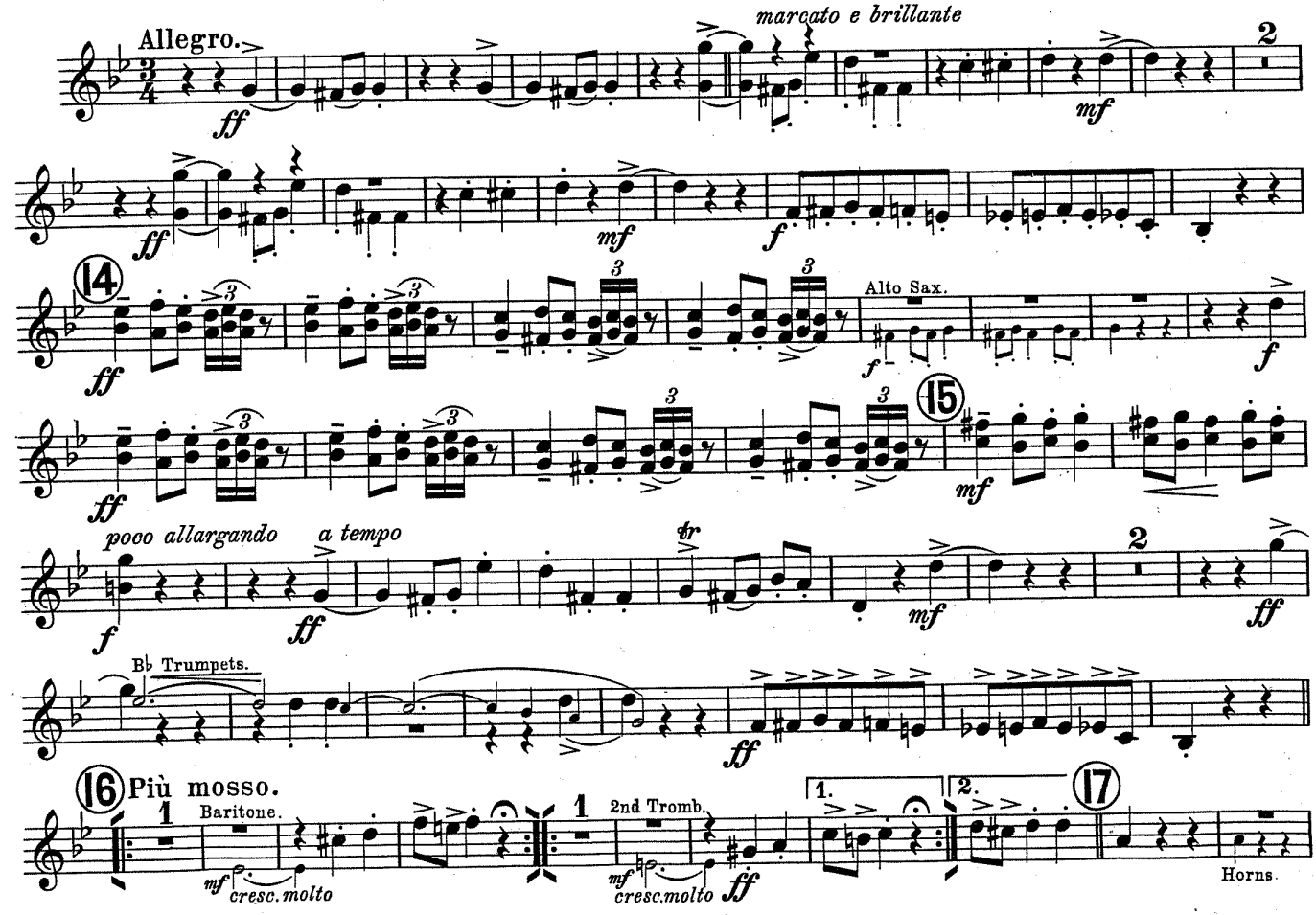
1st B♭ Cornet.

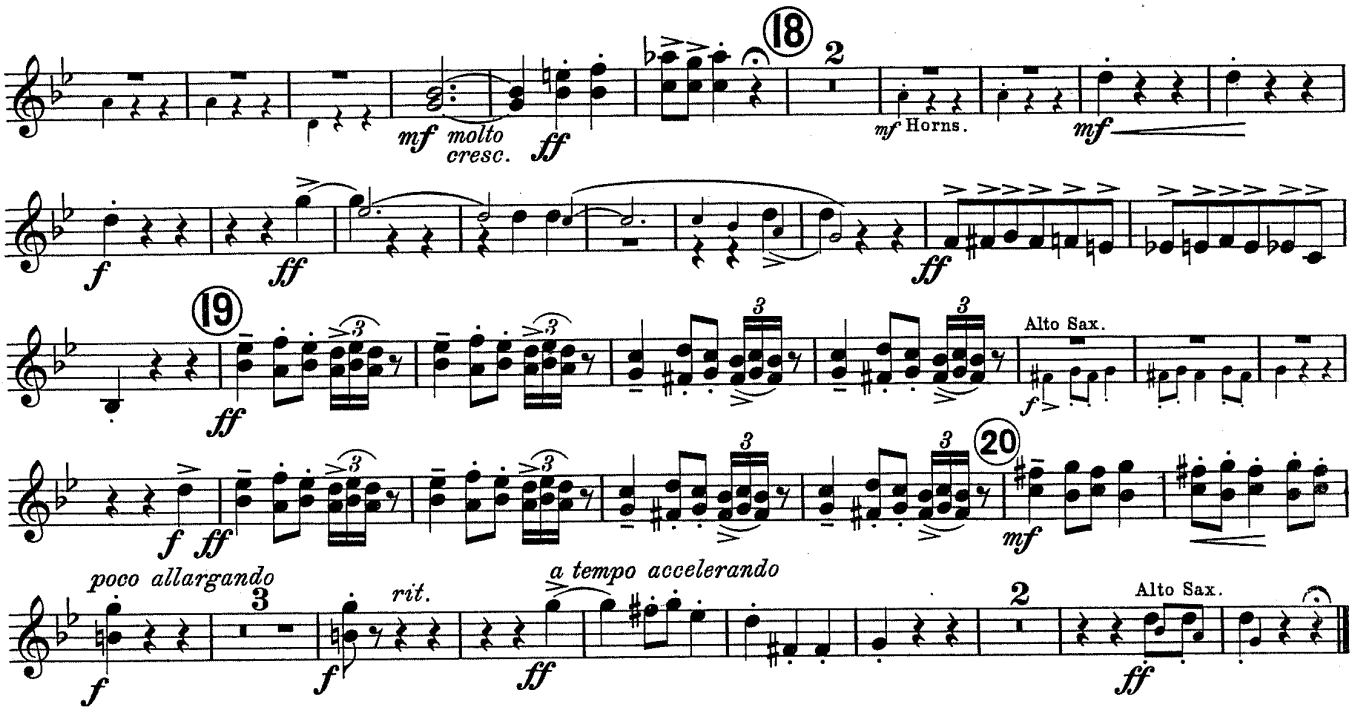


Nº 2. MENUETTO

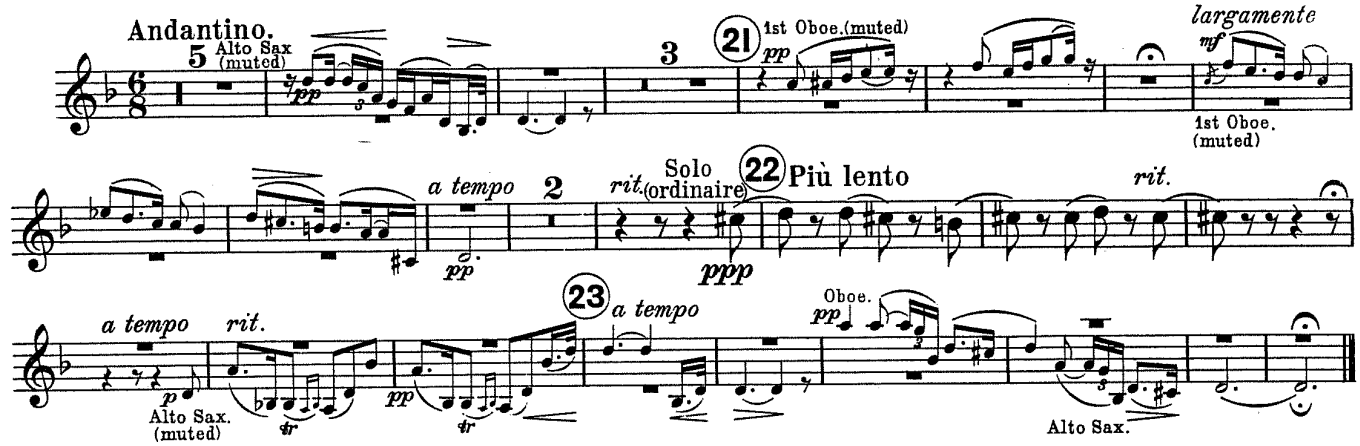


Nº 3. WARRIORS' DANCE

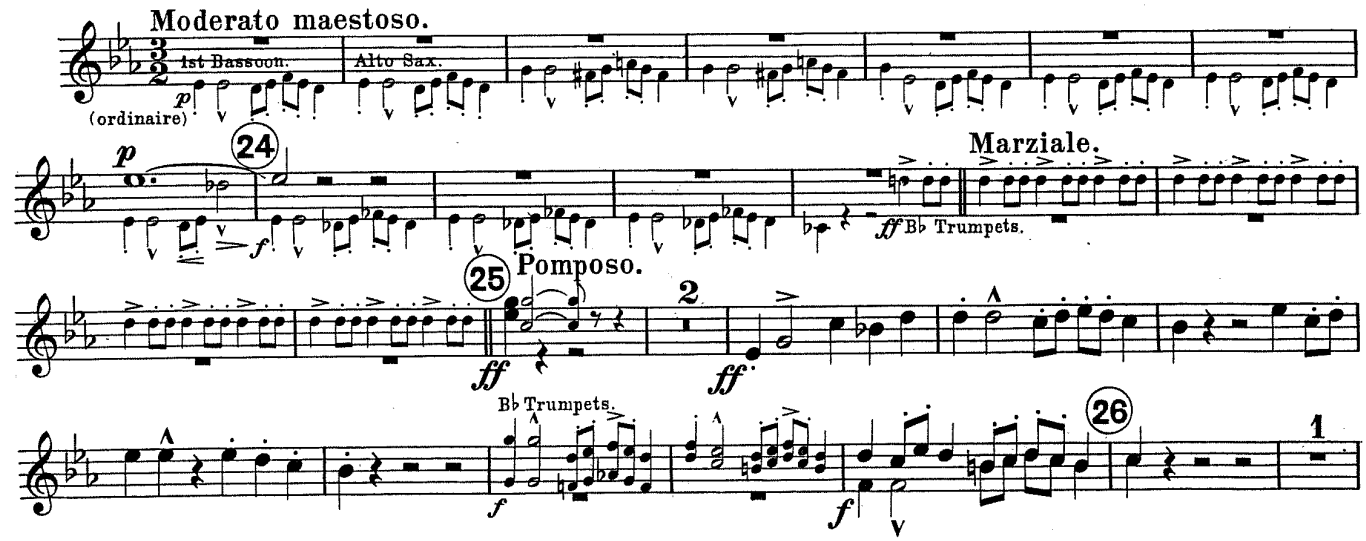




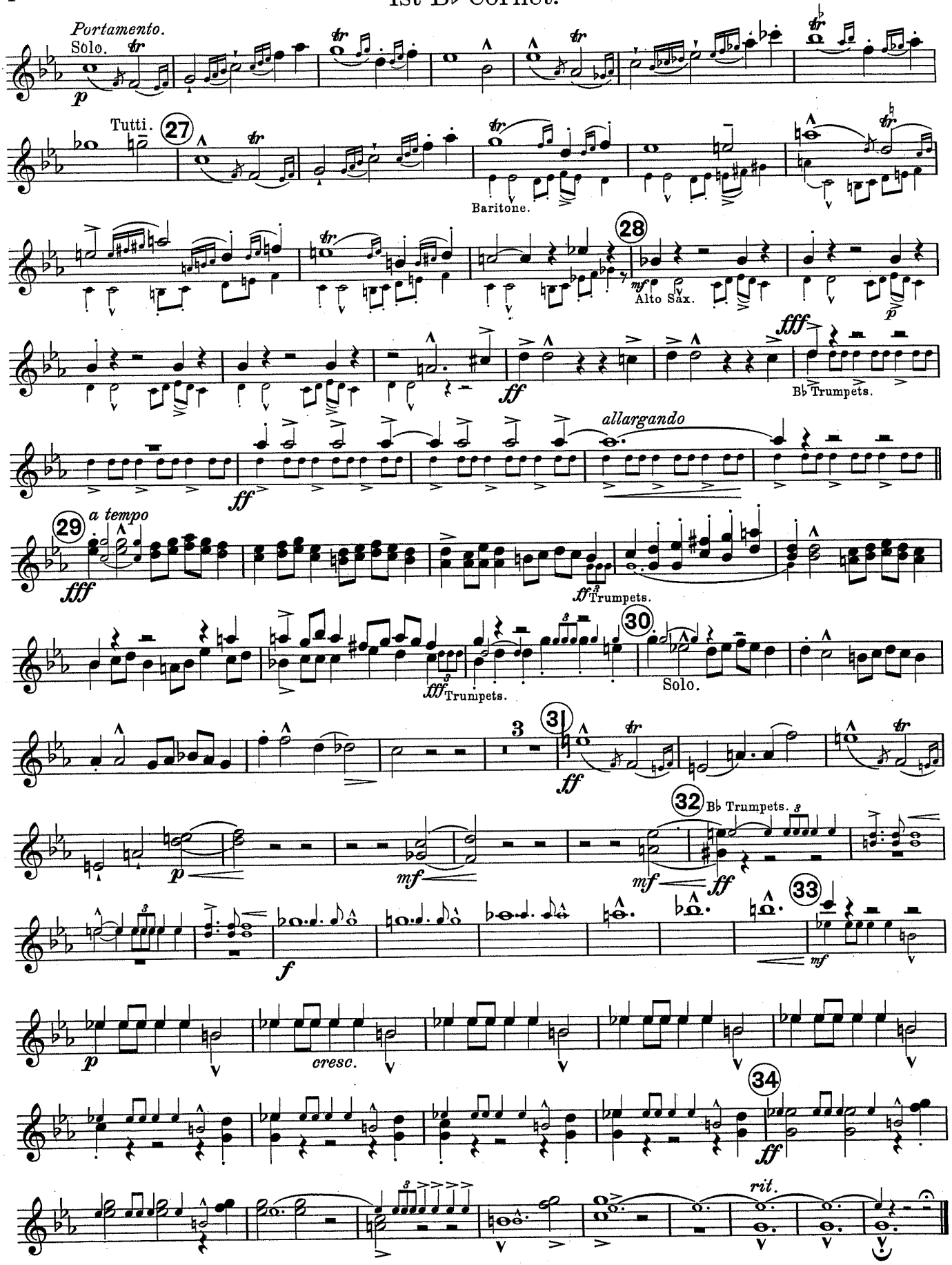
Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



1st B♭ Cornet.

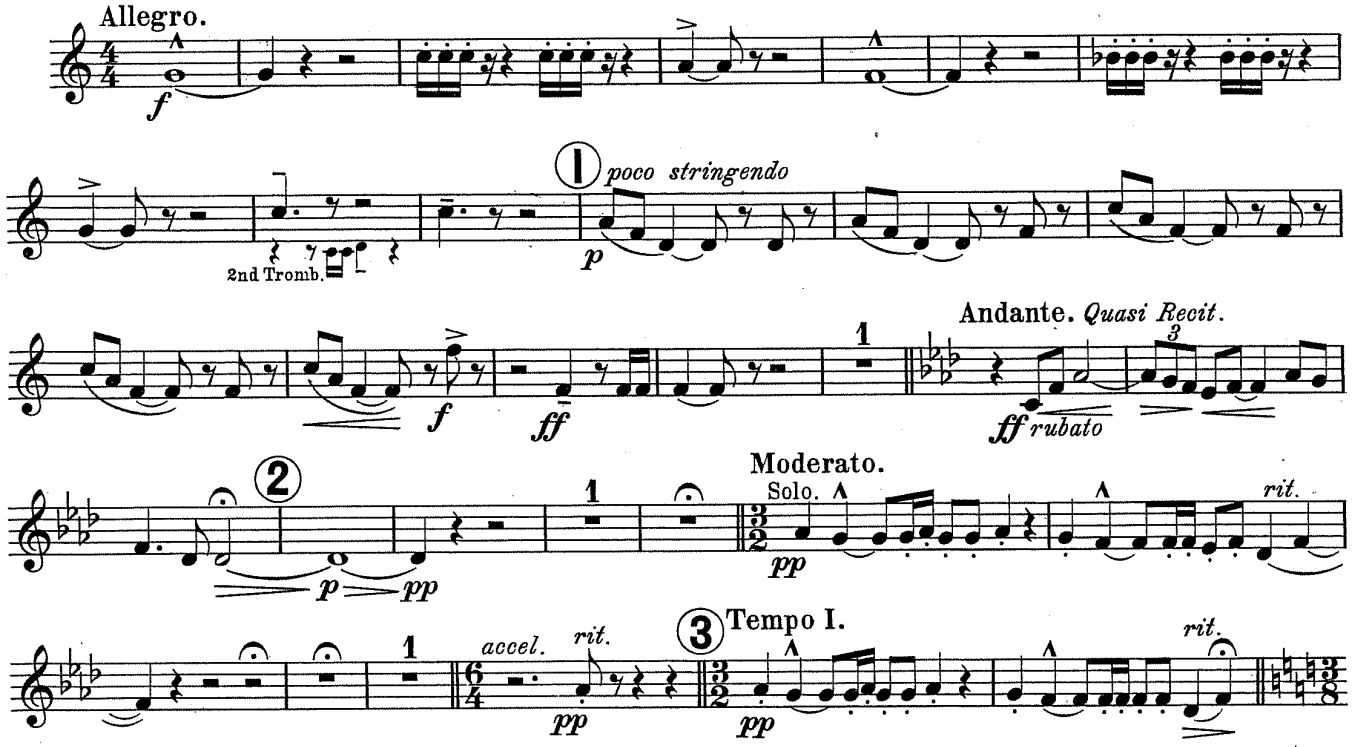

Portamento.
Solo.
Tutti.
27
Baritone.
28
Alto Sax.
Bb Trumpets.
allargando
29
a tempo
Trumpets.
30
Solo.
31
32
Bb Trumpets.
33
cresc.
34
rit.

SUITE
THE CROWN OF INDIA

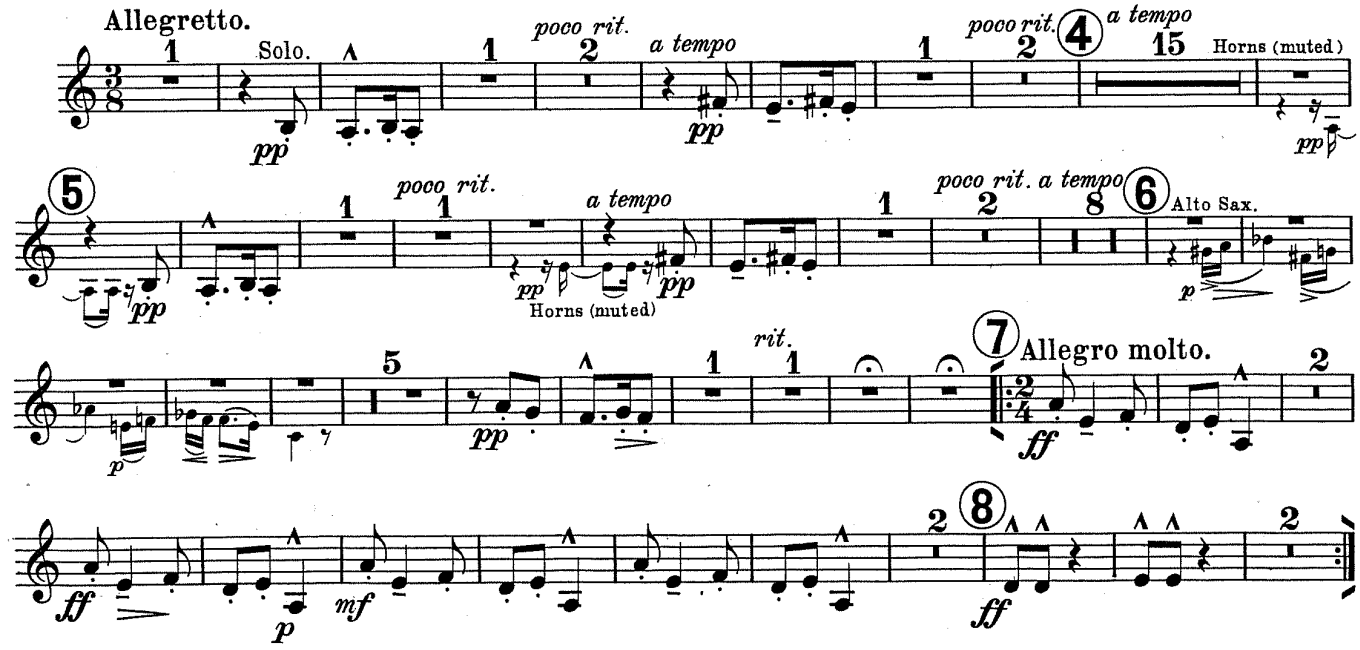
2nd B♭ Cornet.

Nº 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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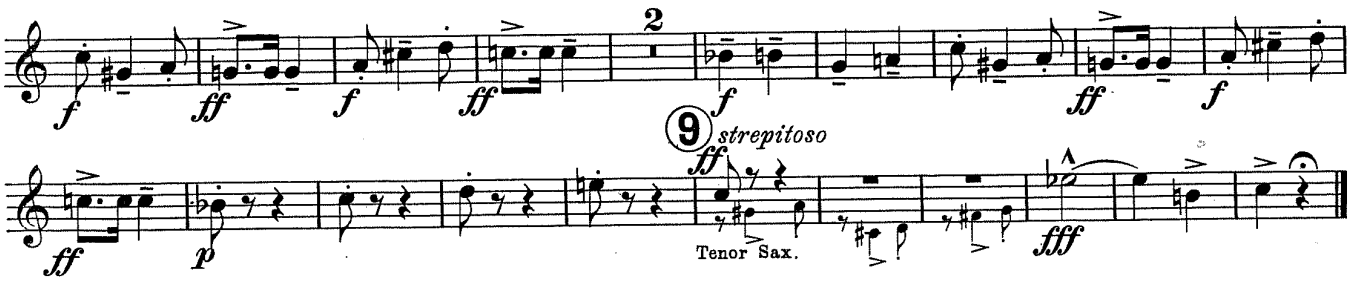
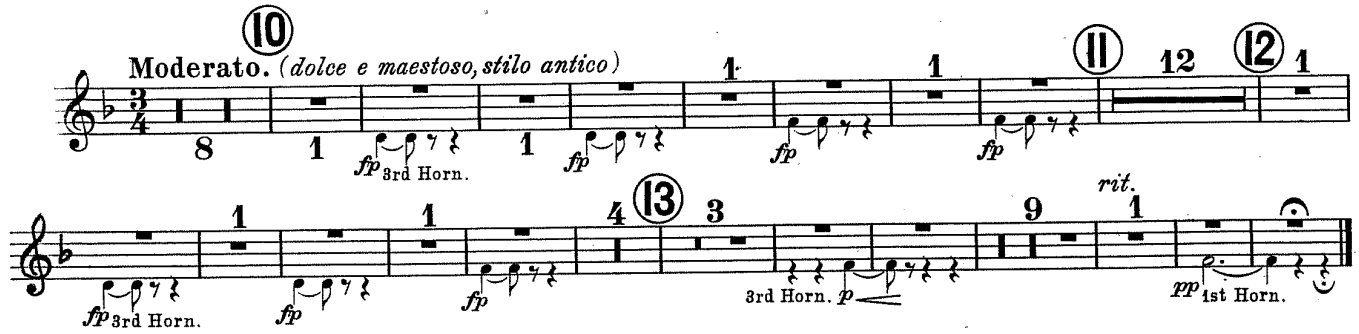
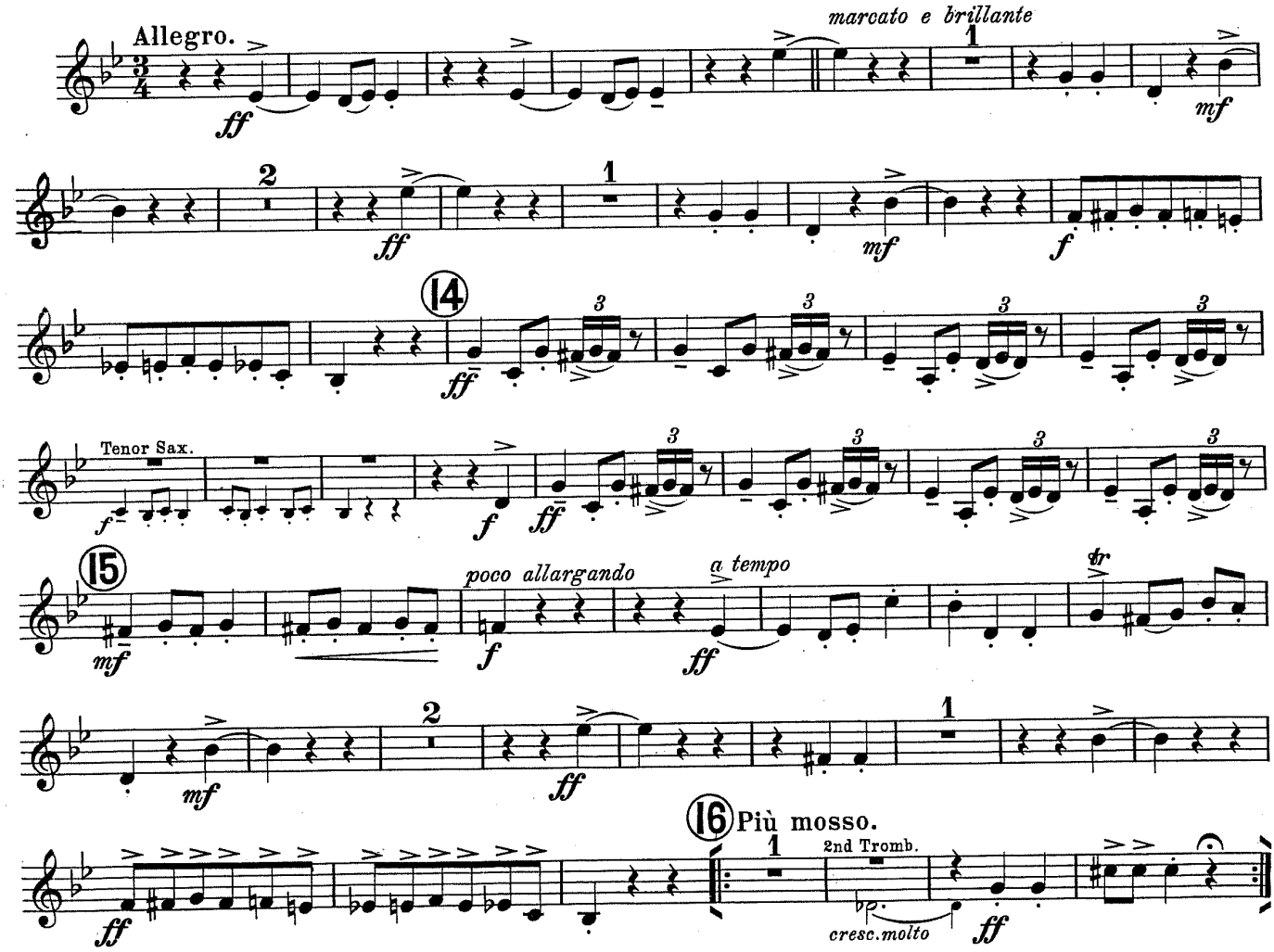
2nd B♭ Cornet.



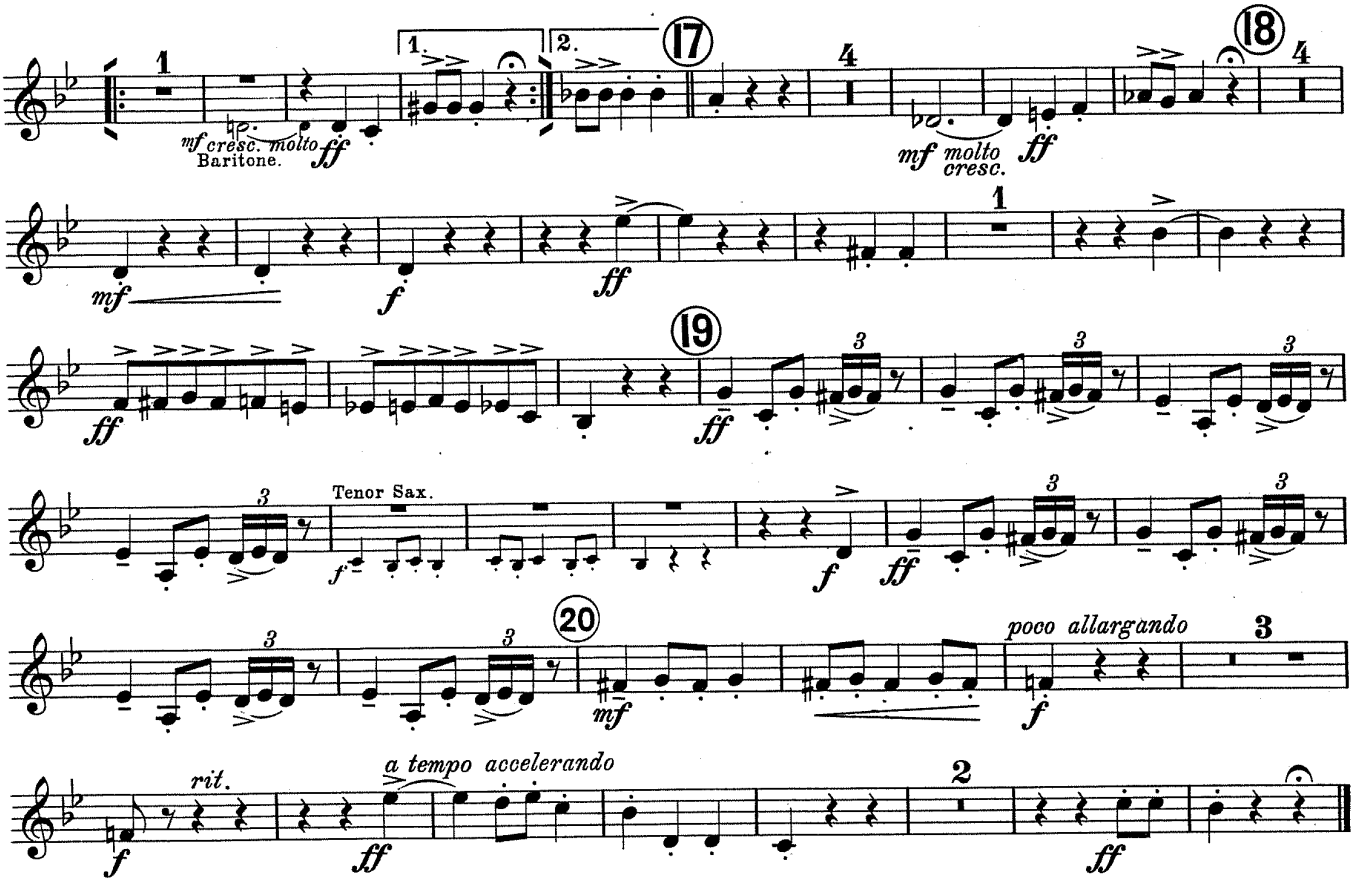
No 2. MENUETTO



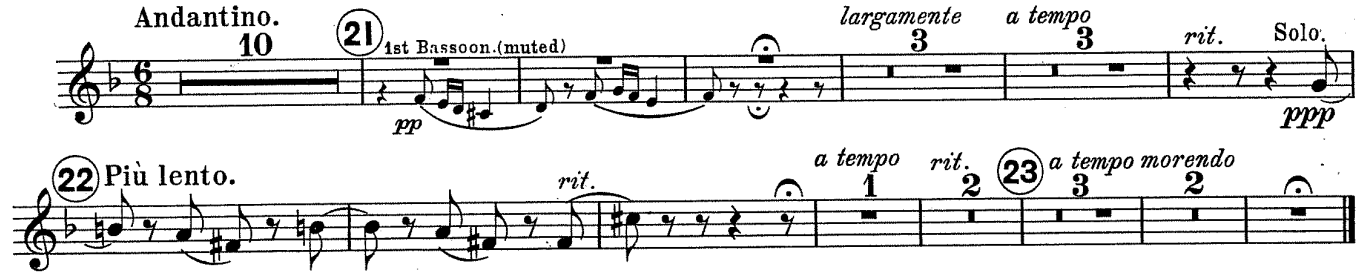
No 3. WARRIORS' DANCE



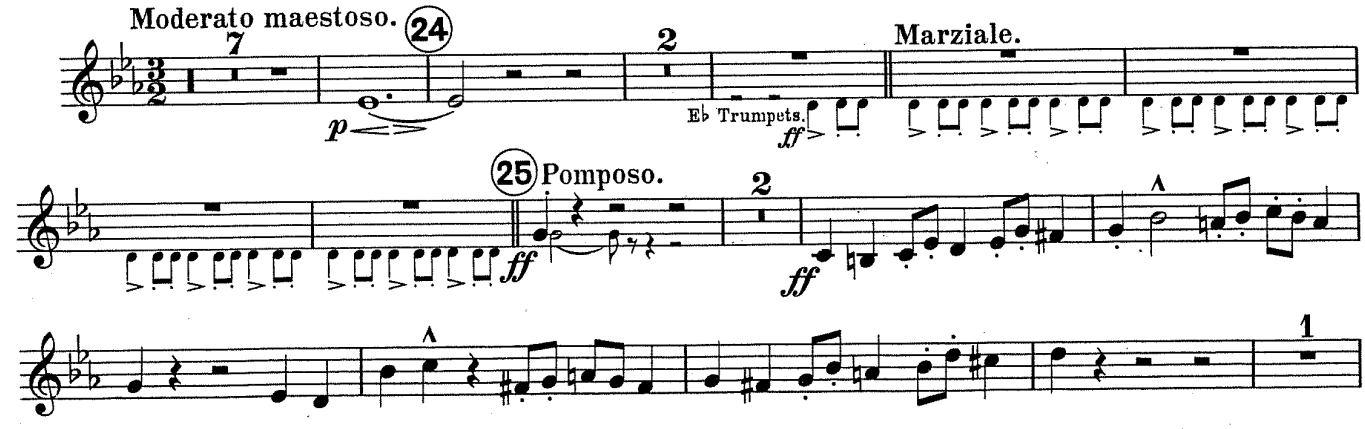
2nd B♭ Cornet.



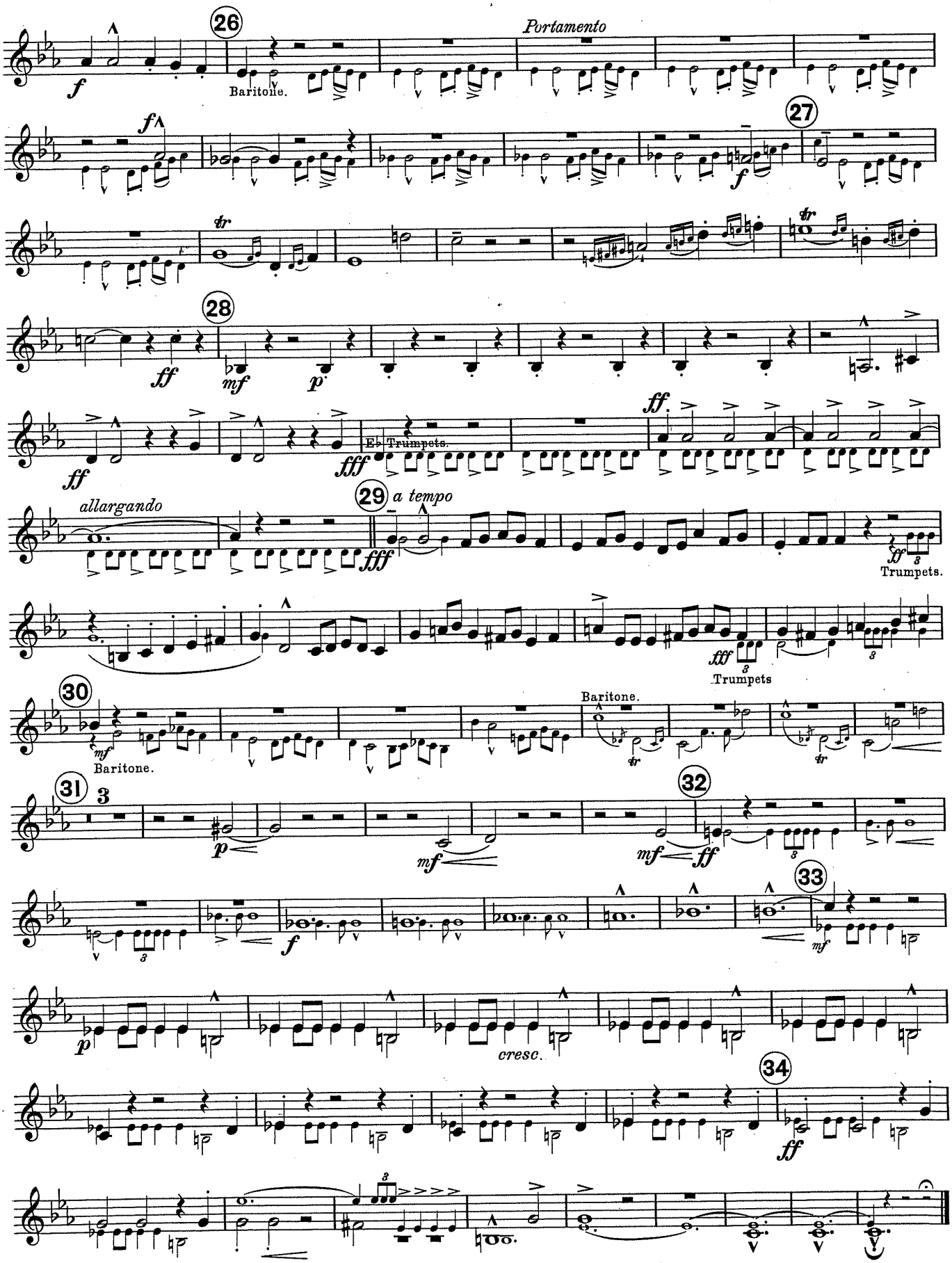
Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



2nd B♭ Cornet.


26
Portamento
Baritone.
27
28
E♭ Trumpets.
29
a tempo
allargando
Trumpets.
Trumpets
30
Baritone.
31
32
33
cresc.
34

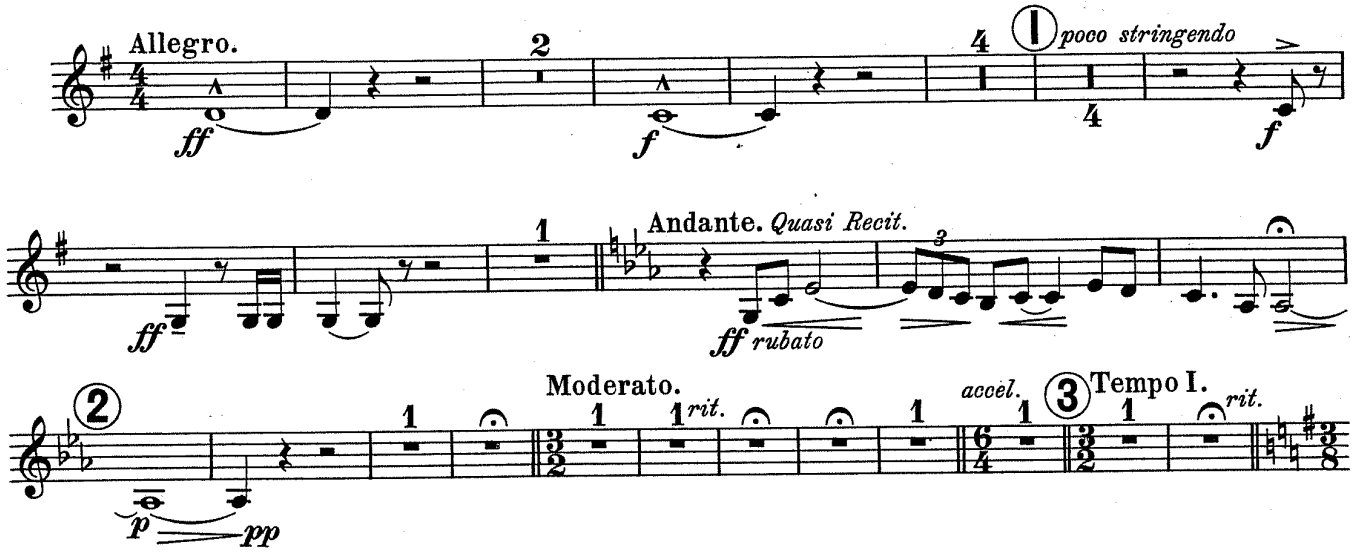
SUITE

THE CROWN OF INDIA

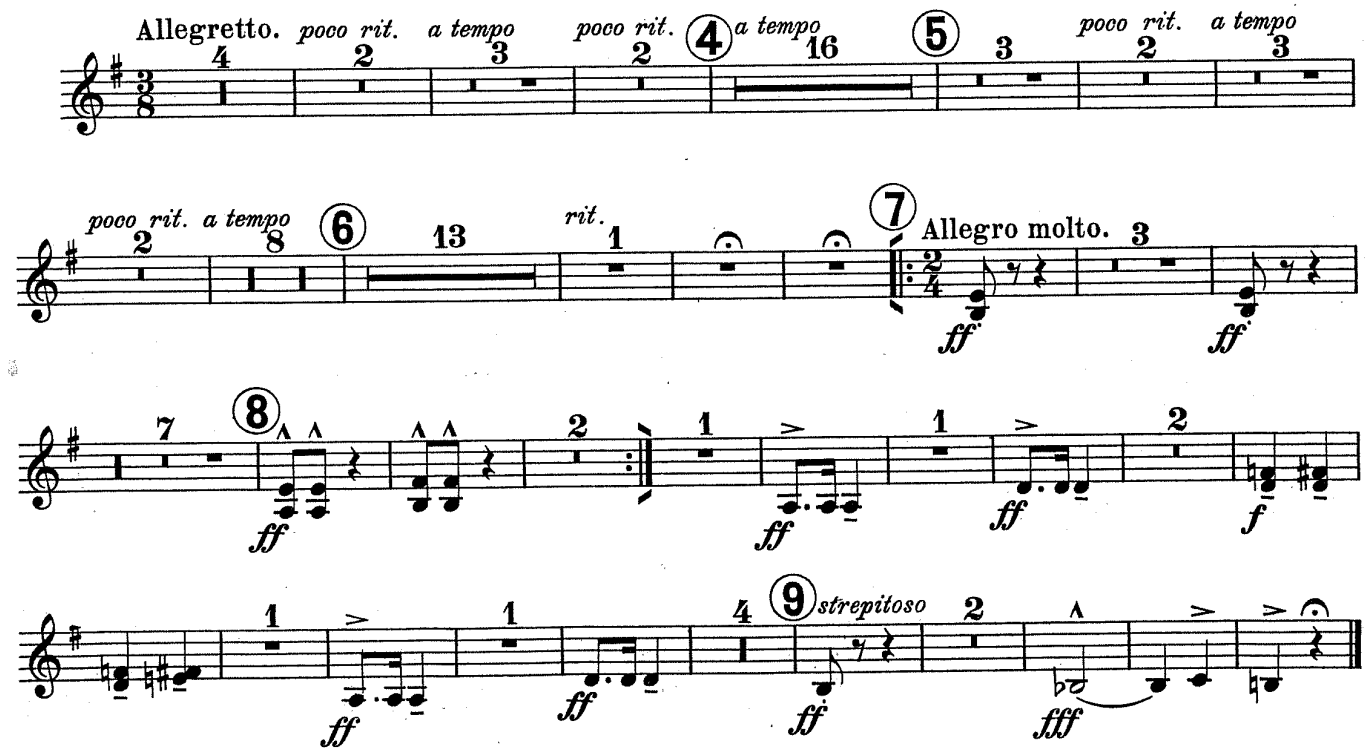
E♭ Trumpets.

No 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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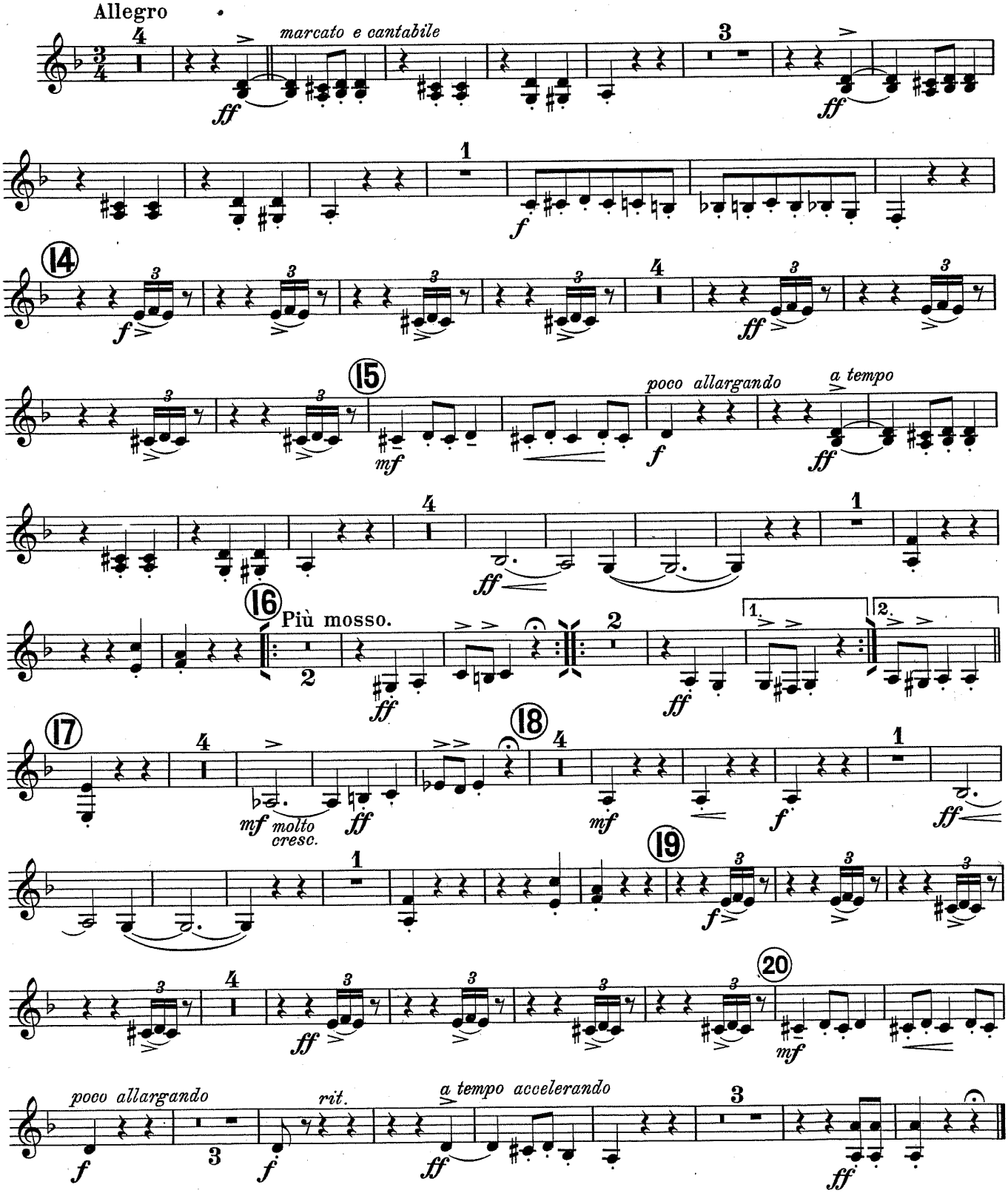
E♭ Trumpets.

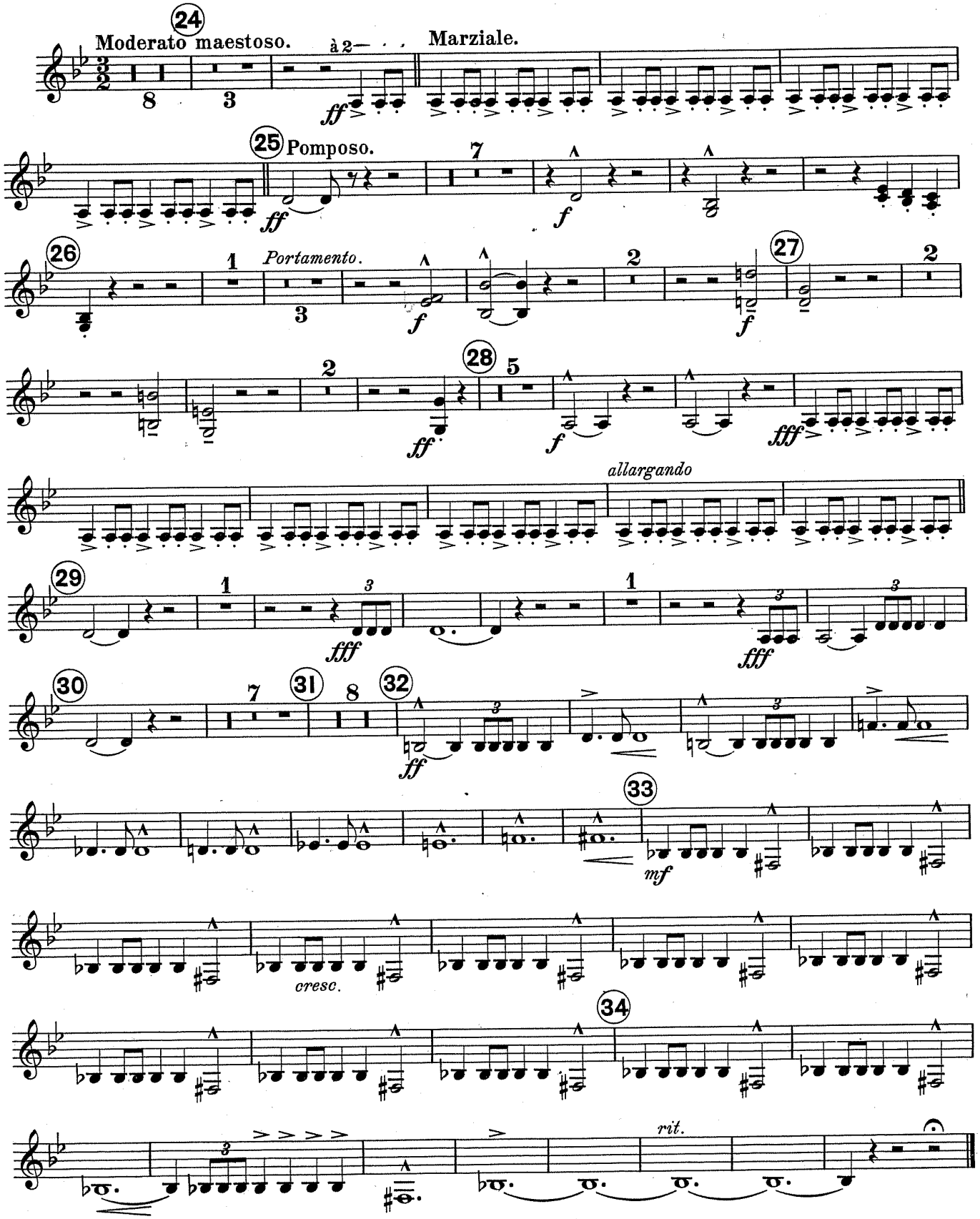
No. 2. TACET

No. 3. WARRIORS' DANCE



No. 4. TACET

No 5. MARCH OF THE MOGUL EMPERORS



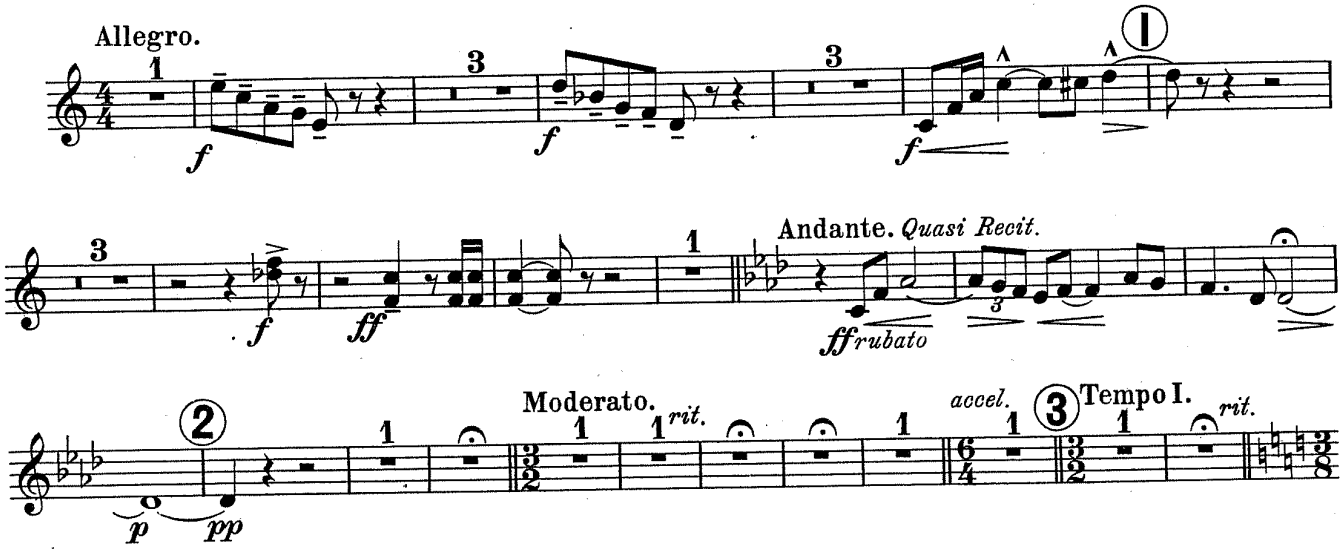
SUITE

THE CROWN OF INDIA

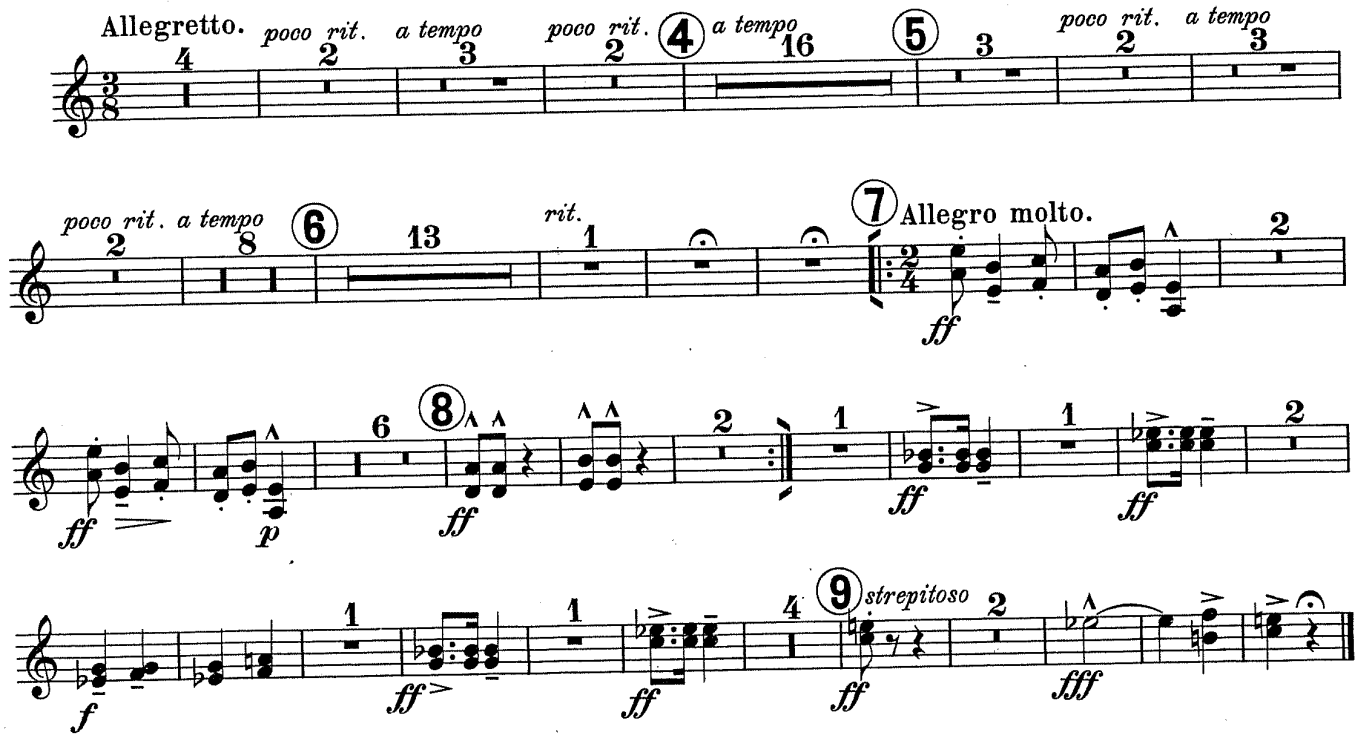
B♭ Trumpets.

No. 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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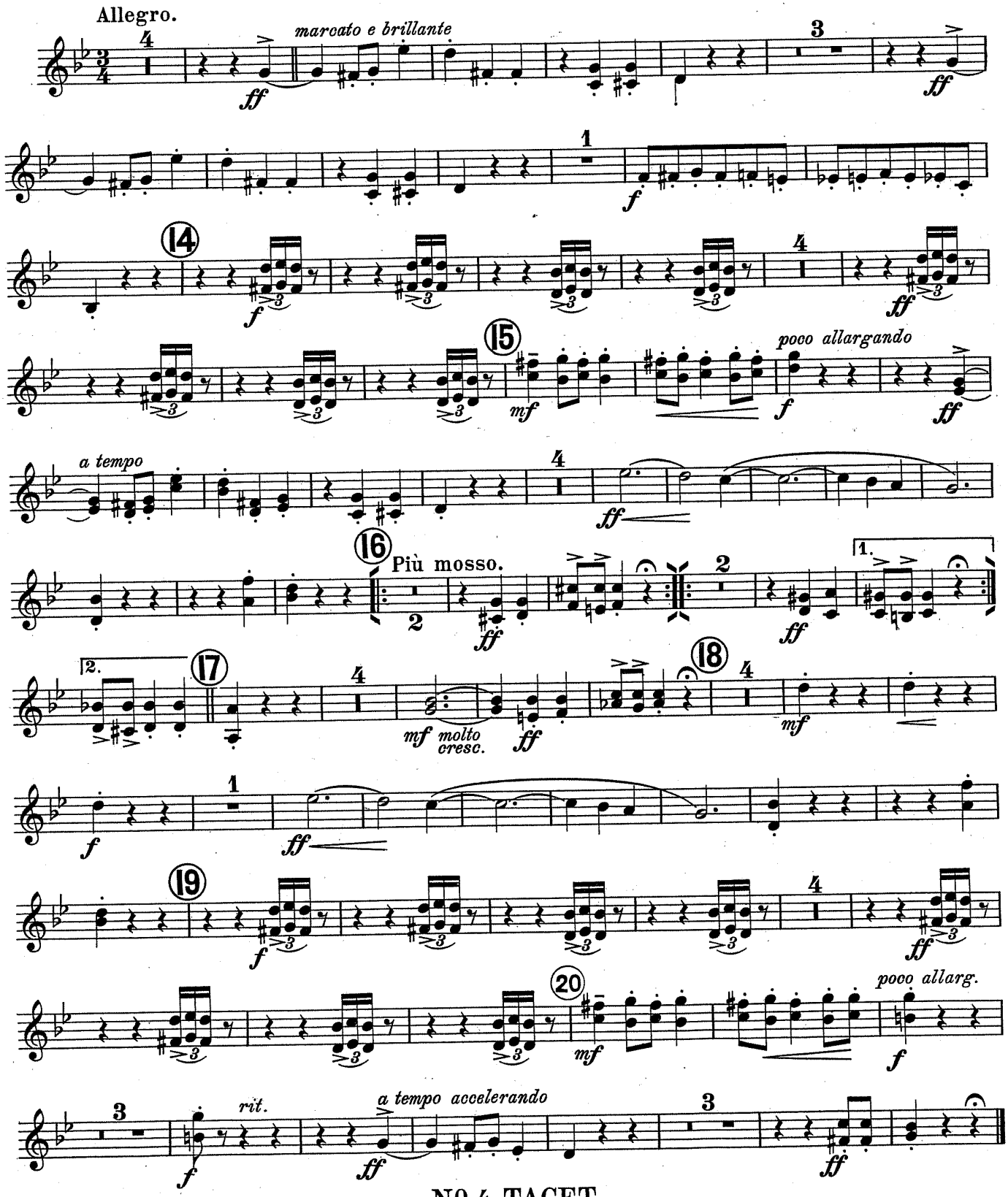
B♭ Trumpets.

No. 2. TACET

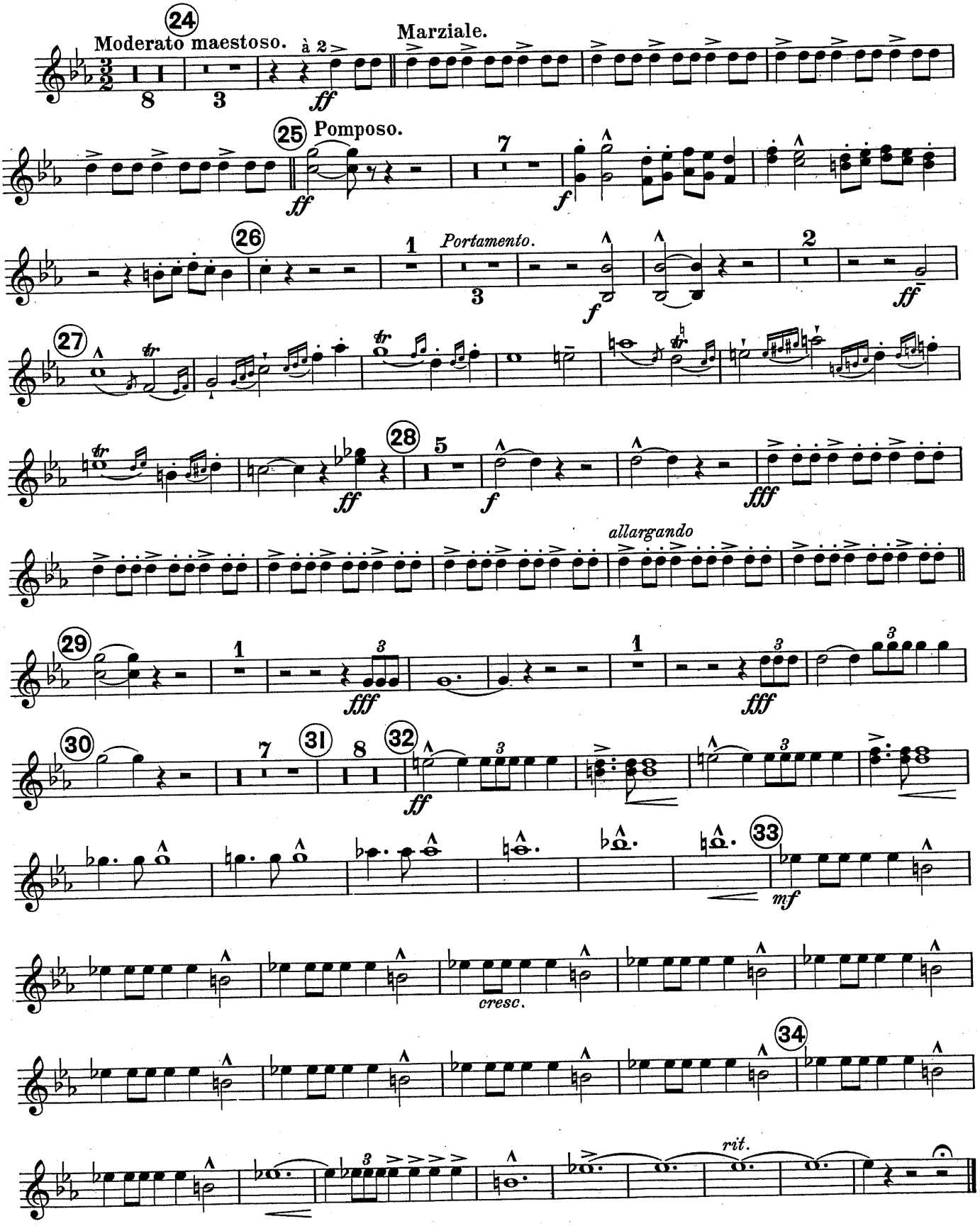
No. 3. WARRIORS' DANCE



No. 4. TACET

B♭ Trumpets.

No 5. MARCH OF THE MOGUL EMPERORS



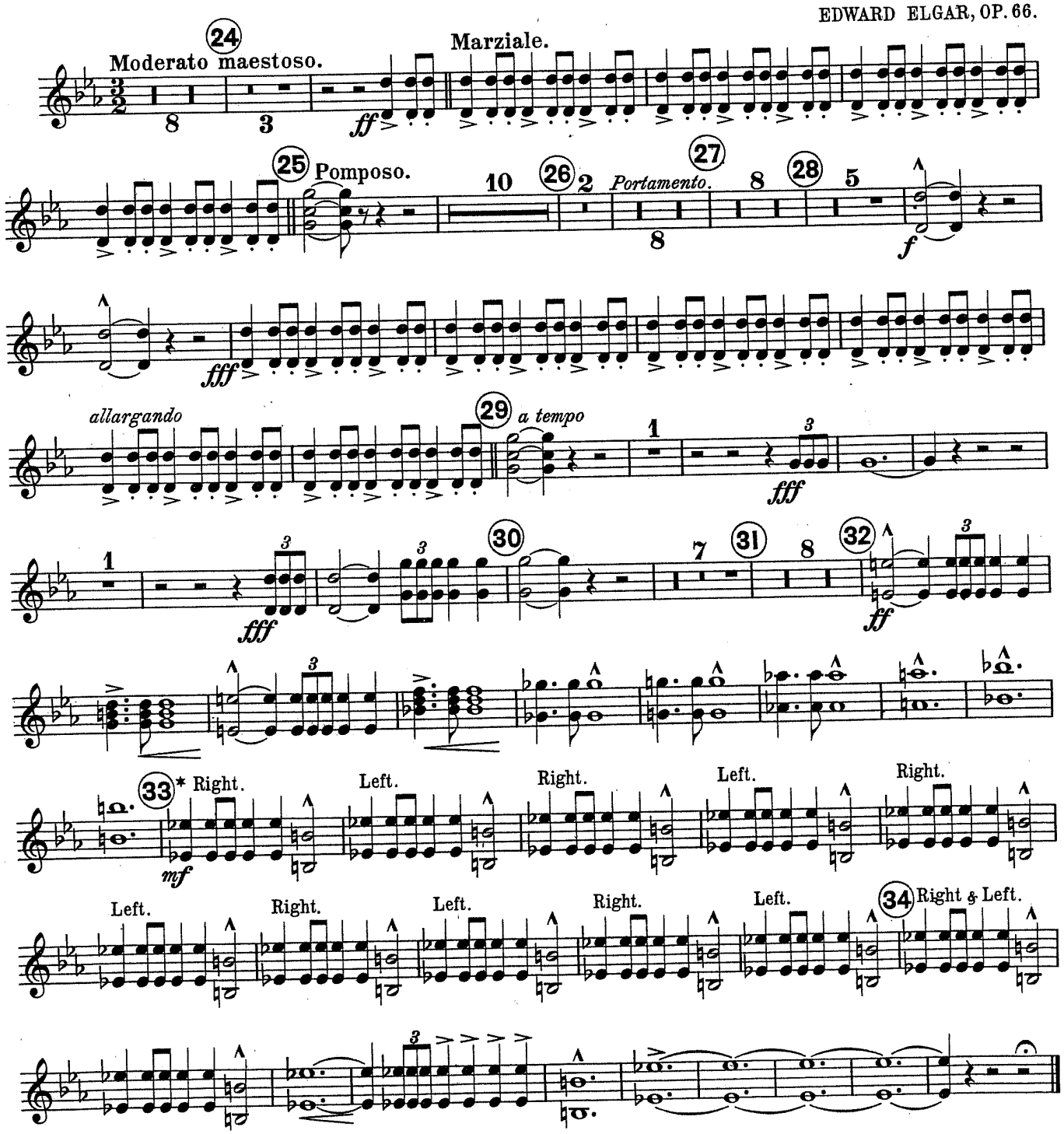
SUITE
THE CROWN OF INDIA

Herald B♭ Trumpets.

Nº 1. 2. 3 & 4 TACET

Nº 5. MARCH OF THE MOGUL EMPERORS

EDWARD ELGAR, OP. 66.



* Note..When several herald trumpets are available,they should be equally divided right and left of the Band and play alternately.

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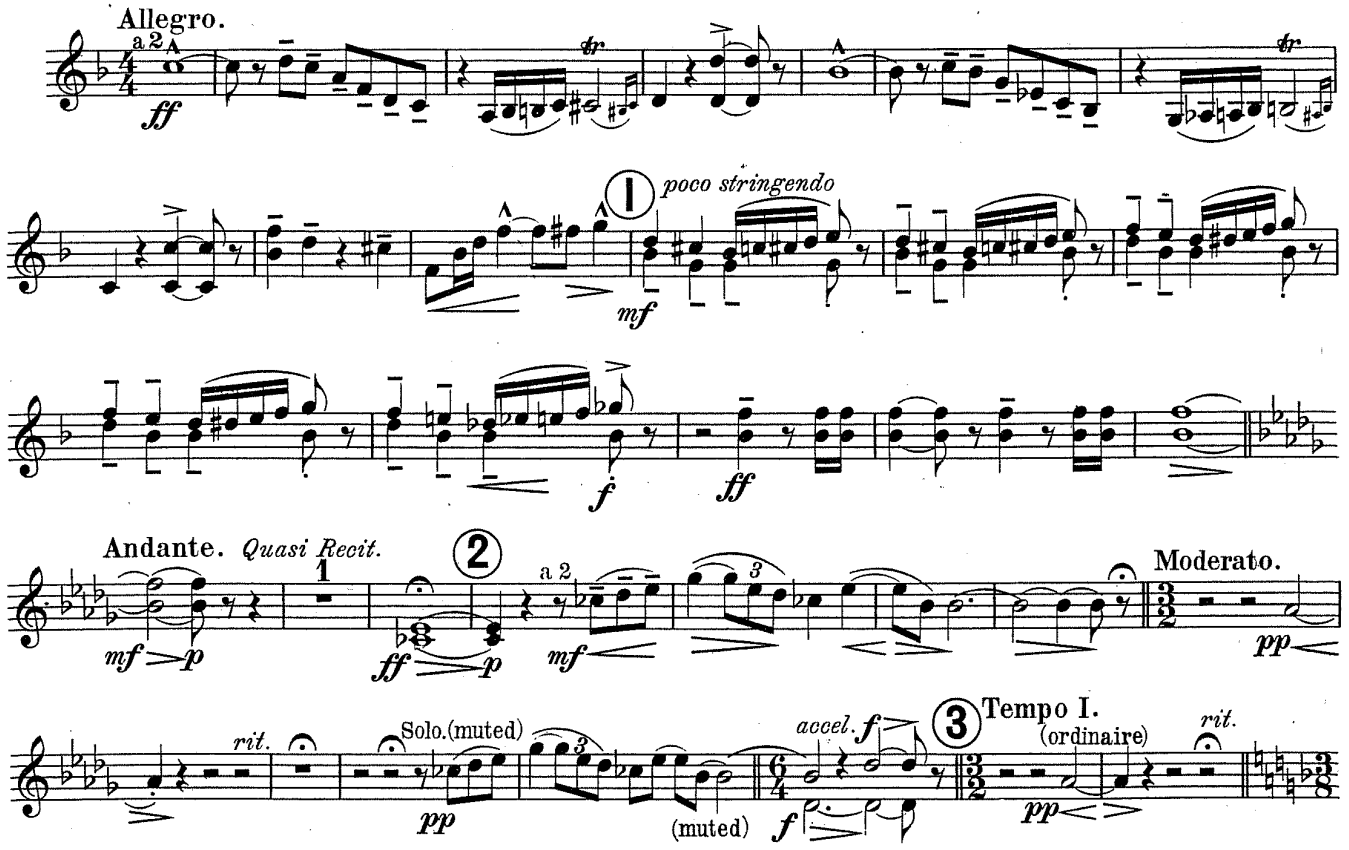
SUITE
THE CROWN OF INDIA

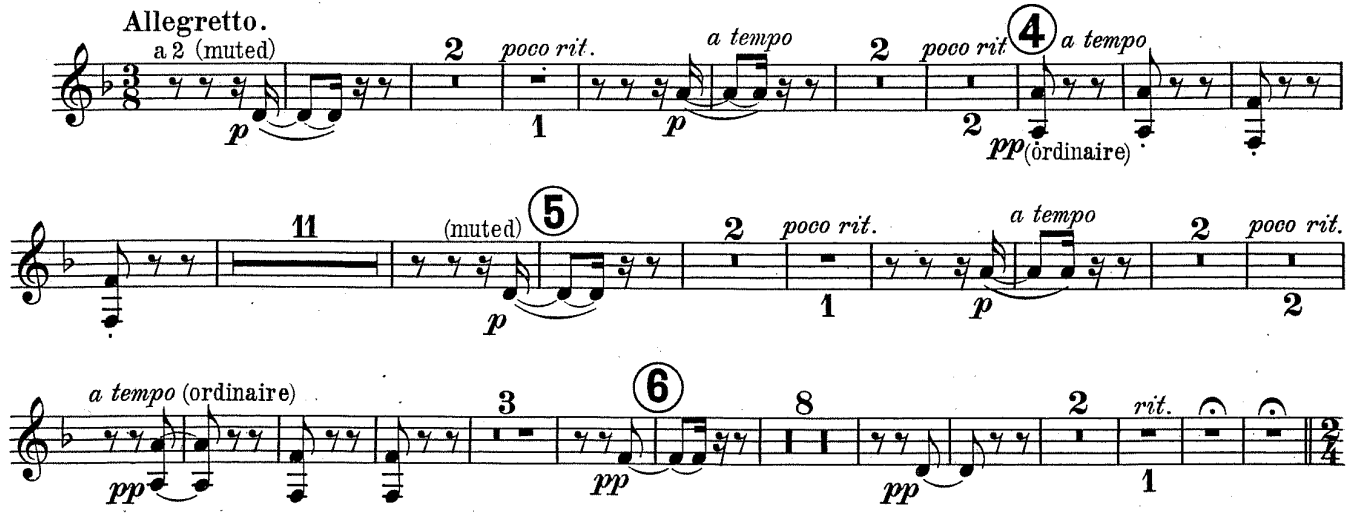
1st & 2nd F Horns.

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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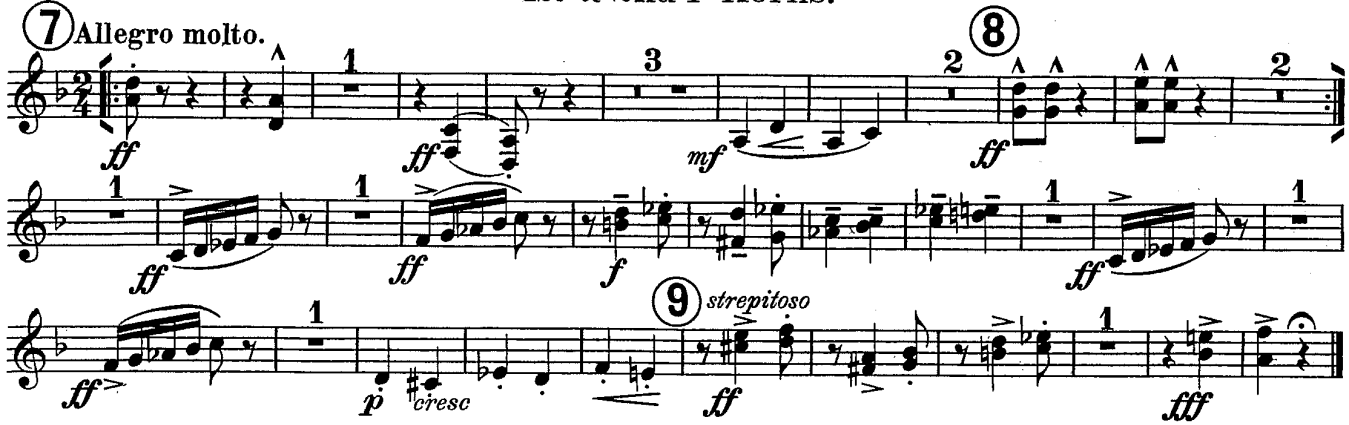
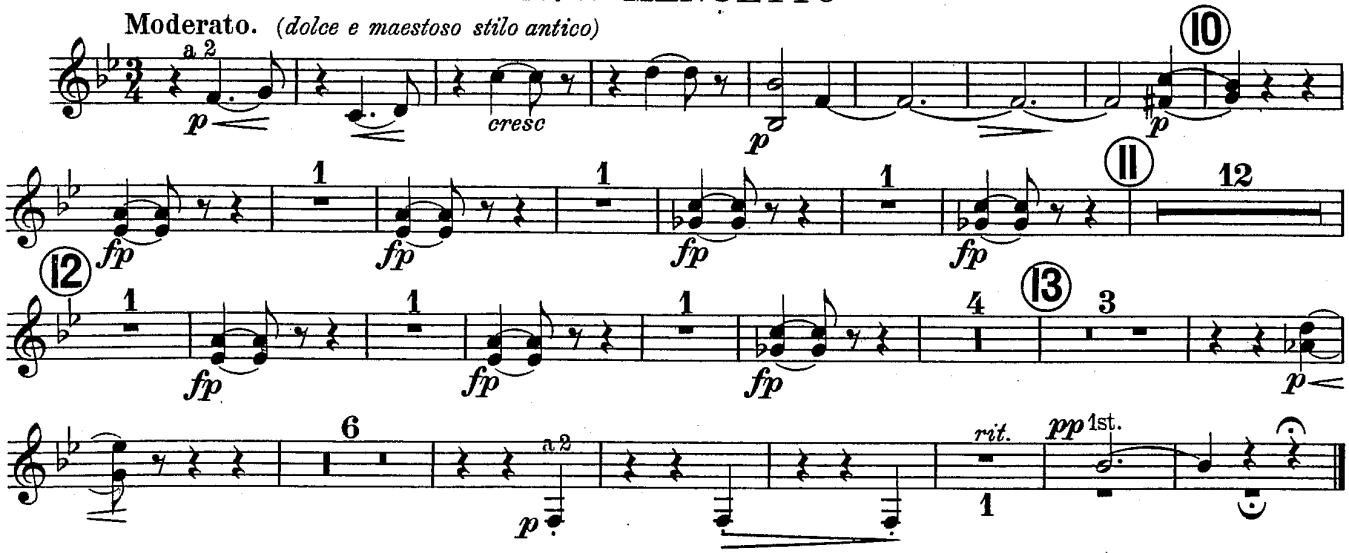
H & S 4988

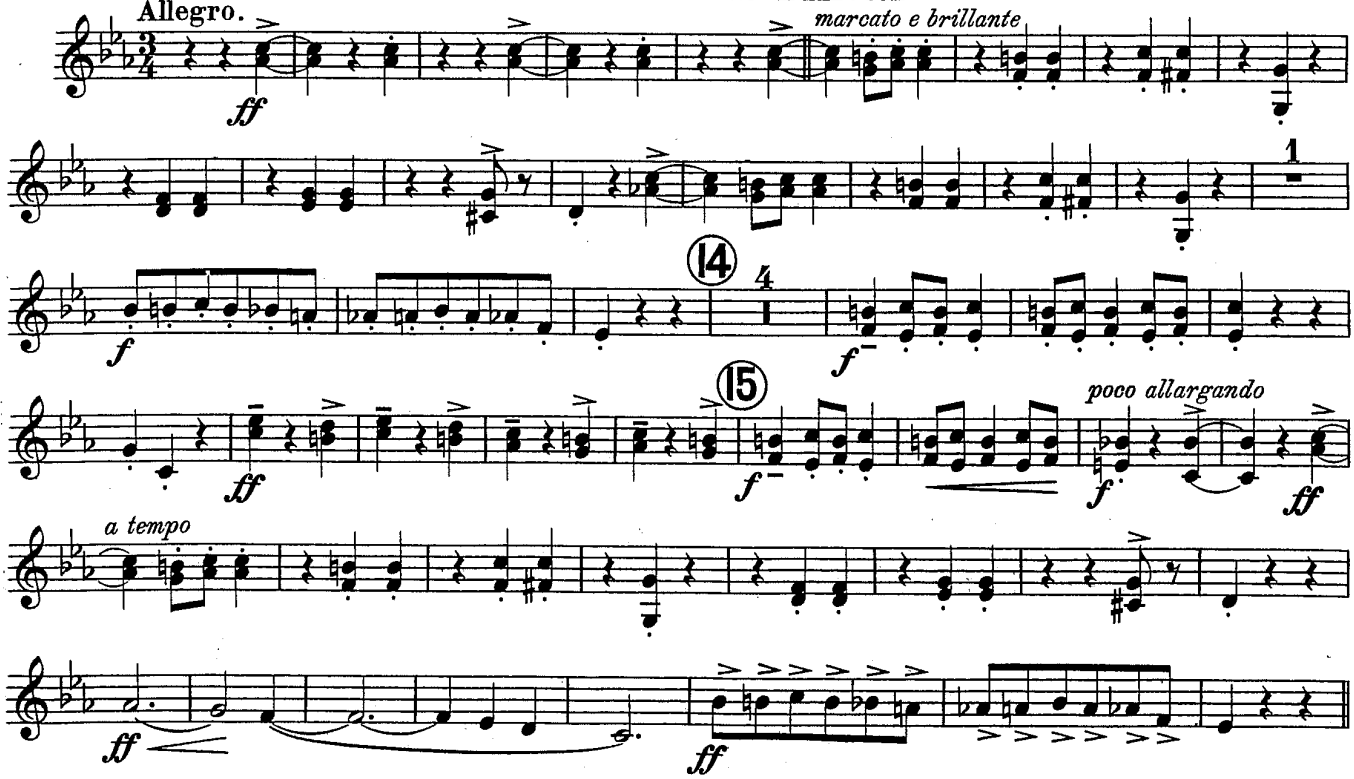
1st & 2nd F Horns.



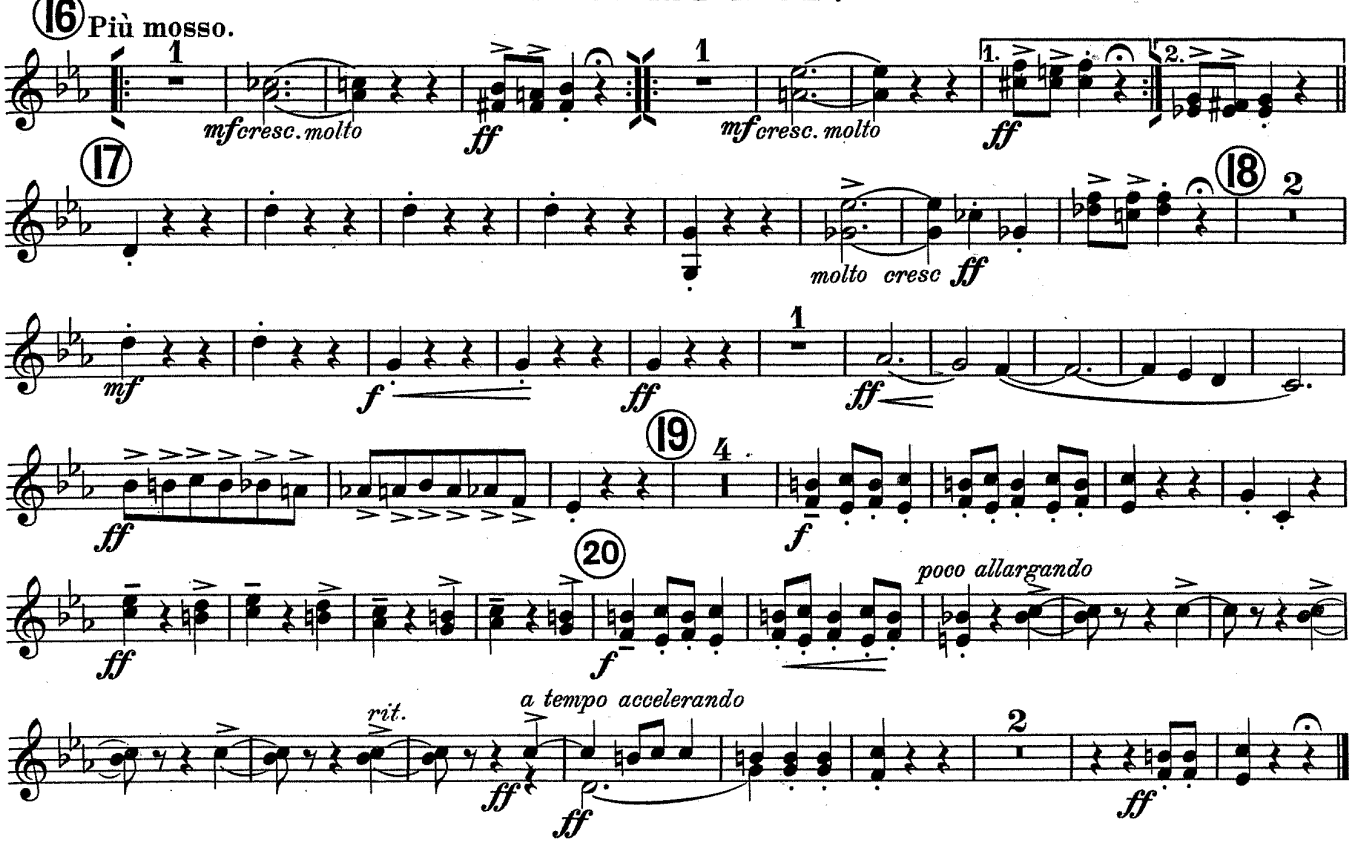
No. 2. MENUETTO



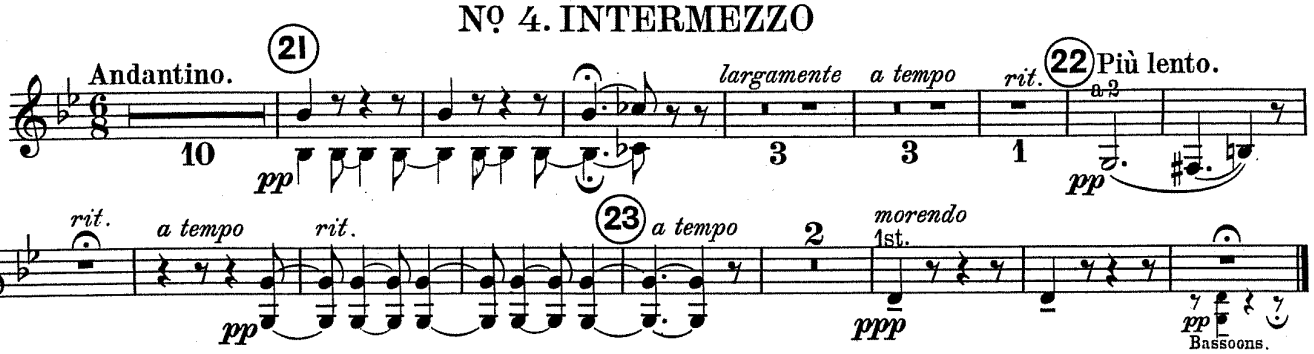
No. 3. WARRIORS' DANCE



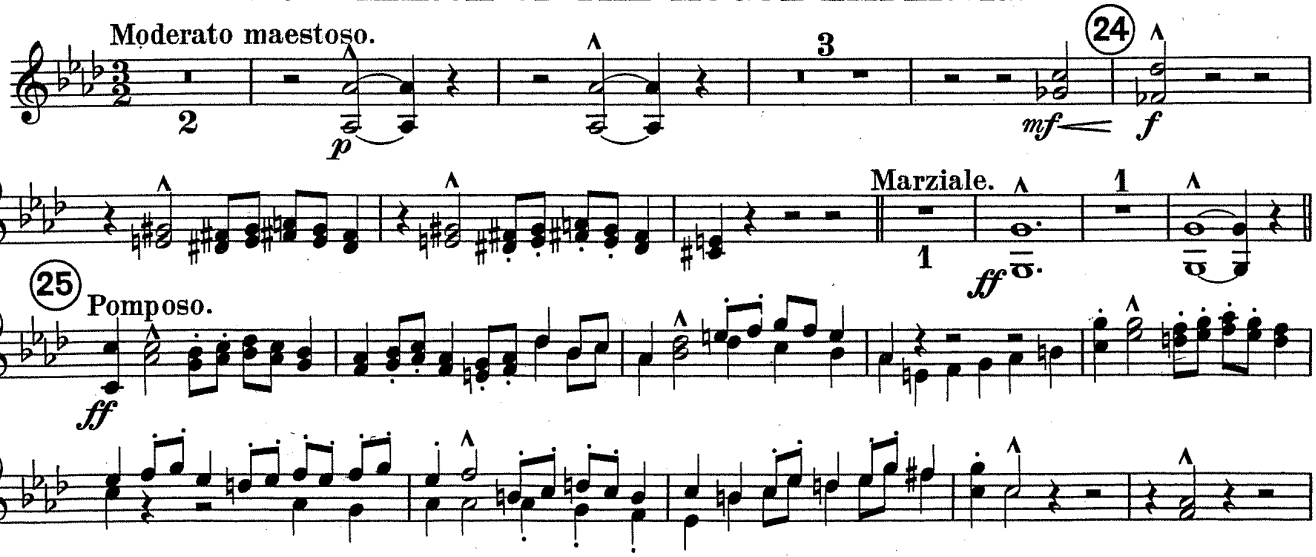
1st & 2nd F Horns.



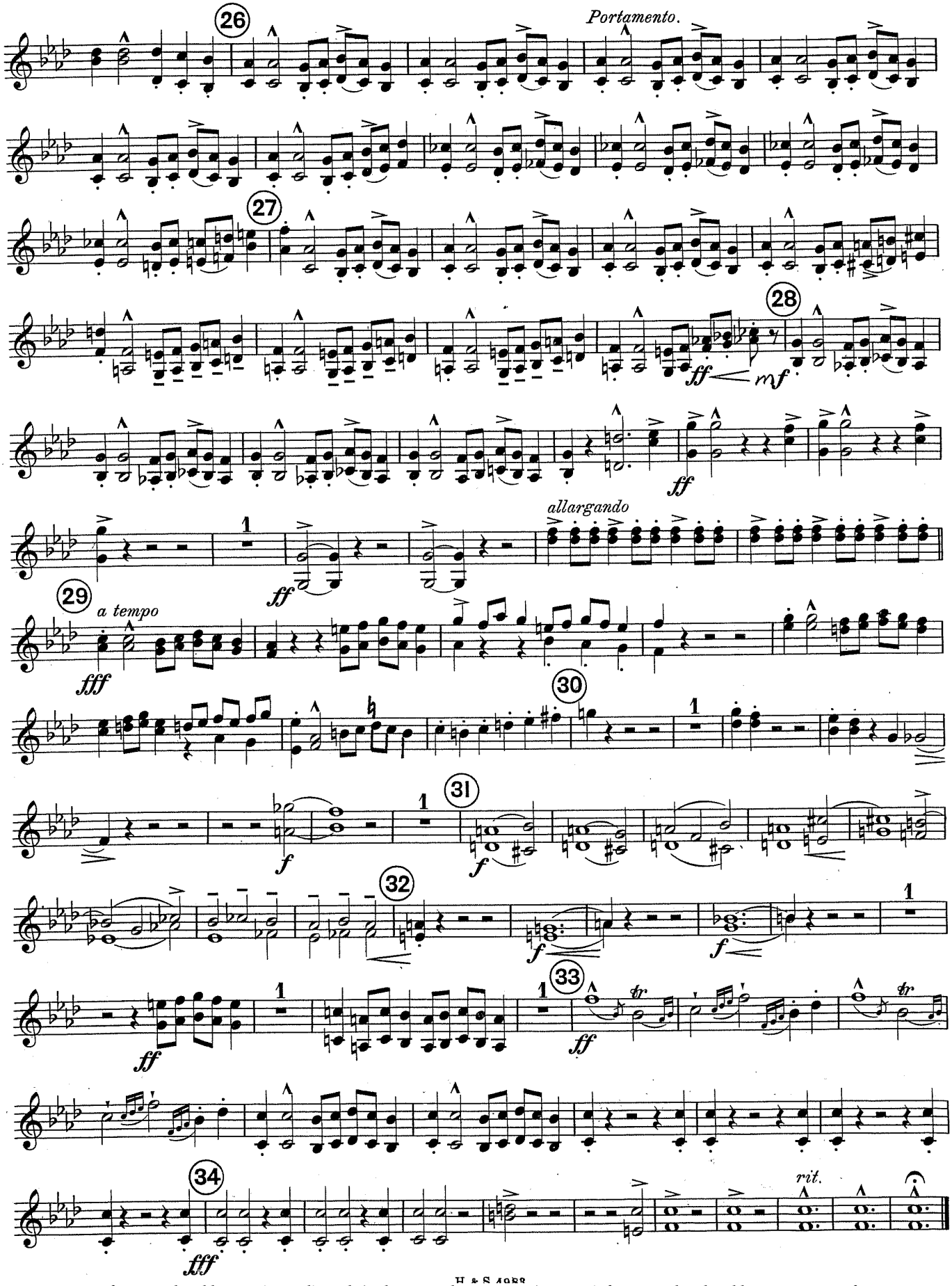
Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



1st & 2nd F Horns.



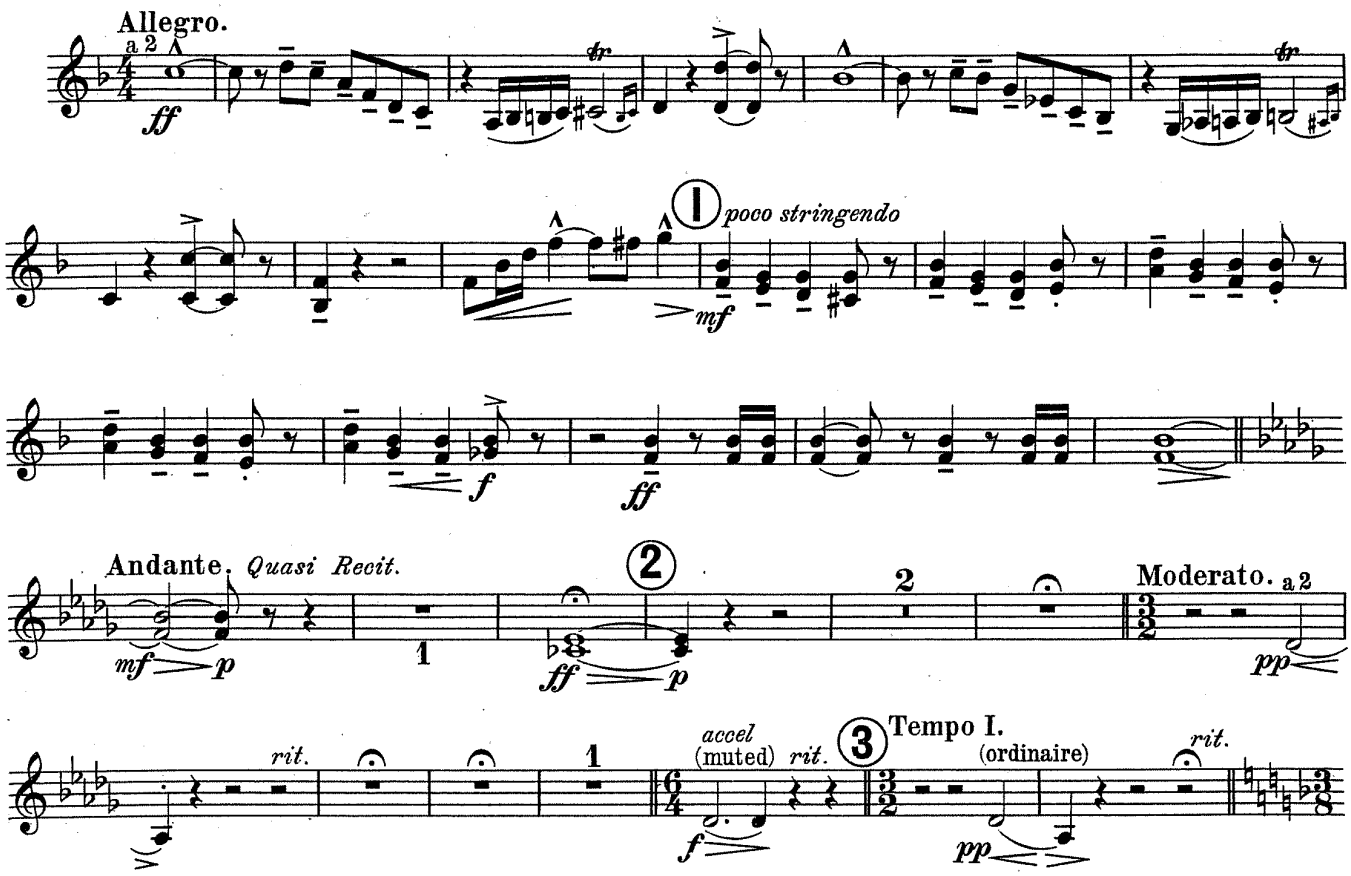
SUITE

THE CROWN OF INDIA

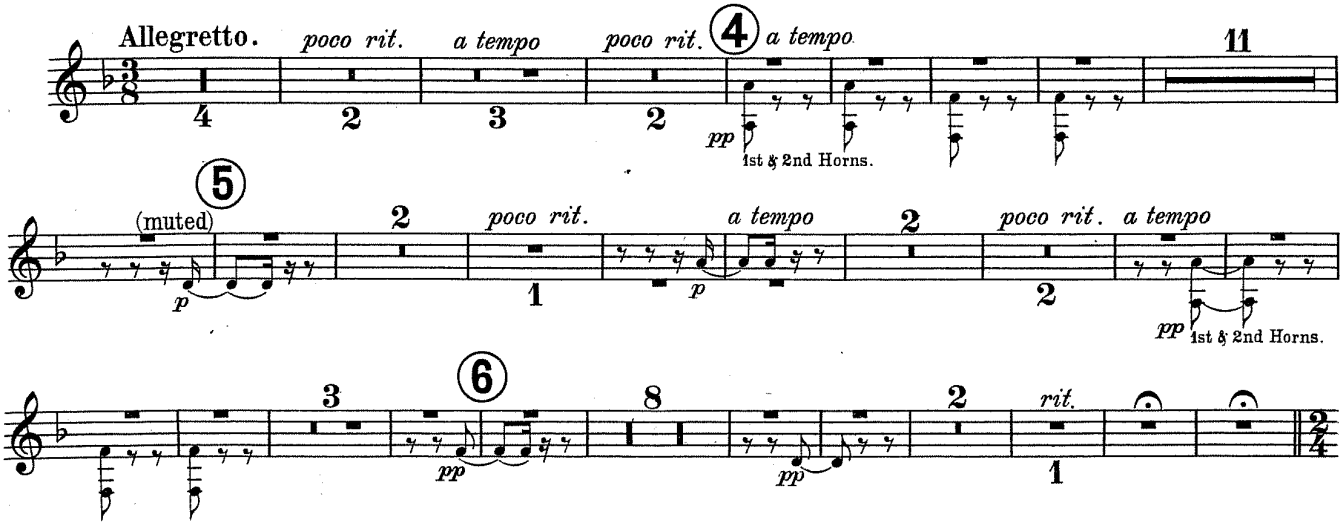
3rd & 4th F Horns.

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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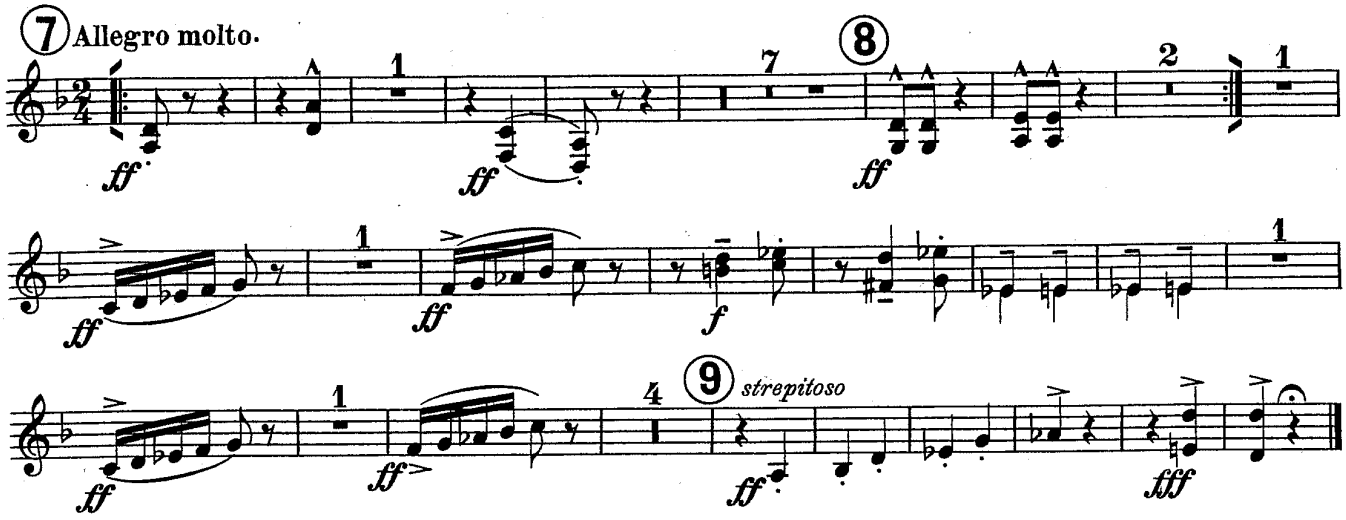
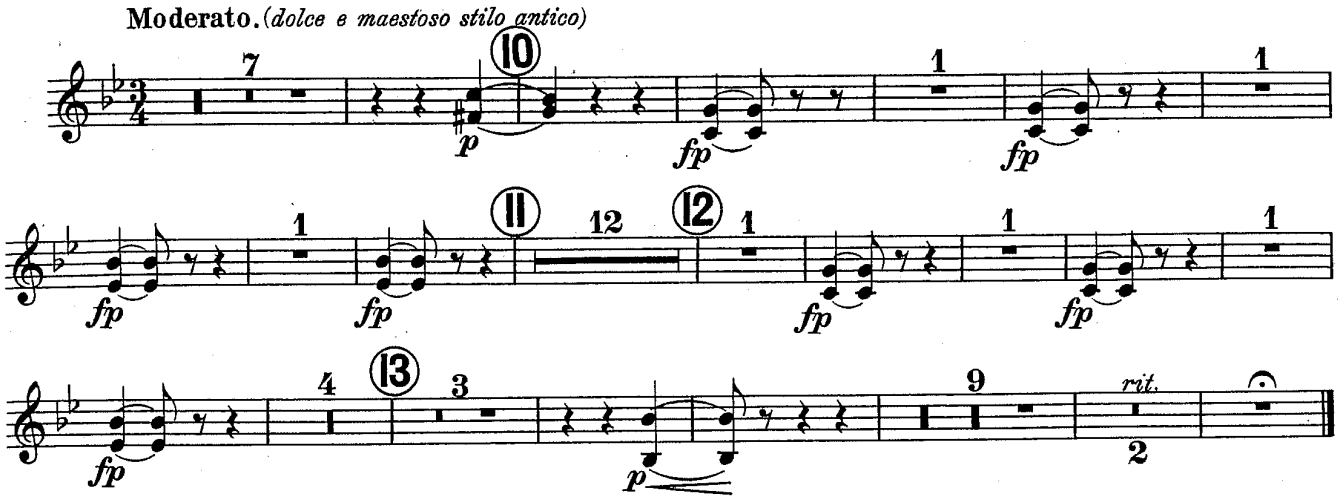
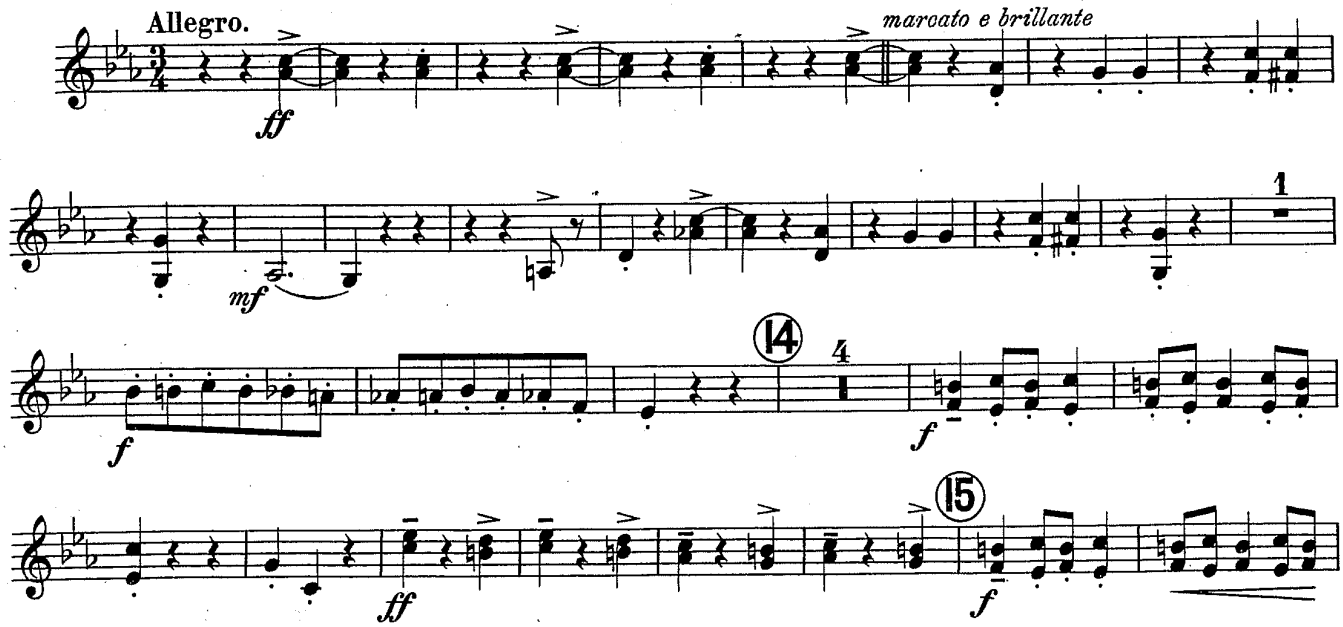
H. & S. 4983
Printed by Hawkes & Son (London), Ltd., Leipzig.
Printed in Leipzig.

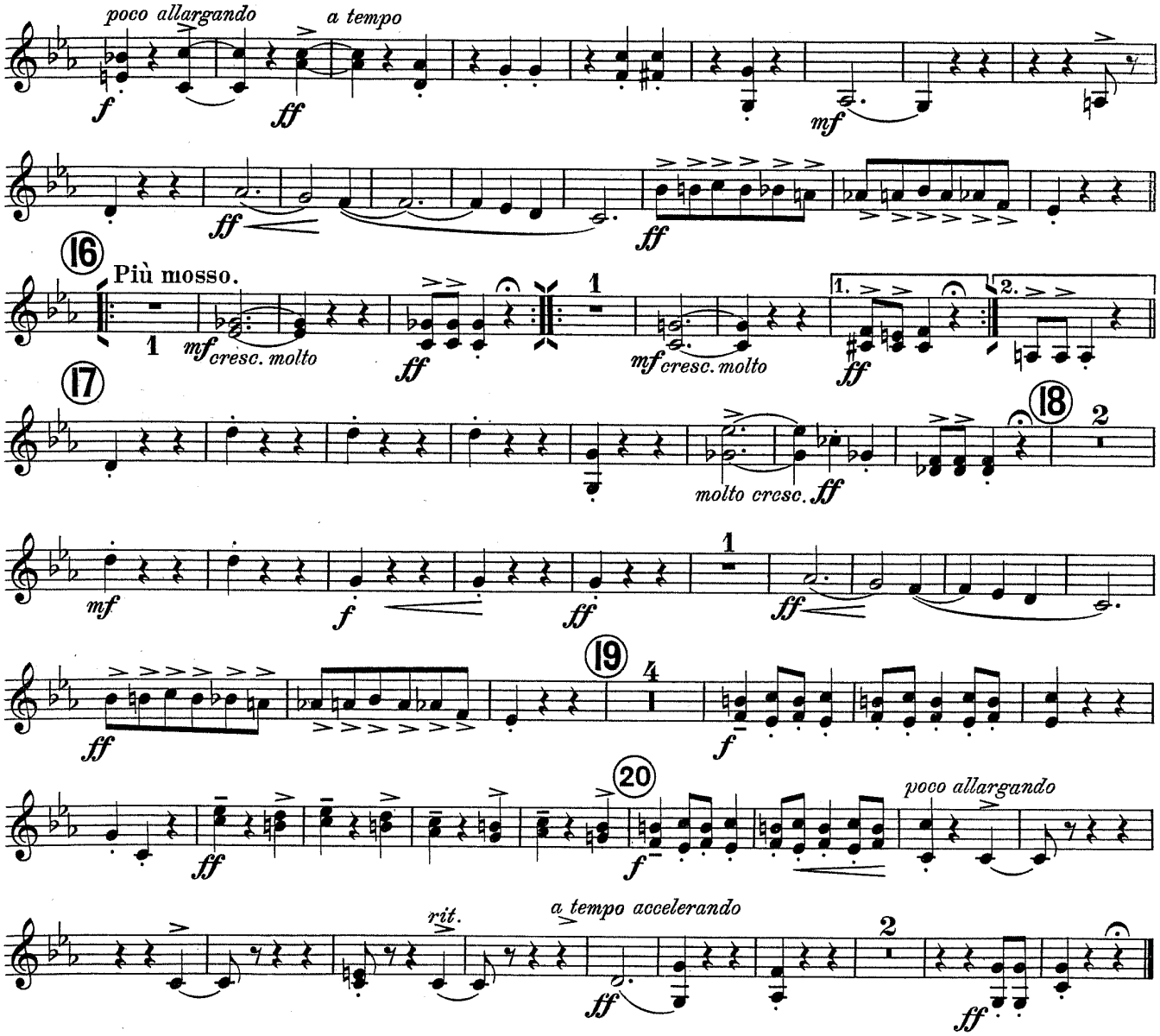


No 2. MENUETTO



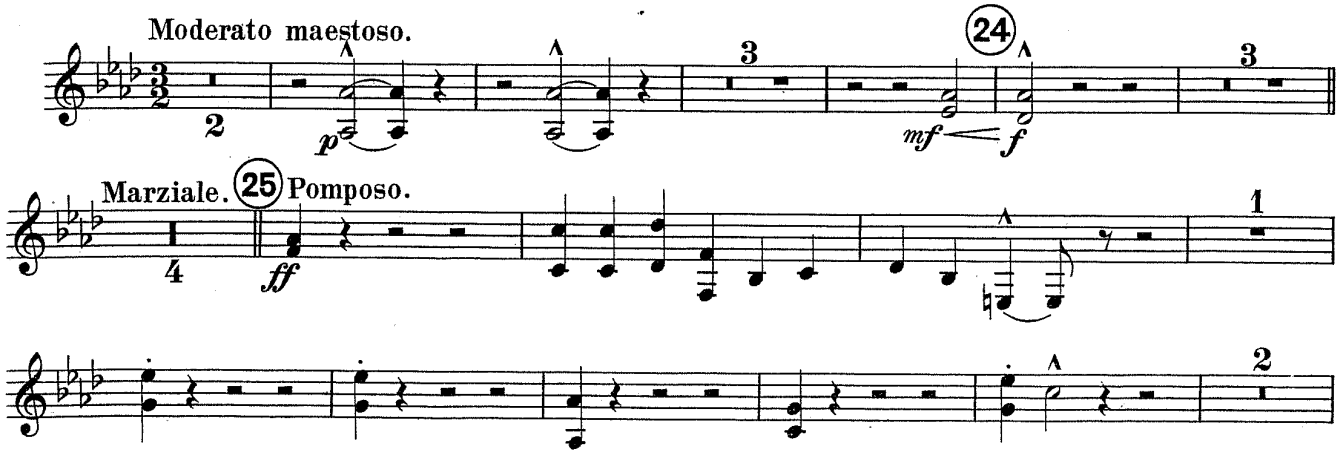
No 3. WARRIORS' DANCE

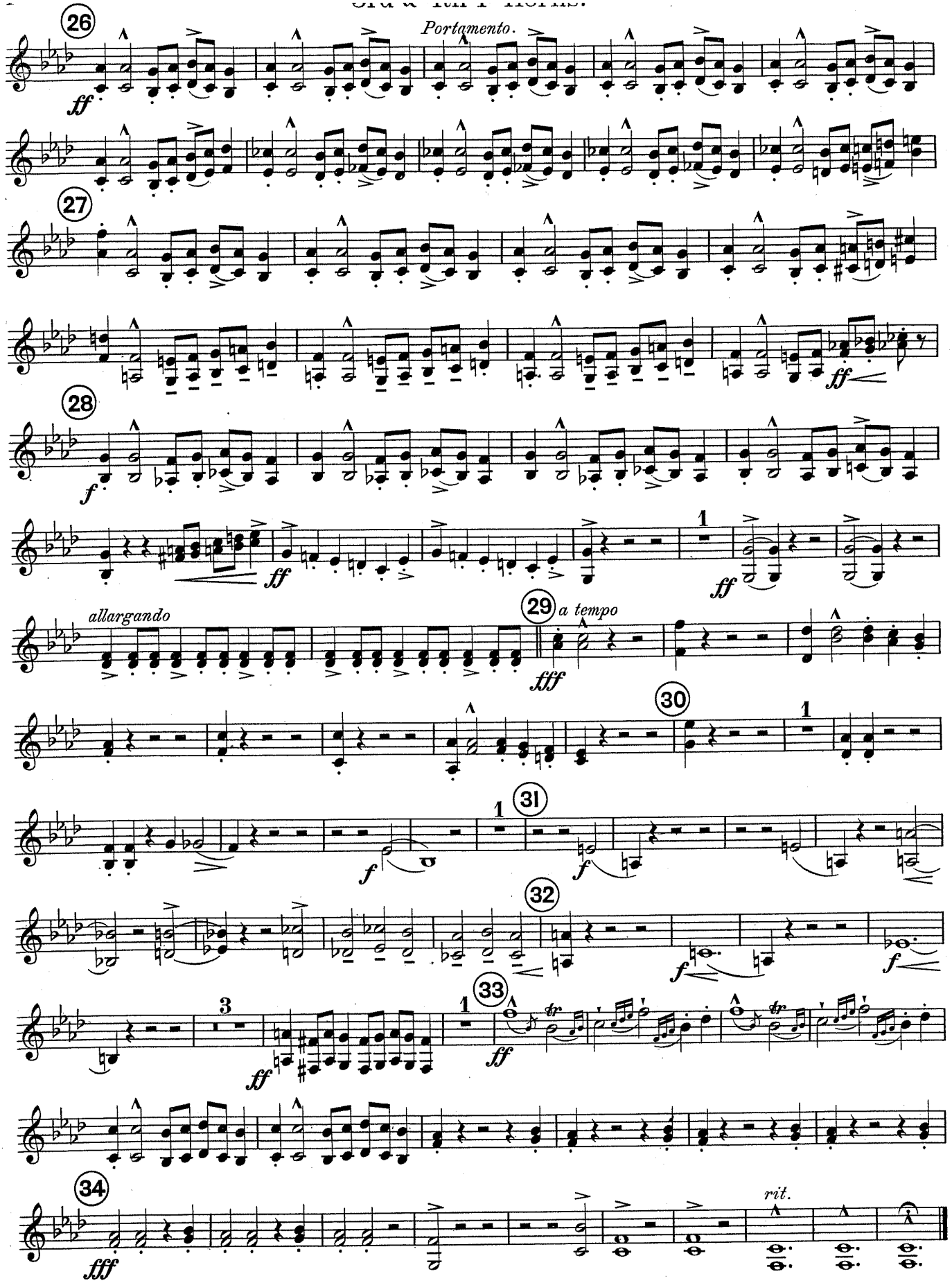




Nº 4. TACET

Nº 5. MARCH OF THE MOGUL EMPERORS




26
Portamento.
ff
27
ff
28
f
ff
1
ff
allargando
29
a tempo
fff
30
1
31
1
f
f
32
f
f
33
3
ff
1
ff
34
fff
rit.

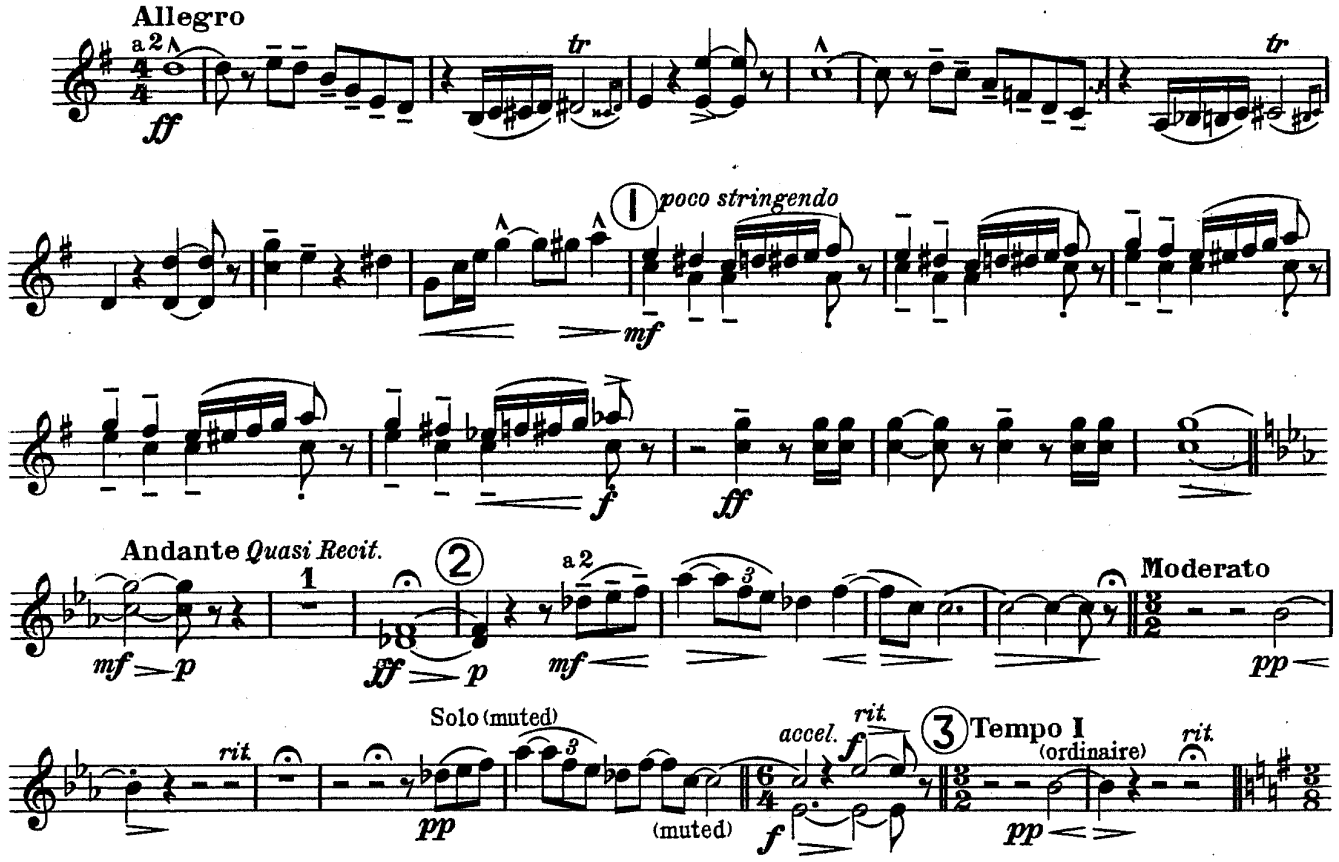
H.& S.4983

SUITE
THE CROWN OF INDIA

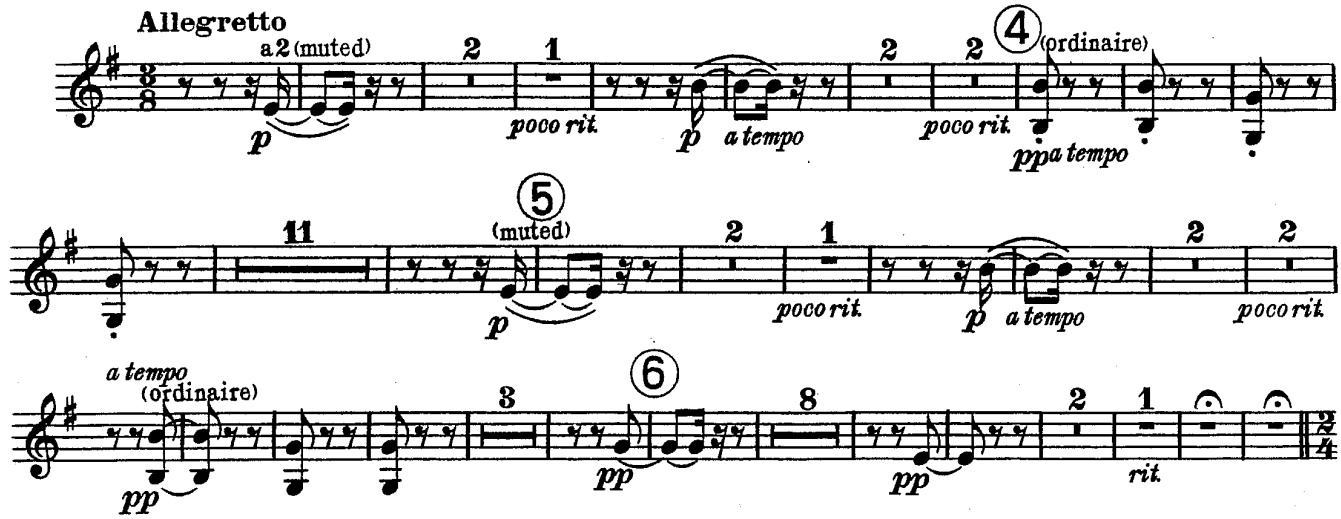
1st & 2nd Horns in E♭

EDWARD ELGAR, OP. 66

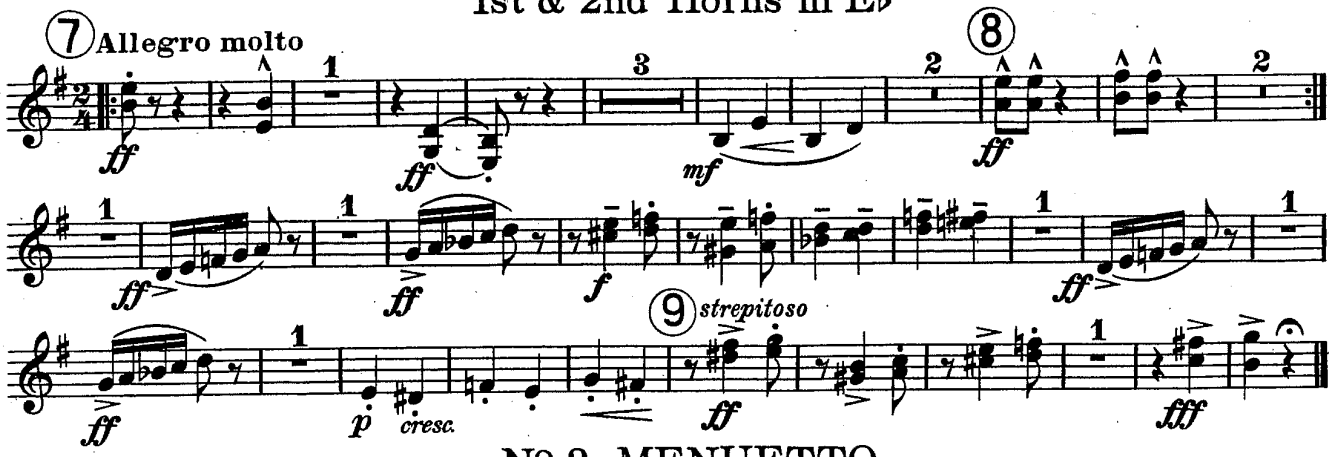
No. 1. (a) INTRODUCTION



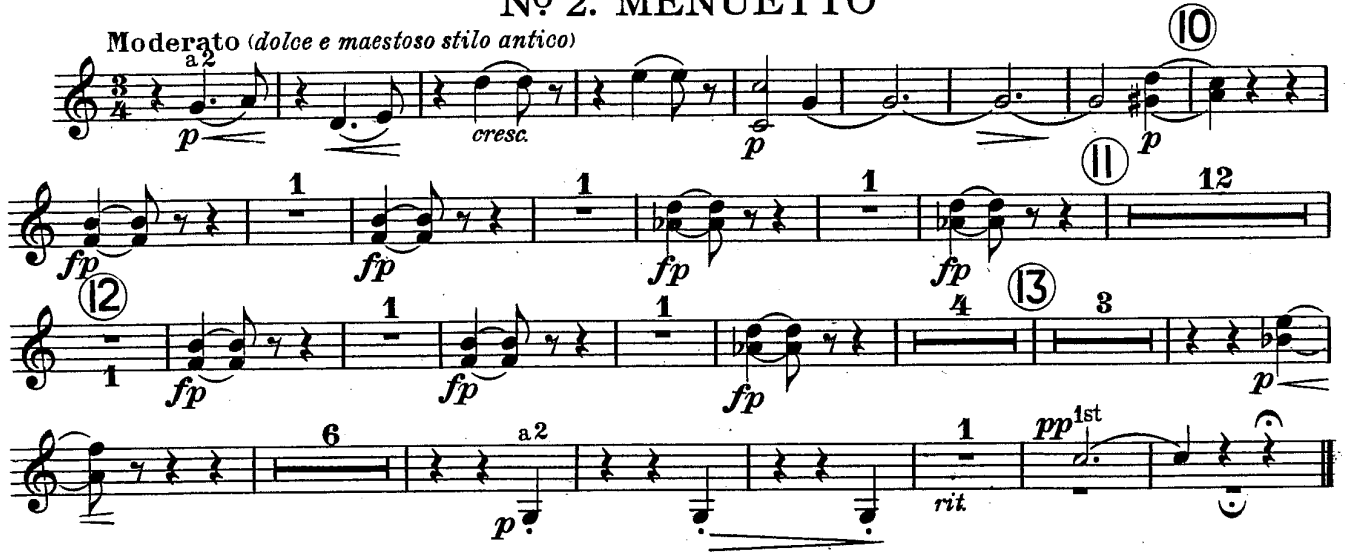
(b) DANCE OF NAUTCH GIRLS



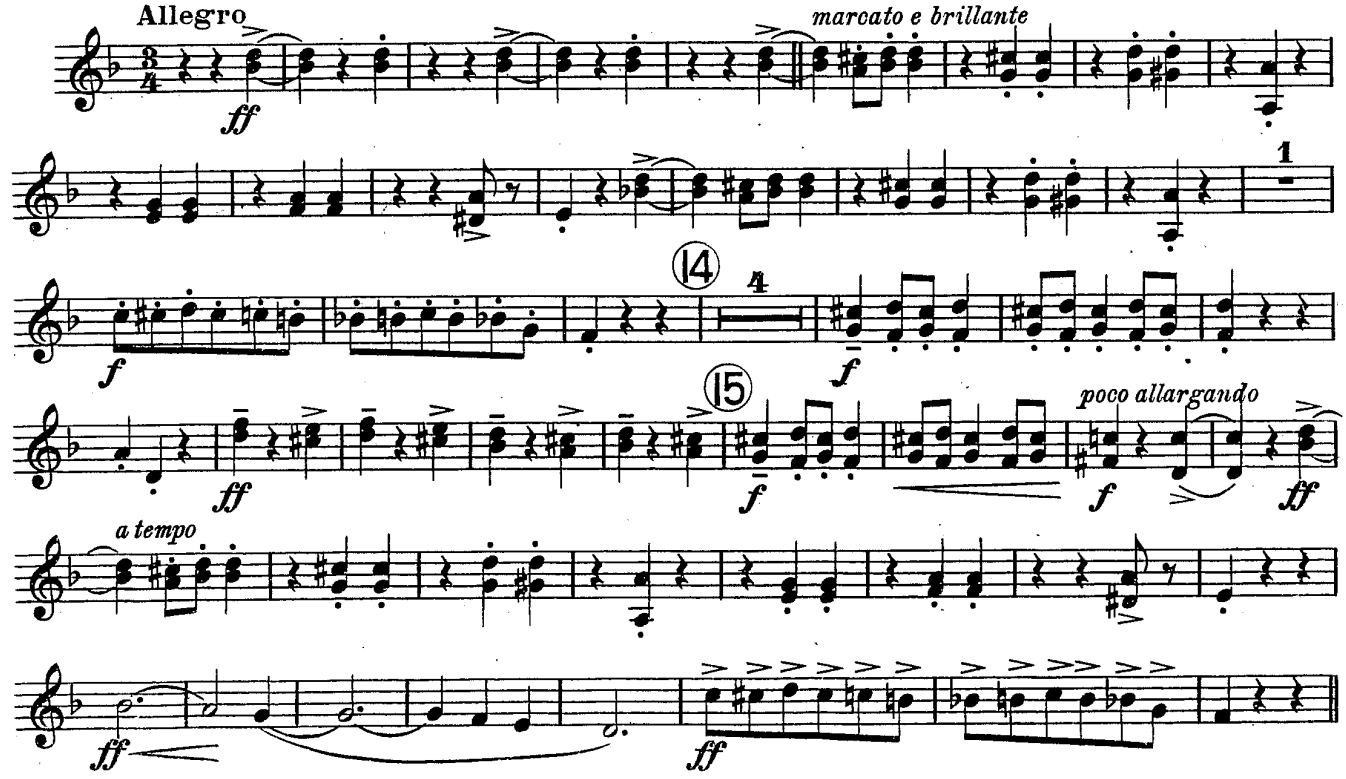
1st & 2nd Horns in E♭

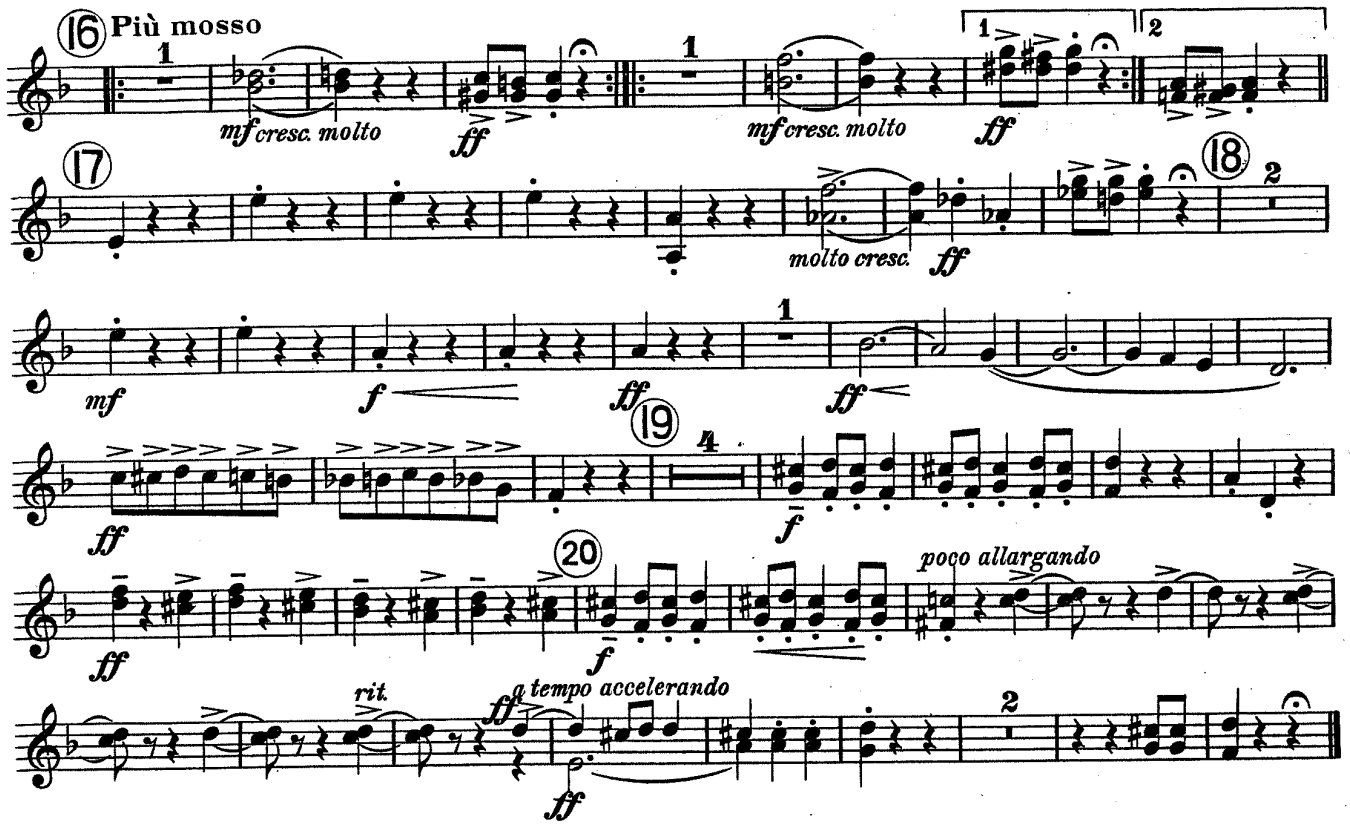


No. 2. MENUETTO

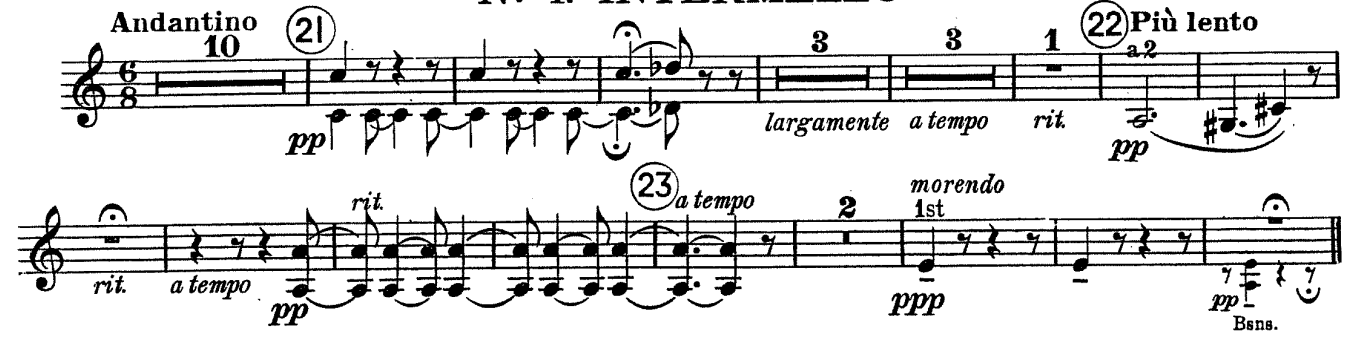


No. 3. WARRIORS' DANCE

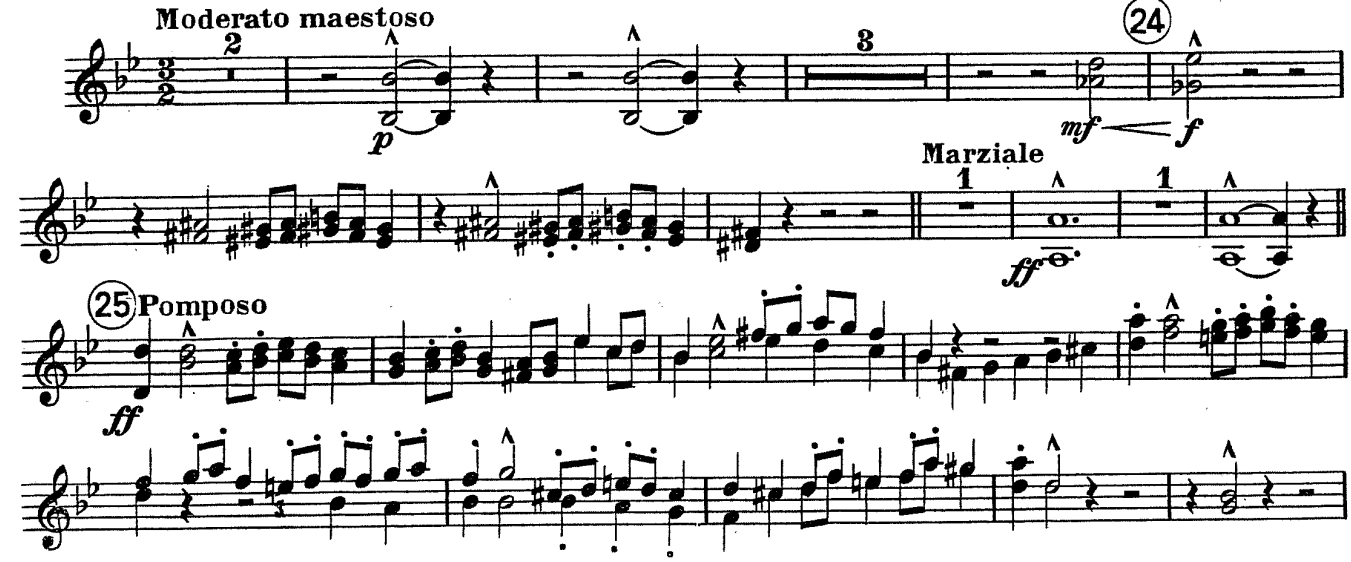




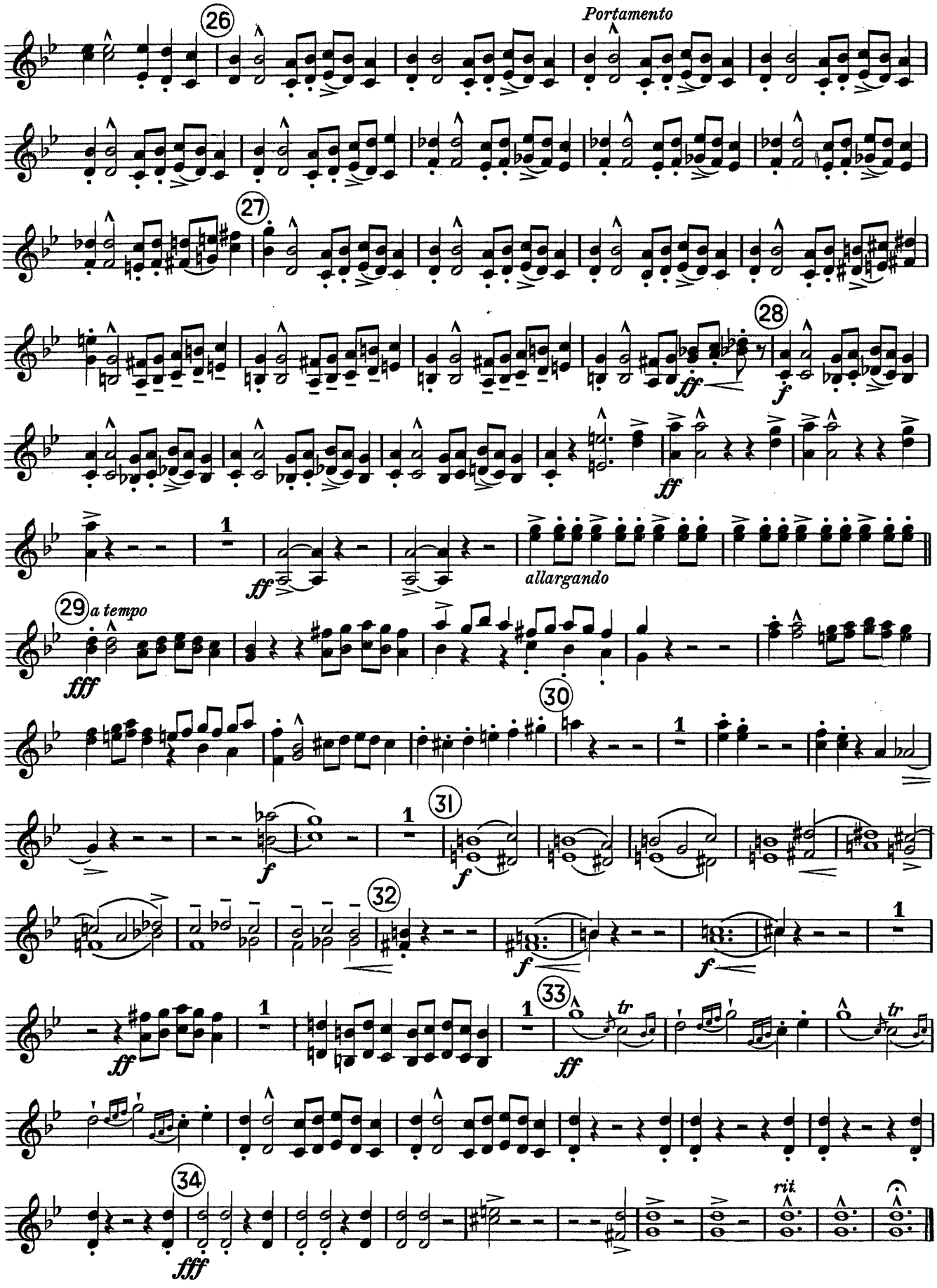
Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



1st & 2nd Horns in E♭

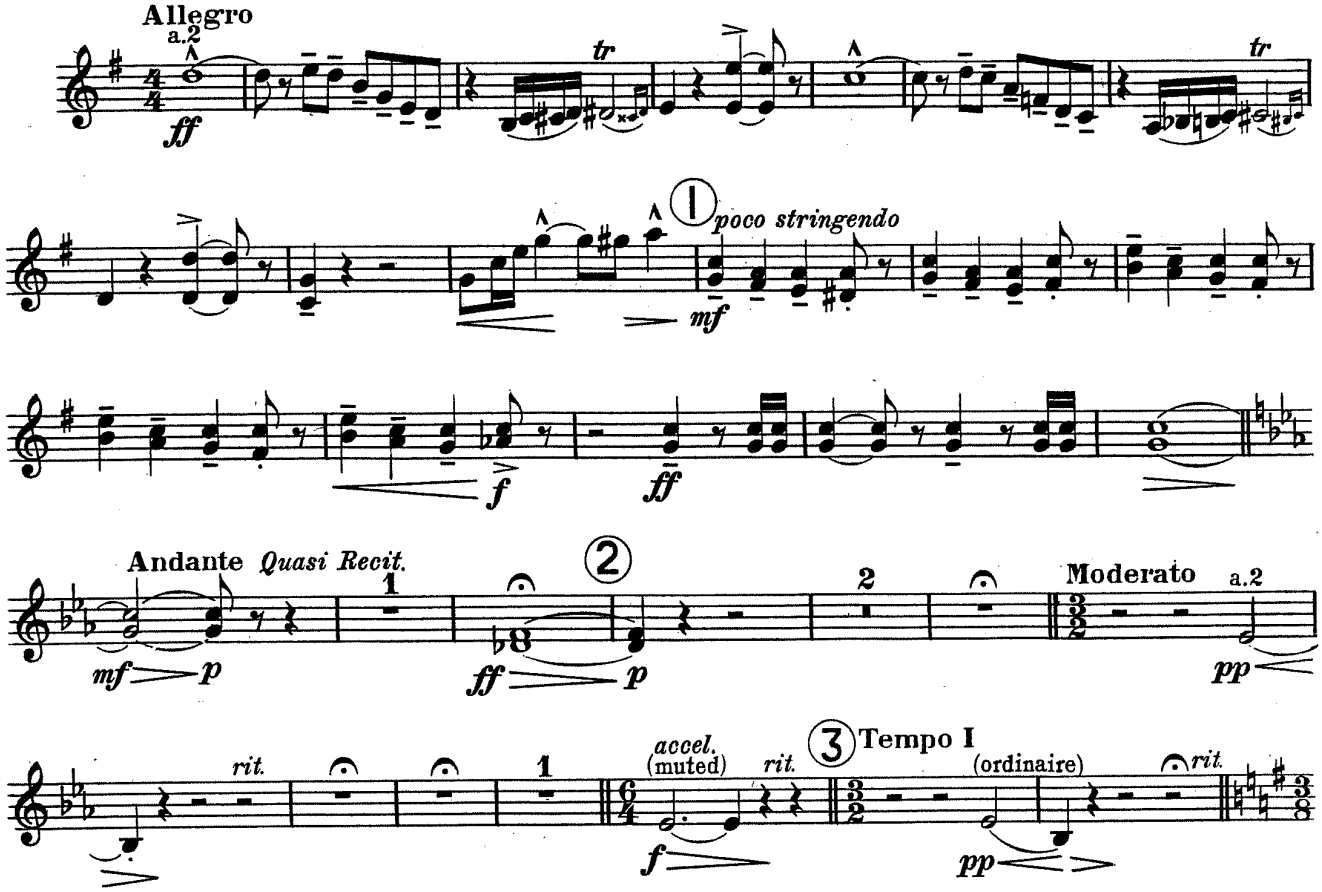


SUITE
THE CROWN OF INDIA

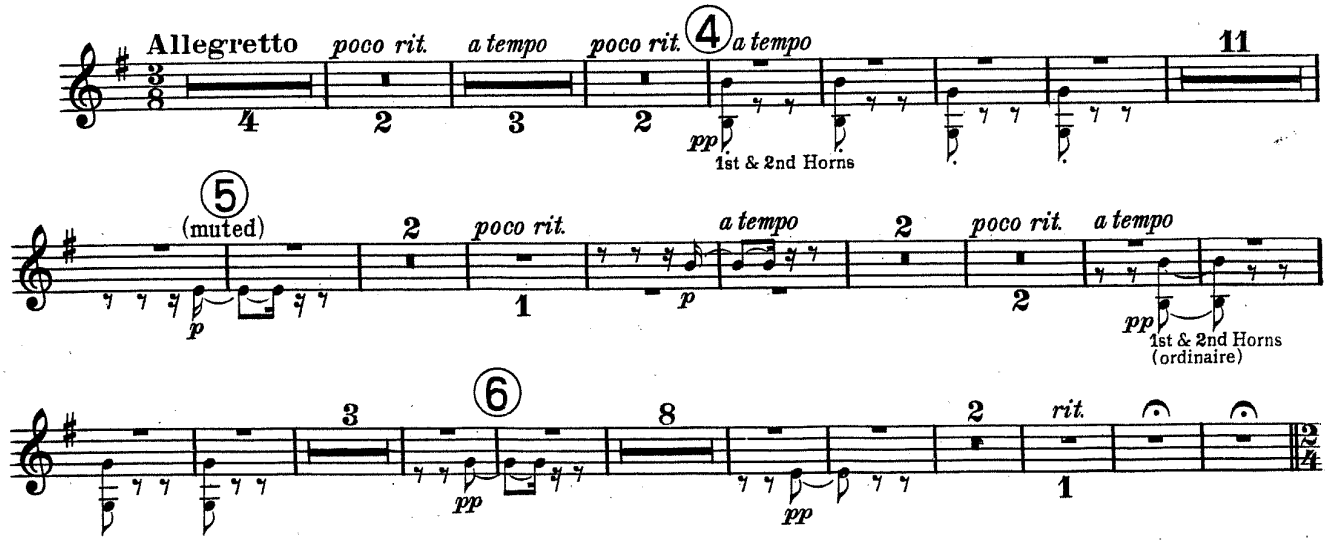
3rd & 4th E♭ Horns

EDWARD ELGAR, OP. 66

No 1. (a) INTRODUCTION



(b) DANCE OF NAUTCH GIRLS



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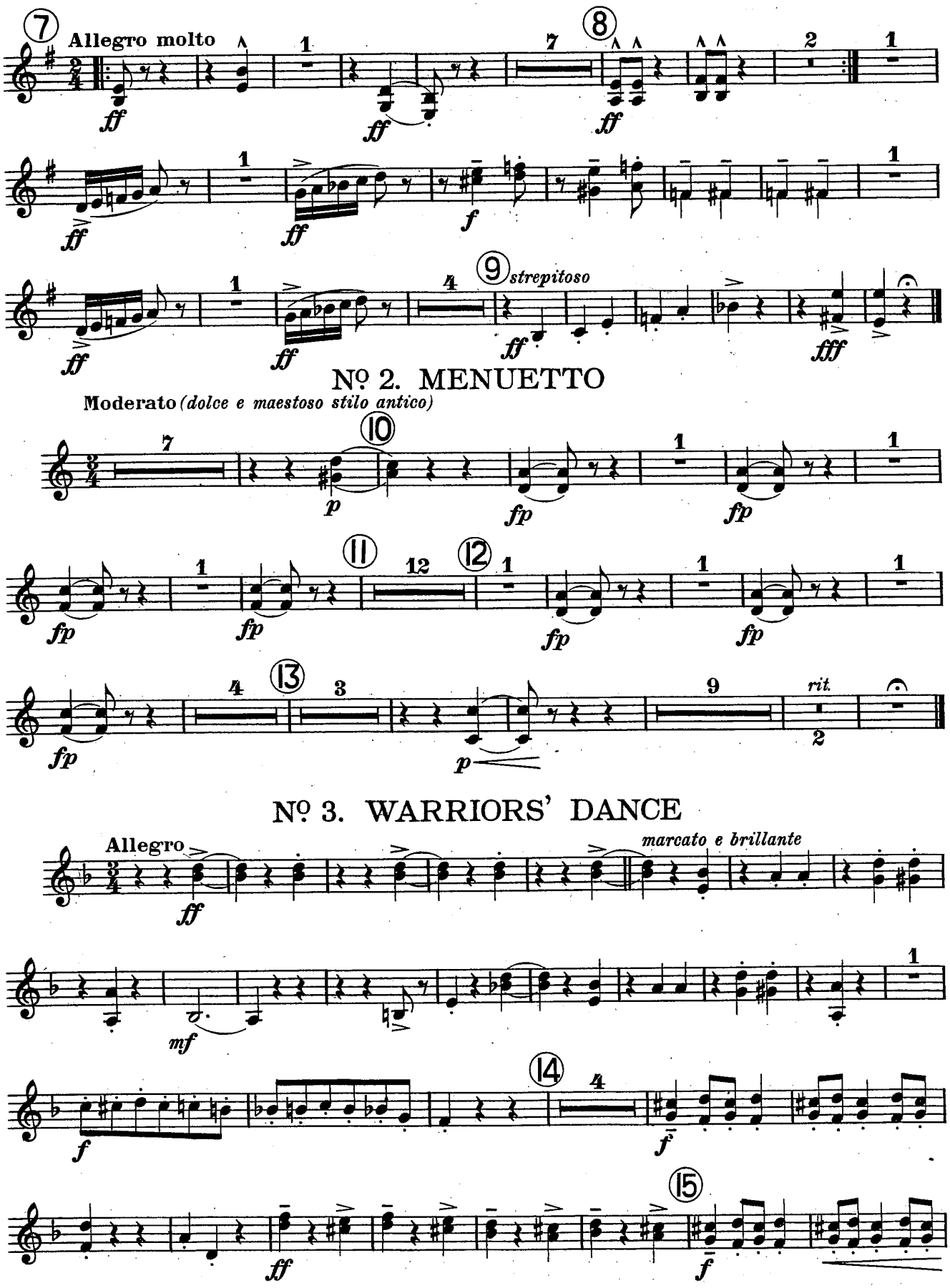
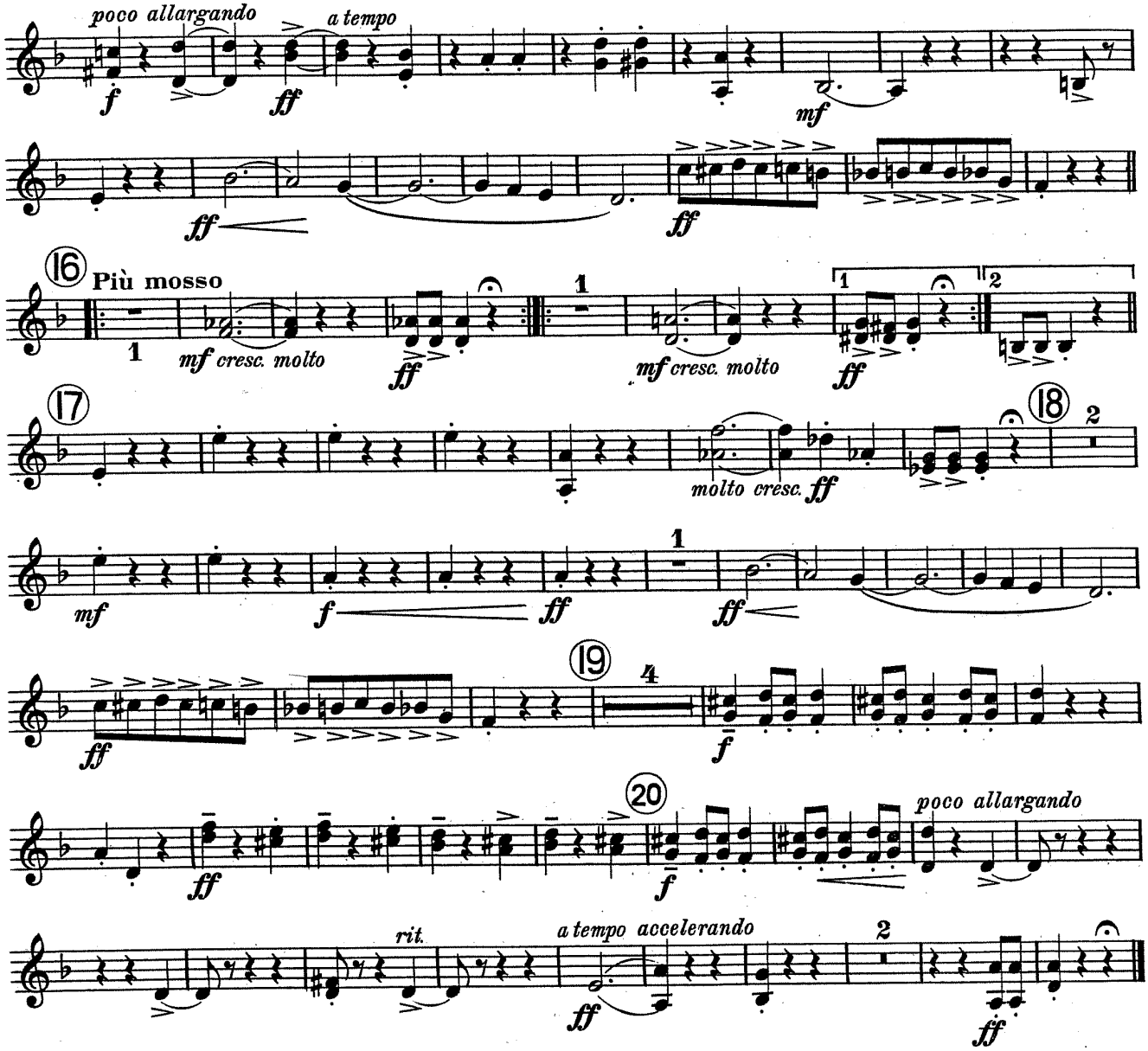
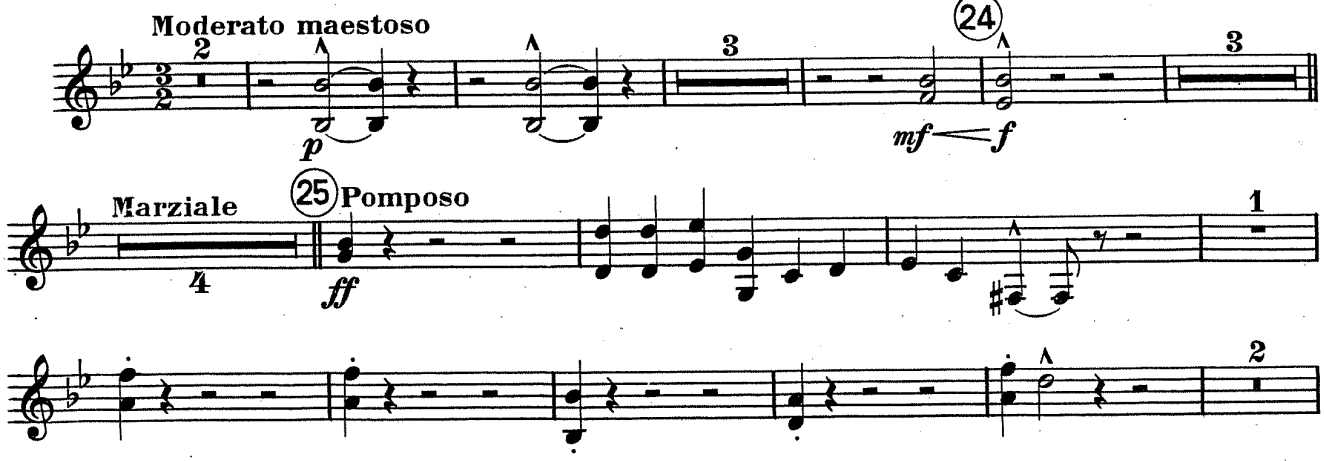
3rd & 4th E♭ Horns

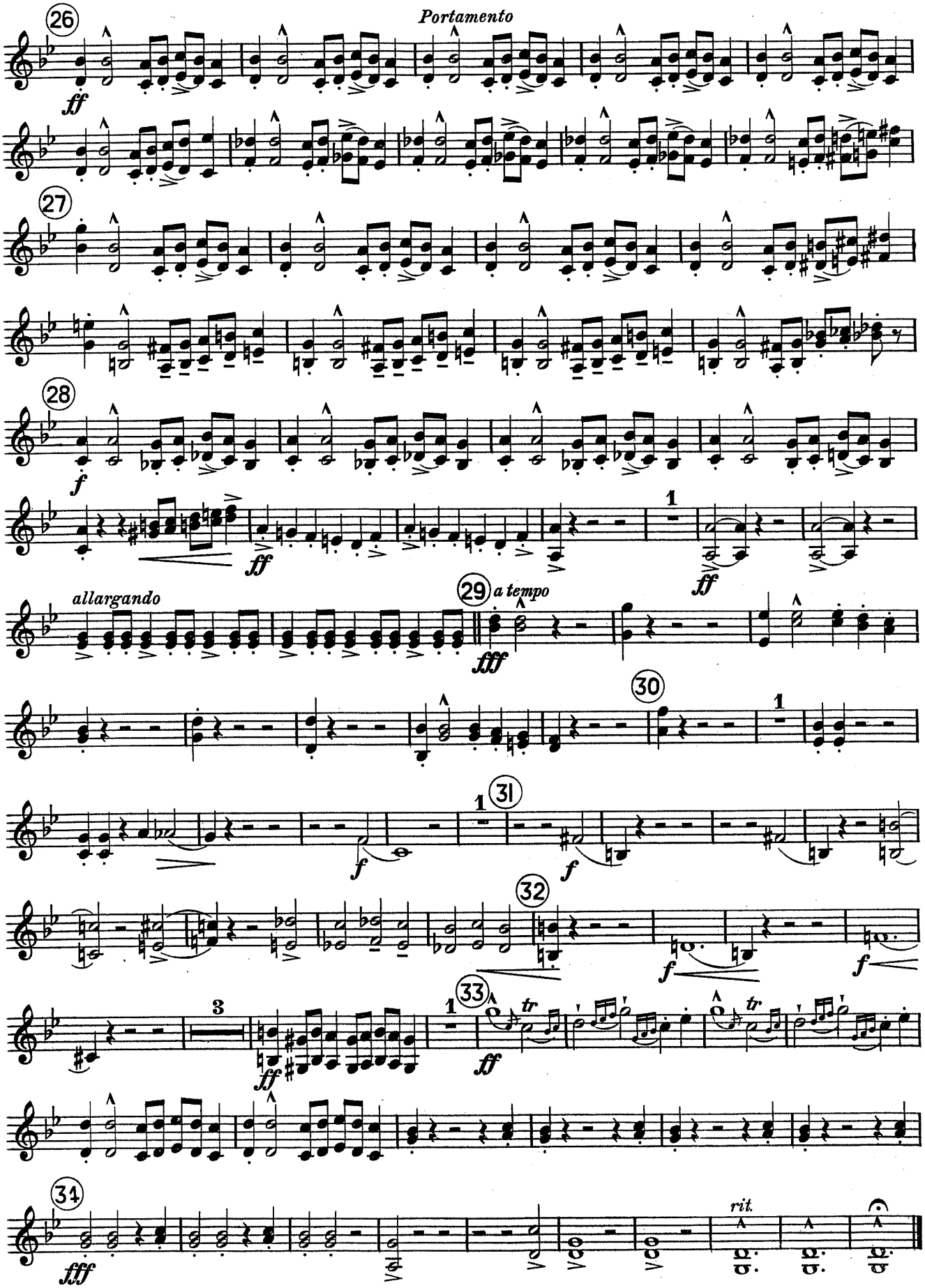




Nº 4. TACET

Nº 5. MARCH OF THE MOGUL EMPERORS



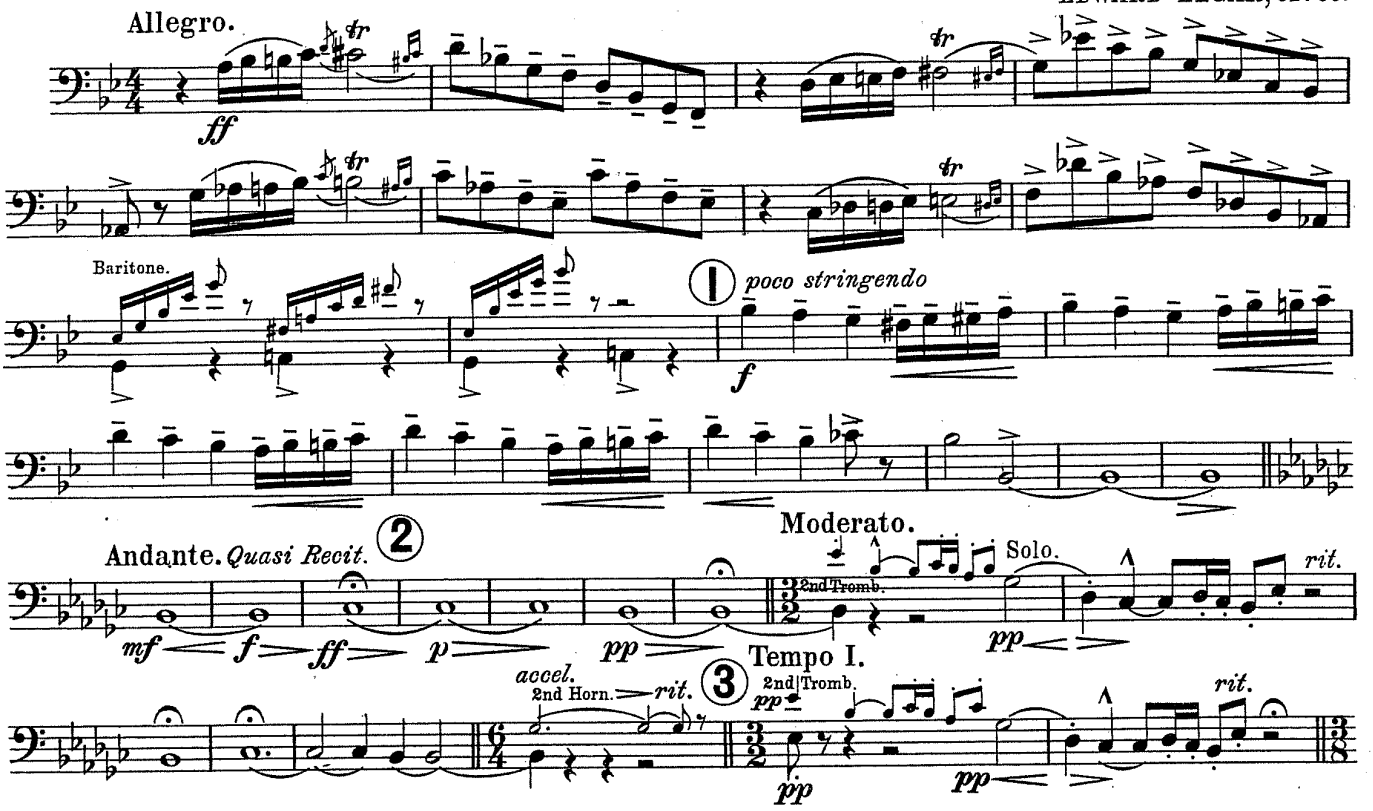

Portamento
26
ff
27
28
f
ff
1
allargando
29
a tempo
fff
30
31
32
33
tr
34
rit.

SUITE
THE CROWN OF INDIA

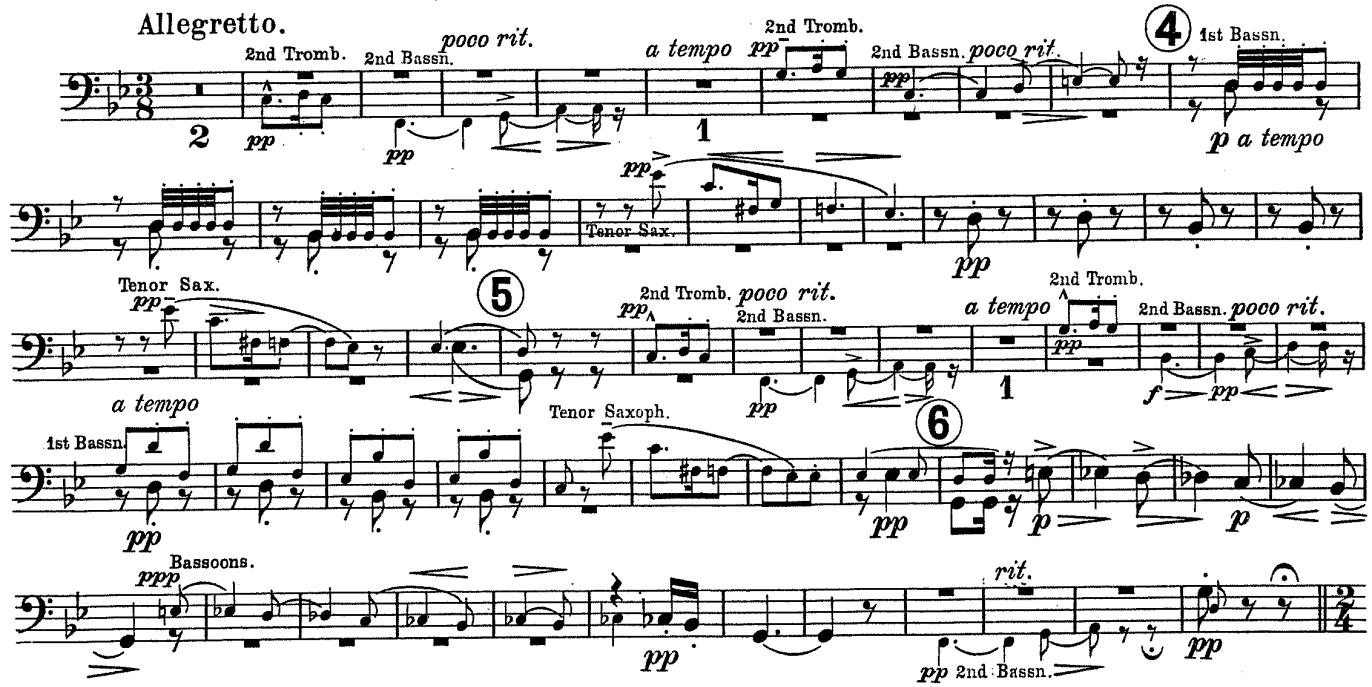
Euphonium.

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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PARIS. 16 Rue Saulnier. IXe
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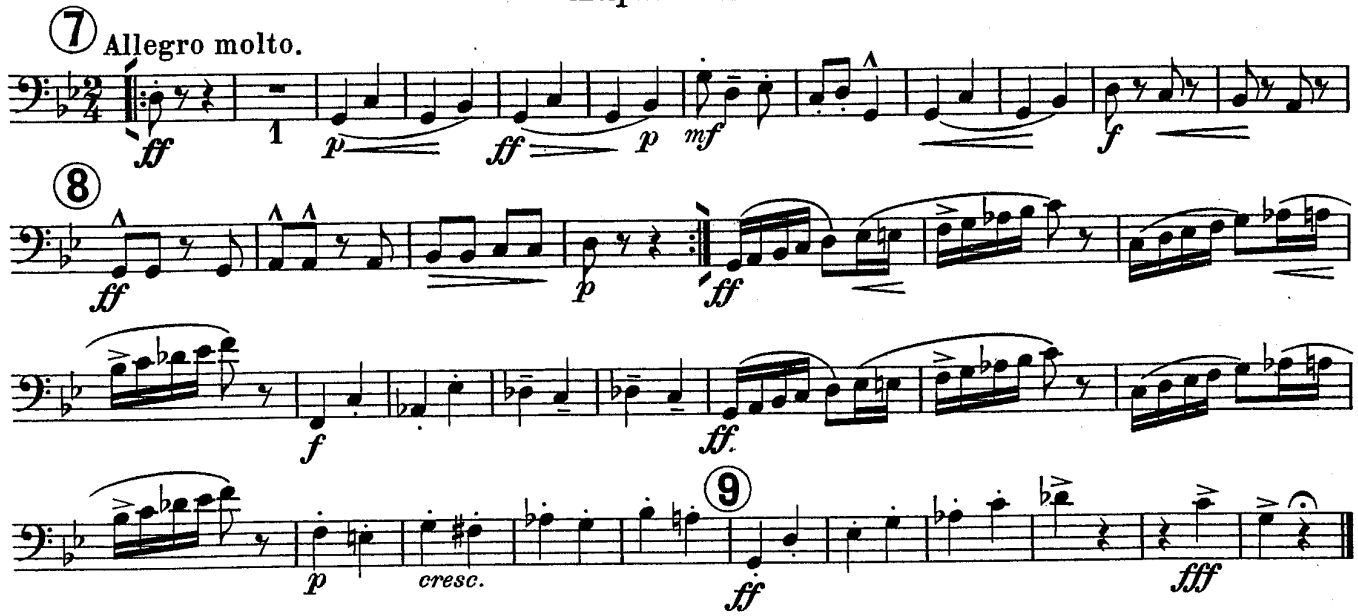
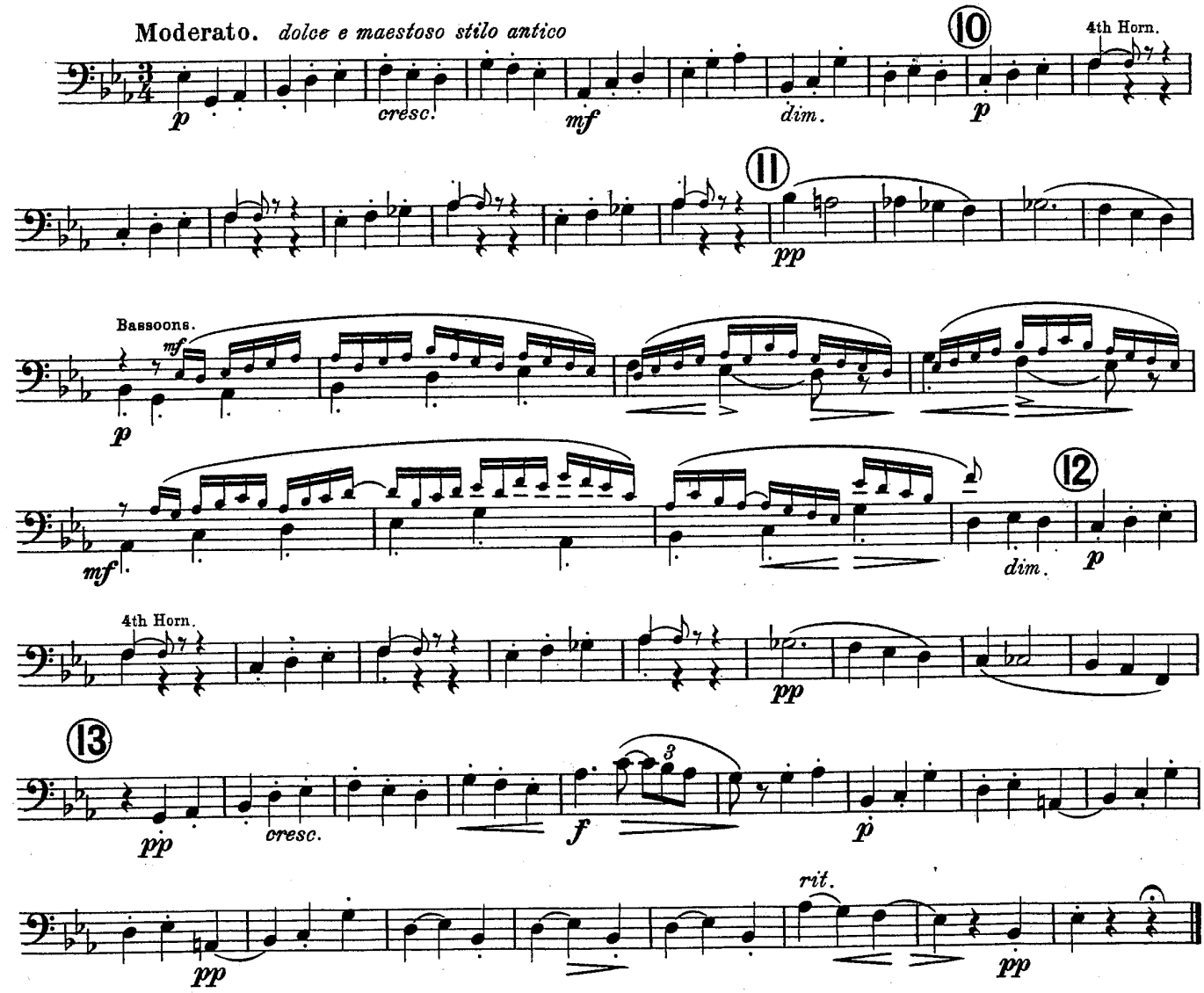
Euphonium.

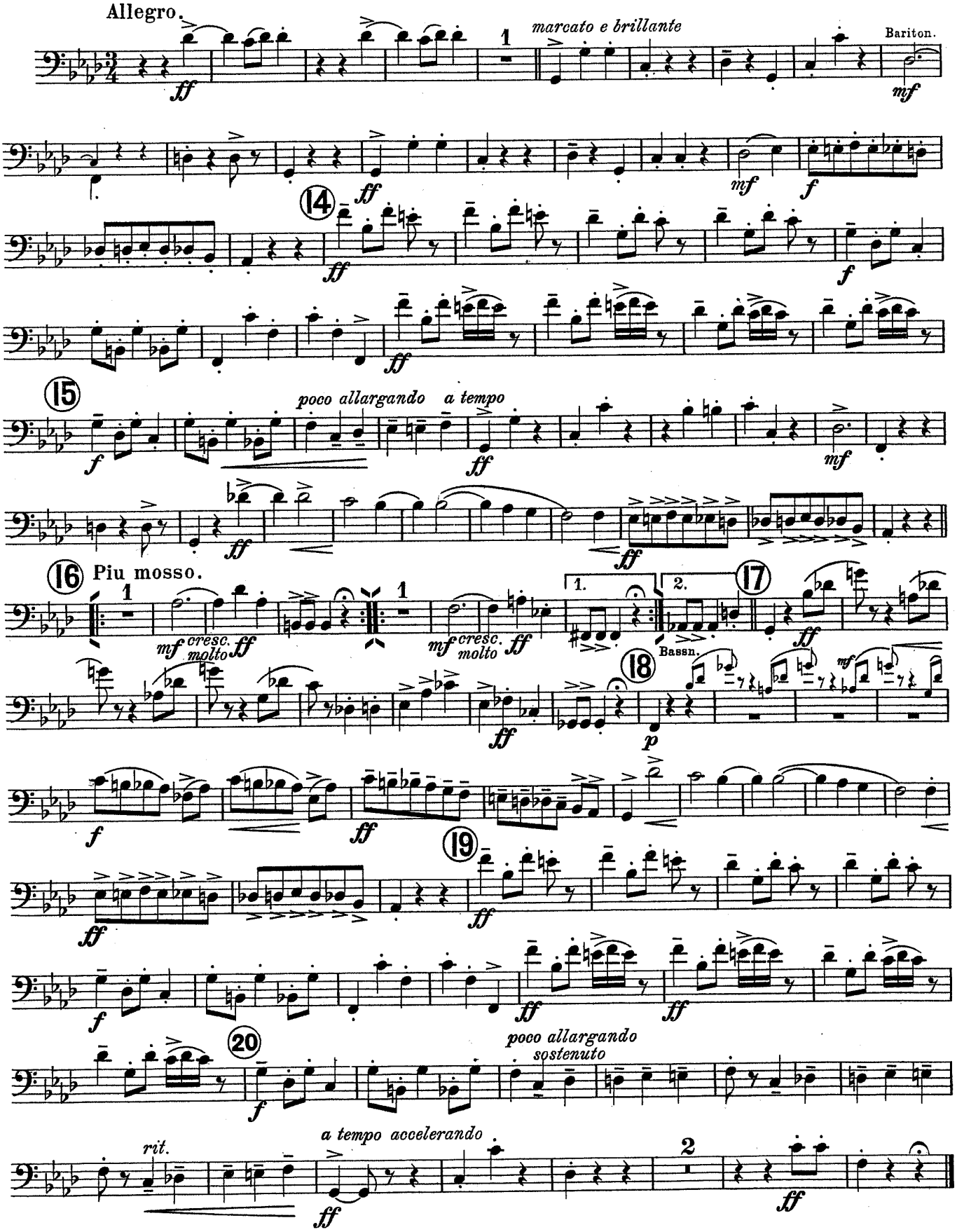


Nº 2. MENUETTO



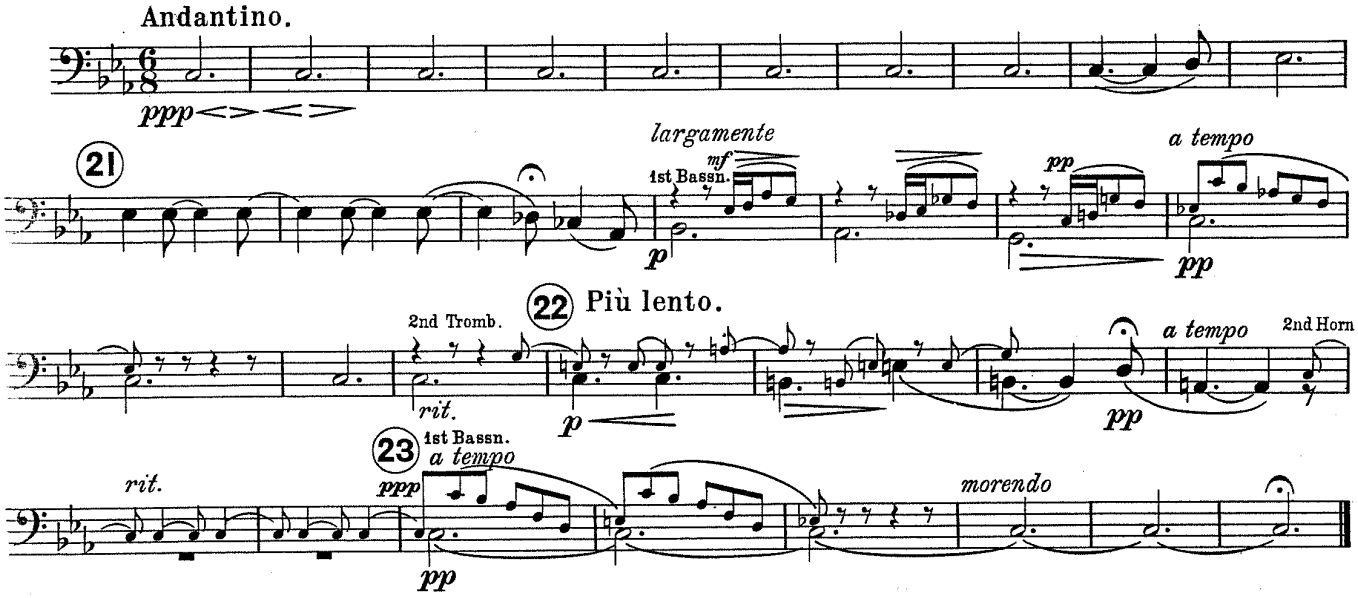
Euphonium.

No. 3. WARRIORS' DANCE

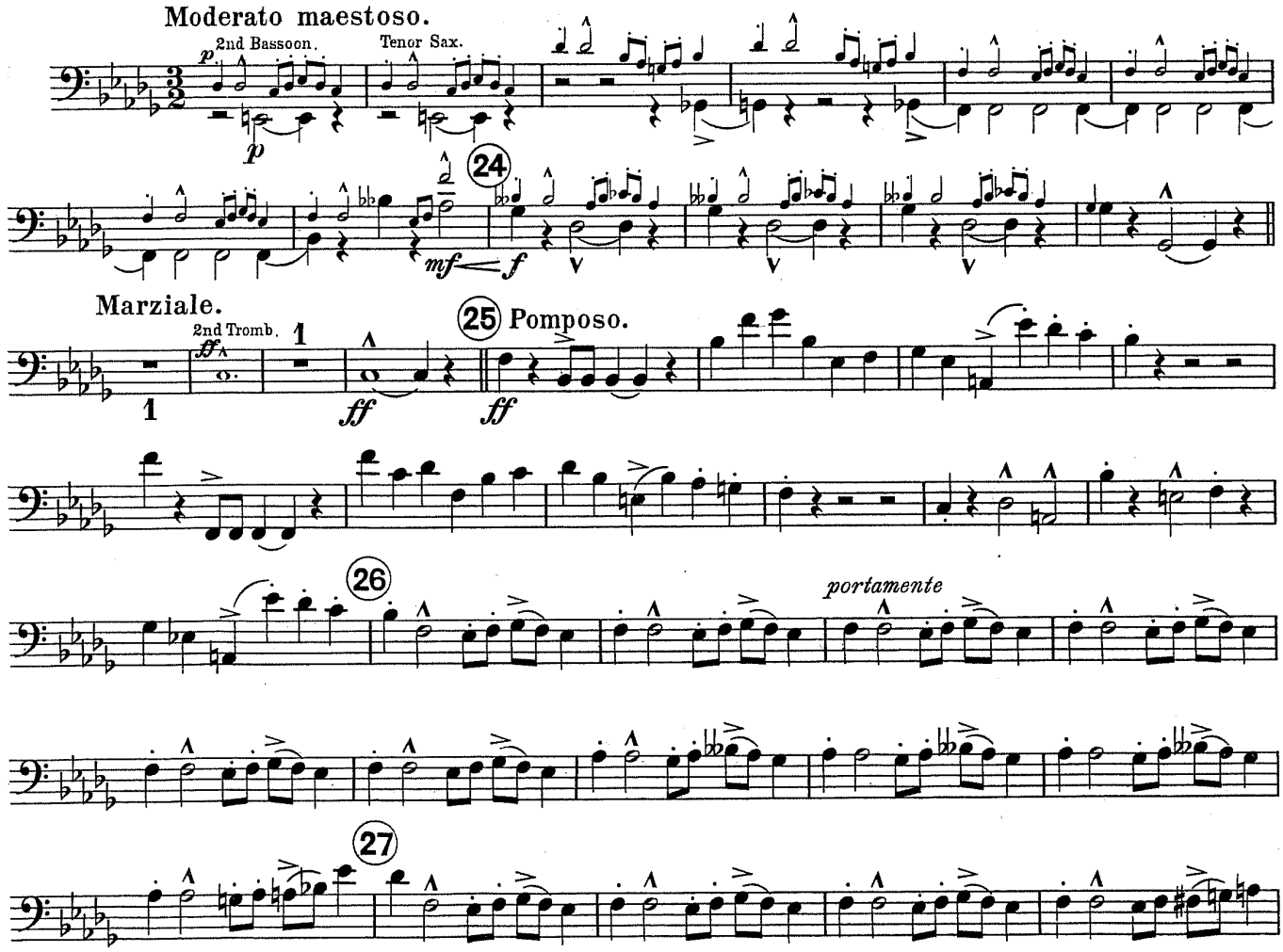


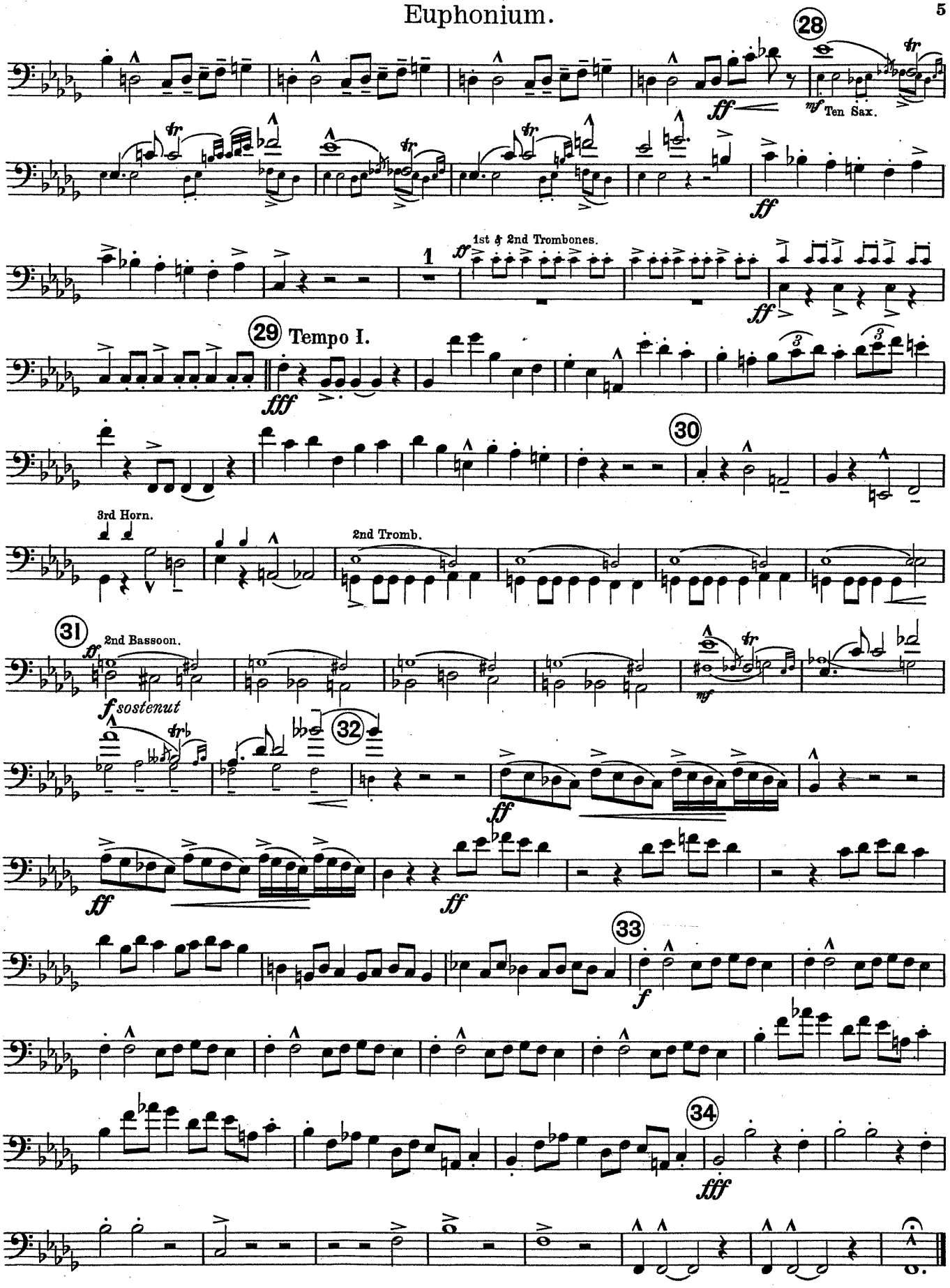
Euphonium.

Nº 4. INTERMEZZO



Nº 5. MARCH OF THE MOGUL EMPERORS



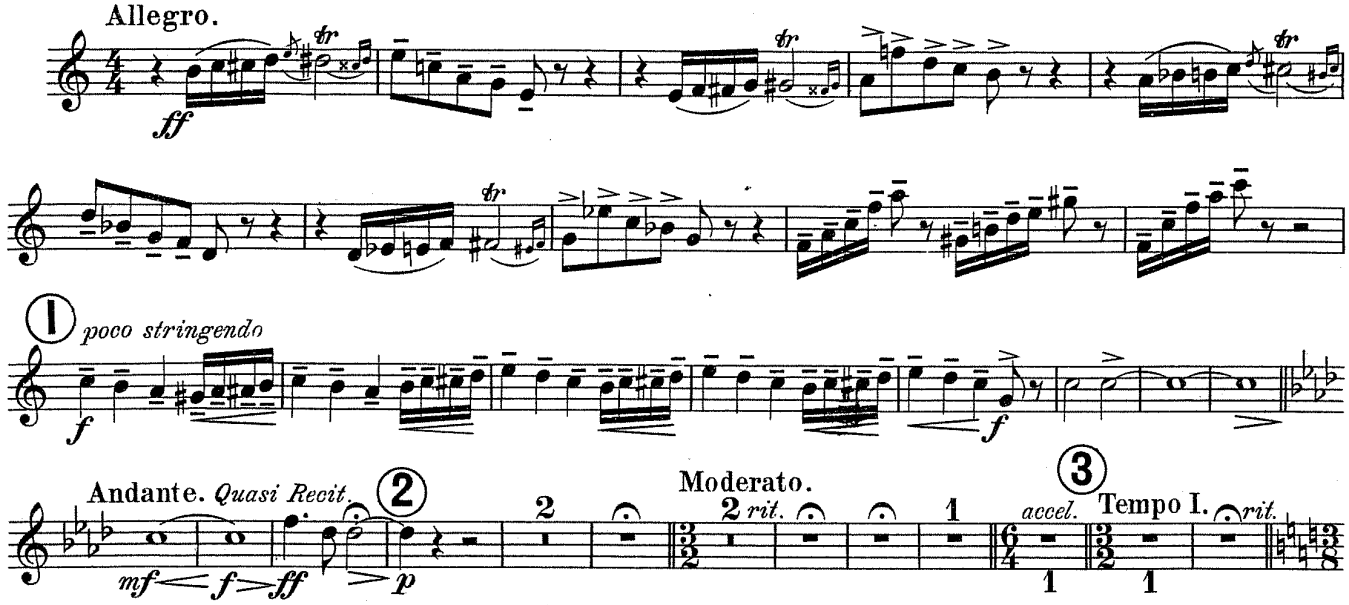

28
ff
mf Ten Sax.
ff
1st & 2nd Trombones.
1
ff
ff
29 Tempo I.
fff
30
3rd Horn.
2nd Tromb.
31
ff 2nd Bassoon.
fsostenut
32
ff
ff
ff
33
f
34
fff

SUITE
THE CROWN OF INDIA

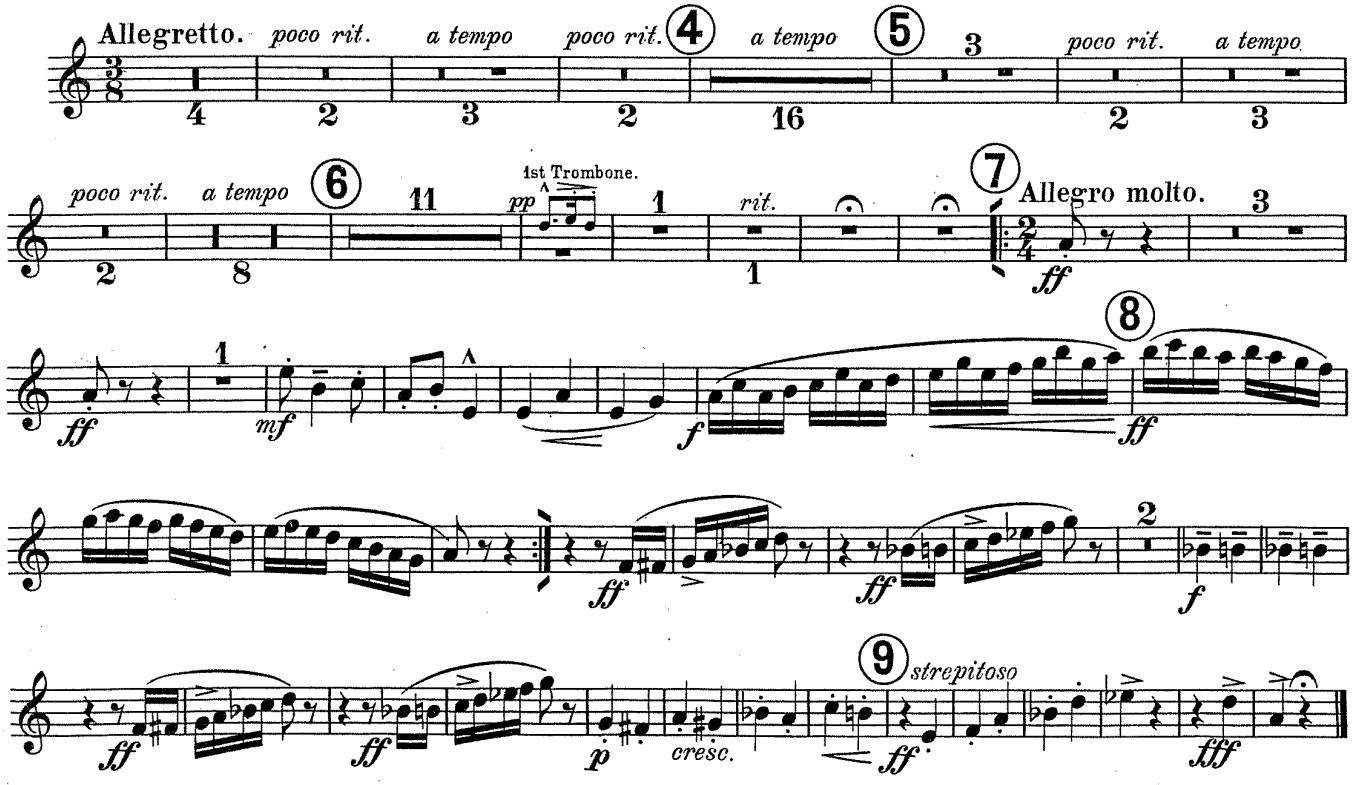
B♭ Baritone.

No 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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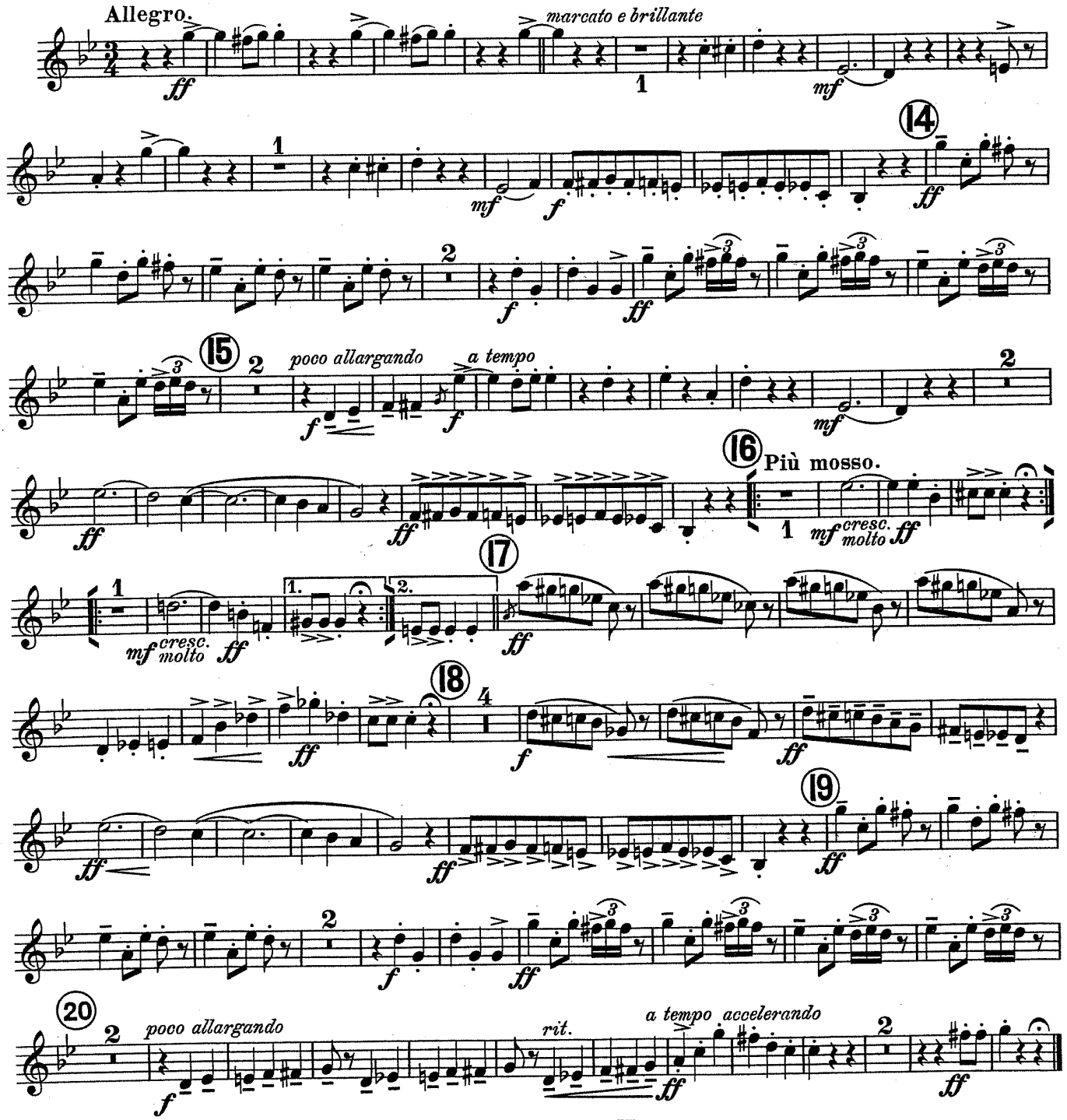
B♭ Baritone.

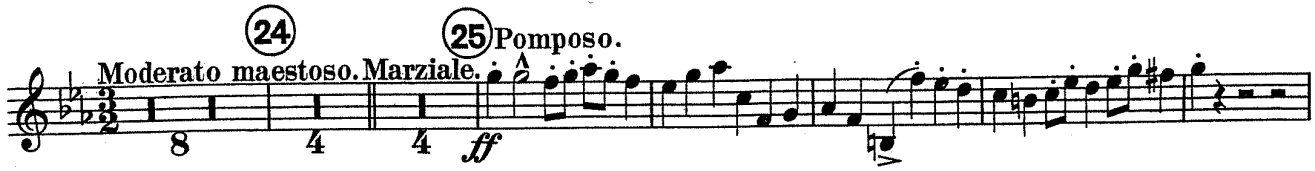
No. 2. TACET

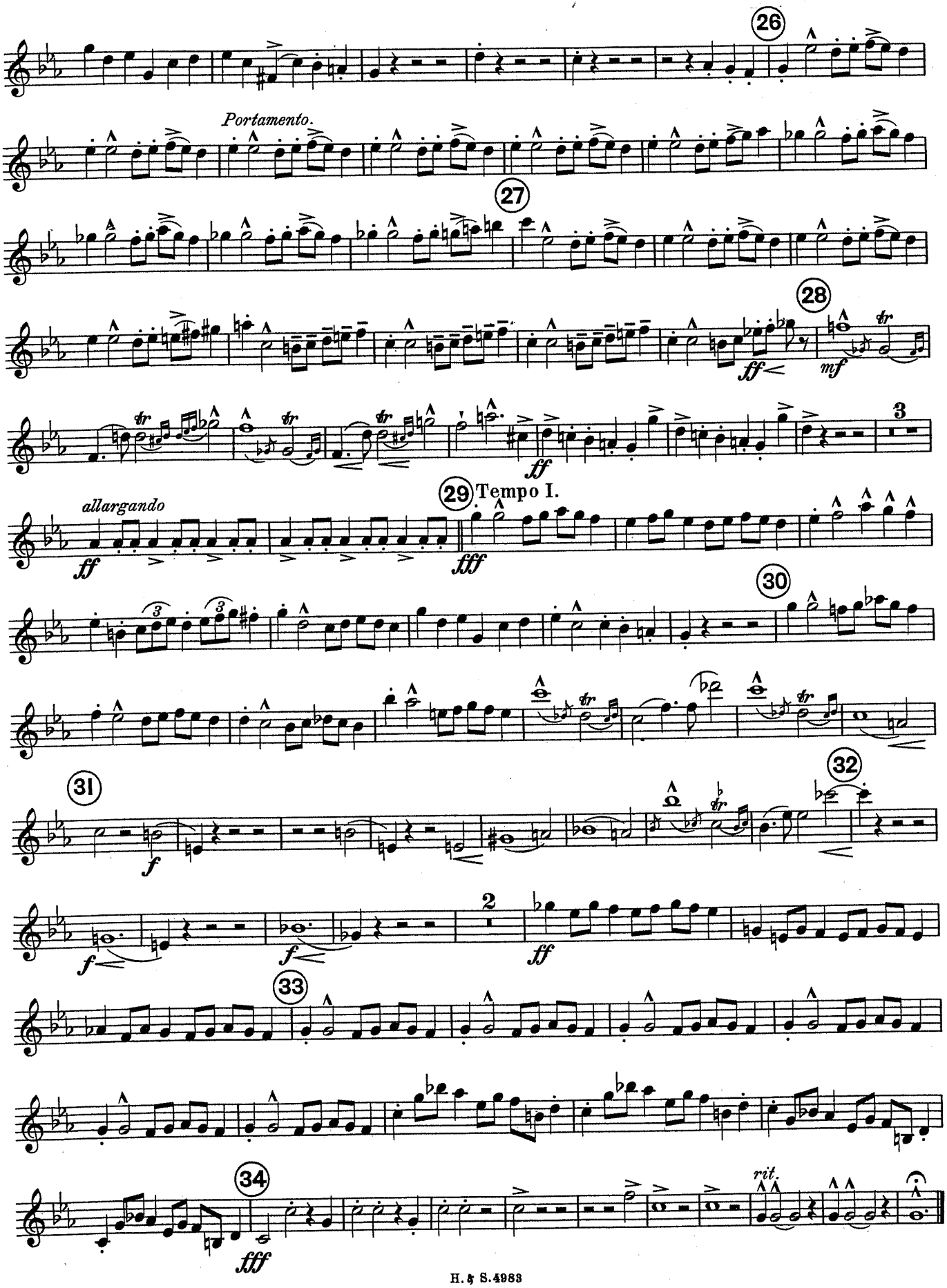
No. 3. WARRIORS' DANCE



No. 4. TACET

No. 5. MARCH OF THE MOGUL EMPERORS



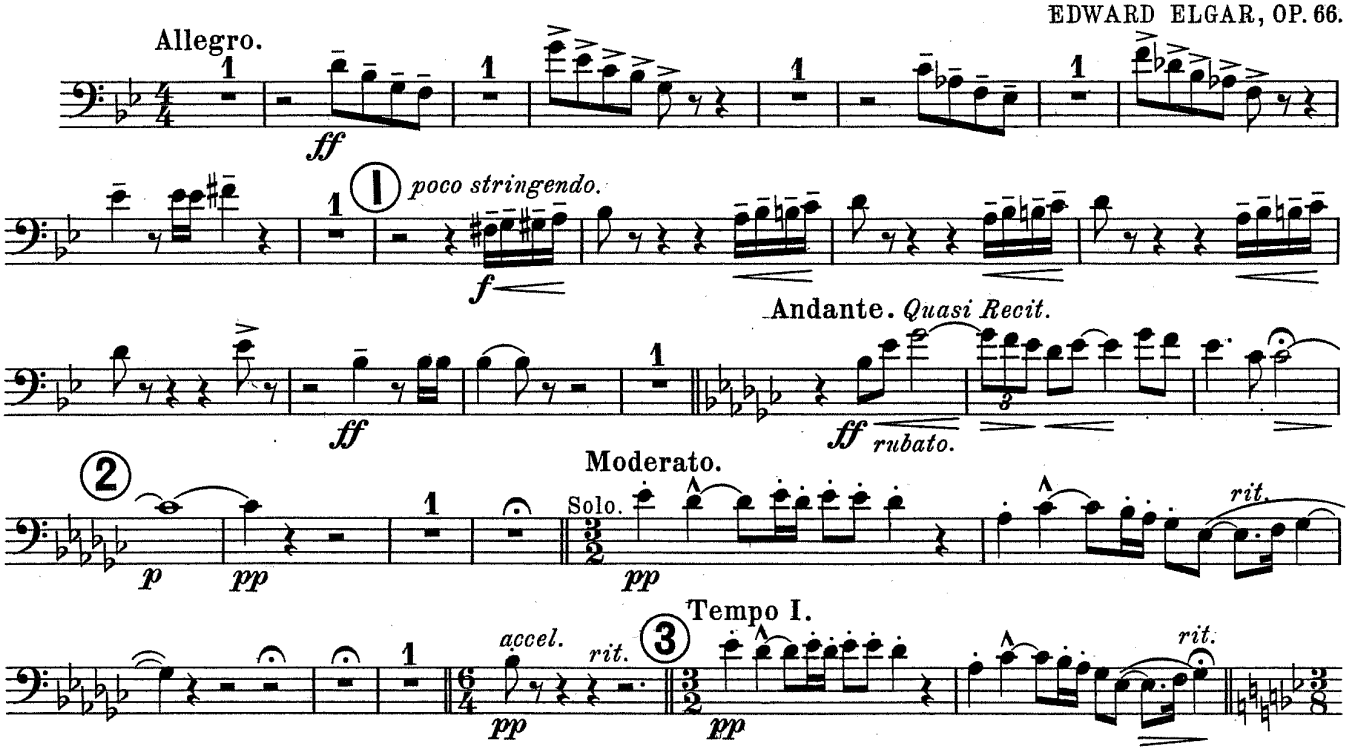

26
Portamento.
27
28
ff
mf
3
ff
allargando
ff
29 Tempo I.
fff
30
31
f
32
f
f
2
ff
33
34
fff
rit.

SUITE
THE CROWN OF INDIA

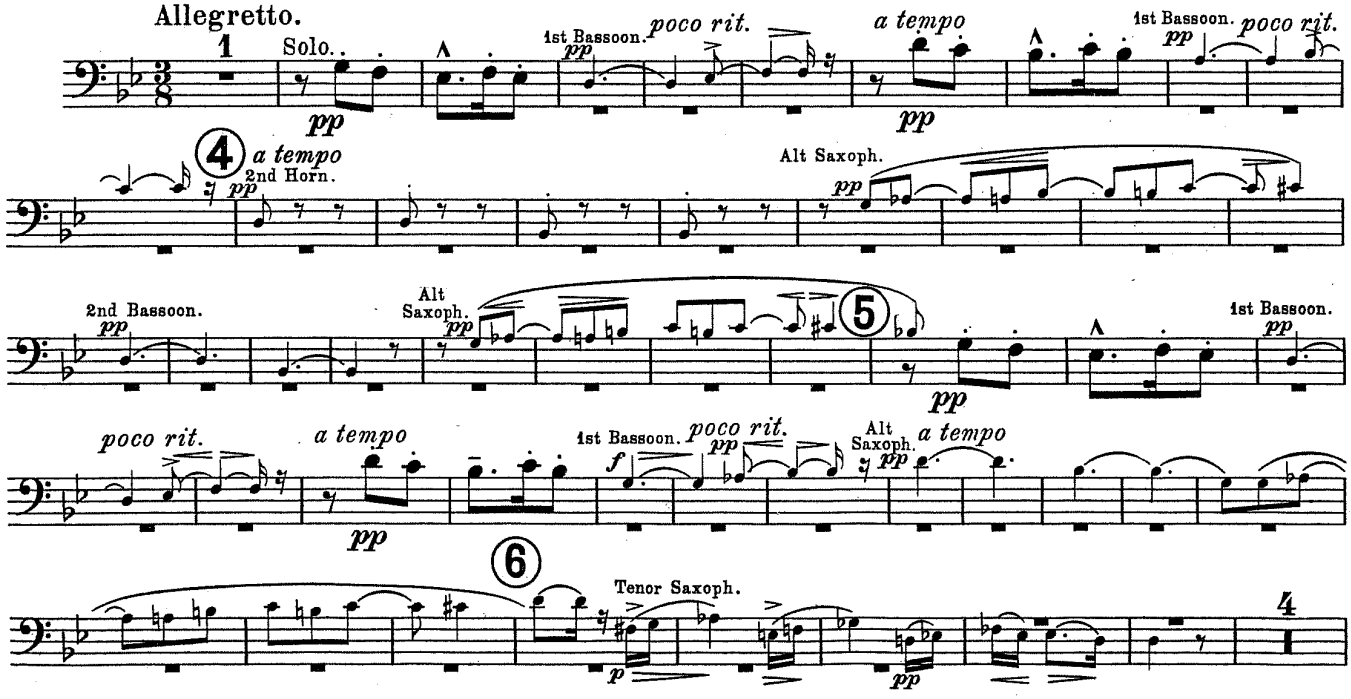
1st Trombone.

Nº 1. (a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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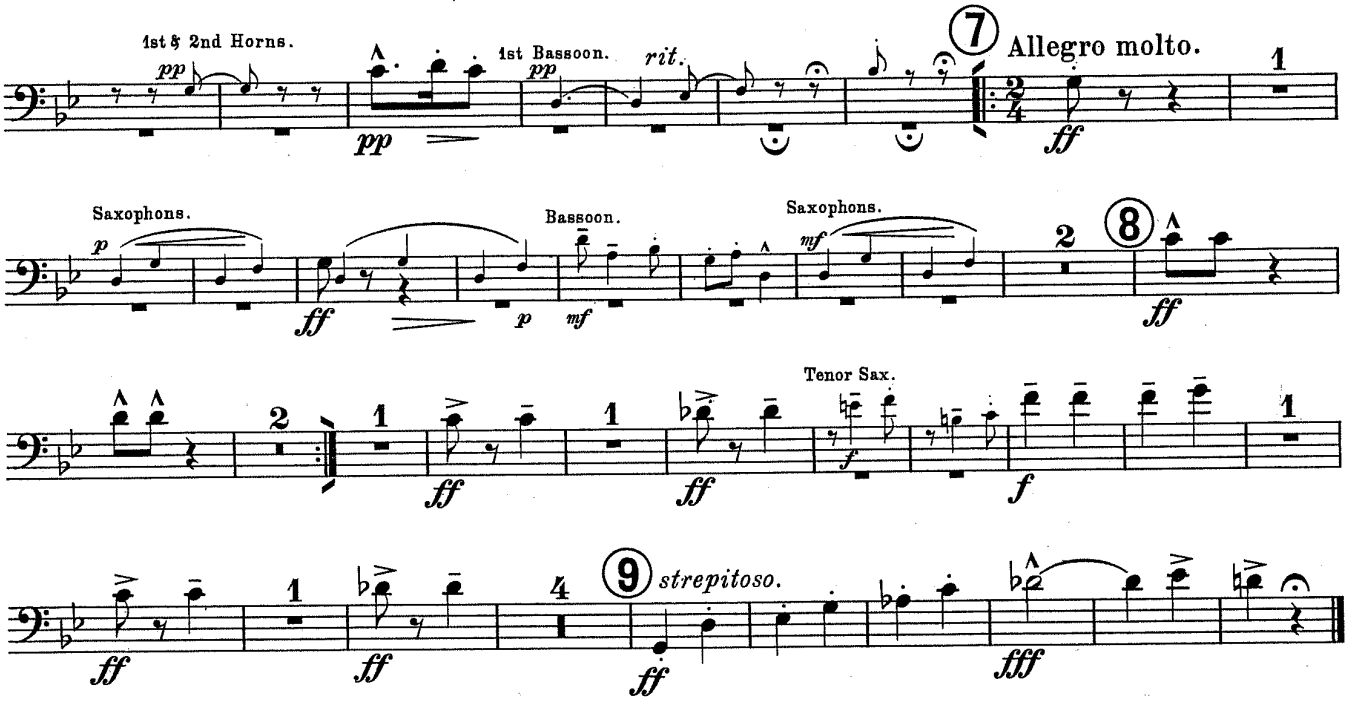
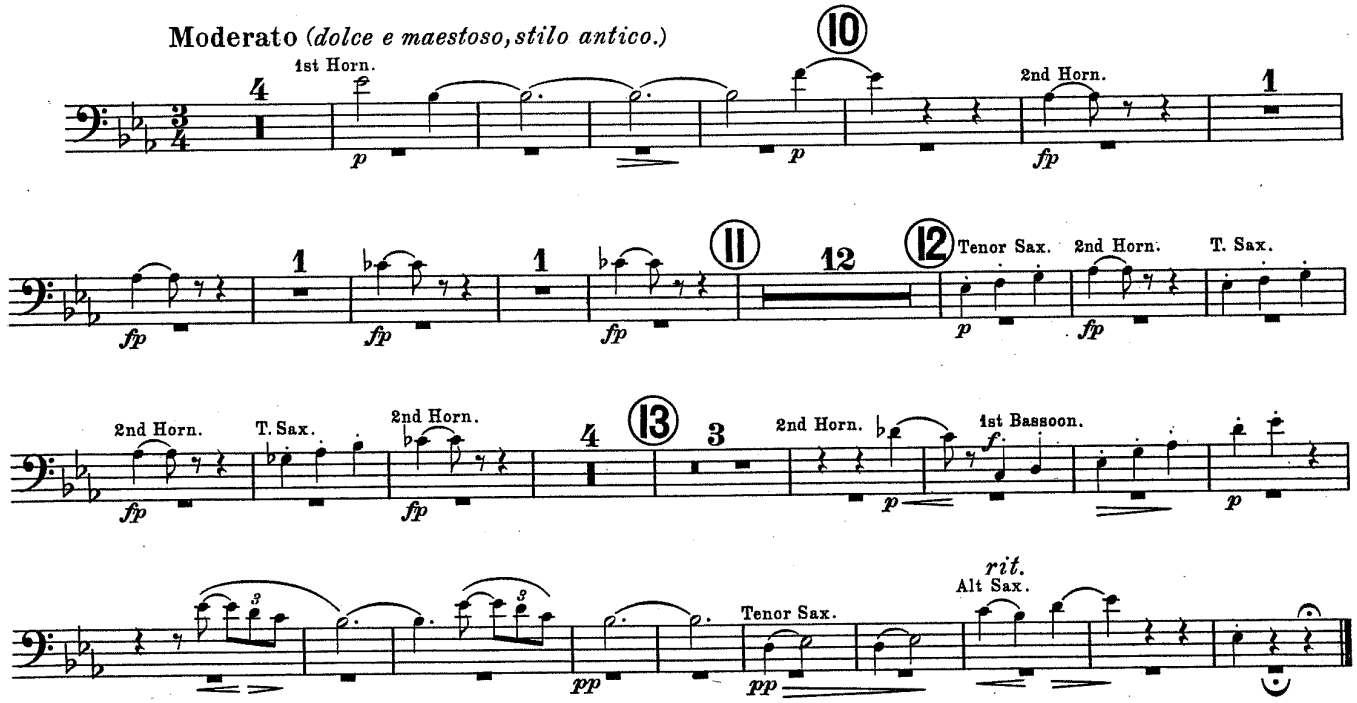
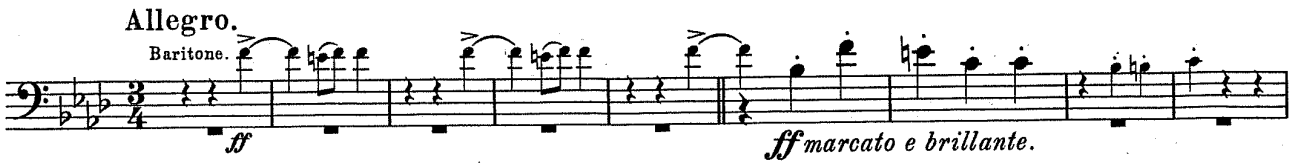
1st Trombone.



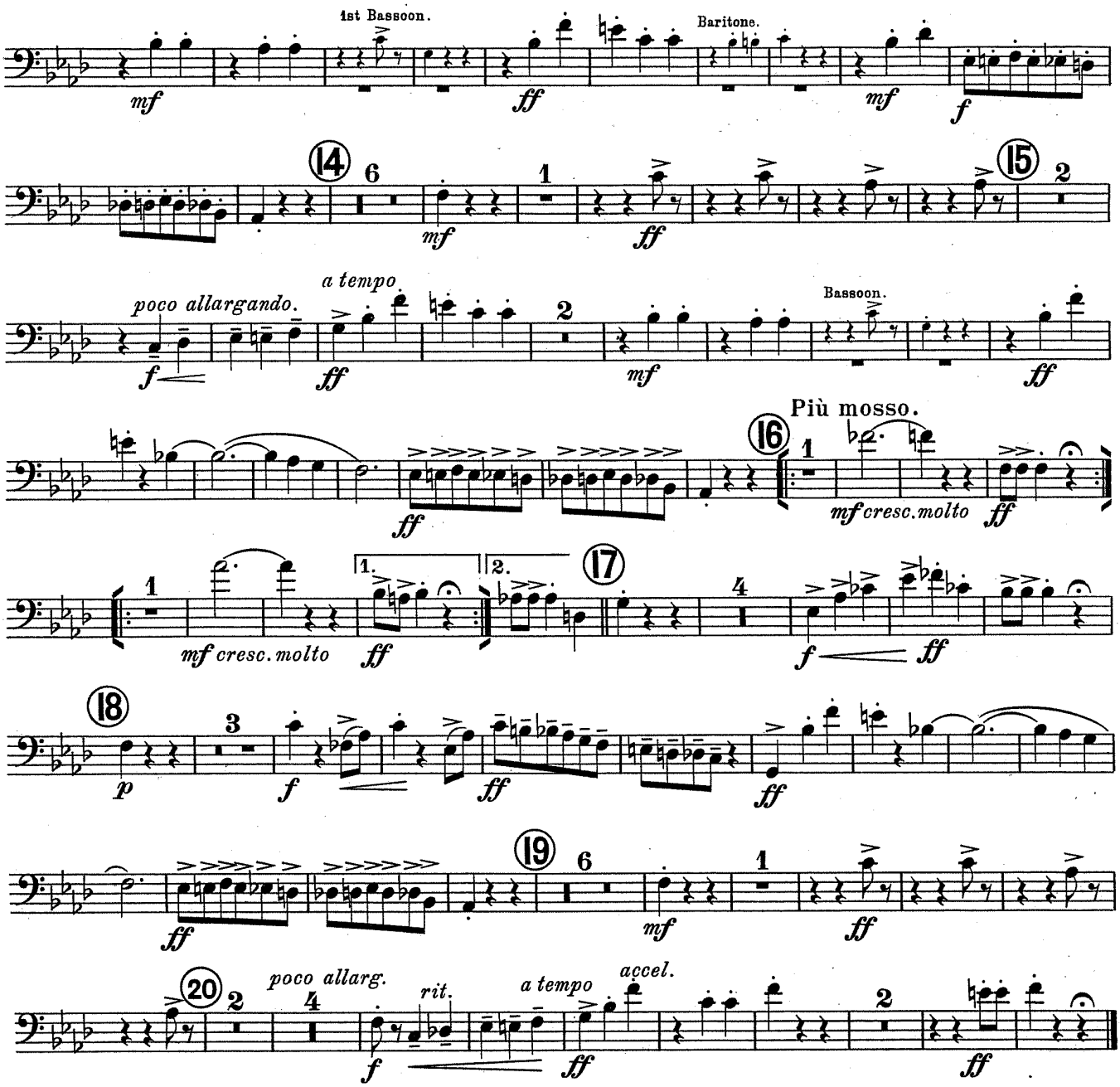
Nº 2. MENUETTO



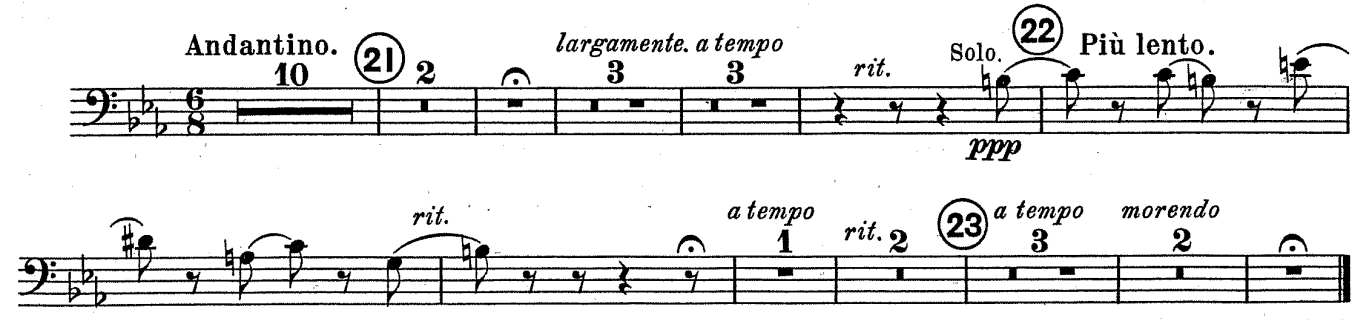
Nº 3. WARRIORS' DANCE



1st Trombone.

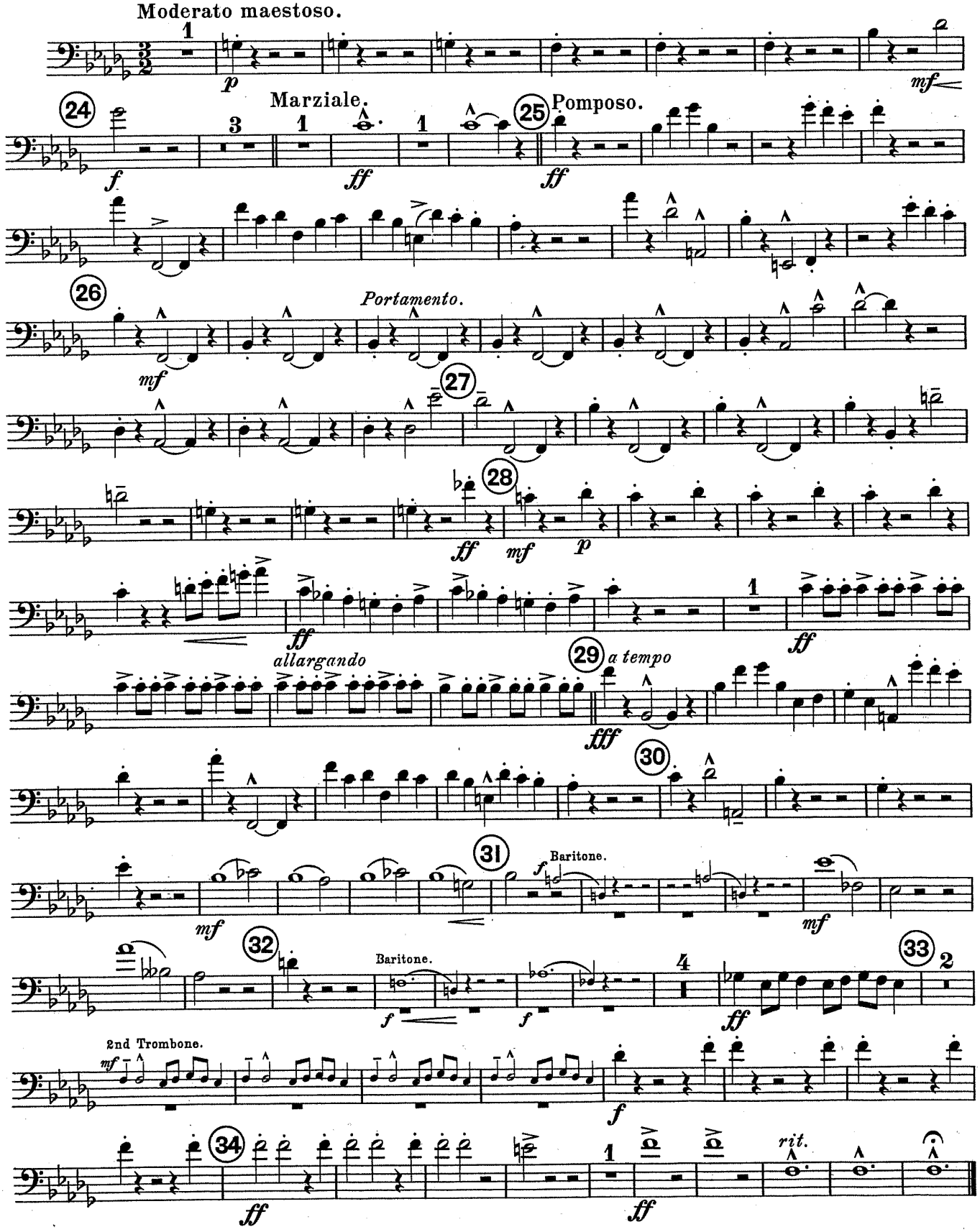


Nº 4. INTERMEZZO



1st Trombone.

Nº 5. MARCH OF THE MOGUL EMPERORS

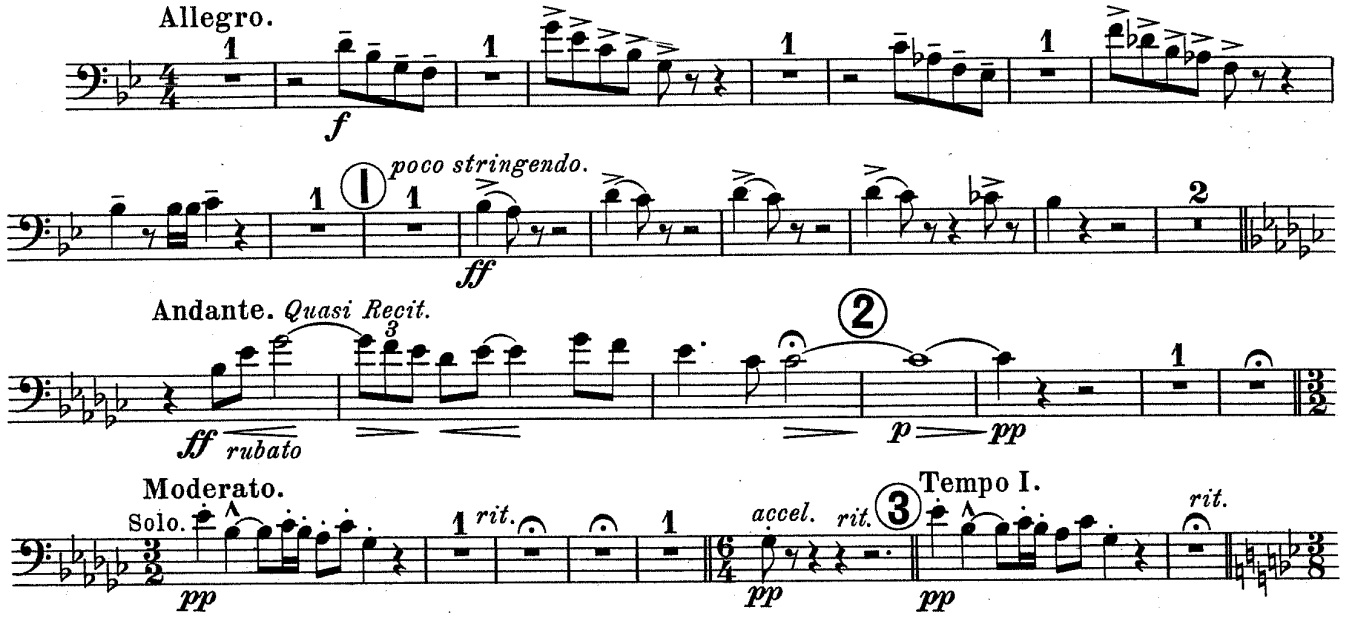


SUITE
THE CROWN OF INDIA

2nd Trombone.

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



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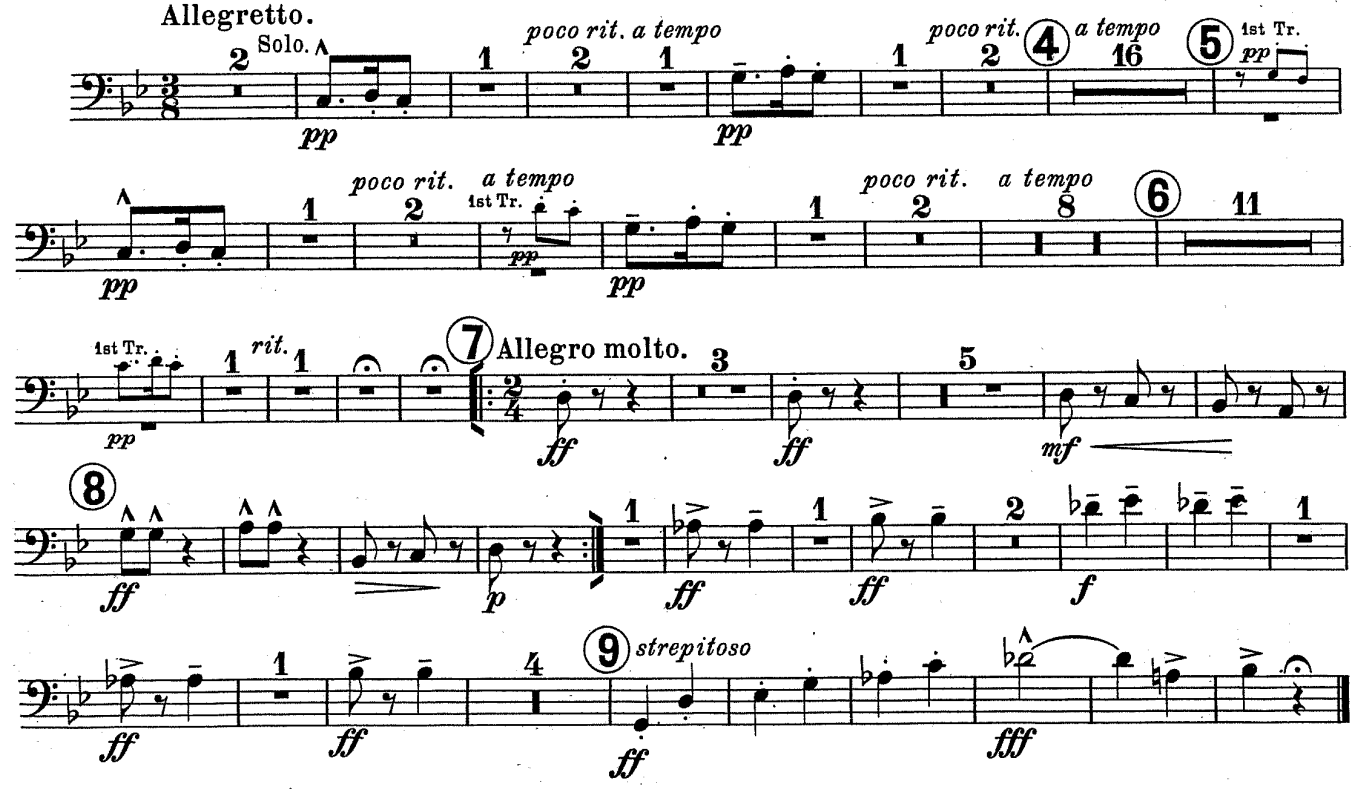

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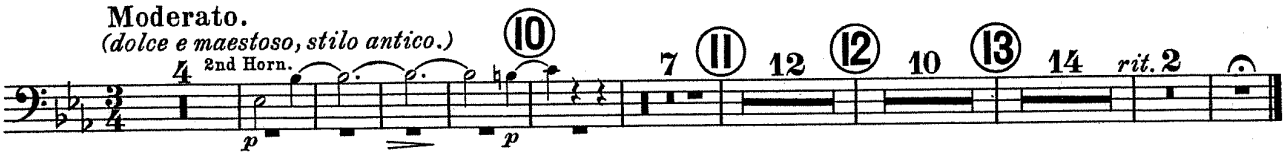
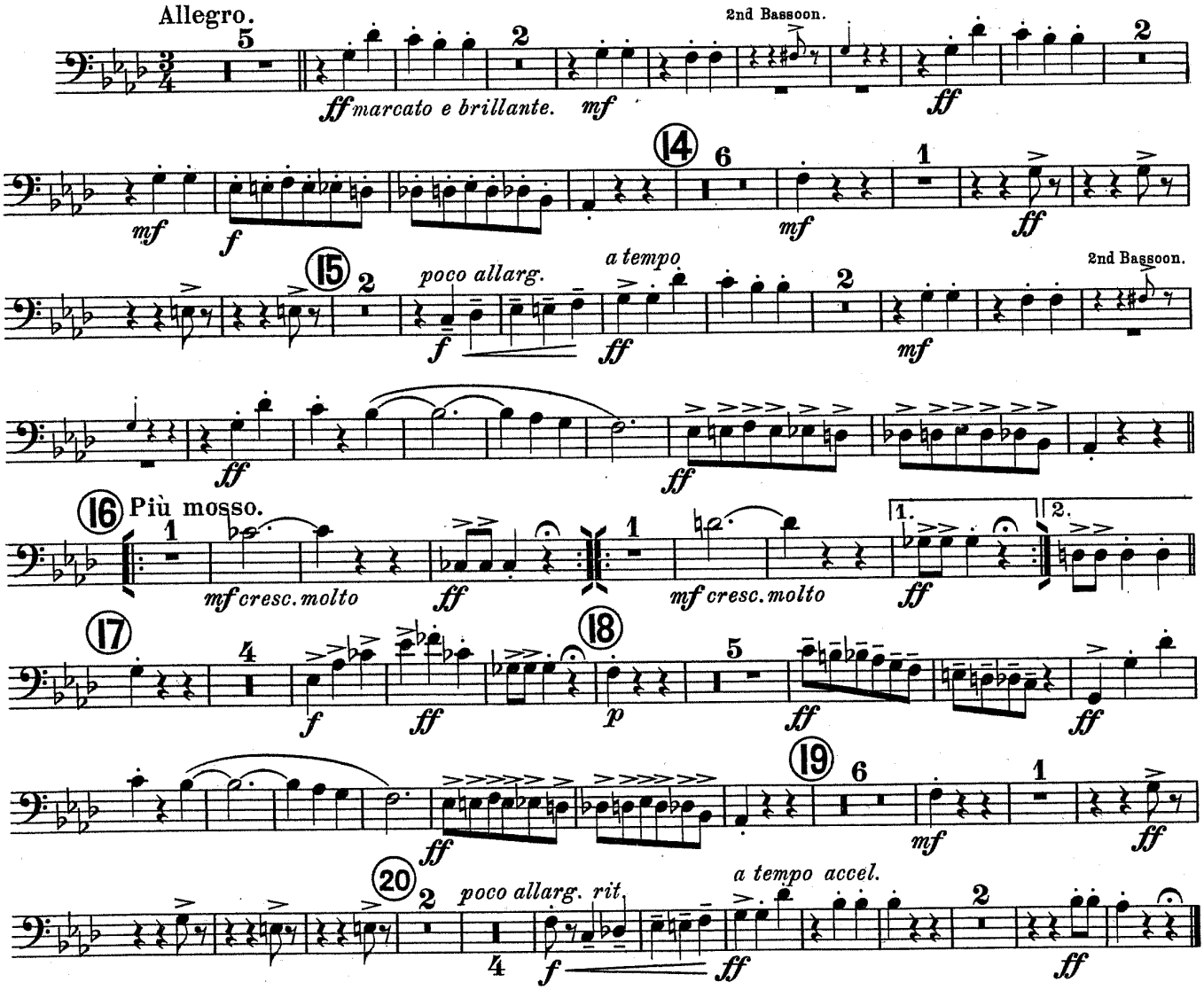
2nd Trombone.

Nº 2. MENUETTO



Nº 3. WARRIORS' DANCE



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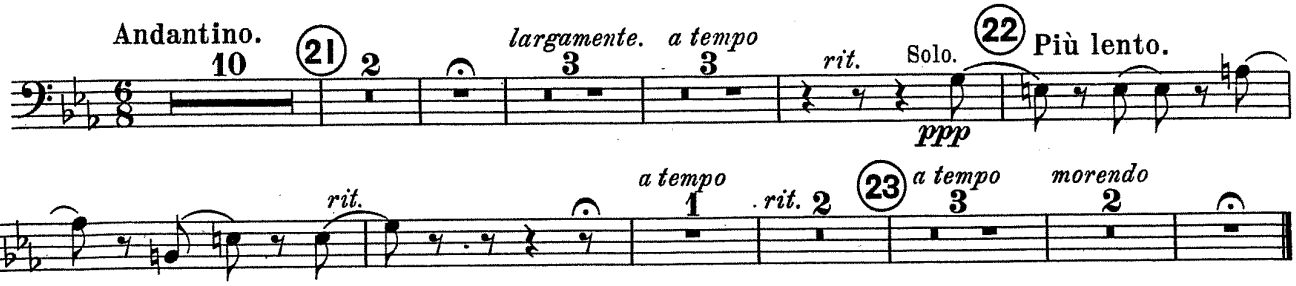
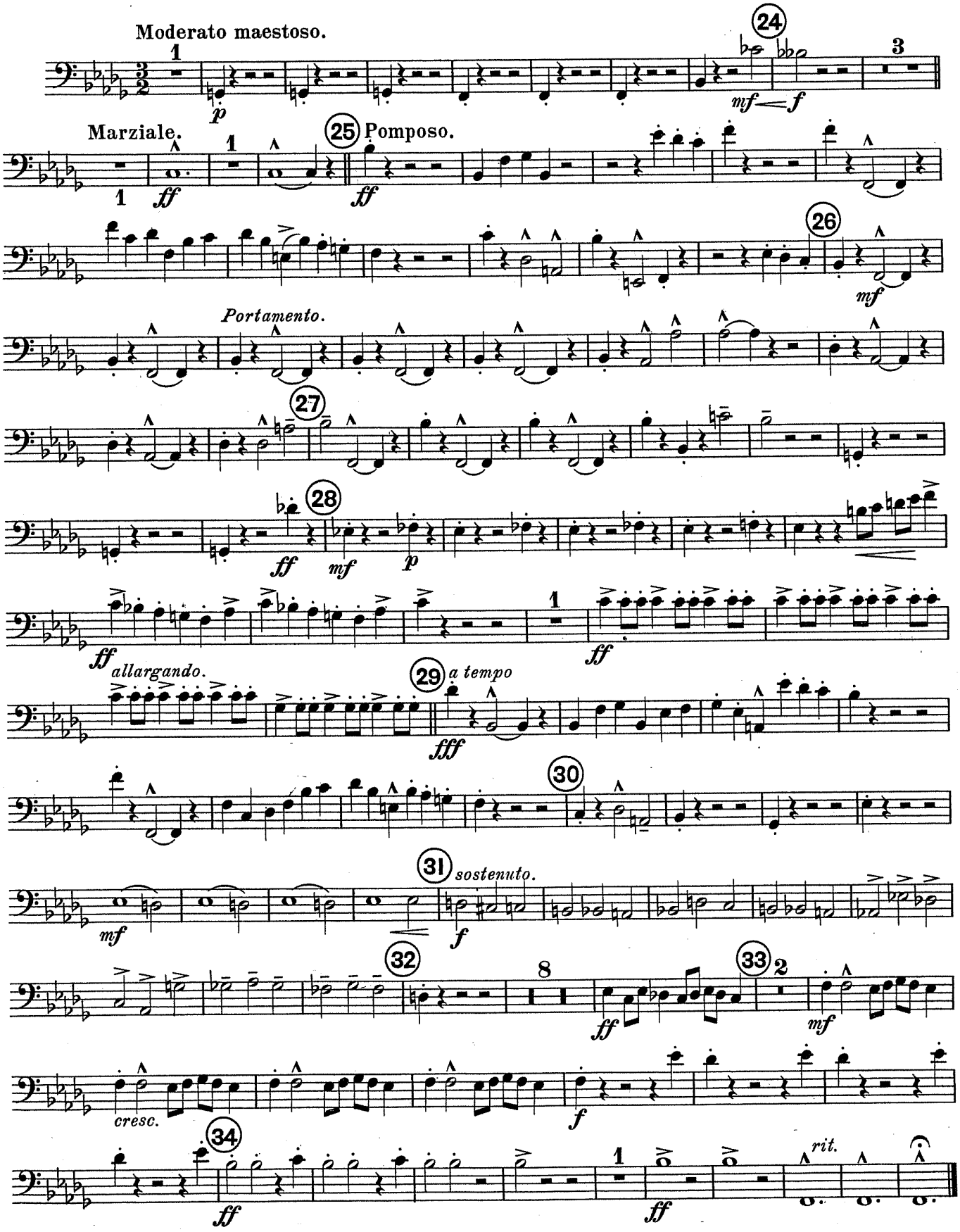


2nd Trombone.

Nº 5. MARCH OF THE MOGUL EMPERORS

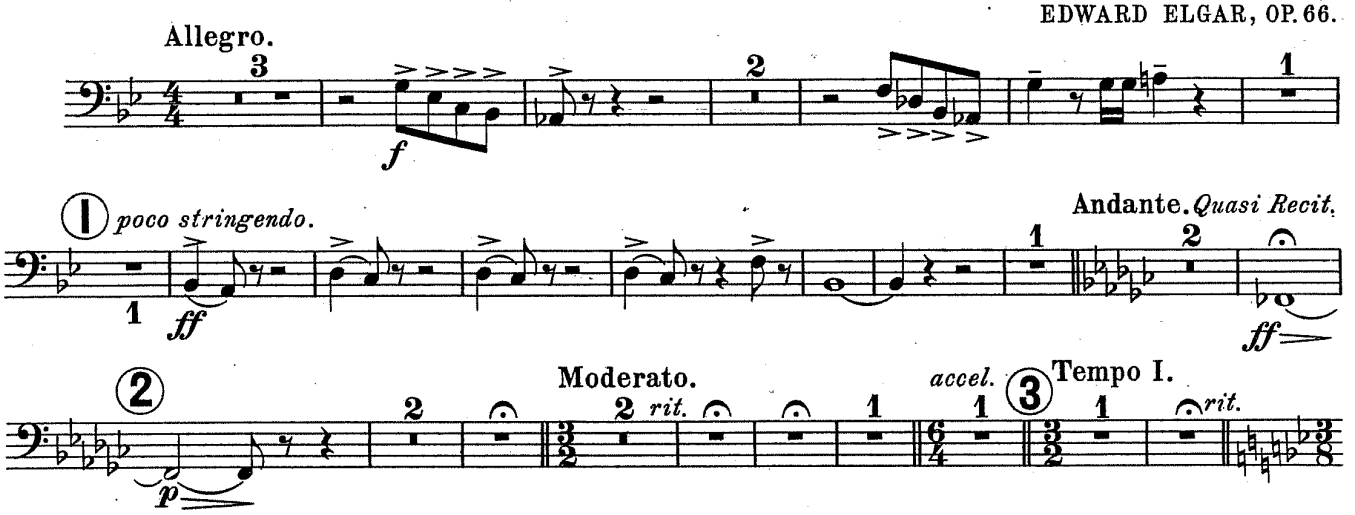


SUITE
THE CROWN OF INDIA

Bass Trombone.

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



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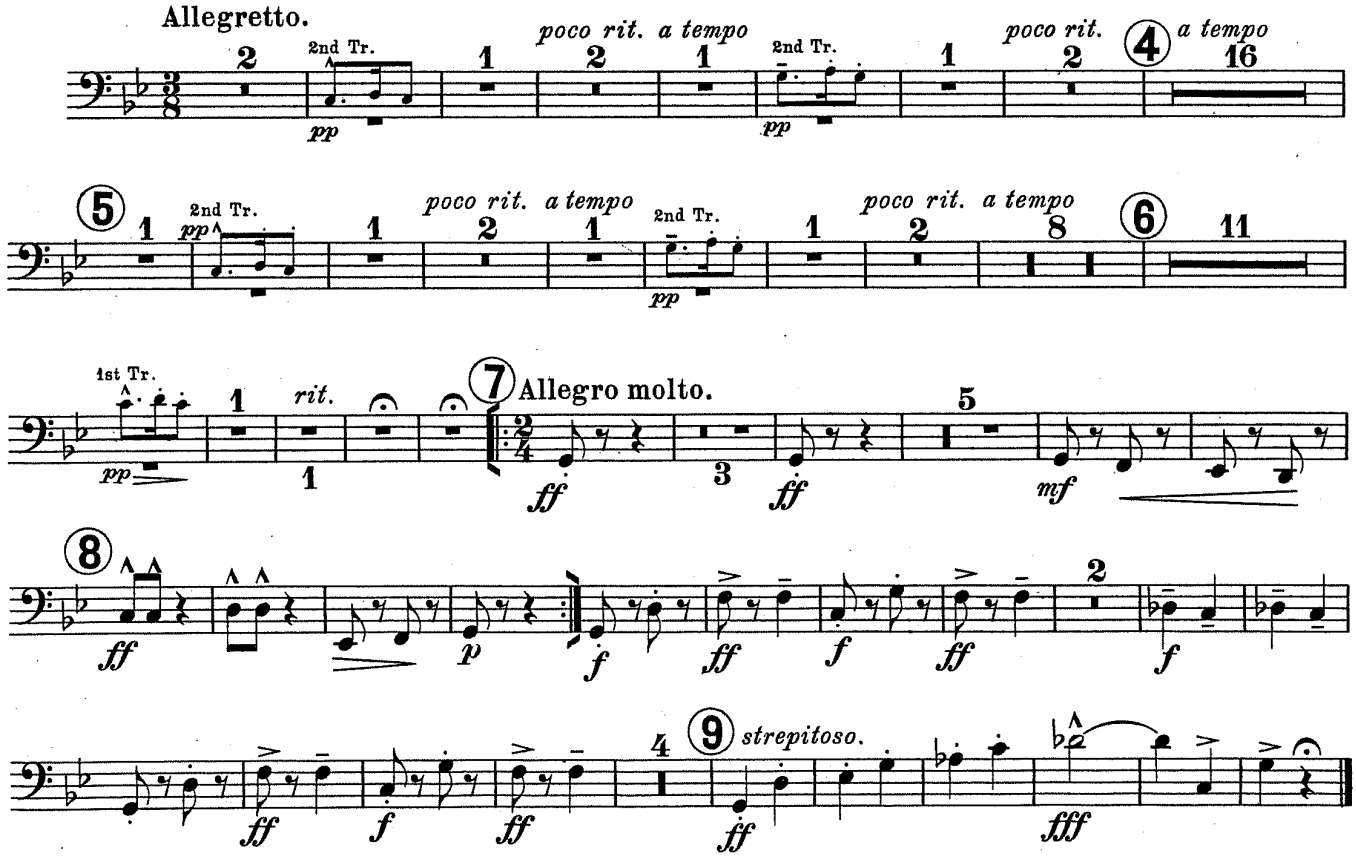

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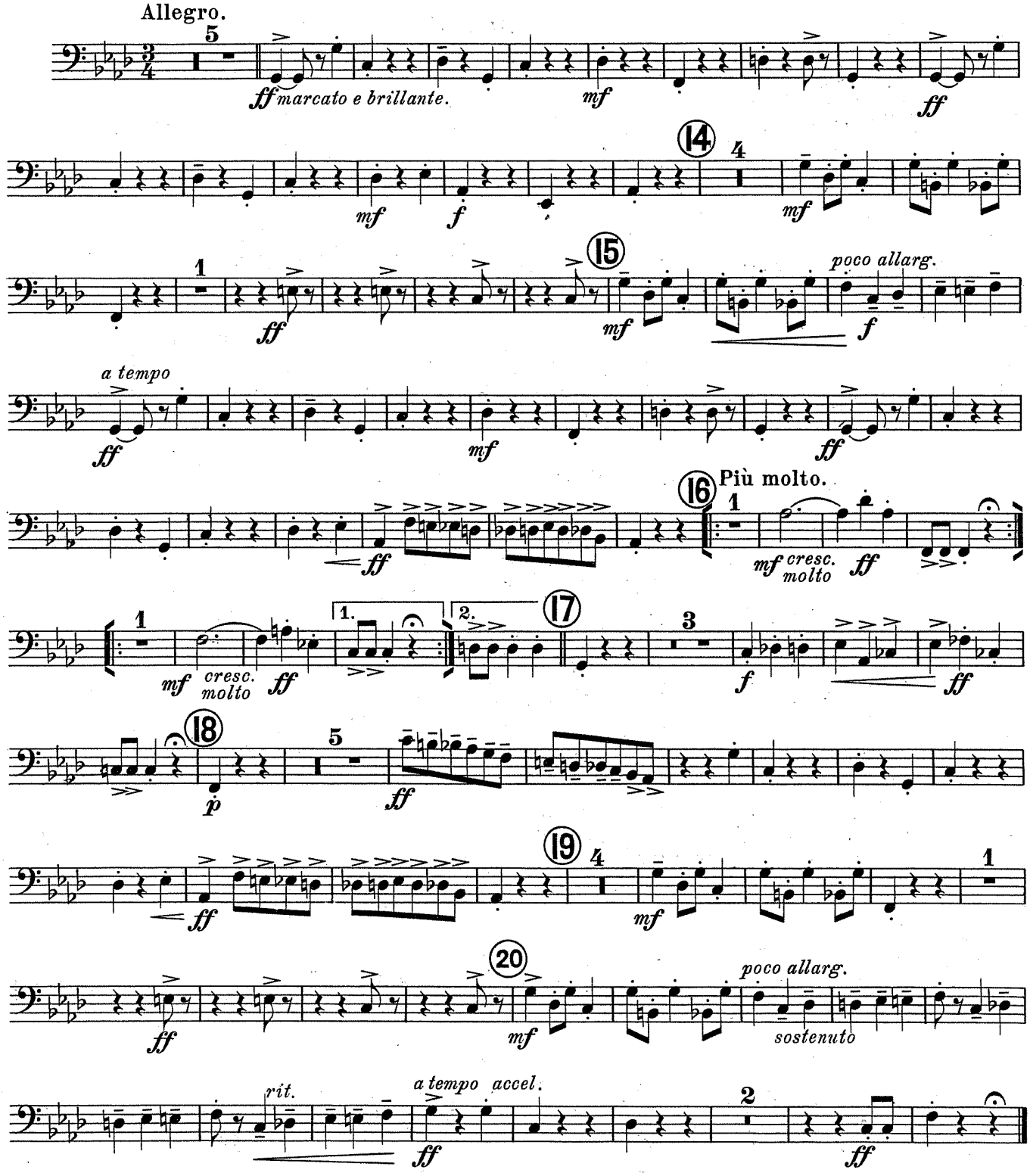
Bass Trombone.

No. 2. TACET

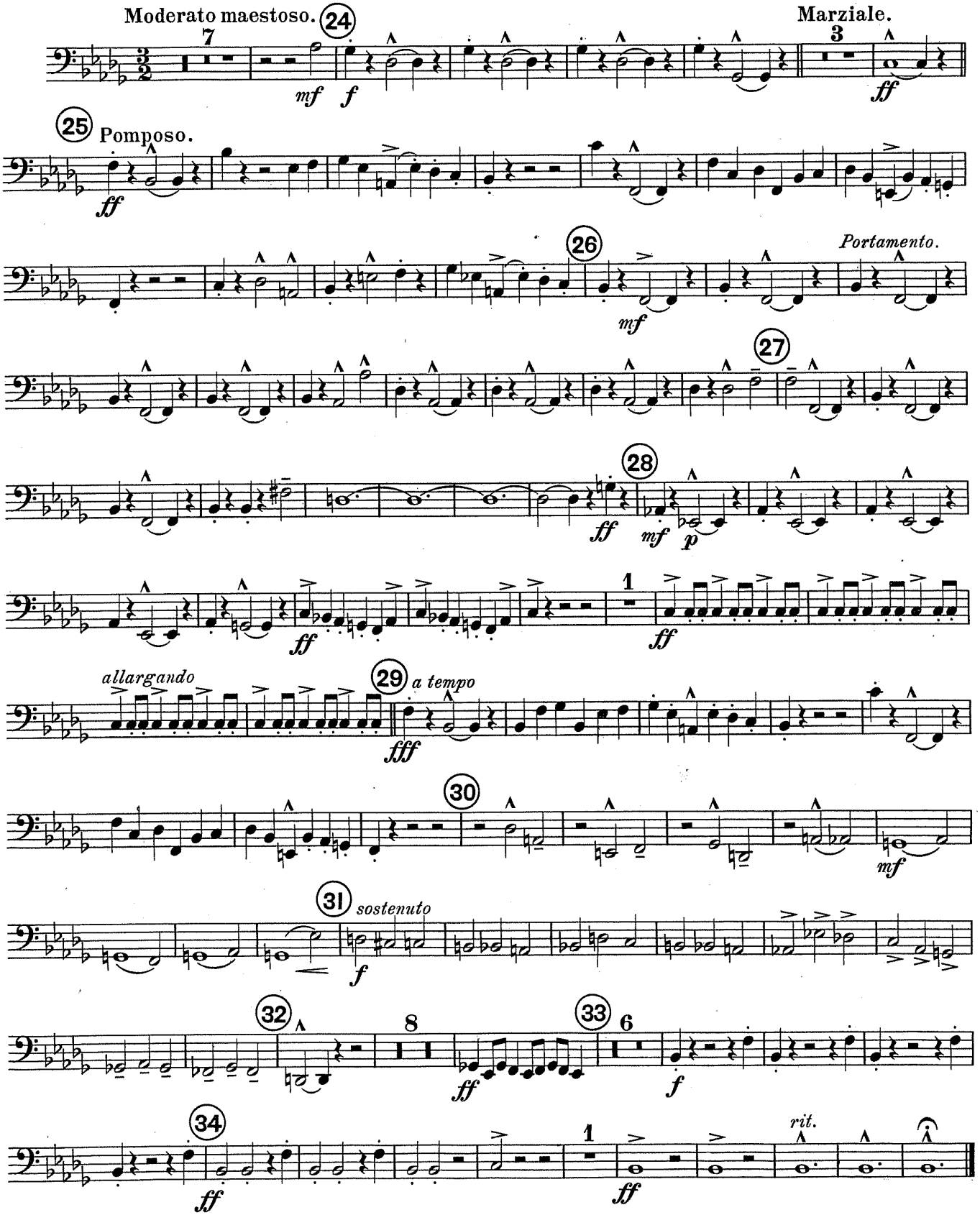
No. 3. WARRIORS' DANCE



No. 4. TACET

Bass Trombone.

No 5. MARCH OF THE MOGUL EMPERORS

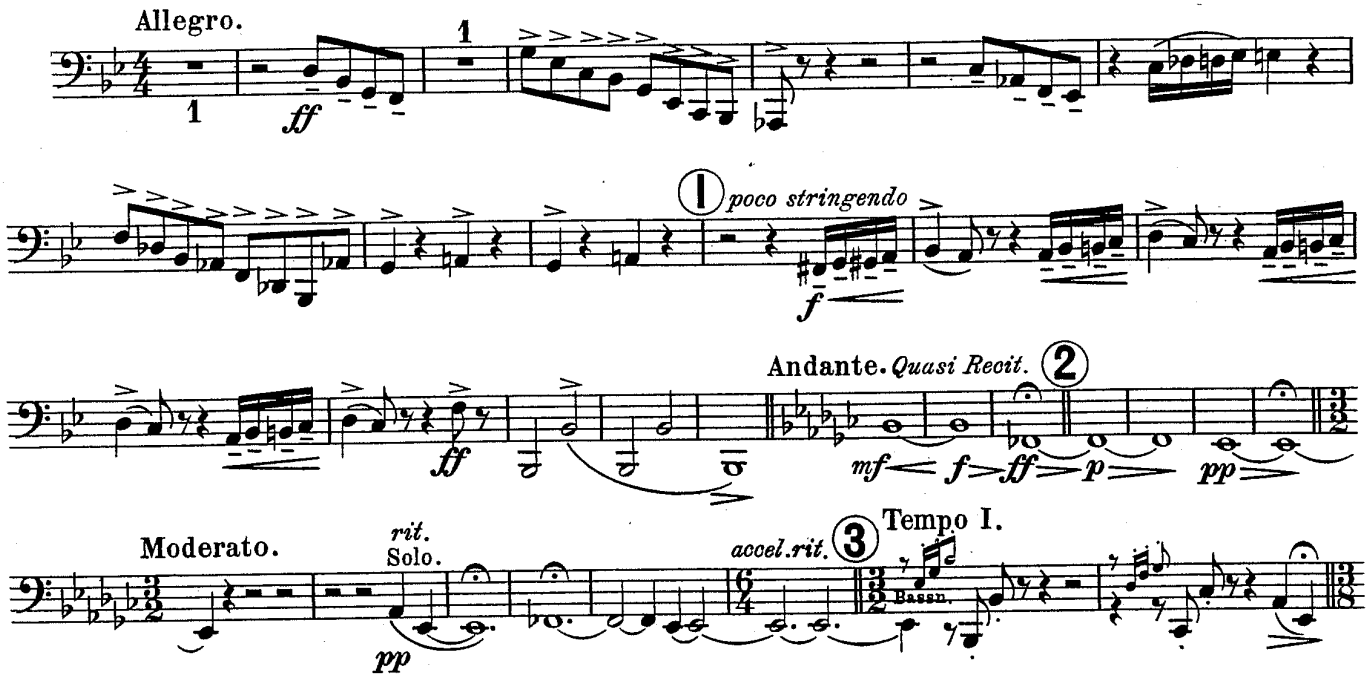


SUITE
THE CROWN OF INDIA

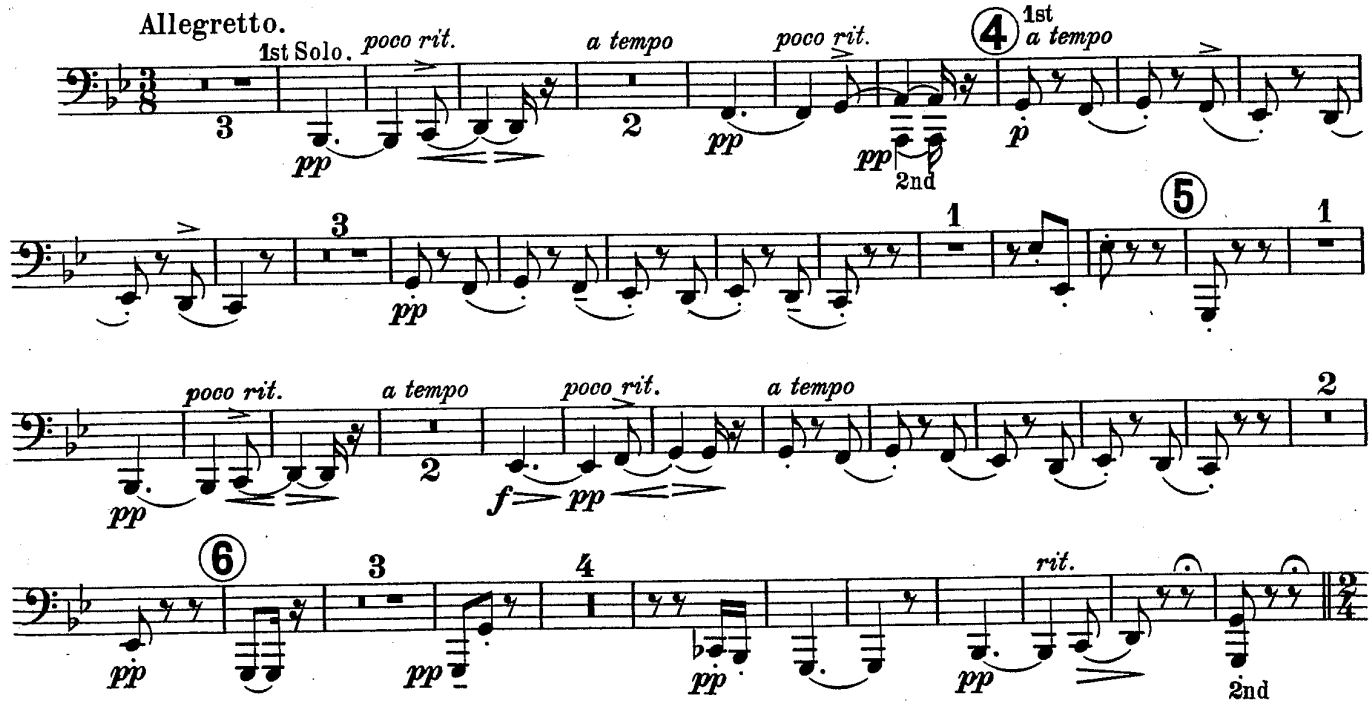
Basses.

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



(b) DANCE OF NAUTCH GIRLS



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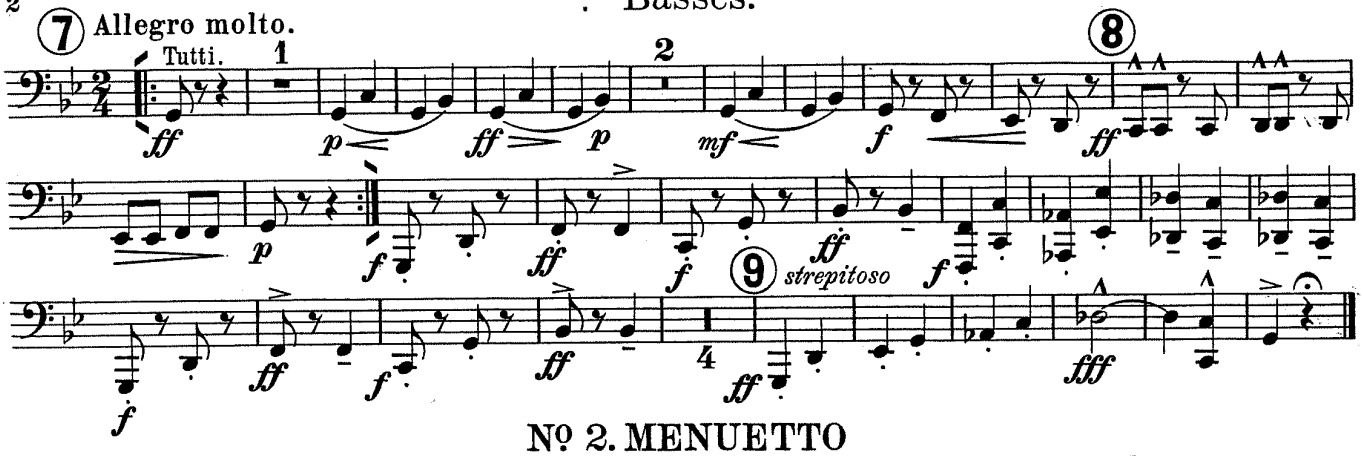

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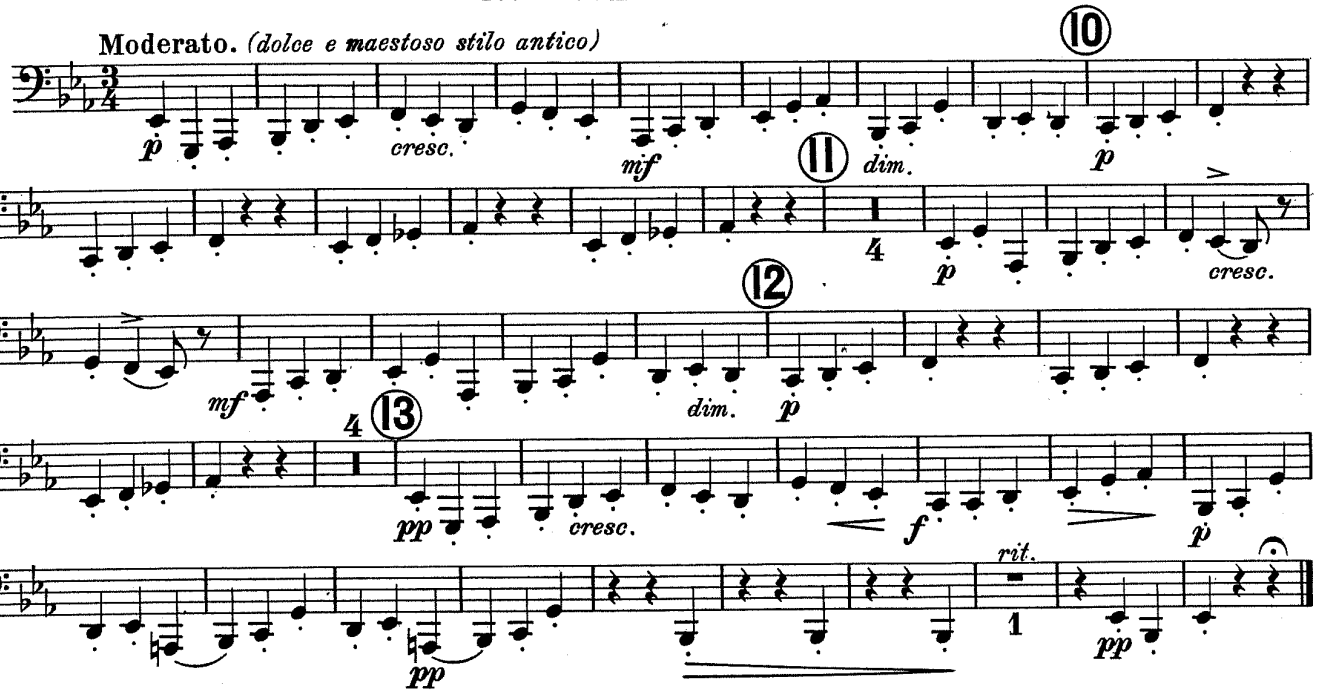

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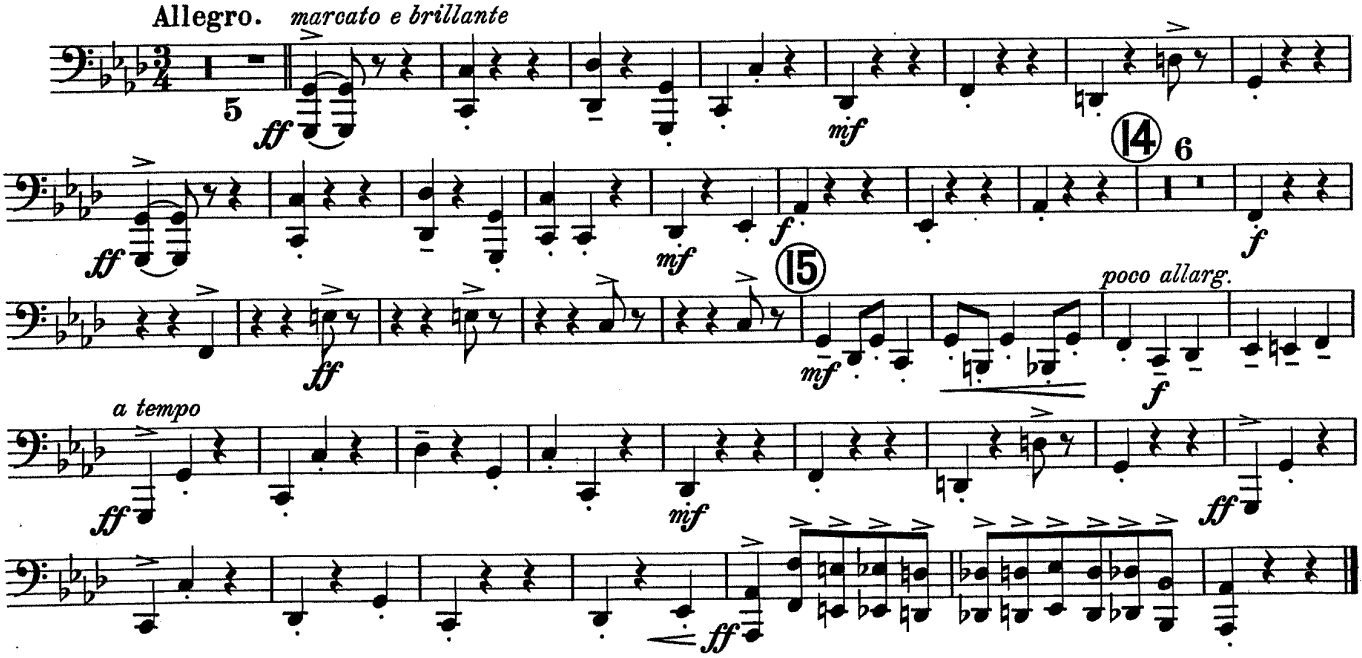

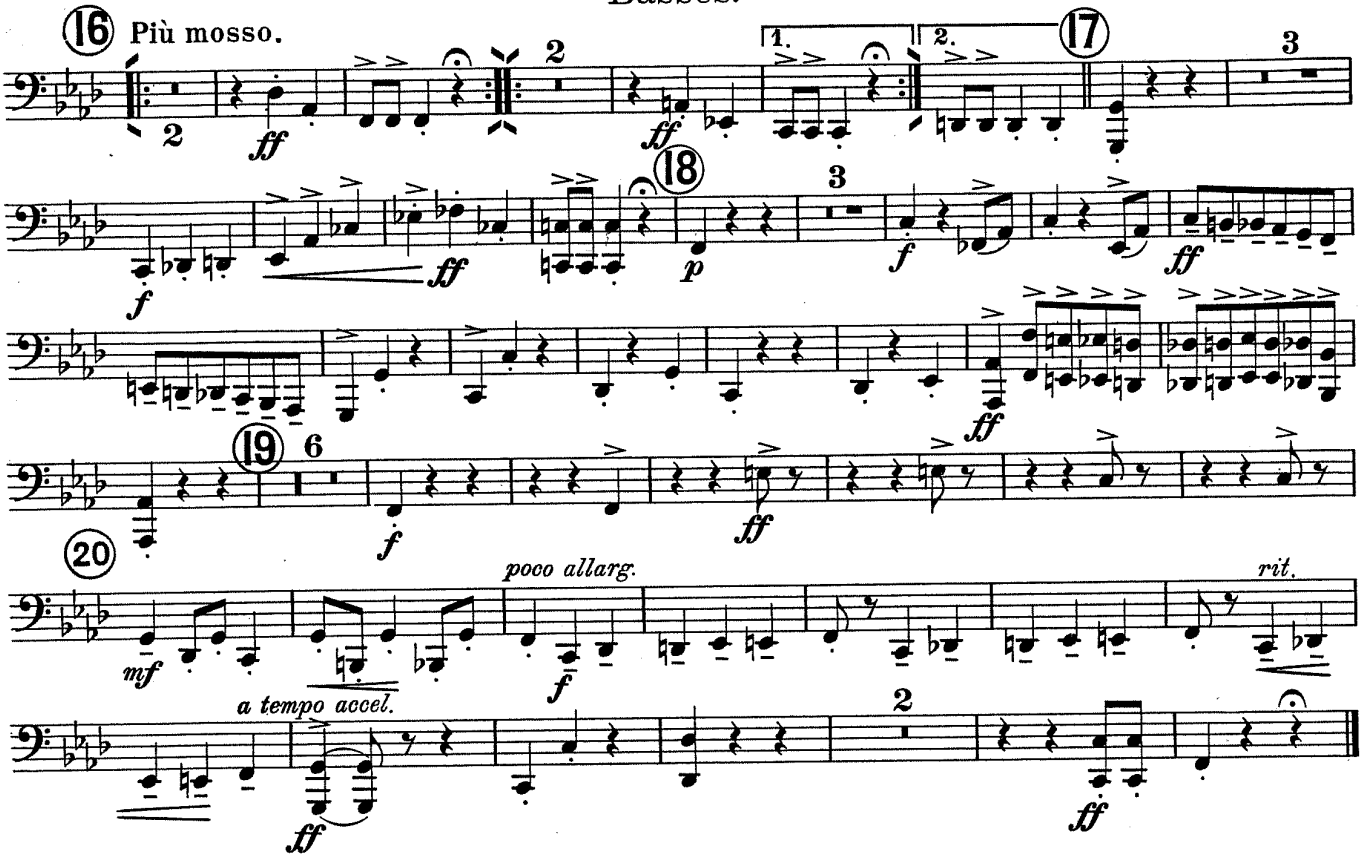

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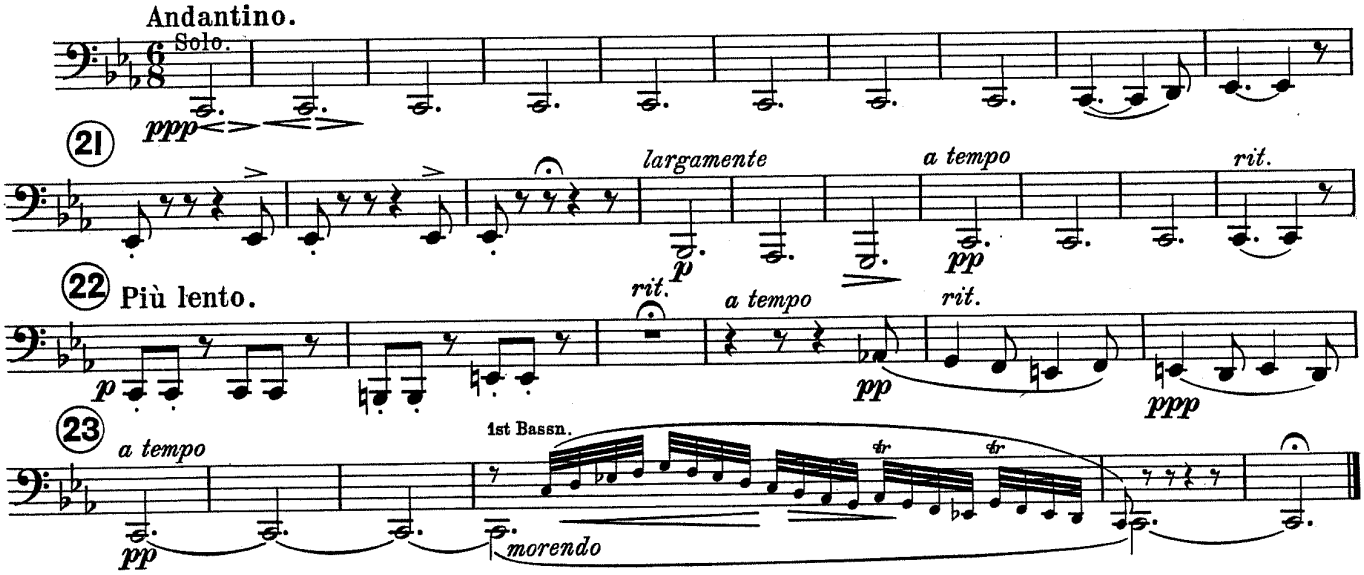

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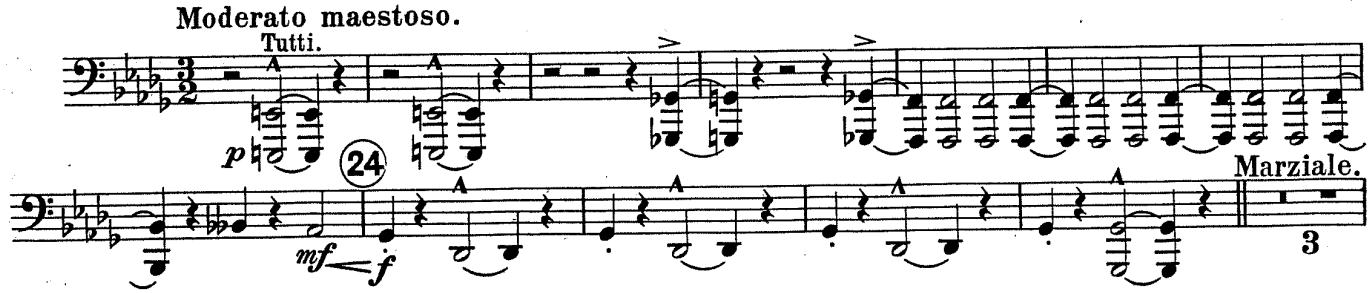

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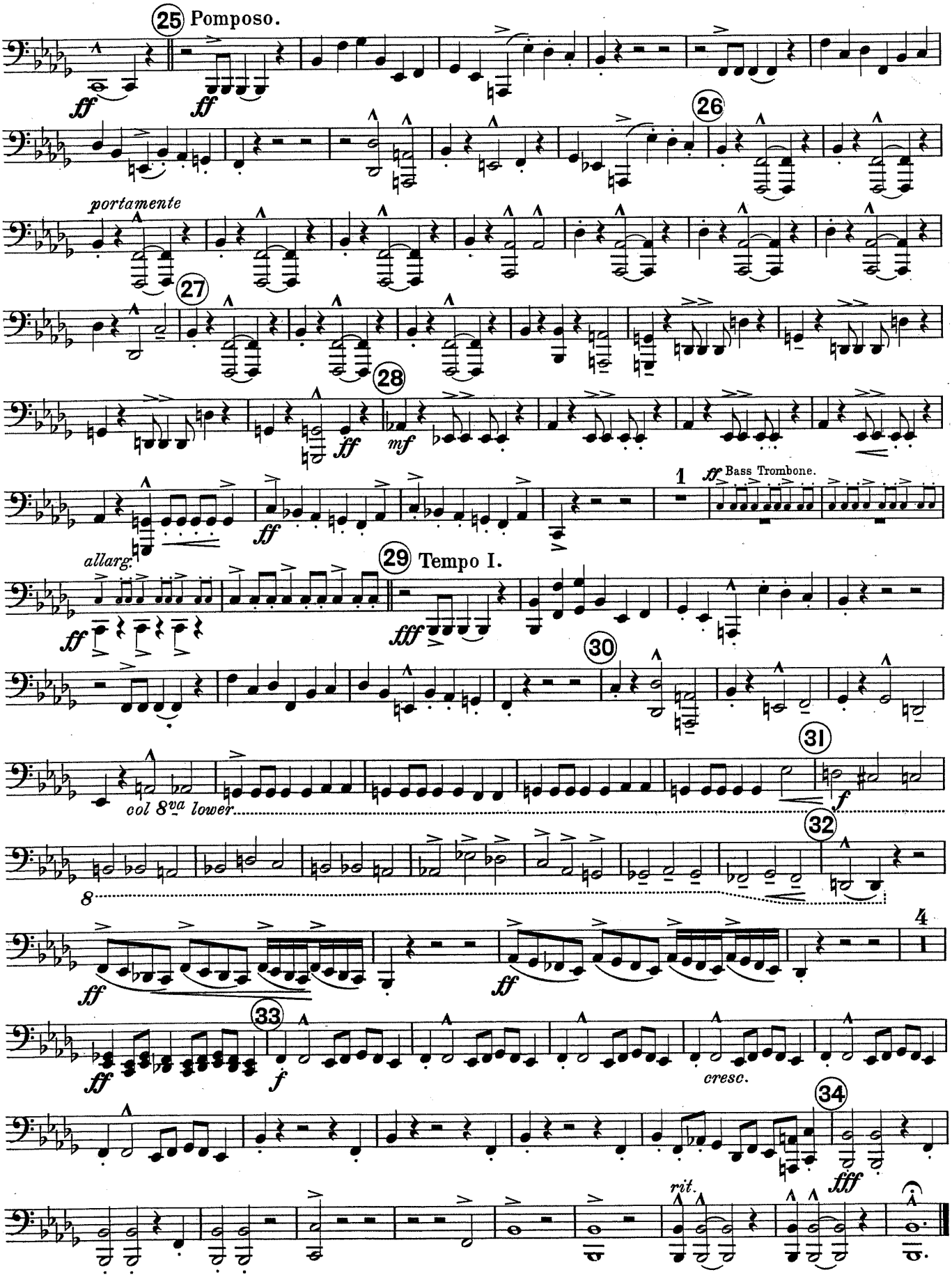
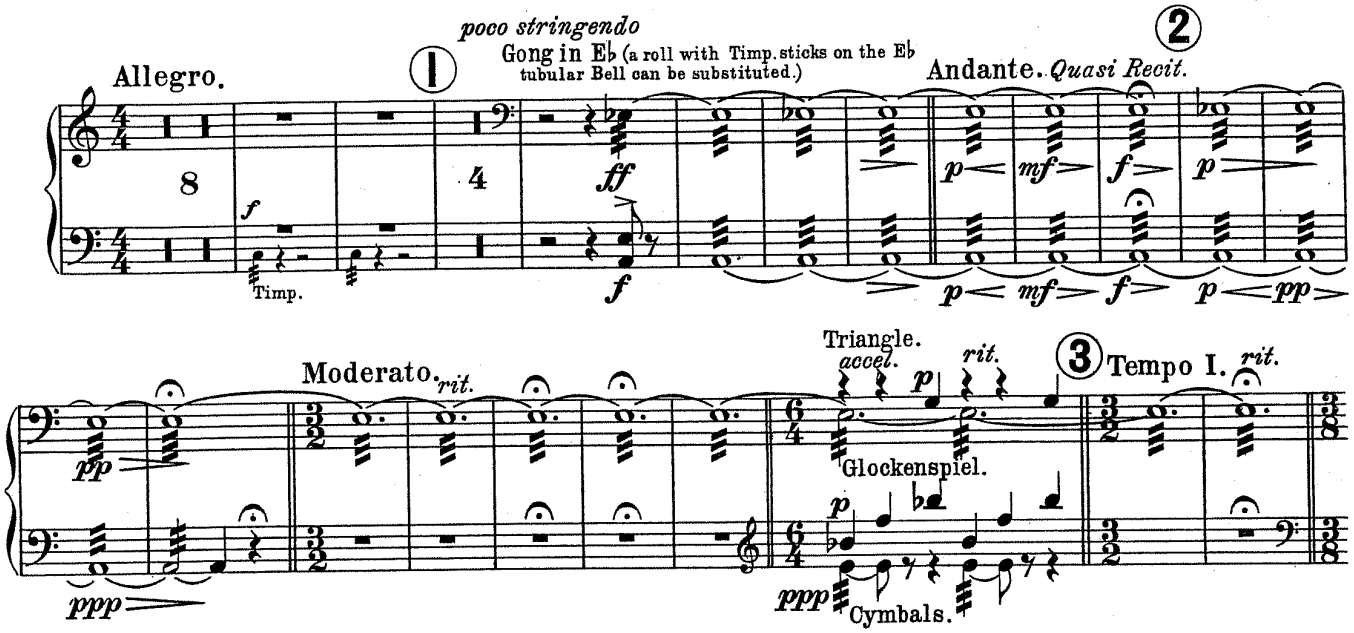

25 Pomposo.
ff
ff
26
portamente
27
28
mf
fff
1
ff Bass Trombone.
allarg.
ff
29 Tempo I.
fff
30
31
col 8va lower
f
32
8
4
ff
ff
33
ff
f
cresc.
34
fff
rit.

SUITE
THE CROWN OF INDIA

Drums.

Nº 1.(a) INTRODUCTION

EDWARD ELGAR, OP. 66.



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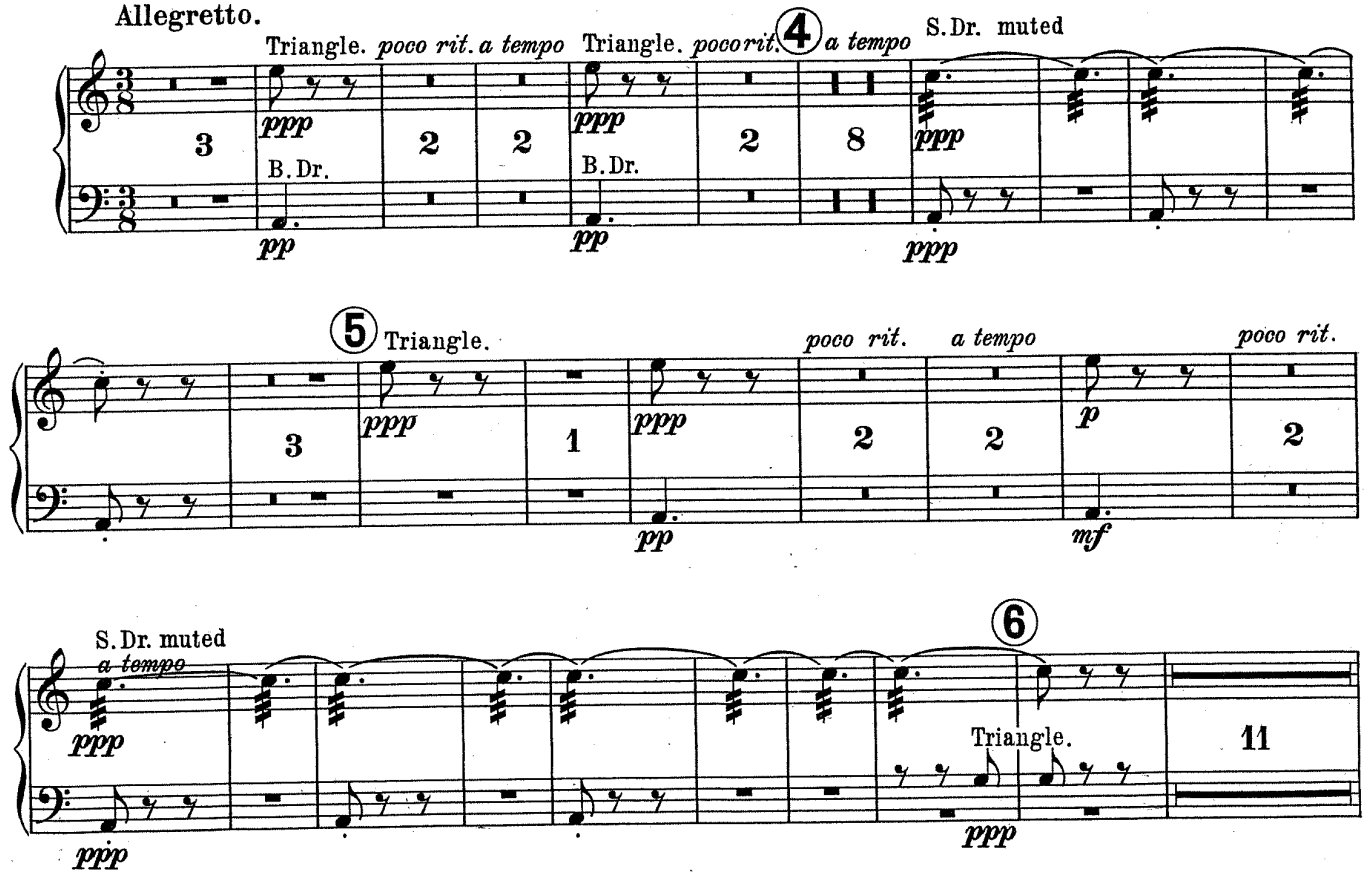

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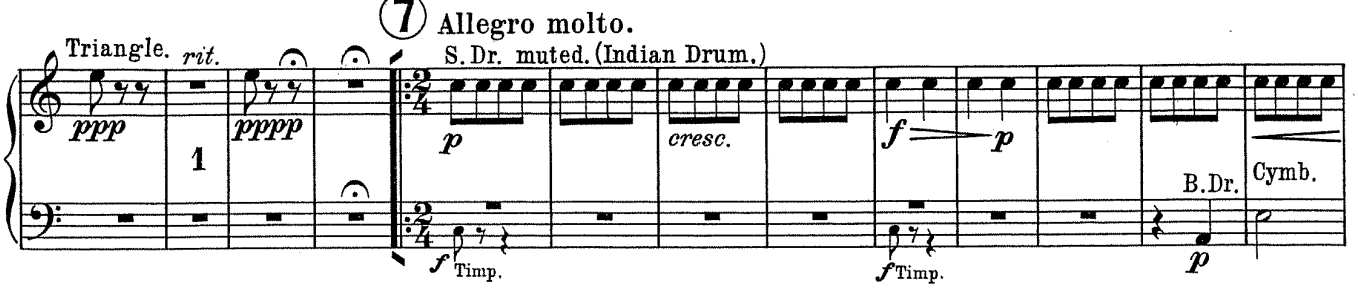
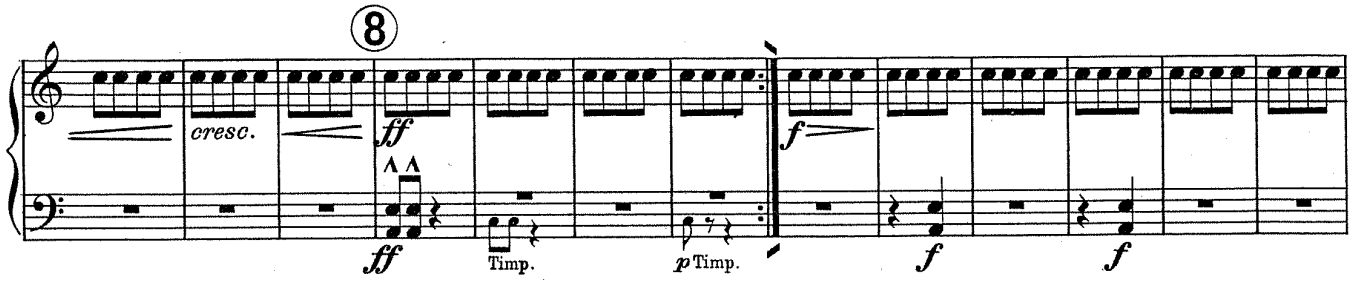
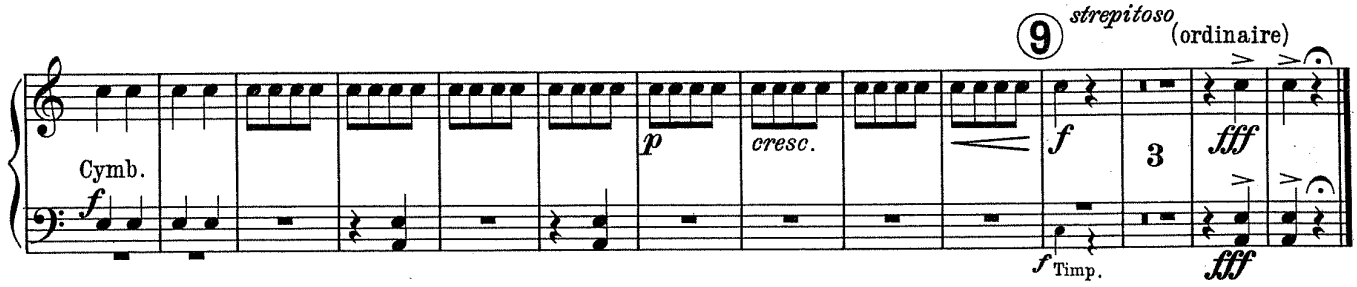
Drums.







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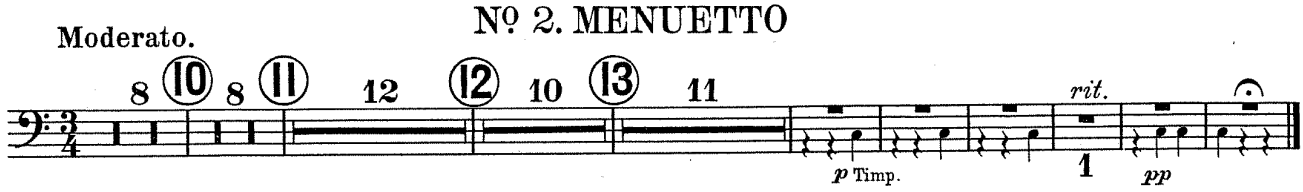

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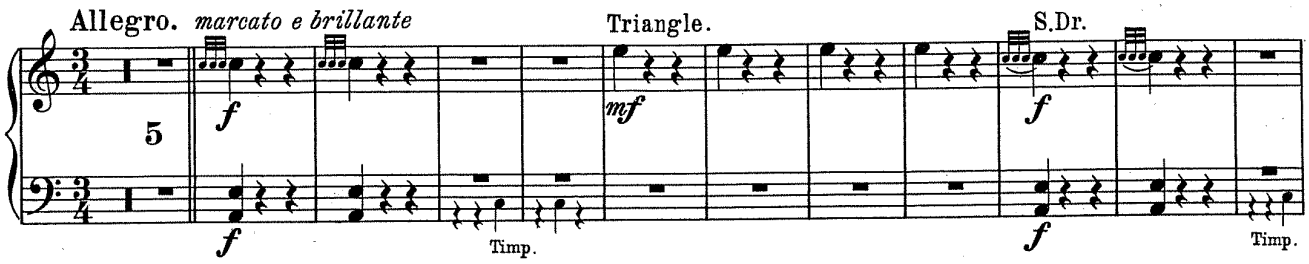

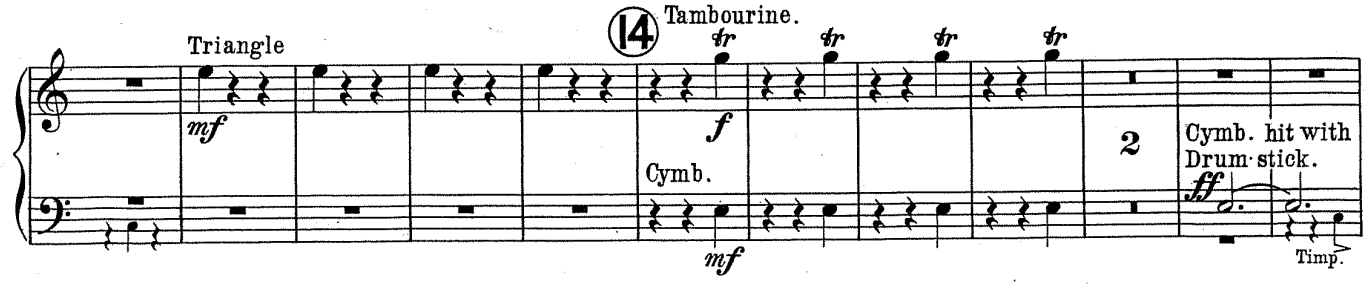

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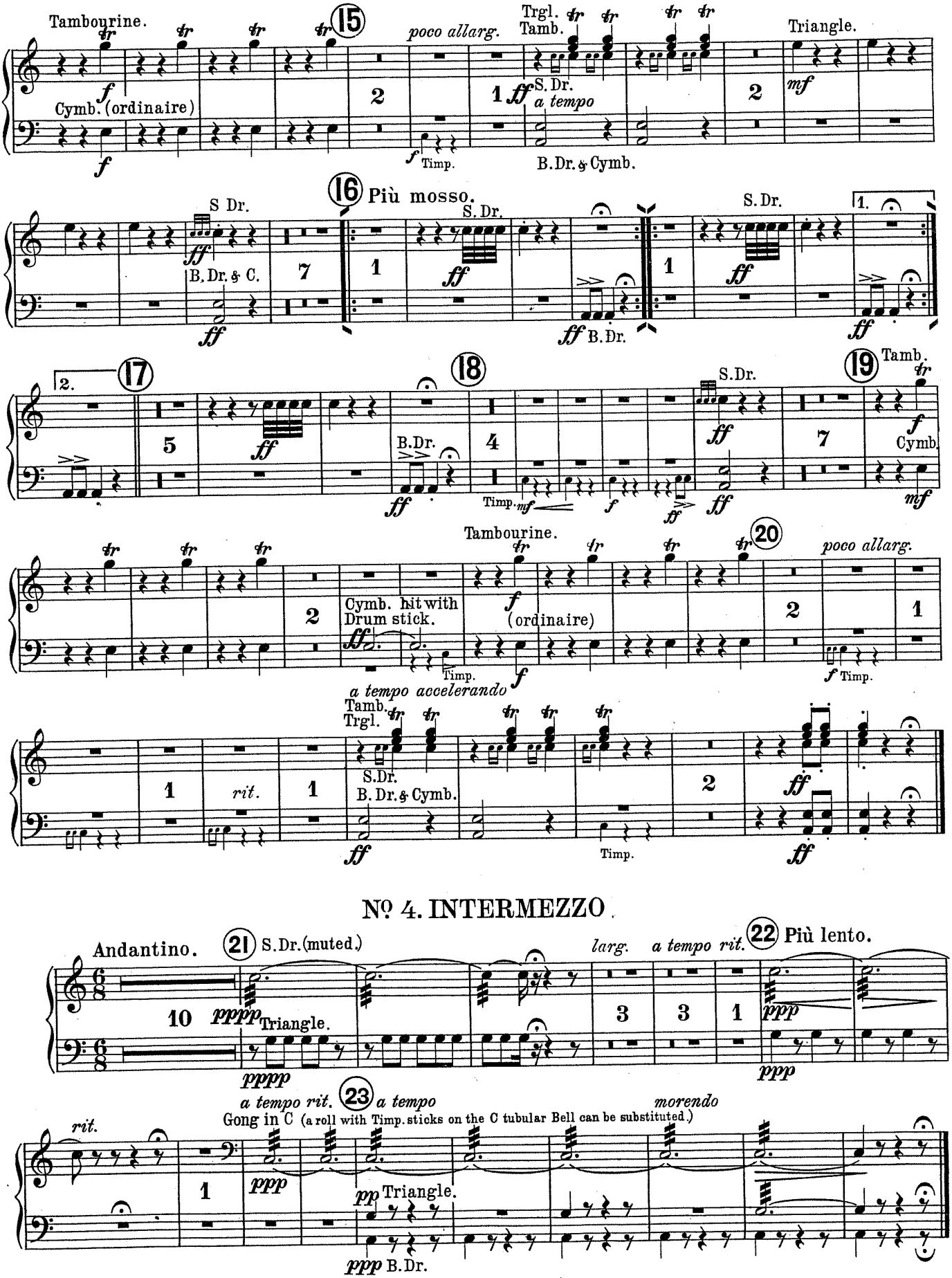
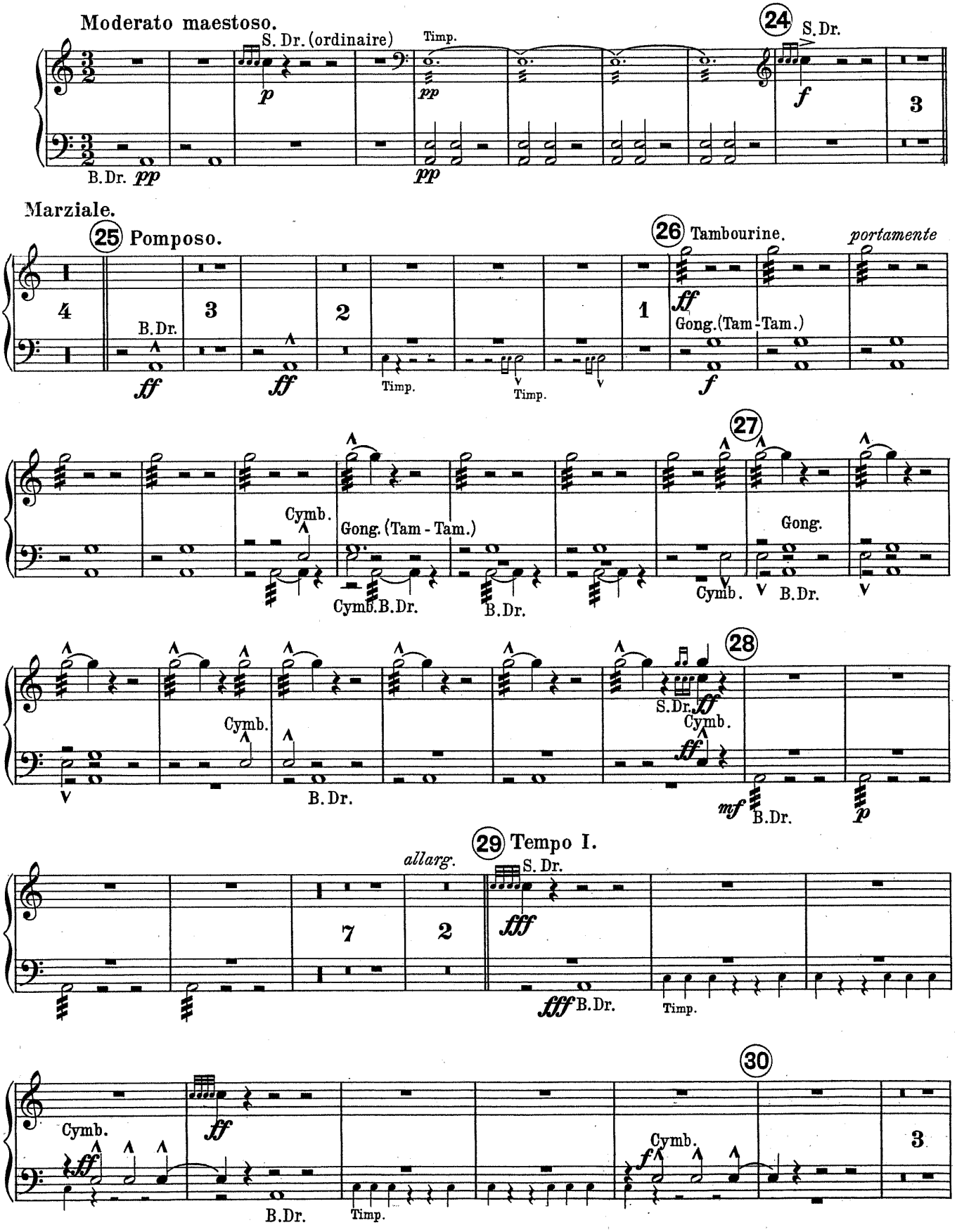
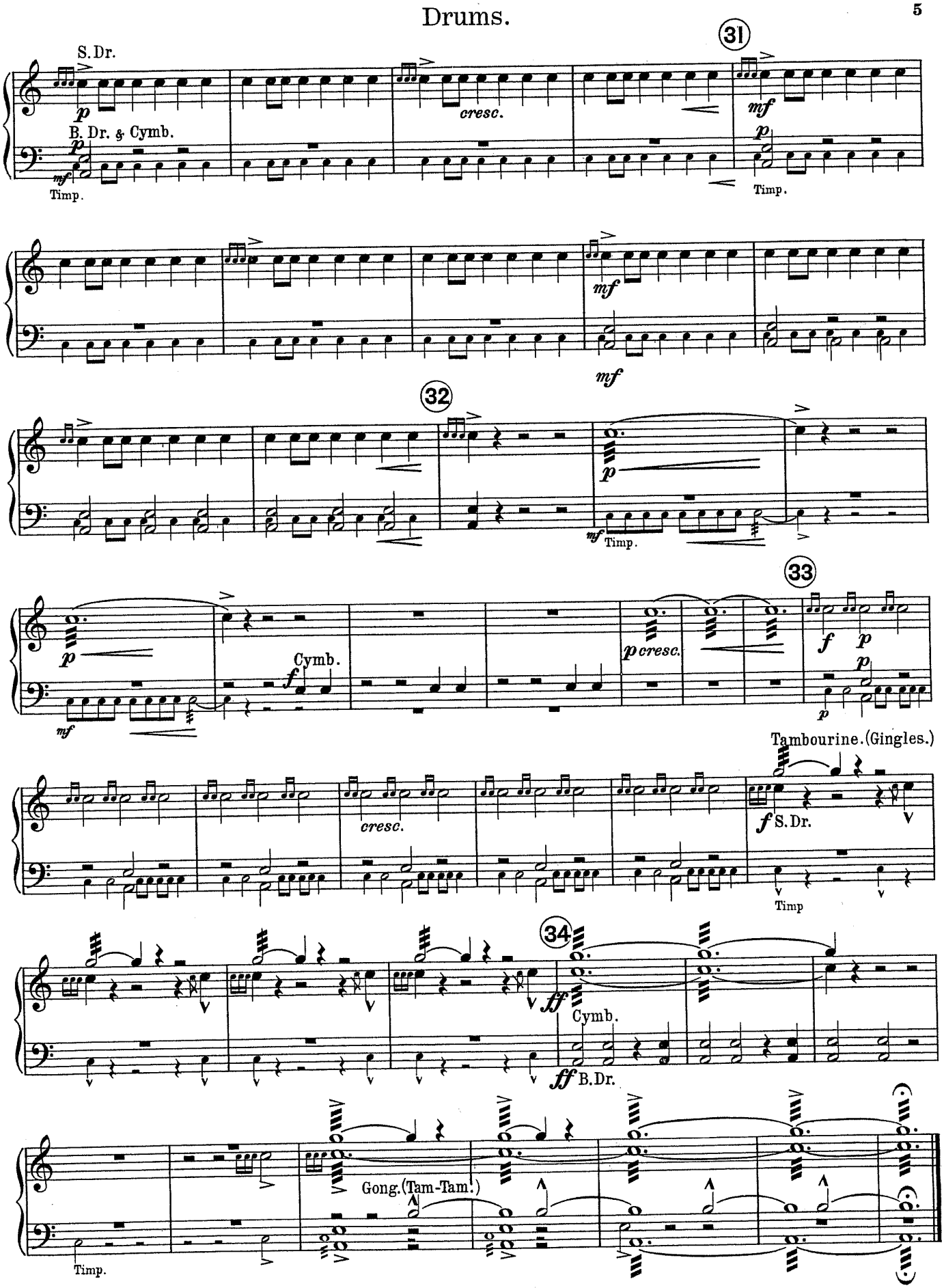


Nº 4. INTERMEZZO.

Drums.

No. 5. MARCH OF THE MOGUL EMPERORS



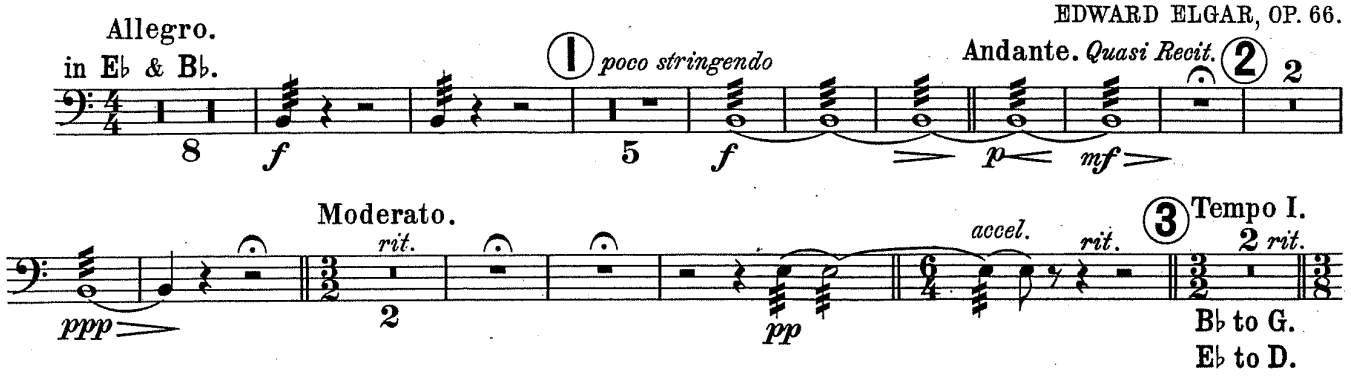

S. Dr.
B. Dr. & Cymb.
Timp.
cresc.
31
mf
Timp.
32
Timp.
33
Cymb.
cresc.
Tambourine. (Gingles.)
S. Dr.
Timp
34
Cymb.
B. Dr.
Gong. (Tam-Tam.)
Timp.

SUITE
THE CROWN OF INDIA

Timpani.

Nº 1. a) INTRODUCTION

EDWARD ELGAR, OP. 66.



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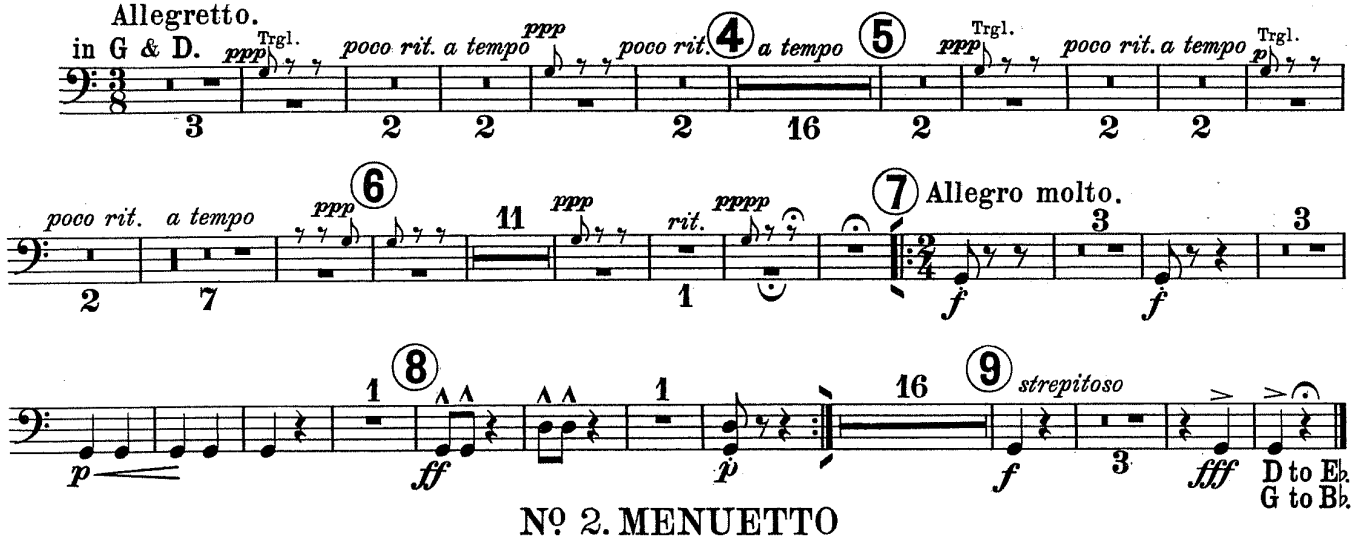

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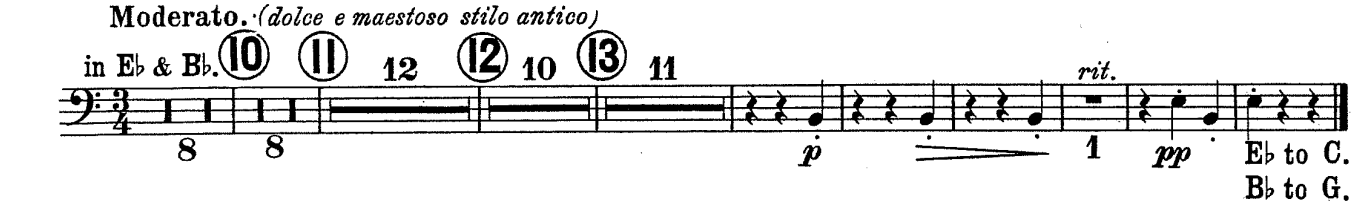
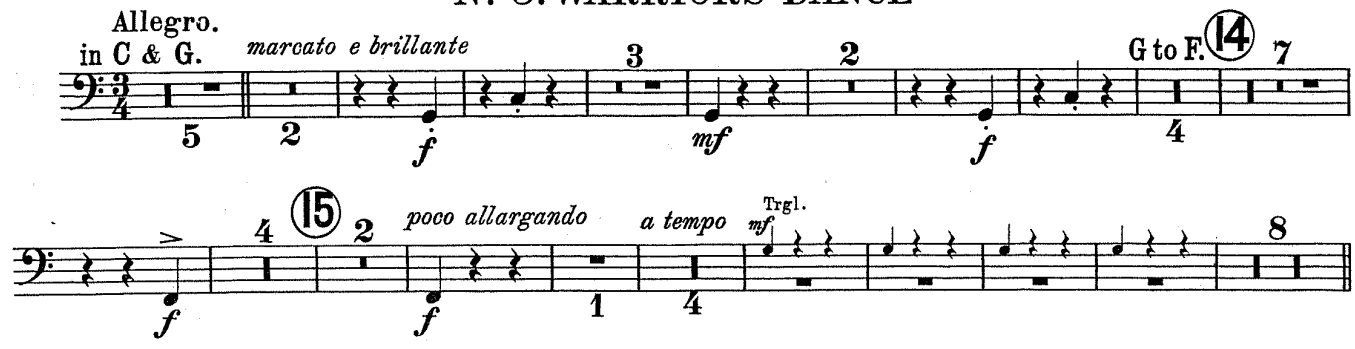


Nº 3. WARRIORS DANCE



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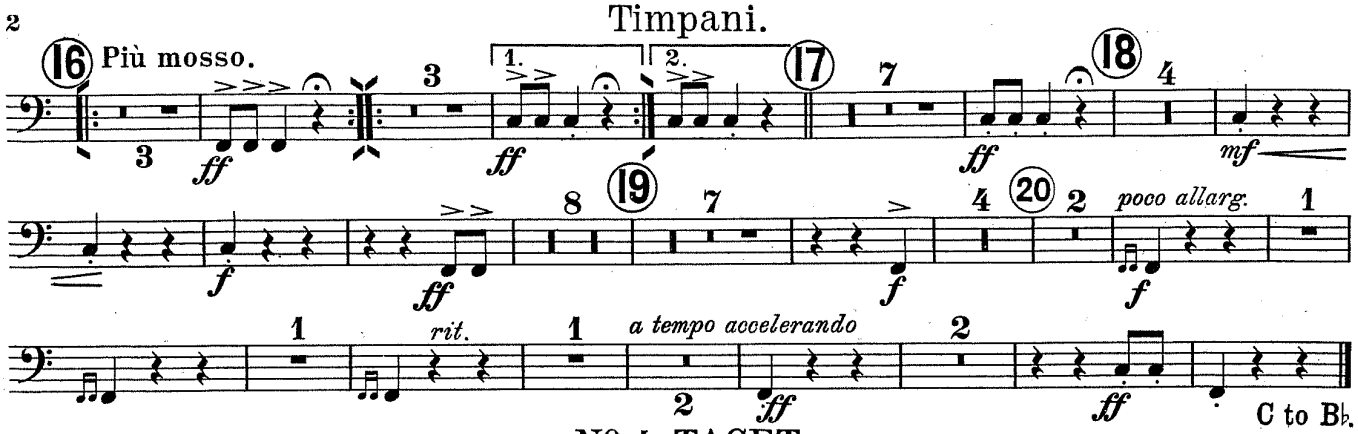
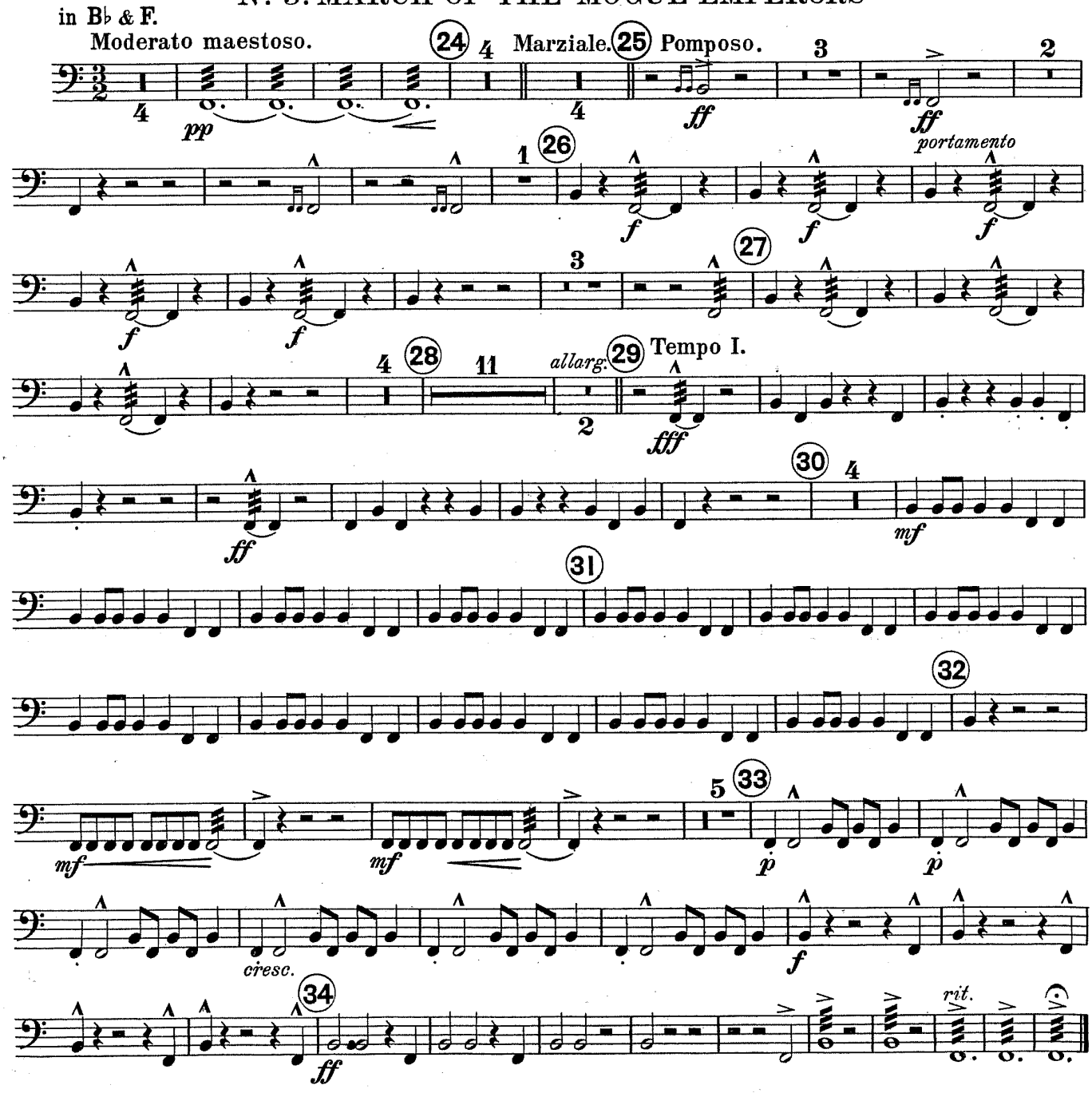
Timpani.



Nº 4. TACET.

Nº 5. MARCH OF THE MOGUL EMPERORS



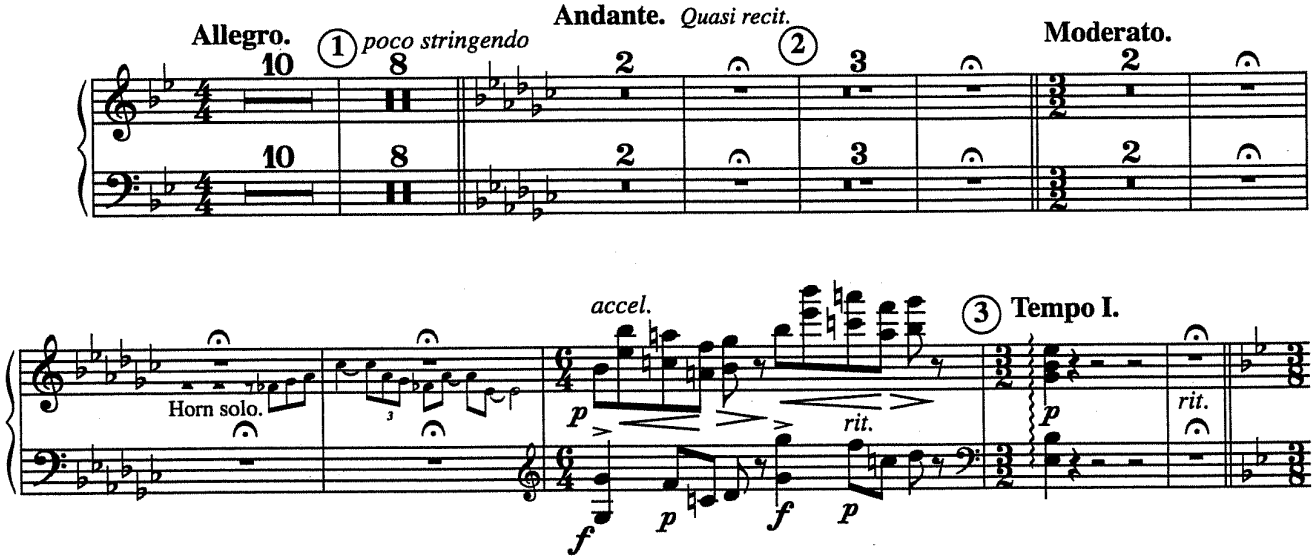
The Crown of India

Harp

Suite

Edward Elgar, Op. 66
trans. Winterbottom

N° 1. (a) Introduction



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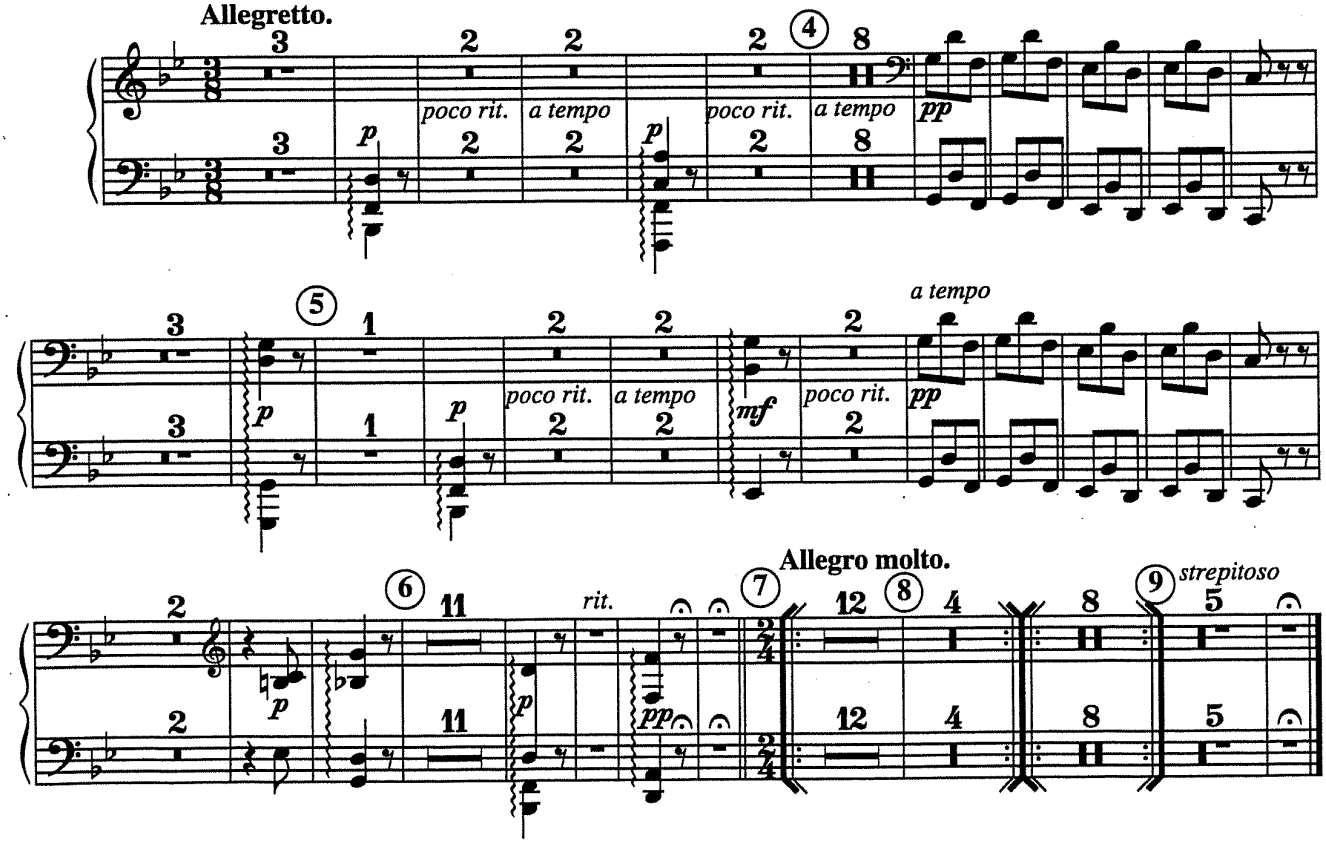
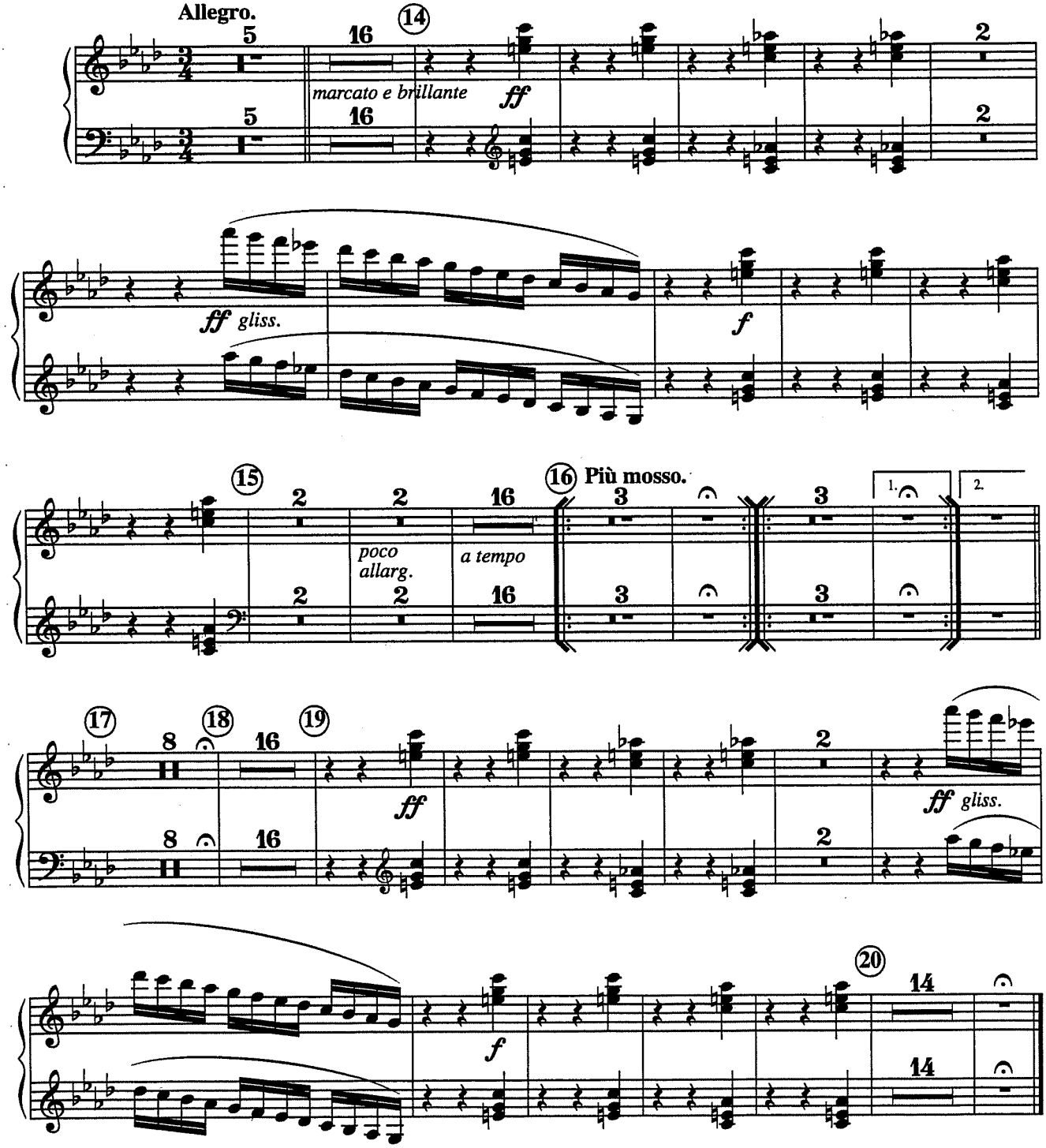
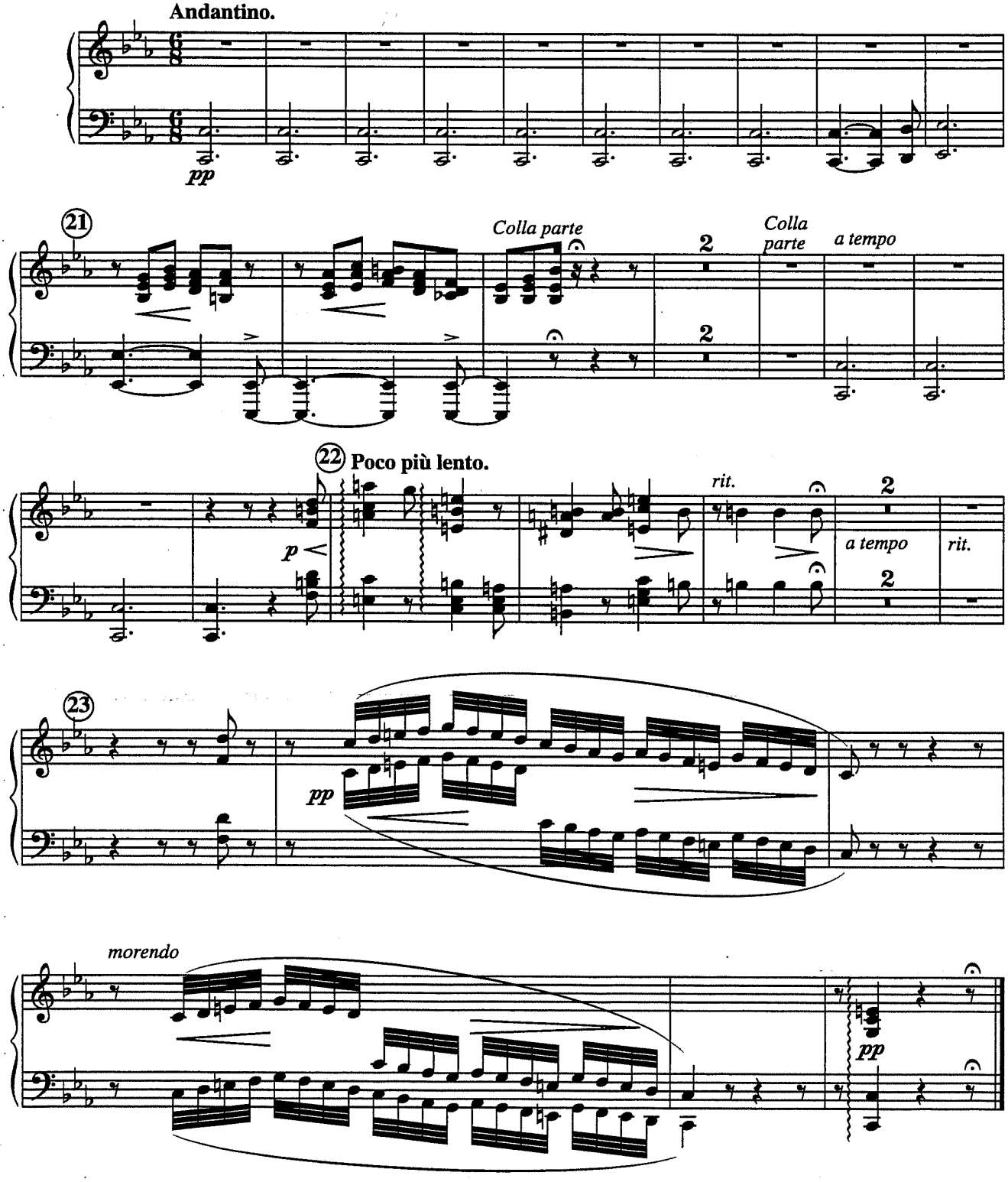


N° 2. Tacet.

N° 3. Warriors' Dance



N° 4. Intermezzo



N° 5. Tacet.

BW 2017

The Bandworld Legion of Honor

Previous LEGION | Next LEGION

A special award of

The John Philip Sousa Foundation

The Bandworld Legion of Honor was established in 1989 to honor, over the course of a year, eight of the finest band directors in our business.

Recipients have taught for at least fifteen years, have maintained a very high quality concert band program, and have contributed significantly to the profession through dedication to bands and band music.

Each is honored at the annual Sousa Foundation awards ceremony during the Midwest Band Clinic in Chicago, Illinois.

Chairman of the Legion of Honor Committee is Terry Austin,Virginia Commonwealth University.

Legion Laureates List Link

Gregg Abe

Gregg Abe has been the Director of Music at Roosevelt High School in Honolulu, Hawaii for 30 of his 32 year career in music. It also happens to be the high school he attended. AT Roosevelt he directs the marching band, Concert Band, Symphonic Band, jazz ensemble, percussion ensemble and the symphony orchestra.

Abe earned his Bachelor of Education degree from the University of Hawaii. He has done extensive extra studies at Brigham Young (Hawaii) and Vandercook College of Music.

Abe has been named hte ASBDA-UNI SW RTegional Teeacher of the Year in 1998, The Hawaii Music Awards HS Music Educator of the Year in 1996, Time Warner Outstanding Educator in 2001 and his band was nominated for the Sudler Flag in 2005.

He has served his profession as Treasurer of both the Oahu Band Director and the ASBDA Hawaii Chapter.

It is not unusual and almost expected that his bands will be at the Superior Rating whether they are competing locally or at the state level.

Abe says, "The most important factor that I consider that has shaped my career are my students. I am still learning my profession and who I learn from are the students themselves. I learn from their mistakes as well as their success. I listen to what they have to say and structure my curriculum at times around them in order to bridge the communication gap sometimes prevalent in a highly structured environment."

"My philosophy stresses the knowledge and development of three basic principles--Discipline, Effort, and Pride. Stressing discipline is the primary step. In order to accomplish and achieve any goal, your mind must be focused on the task at hand. When one is able to listen and receive, understanding and learning can take place. The second step is effort. Effort requires one to participate in the learning process without fear or rationalization. One must practice or study for the purpose of strengthening their weak areas. Through effort, one is able to achieve whatever goals they have set for themselves. The third basic step is pride. To develop pride one must have an awareness of oneself and others in whatever one does. As this process continues, the student becomes truly involved with learning and is able to reach their inner self to realize specific values."

Todd Summers

Todd Summers is the Director of Bands at Henry Gunn High School in Palo Alto, California where he has been for the last 16 years of his 26 year career. His previous experience was in Ohio at Miller HS, Tri-Valley HS and Frannklin Heights HS. He also spent a year as a graduate assistant at Ohio University.

Summers earned his BA in Music Ed. from Capital University, his MA in Conducting from Ohio University and his MA in Educational Admin. from Santa Clara University.

In 2010 Summers was named Henry Gunn HS Teacher of the Year. In 2011he was named the CMEA Bay Section Instrumental Teacher of the Year. In 2013 He took the Henry Gunn HS Orchestra to the Midwest Clinic in Chicago.

Summers has served the profession as Vice-President of the Santa Clara County BDA as well as President of the CMEA Bay Section.

Under his leadership Henry Gunn HS ensembles have established themselves as a perennial Superior Ratings machine since 1999.

Summers attributes much of his success to" being a lifelong learner: Working with mentors, being a mentor, continual professional development through conferences, course work and working with colleagues at my school."

When he is asked about his philosophy Summer says,"Teaching provides an opportunity for continual learning and growth. I hope that I can instill a lifelong love of learning and appreciation for music in my students. I try to shaare my passion for learning everyday with my students and colleagues."

Hls colleagues hold him in high regard as someone who has moved the case for music far beyond the walls of Henry Gunn HS into the greater California area.

Terry Austin Bio
Legion of Honor Chairman

DON'T I JUST PUSH THE BUTTONS AND BLOW?

(A Band Director's Guide to Woodwind Pitch)

Jessica Tippett
Practical Application 2
MUSI 5398
American Band College at Sam Houston State University

Table of Contents

Have you ever been in this situation?

A portion of band rehearsal has just been spent tuning each and every member of the woodwind section on a concert B-flat. Now that each instrument has been properly adjusted, the band is ready to make the first sounds. The students bring their instruments up to playing position, take a deep breath, and play the first few notes of the piece and...

...the most horrendous sound is heard from the woodwind section!

"How can this be?!" the director and students ask themselves. "We just spent twenty minutes making sure each instrument was in tune!"

The director stops in frustration and proceeds to tune each and every woodwind instrument again, but this time not using a concert B-flat as the tuning note. Instead, the director asks each student to play the first note of the piece individually as he glances at the electronic tuner to see if students are still in tune. Sadly, none of them are. As the director turns to Sally, the first chair flute player, to have her play her first note of the piece, she looks up angelically at the director.

"But my concert B-flat is already in tune," Sally states, innocently. "Once that's in tune, don't I just push the buttons and blow?"

* * *

Unfortunately for Sally, playing a woodwind instrument in tune is not as easy as pushing buttons and blowing. Bad intonation problems are the result of not understanding the tendencies of an instrument and have a negative effect on the band's sound. *Don't I Just Push the Buttons and Blow? (A Band Directors Guide to Woodwind Pitch)* provides directors with the necessary information to teach their woodwind players how to fix their intonation problems. Most intonation problems for woodwinds are caused by things the players are doing.

This book provides in-depth information about the pitch tendencies for each instrument and ways to improve intonation in the woodwind section. Each instrument is discussed and information is provided in three sections:

- The first section provides basic information about each instrument including what causes bad intonation. Solutions to intonation problems controlled by the student are also discussed.
- The next section contains a reproducible alternate fingering chart created to help make out of tune notes sound more in tune.
- Finally, a reproducible student-friendly Pitch Tendency Packet provides information about intonation.

This book is not designed to be read cover-to-cover but instead used as an as-needed reference for the band room.

Alternate Fingering Section

Each instrument has alternate fingerings that will help improve intonation. The selection for each note is based off of the pitch tendencies specific to that instrument. Not every note considered out of tune will be included because sometimes the best adjustment to pitch is done by the student. These alternate fingerings should not be taught until they understand how to make adjustments using the standard fingerings. These fingerings will not be helpful to every student, but they provide another option for solving pitch problems.

Pitch Tendency Packet

Intonation is a very individual process and probably is the most frustrating thing about playing a woodwind instrument. The purpose of the Pitch Tendency Packets is to get students to discover what their individual intonation problems are and what they can

do to play more in tune. Each Pitch Tendency Packet includes information explaining the science of intonation, how it is heard, what determines flat and sharp, and suggestions for memorizing pitch tendencies. A how-to guide for an electronic tuner is included as well.

The Pitch Tendency Chart included in each packet covers the range of the instrument. Depending on the level of the student, certain notes may need to be left out. Students will need an electronic tuner and somebody to help them fill out the chart, whether it is the director, a parent, or another student. This chart should be filled out at least twice a year because students' pitch tendencies may change as they advance.

Once the student has completed the Pitch Tendency Chart, the student should consult the Quick Fixes page to learn ways to improve intonation. They should experiment with each suggestion to find what makes them sound the most in tune.

The Results...

It is well worth the time and effort to engage students in the tuning process. They will feel a sense of ownership with their playing and will feel obligated to play in tune with their best tone all the time. Students will start to actively listen to what they are playing and make adjustments to their intonation without even thinking about it. Not only will the efforts of individual players improve, but the overall intonation of the band will get better!

Flute

Sound Production

Many believe that sound on the flute is created by blowing air into the head joint. The initial noise of the flute is actually produced at the edge of the aperture hole while the body of the flute turns air vibrating at the aperture hole into musical sound. The head joint carries the air from the edge of the aperture hole to the body of the flute. The sound that vibrates at the edge of the aperture hole, called the edge tone, is similar to lips buzzing on a brass instrument. As air is blown at the edge of the aperture hole, it does not flow smoothly around or past the edge. Rather, it becomes quite turbulent. The air moves side to side, creating small whirlpools of air above and below the edge of the tone hole. The effect heard without the body of the flute is a high-pitched whistle, much like what happens when wind whistles through a crack in a door.[1]

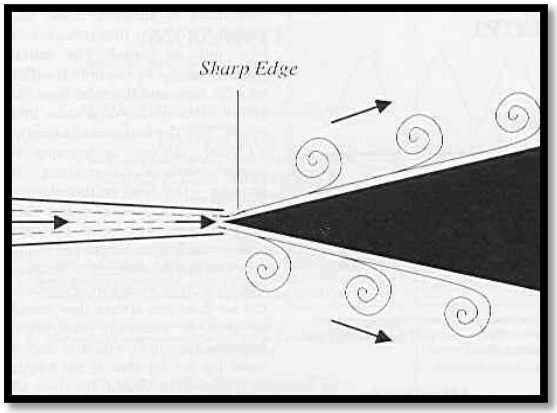


Figure 1: A demonstration of what air is doing when it reacts with the edge of the aperture hole.

When the edge tone separates, the downward air travels down the body of the flute. As the air reaches the end of the flute, it reacts with low-pressure air that is already in the flute from the atmosphere. The low-pressure wave combines with the air from the player to make high-pressure air. This air is forced back up the instrument to react with the air coming from the player. The entire process takes a very short amount of time. Every time the air moves up and down the flute, they increase in power forcing the air to oscillate in and out of the first open hole, or tone hole.[2] The oscillating air creates a powerful sound wave heard to the human ear as a flute sound.

How far the air travels back and forth through the flute depends on the location of the first open tone hole. Air exits the flute through the opening whether it is located at the top or bottom of the flute. The player opens and closes tone holes by pushing and releasing keys to control how far air travels up and down the flute. A tone hole that opens near the head joint will create a smaller area for the air to vibrate, forcing faster vibrations. Those faster vibrations will be heard by the ear as high pitches. Conversely, the first open tone hole near the foot joint will release air that is vibrating slower because of the large space it has to move through. In this case, a lower pitch will be heard.[3]

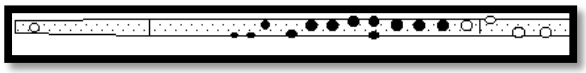


Figure 2: A flute with some tone holes open.

Natural Tendencies

The flute's natural overtone series break the octaves down in the following way:

- The first octave occupies the fundamental.
- The second octave occupies the second partial.
- The third octave occupies a combination of the second and third partials.

When a flute player over-blows a note or lifts the first finger, the fundamental frequency of a note is eliminated and the second partial is heard. Air is forced to vibrate at the second partial's frequency creating a sound eight

[1] (Jakeways, 2011)

[2] (Jakeways, 2011)

[3] (Shepard)

notes higher, called an octave. The same reaction happens to create the third octave, however the second partial is still the primary partial heard for the first few notes.[4]

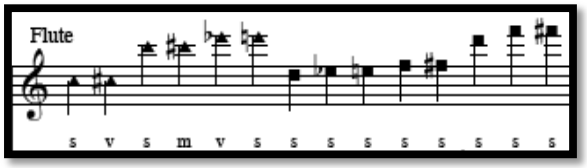


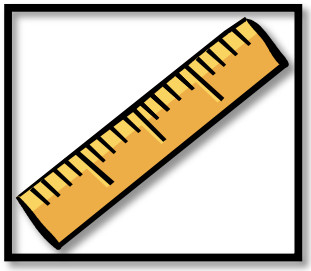
Figure 3: Pitch tendencies for the flute. The notes with triangle note heads are sharp notes. Notes with square note heads are flat notes. S stands for slightly, M stands for moderately, and V stands for very. The first note would be slightly sharp. Notes that are left off are considered in tune.

There are compromises in the design of the flute that allow it to play all octaves with a good embouchure. However, the natural overtone series causes the first and second octaves to be generally flat while the third octave is generally sharp. (Westphal, 1990) Figure 3 displays the typical tendencies for each note of the flute. Unlike brass instruments that follow a specific pattern to find pitch tendencies, the flute tendencies are seemingly random. Each note on the chart should be played using the standard fingering with slight adjustments controlled by the player. Alternate fingerings can be used, but as a last resort.[5]

It is important to mention that the natural tendencies for the flute shown in Figure 3 are *typical* and are not experienced by all flute players. A very sharp note on flute could be perfectly in tune on another. Students playing on the same instrument will not play the same notes in tune, either. Because of this, flute players need to be made aware of natural pitch tendencies and monitor them regularly so they understand what affects them individually.[6] The band director should also know what the natural tendencies are so players are provided with ways to improve out of tune sounds. This will help improve intonation and tone for the entire flute section.

General Tuning Procedure

The flute is an instrument that must be in tune with itself before it can tune its natural tendencies. The tendencies will get worse if a flute is not tuned properly.[7] Students should follow this procedure:



1. **Adjust the head joint so that it is pulled out an eighth of an inch.**

Flutes are not made to be played with the head joint pushed all the way in. Pulling the head joint out an eighth of an inch will allow the player to push in if the tuning note is flat.[8] If the head joint is pushed in all the way and the student plays flat, they cannot push the head joint in any further and will not be able to make the proper adjustments.

2. **Warm up for at least ten minutes.**

A cold instrument is an extremely flat instrument.[9] By warming up for at least ten minutes the flute will adjust to the player's body temperature. Avoid tuning if players

[4] (Westphal, 1990)
[5] Alternate fingerings are presented on page 11.
[6] See page 16 for the Flute Pitch Tendency Packet.
[7] (Westphal, 1990)
[8] (Cluff, 2004)
[9] (Allen, 2002-2007)

have been sitting in rehearsal for a short amount of time because the instrument will adapt to the temperature of the room.

3. **Using a good tone, play fourth-space D at mezzo forte with no vibrato.**

Dynamics greatly affect the flute's intonation. A mezzo forte dynamic affects intonation the least and requires very little manipulation by the player.[10] Students should always focus on using their best tone because a poor tone quality results in poor intonation. Fourth-line D is a great note for students to start tuning with even though it typically tends to be slightly flat. Students should start tuning within the first few months of playing. Hands are still small at this point and they may have trouble holding the flute with only their left hand. The fingering for D uses both hands, which in turn balances the flute.[11] Vibrato should be avoided when tuning since the player is moving the pitch from flat to sharp to create the pulses.

4. **Adjust the head joint by pulling out if the D is sharp and pushing in if the D is flat.**

The flute is an instrument that can adjust its general tuning by pulling out or pushing in the head joint. Doing so will put the flute at a different length which can affect the frequency of the D. It is recommended to adjust the head joint *only* for the purpose of getting the flute in tune with itself. If every out of tune note was adjusted with the head joint, intonation of the natural tendencies would get worse.[12]

Causes and Solutions for Intonation Problems[13]

Embouchure and Air Direction

Bad embouchure and air support lead to poor intonation and tone. Emphasizing good embouchure and air support continually and consistently throughout a player's career is important when dealing with intonation. Most solutions to individual pitch problems on flute use corrections made to the air direction and embouchure. The direction of air entering the flute can be altered by making changes with the embouchure using the corners of the mouth. Air directed at the aperture hole in a more downward direction results in a flat pitch. Moving the corners of the mouth back towards the ears will bring the pitch up. If the air is moving across the aperture hole, the pitch will be sharp and the corners of the mouth should move forward to lower the pitch. The jaw can be used to make adjustments but only when adjusting large pitch discrepancies.

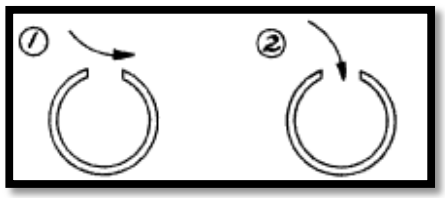


Figure 4: 1. Air direction when pitch is sharp. 2. Air direction when pitch is flat.

[10] (Westphal, 1990)
[11] (Cluff, 2004)
[12] (Westphal, 1990)
[13] (Westphal, 1990)

Dynamics

The speed of air striking the aperture hole controls dynamics. Faster air creates a louder tone but also a sharper pitch. As a flute gets louder, the direction of the air goes more across the aperture hole than in it also making the pitch sharper. To adjust, the air will need to be directed downward by moving the corners of the lips back towards the ears. When the flute gets softer, the pitch gets flatter because air is directed more into the aperture hole than across it. Pushing the corners of the lip forward will help raise the pitch. As a note gets louder or softer, the pitch will gradually change and so should the direction of air. Students should get used to making these adjustments by practicing long tones that crescendo and decrescendo while checking pitch with an electronic tuner.

Playing Position

If a player slouches while playing, breath support is reduced and air speed entering the flute cannot be controlled making intonation flat. Also, playing the flute at an angle that does not follow the line of the lips will force the air to hit the aperture hole at an angle and bring out the natural tendencies of the flute. Both problems can be prevented by always encouraging students to sit with the correct posture so the flute can be held at the correct angle.

Figure 5: Flute lip plate.

Lip Plate Placement

Overall pitch, intonation, and tone quality can be affected by the placement of the lip plate. When checking intonation, the first thing to look at is the location of the lip plate. If it is placed too low on the lip, the pitch will be flat; if the plate is too high, the pitch will be sharp. The lip plate should always be placed just above the edge of the lower lip.

Mechanical Factors

Teaching students to regularly monitor the condition of keys, pads, and rods on their flute will not only keep the instrument in good playing condition, but also will help intonation. All keys should open and close at the same height. Unadjusted keys will affect intonation the most if they are the first open key of a fingering. A key that is too close to the tone hole will flatten the pitch, but a key that is too open will raise the pitch. Keys that do not seal completely around the tone hole will interfere with response and also cause notes to sound sharp. Make sure adjustments screws on each finger key are allowing keys to seal properly.

The plug in the end of the head joint can affect intonation even though it should never be regularly adjusted for tuning. The sole purpose of the plug is to close the head joint, which is done so by a cork shaped much like the cork from a wine bottle. The cork must be exactly 17.3 millimeters from the center of the aperture hole and it needs to be checked daily. If it is not at 17.3 millimeters, the player will be consistently out of tune regardless of the adjustments made.[14]

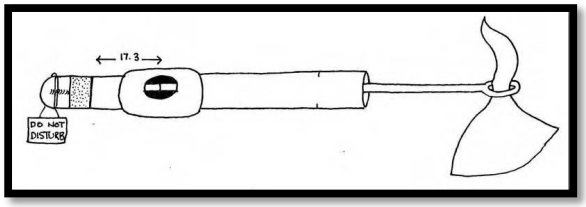
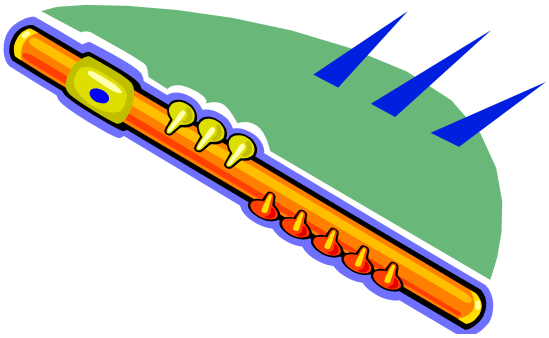


Figure 6: A cork that is set at 17.3 mm.

To access the cork, a cap is attached to the head joint. To verify the distance, insert the bottom of the cleaning rod into the head joint until it touches the cork. The etched line found at the bottom of the

[14] (Cluff, 2004)

cleaning rod should be in the exact center of the aperture hole. Unscrew the cap and push the plug into place by applying pressure to the cap if the line is closer to the top of the head joint. The player will be flat on the general tuning note even after multiple adjustments to the head joint are made. If the line is closer to the body of the flute making the player sharp, unscrew the cap and gently tap the cleaning rod with a rawhide mallet until the line returns to the center. The cap should always be tightened by the fingers to the point that it securely stays in place. Students should be warned that the plug should be kept in place at all times and not unscrew the cap.



Alternate Fingering Chart (Flute)

Purpose of Alternate Fingerings

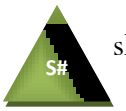
Alternate fingerings are used primarily for technical ease on the flute. However, there are fingerings that can be used to improve intonation for some notes. Using alternate fingerings to adjust the pitch of a note should be used as a "last resort" method. Students should be taught how to make intonation adjustments with the embouchure and direction of air using standard fingerings before alternate fingerings are taught. Not all of the fingerings included in this chart include every note on the Pitch Tendency Chart[15] nor will they be useful to every player. Some of the fingerings will be out of tune to a greater or lesser degree for some player.

How to Read the Alternate Fingering Chart

- The first column shows the note the alternate fingering affects.
- The second column shows the typical tendency of the note.
- The third column shows the alternate fingering.
- The fourth column explains how the alternate fingering will improve the intonation of that note.

The pitch tendency symbols used in this fingering chart will explain the typical tendency of a note.

shows that a note is slightly flat.



shows that the note is slightly sharp.

shows that the note is moderately sharp.

shows that the note is very sharp.

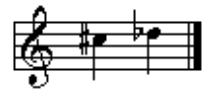
Most fingerings in this chart are actually slight deviations from the standard fingering. If a key is used in the standard fingering, it will be colored in black.

When a key is not typically used in the standard fingering, it will be colored in yellow.

There are instances where eliminating one key from the standard fingering will improve intonation. The eliminated key will have a red X placed over it.

Examples of Alternate Fingerings

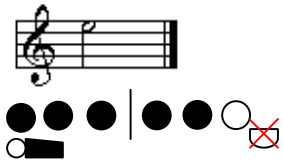
Flute players typically will make fingering adjustments by closing one or more tone holes to adjust pitch. An example of this is with third-space C-sharp, normally played as:



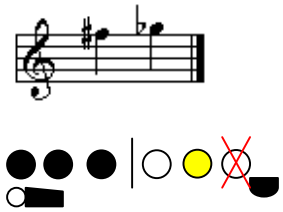
[15] See page 23 for the Flute Pitch Tendency Chart.

This note tends to be very sharp. By adding fingers four, five, and six, this very sharp note will lower in pitch:[16]

Flute players can also eliminate the use of a key. An example of this is the alternate fingering for E:

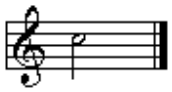
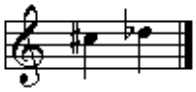
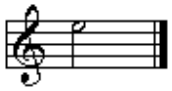
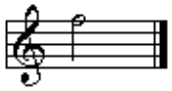
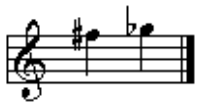
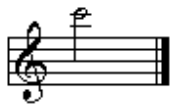
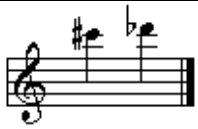
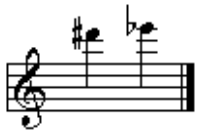
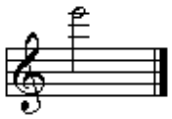
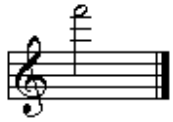


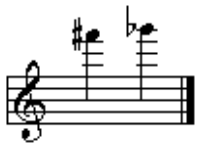
Using a different key altogether can also help improve pitch. An example of this is the alternate fingering for F-sharp:



Whether or not this fingering chart will be distributed to students is at the discretion of the director because students may mistake alternate fingerings for the standard ones. Also, this chart would not be appropriate for students who are in the first couple years of their playing career. These students need to learn the basics of flute playing and how to make intonation adjustments with their embouchure and air direction. As stated earlier, this chart is to be used as a last resort.

[16] (Flute Fingerings, 2008)

Note	Tendency	Fingering	How It Helps
			Adding fingers 5 and 6 will help to lower this slightly sharp note.
			Adding 4, 5, and 6 will help to lower this very sharp note.
			Eliminating the use of the Eb key will raise the pitch of this slightly flat note.
			Adding finger 6 will raise this slightly flat note.
			Using finger 5 instead of finger 6 will raise this slightly flat note.
			Adding finger 6 will help to lower this slightly sharp note.
			Adding fingers 4, 5, and 6 will help lower this moderately sharp note.
			To lower this very sharp note, use the 4th-space Eb fingering and over blow.
			Eliminating the Eb key will lower this slightly sharp note.
			Adding finger 6 will raise this slightly flat note.



Using finger 5 instead of finger 6 will raise this slightly flat note.

(Flute Fingerings, 2008) (The Woodwind Fingering Guide, 1998-2005)

Pitch Tendency Packet (Flute)

Name_____
Date_____

Materials needed:

1. Instrument
2. Pencil
3. Electronic Tuner
4. Someone to help you (either a friend, parent, or band director)

Knowing the tendency of each note is important!

Playing the general tuning note and making a physical adjustment is not enough to play in tune. Each note on your instrument will play flat, sharp, or in tune. The purpose of the Pitch Tendency Packet is to teach you what notes are in tune and out of tune on your instrument. Once you discover what the out of tune notes are, you can manipulate the notes to play in tune by making small adjustments when you are playing.

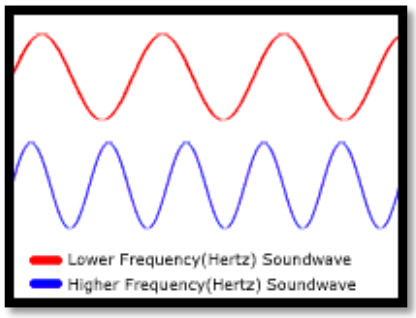
This packet will help you develop an individualized plan for tuning. As you discover which notes need special attention, it is your responsibility as a musician to figure out how **you** can play the note in tune. The tricky thing about this process is what gets you to play in tune may not work for your stand partner! Things like dynamics, reeds, embouchure, and even the brand of instrument can cause one person to play a note in tune while another plays the same note out of tune.

The last page of this packet will provide you with some tricks of the trade that you can experiment with those tricks to improve those out of tune notes. You will notice that once you start focusing on making those out of tune notes sound in tune, your tone will improve and your musician's instincts will start to anticipate intonation problems before they happen.

What is intonation?[17]

A musical pitch you hear is actually a sound wave going through your instrument. The sound wave can travel at different speeds, or frequencies, depending on what finger combinations you are using. More fingers usually means a lower pitch and a slower sound wave, but adding playing the note at a higher octave will make the sound wave move faster.

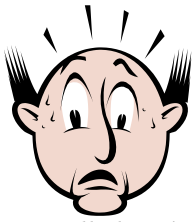
Frequency is measured in cycles per second, or Hertz (hz). One cycle per second is equal to one Hertz. Musicians have a standard frequency that we agree will make us sound the most in tune. That frequency is measured at 440 hz. Anything higher or lower than that will not agree with the musicians' or the audience's ears.



An example of sounds at different frequencies.

A Case of the "Wah's"[18]

If two musicians are playing the same note at exactly the same time, they're playing in tune, right? Not really. Have you ever heard two musicians play the same note at the exact same time, but instead it sounds like "wah-wah-wah"? This means the musicians have a case of the "wah's", a disease that cause musicians to play out of tune!



You are actually hearing the musicians play out of tune with each other. Each note's sound wave is moving at a slightly different frequency, making the sound waves clash. Both notes are fighting so much to be the main note heard that they are cancelling each other out!

One of the musicians should make an effort to get rid of the "wah's" by making adjustments to the way they are playing their instrument or by physically adjusting something on their instrument. If the musician makes the right adjustment, the "wah's" will start to disappear and the note will be in tune. However if the wrong adjustment is made, the "wah's" will move faster.

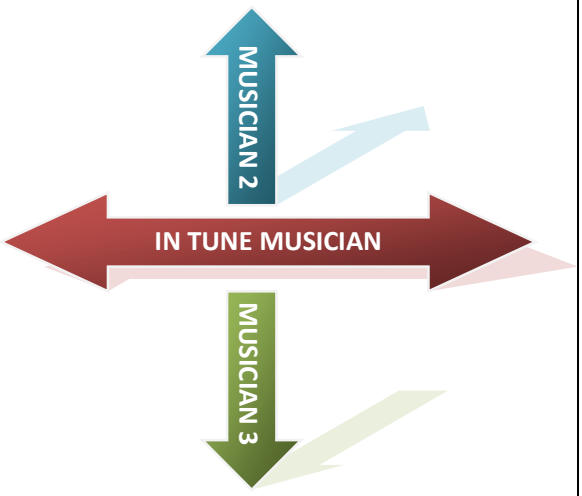
Flat vs. Sharp[19]

Musicians think of intonation as a vertical concept. The straight line below represents In Tune Musician, a musician who always plays in tune.

[17] (Pitch (music))
[18] (Hein, 1981)
[19] (Pitch (music))

Now, another musician will play the same note along with In Tune Musician.

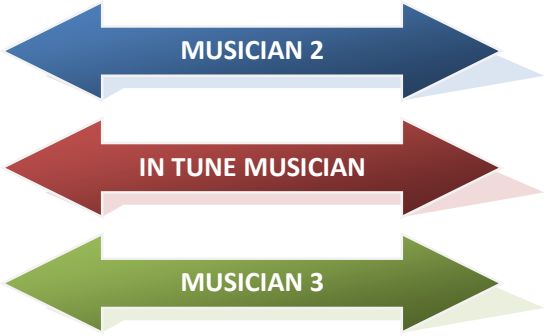
Finally, a third musician will play the same note with the other musicians.



Even though all three musicians were playing the same note, Musicians 2 and 3 were playing their notes at different frequencies.

Musician 2's note was played at a slightly higher frequency than In Tune Musician. Even though the both musicians were playing the same note, Musician 2's note sounds a little higher than In Tune Musician's. When notes vibrate at a slightly higher frequency than 440 hz, they are considered sharp. Musician 2 will have to lower his frequency so he can play at the same frequency as In Tune Musician.

What about Musician 3? Well, his note was played at a slower frequency than In Tune Musician's. He sounds a little lower because his note vibrates slightly slower than 440 hz. When notes vibrate at slightly slower frequencies, they are considered flat. Musician 3 will have to raise his frequency so he can play in tune with the others.



How to Improve Intonation

Intonation will not get better by itself; it is something that will constantly need to adjust no matter your musical experience. Professional musicians struggle with intonation issues even with all the experience they have. Constant practice and reinforcement will help you understand intonation. Here are some suggestions to help you improve your intonation:

Fill out the Pitch Tendency Chart. The chart will tell you what notes are the notes you need to focus on. As you advance in your playing, your pitch tendencies may change. Continue to fill the chart out every four to six months to see if there are any changes.

Practice making the adjustments! Remember, it is your responsibility as a member of the ensemble to play in tune. If you do nothing to improve intonation, nothing will get better. Your brain will train itself to make the adjustment automatically once you've found what works and practice making those adjustments every time you see the note. If you focus on improving only five

notes a week in your practice time, you will see huge improvements in your playing.

Use a friend, an electronic tuner, or a tuning CD to help train your ear. If your ear doesn't know what bad intonation sounds like, then you will always play out of tune. Here are some ways to help train your ear:

- Have a friend help you by having them play each note as the In Tune Musician. If you have the "wah's", then you need to adjust to cure yourself. Have them play again and see if you adjusted correctly. Remember, if the "wah's" get better, you made the correct adjustment!

- An electronic tuner will give you a visual measurement of how flat or sharp you are. Play a note you're your eyes closed and guess if it's flat or sharp. Electronic tuners are usually around $25 and can be purchased at any music store or website. Korg brand tuners are the most common.

- Some electronic tuners also have a function where they can produce pitches so you can check for the "wah's". This is a great function to use if you are by practicing by yourself.

- "The Tuning CD" is available for download on iTunes and can be purchased online. It is a CD containing all the notes of the chromatic scale that you can play along with to check the "wah's".

Memorize your pitch tendencies. You can do this by creating flashcards or writing the tendencies in your music.

The Results...

Poor intonation doesn't fix itself and is not pleasant to listen to. If you focus and stay consistent in your efforts to improve your intonation, you will also hear improvement in your tone quality. It will start to become second nature to you and you will begin to adjust your pitch without even thinking about it.

Electronic Tuner How-to Guide

1. Turn your tuner on by pushing the on/off button.
2. Check the upper left-hand corner to see if your tuner is calibrated to 440 hz. If it is not, push either the calibration up button or the calibration down button until you see 440 on the screen.
3. Set the tuner on your stand so the screen is facing you. Make sure the microphone (indicated by the word "mic") is not covered up.
4. Play a note to move the needle. The concert pitch letter name of the note you are playing will be shown in the upper right-hand corner of the screen.
5. If you are...
   ...flat, the needle will move to the left and the light next to the flat sign will light up.
   ...in tune, the needle will stand straight up and the green light will light up.
   ...sharp, the needle will move to the right and the light next to the sharp sign will light up.
6. If your tuner has the option and wish to have the tuner produce a sound while you are playing, hit the sound button on the tuner. Hitting the sound button again will turn off the sound.
7. Turn your tuner off by pushing the on/off button when you are finished using it.

The meter on a tuner measures pitches in cents. In tune notes are measured at zero cents, which makes the needle stand straight up. As a note gets progressively flatter, the needle will move to the left measuring the note in negative cents. When a note gets increasingly sharper, the needle will move to the right measuring the note in positive cents.

Completing Your Pitch Tendency Chart

Make sure you have someone to help you complete this!

1. Fill out the top portion of the guide as completely as you can. Ask your band director for help if you have questions about the brand of your instrument or reed.
2. Warm up for at least ten minutes to allow your instrument to adjust to your body temperature.
3. Turn the electronic tuner on and get your instrument in tune with itself using the following procedure:

    1. Adjust the head joint so it is pulled out an eighth of an inch.
    2. Using a good tone, play D at a mezzo forte volume with no vibrato.
    3. Adjust the head joint by pulling out if the note was sharp or pushing in if the note was flat.
    4. Continue this process if your first attempt was not in tune.

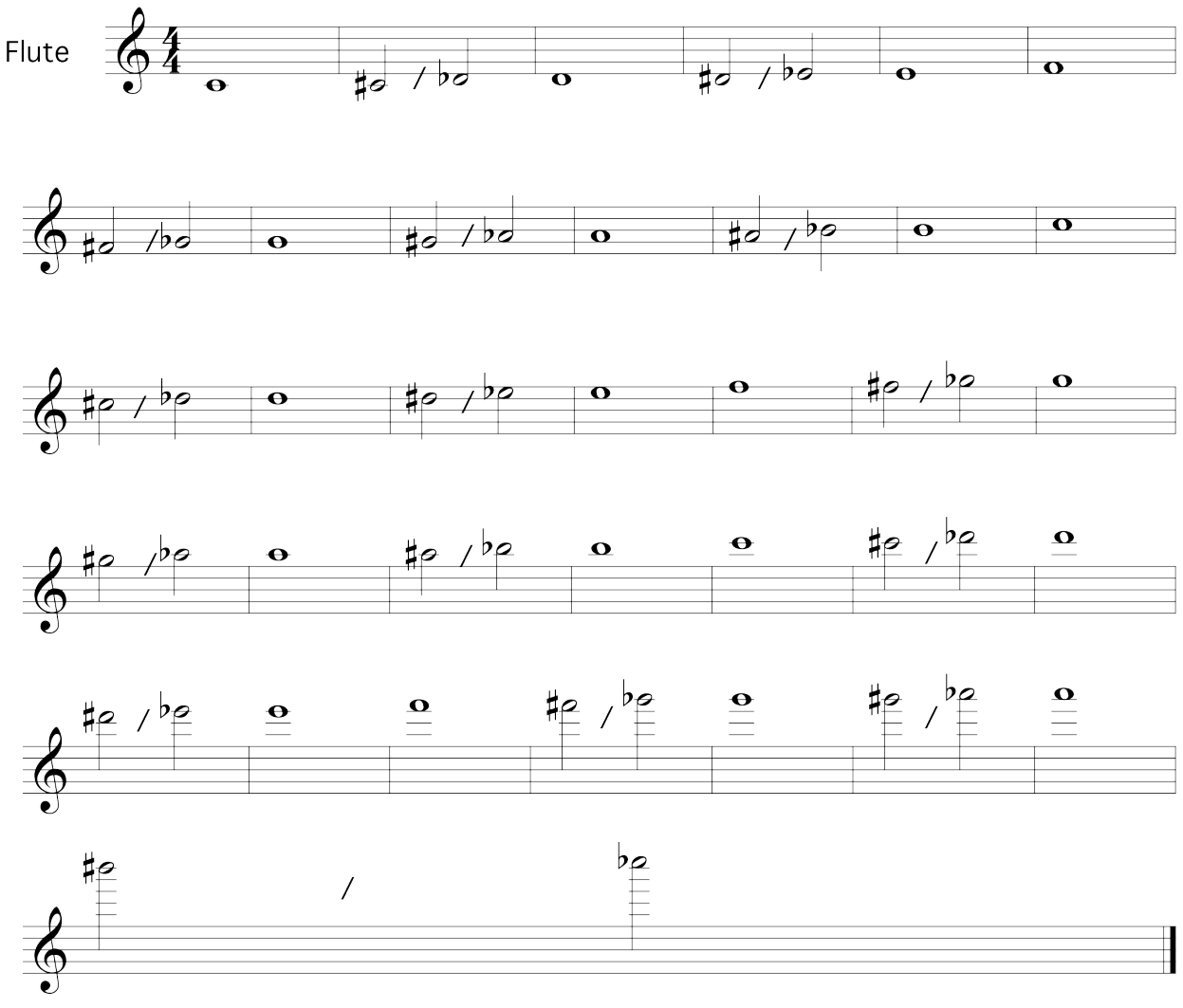
4. Give the tuner and your Pitch Tendency Chart to your partner so they can fill it out while you play.
5. It is best to start at concert B-flat and work your way down and then start again at concert B-flat and work your way to the top to get the most accurate reading. Have your partner tell you what note to play. Play the note and have your partner write down what your pitch tendency is based on the chart below.

Pitch Tendency Category	Cents
Slightly flat (Sb)	-1 to -10 cents
Moderately flat (Mb)	-11 to -25 cents
Very flat	-25 cents to -50 cents
Slightly sharp (S#)	+1 to +10 cents
Moderately sharp (M#)	+11 to +25 cents
Very sharp (V#)	+25 cents to +50 cents

6. Once you have completed the chart, return it to your director. A copy will be made for their files and your completed chart will be returned to you.
7. Using the *Quick Fixes for Flute* chart and an electronic tuner, find the tricks for each note that will make them in tune. Make a note of what works and use those tricks each and every time you play.

Flute Pitch Tendency Chart

Name_____ Make of Instrument_____



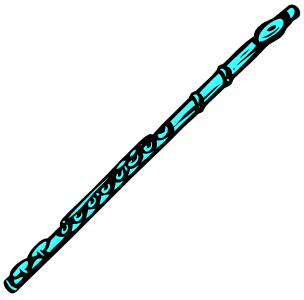
Flute Quick Fixes

If the note sounds sharp....

- ☑ Use a mirror to see if the lip plate is placed too high. It should be placed right above the edge of your lip.
- ☑ Move the corners of your mouth towards your ears to direct the air stream into the aperture hole.
- ☑ If the music is written at forte or louder, you will need to move the corners of your mouth towards your ears to direct the air stream into the aperture hole.
- ☑ Check to see if any of keys on your flute are too open. Let your band director fix any keys that are out of line.

If the note sounds flat....

- ☑ Use a mirror to see if the lip plate is placed too low. It should be placed right above the edge of your lip.
- ☑ Make sure you are sitting up nice and tall, holding the flute in the proper playing position
- ☑ Move the corners of your mouth forward to direct the air steam across the aperture hole.
- ☑ If the music is written at piano or softer, you will need to move the corners of your mouth forward to direct the air stream across the aperture hole.
- ☑ Check to see if any keys on your flute are too close to the tone hole. Let your band director fix any keys that are out of line.



Oboe

Sound Production

The oboe is a double-reed instrument that cannot produce sound unless both blades of the reed are forced to vibrate against each other. Like all wind instruments, air is important in producing sound on an oboe. Once the correct oboe embouchure is formed around the reed, air is blown into the reed and moves toward the first open tone hole as low-pressure air. The pressure of the lips around the reed and the air moving inside the reed causes the blades of the reed to move together. The wave of low pressure air continues to move down the bore of the oboe and arrives at the first open tone hole.

Low-pressure air forces outside air into the oboe and both types of air combine to create high-pressure air. The air then moves back toward the reed changing all the air inside the oboe to high-pressure air while returning the blades of the reed back to their original position. Another dose of low-pressure air coming from the player collides with the returning air and creates high-pressure air that moves toward the first open tone hole. When it arrives, it forces air that is coming into the bore to exit through the tone hole to create a musical sound. This continues to happen until the player ends the air flow.

Oboe players usually complain of feeling resistance or pressure as they blow into the reed. When high-pressure air re-enters the oboe, it releases pressure points back at the player. These pressure points are created because of the high-pressure air from the oboe reacting with the low-pressure air from the player's mouth in the tiny space of the oboe reed. This sensation, called backpressure, makes the player feel like they are inhaling and exhaling at the same time. This is very similar to what trumpet players experience when they blow into their horns.[20]

[20] (11Ju)

Reed vibration controls air flow into the oboe just as much as air flow controls reed vibration. But too much air or reed vibration will completely stop the sound. This is like what someone feels if their nose is plugged while their mouth is closed. Pitch is changed when players cover tone holes by pressing and releasing keys. The oboe has small holes in some keys that will force the oboe to not respond correctly if they are not covered completely. Covering more tone holes means the air takes longer to travel through the oboe. A low sound is heard because the air is not moving as fast. If less tone holes are covered, then air is traveling through a shorter length of the oboe. This smaller space forces air to move quickly and the listener will hear a high sound.

Natural Tendencies

The oboe's natural overtone series break octaves down in the following way:

- The first octave occupies the fundamental.
- The second octave occupies the second partial.
- The third octave occupies a combination of the second and third partials.

There are compromises in the design of the oboe that allows it to play all octaves with a good embouchure.

Figure 7: The half-hole key on oboe. The side octave key is on the right.

When an oboist uses the back octave key or the half-hole option on the first finger, the fundamental frequency is eliminated and the second partial becomes the vibrating frequency. The second octave is heard as the oboe is letting air escape two parts—out of the octave key or half-hole key and also the first open tone hole. The half-hole and octave keys are small in diameter so air will still move down the horn. The same effect occurs when the side octave key is used or the first finger is not used. The oboe is still vibrating in two parts; however the third octave is heard.

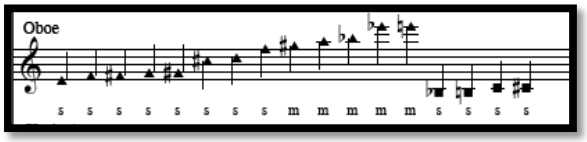


Figure 8: Pitch tendencies for oboe. The notes with triangle note heads are sharp notes. Notes with square note heads are flat notes. S stands for slightly, M stands for moderately, and V stands for very. The first note would be slightly sharp. Notes that are left off are considered in tune.

Figure 8 displays the typical tendencies of the oboe. When broken down as individual pitches, notes below the staff tend to be slightly flat, notes on the staff tend to be slightly sharp, and notes above the staff tend to be moderately sharp.[21] Each note on the chart should be played using the standard fingering with adjustments being controlled by the player. Alternate fingerings can be used, but as a last resort.[22]

It is important to mention that the natural tendencies of the oboe presented in this book are *typical* and are not experienced by all oboe players. An out of tune note on one oboe could be perfectly in tune on another. A reed could make a note sound in tune one day and terrible the next. Because of this, oboe players need to know the instrument's natural pitch tendencies and monitor them regularly so they understand what affects them individually. The band director also should know what the natural tendencies are and provide the players with tools to improve them. This will help improve the intonation and tone for the oboe section.

General Tuning Procedure[23]

Oboes cannot make physical adjustments to intonation like other woodwinds because all adjustments are made with the embouchure and reed. Students should never be asked to pull the reed out of the oboe slightly because this will cause notes to not speak. Essentially, the oboe has to tune each note every time it is played due to the sensitivity of the reed. Knowledge of the pitch tendencies and how it affects the player is extremely important.[24] In this situation, it is best for students to develop their ear by playing with another instrument or an electronic tuner.

A mezzo forte dynamic affects intonation the least and requires very little manipulation by the player. Students should always focus on using their best tone because a poor tone quality results in poor intonation. Vibrato should be avoided because it is an effect that moves the pitch quickly between flat and sharp to create pulses in the sound. Avoid tuning if players have been sitting in rehearsal for a short amount of time or right when the oboe is taken out of the case. A cold instrument tends to be flat and the reed dries out making it difficult to respond so students should play for about ten minutes before tuning.

[21] (Westphal, 1990)
[22] Alternate fingerings are found on page 30.
[23] (Oboe Intonation, 2009), (Allen, 2002-2007)
[24] See page 34 for the Oboe Pitch Tendency Packet.

Causes and Solutions to Intonation Problems[25]

Figure 9: Oboe reeds.

Reed

The reed has the most effect on an oboist's intonation. Good reeds are more likely to play in tune for the entire range of the instrument. Monitor students' reeds so that they are constantly playing on newer reeds. Old reeds are impossible to control with embouchure or reed adjustments so the student should be given a new reed. Also, monitor the strength of reed students are using and adjust as they advance. A common mistake directors make is keeping students on the same strength reed that they started on and never giving them harder reeds.

Soft reeds tend to play flat, especially in the highest and lowest notes of the range. Tone will become very harsh and do not respond to embouchure adjustments. Clipping a very small amount of the tip of the reed will make the reed a bit harder. Another mistake directors make is providing students with reeds that are too hard, which sound sharp and emphasize the natural tendencies of the horn. The reed will be difficult to control with the embouchure. Scraping the heart of the reed lightly will soften the reed and flatten the pitch.

[25] (Westphal, 1990)

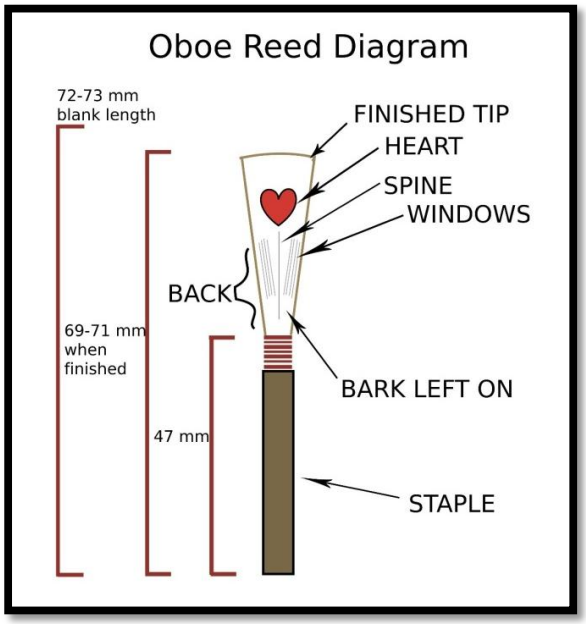


Figure 10: Diagram of oboe reed. The heart is located just below the tip.

Directors should let students experiment with different brands of reeds to find which sound the best to the players. Hand-made reeds are better than machine-made reeds because they respond well to adjustments made to improve intonation.

Embouchure

Poor embouchure and air support lead to poor intonation and tone. Emphasizing good embouchure and air support continually and consistently throughout a player's career is important when dealing with intonation. Most solutions to individual pitch problems on oboe use corrections made with the embouchure to support the reed. Relaxing embouchure pressure will flatten pitch while increasing pressure will make a note sharper. Changing the amount of reed that goes in a player's mouth fixes intonation the same way moving the barrel on a clarinet does. Not enough reed in the mouth will make a pitch flat.

"Biting" on the reed with the embouchure is the result of a hard reed. The second octave will sound like the first octave and pitch will be extremely sharp.

Check to see if the corners of the mouth are touching the sides of the reed. This will give the reed more support so it can vibrate to its full ability.

Playing Position

The oboe should always be held at a forty degree angle with the chin parallel to the floor to maintain good intonation. Constantly monitor oboe players to make sure they are holding the horn at the correct angle. If the angle is too high or the head is down, the pitch tends to be flat. The upper lip will support the reed more than the lower lip, interfering with the control of the reed. The pitch, especially in the upper register, will be sharp if the horn is held too close to the body.

Figure 11: Correct playing position.

Mechanical Factors

Teaching students to regularly monitor the condition of keys, pads, and rods of their oboe will not only keep the instrument in good playing condition, but also help intonation. All keys should open and close at the same height. Unadjusted keys will affect intonation the most when they are the first open key of a fingering. A key that is too close to the tone hole will flatten the pitch, but a key that is too open will raise the pitch. Keys that do not properly seal will interfere with response and also cause the notes to be sharp. Make sure adjustments screws on each finger key are allowing keys to seal properly and check post screws to see if they are properly adjusted.

Dirt tends to build up in the opening of the half-hole key, third finger of the left hand, and both octave keys. The director should regularly take apart the octave keys and clean the opening out with a feather. The half-hole key can be cleaned out by inserting a toothpick gently into the opening and then using a feather to remove any dirt that has entered the bore.

Alternate Fingering Chart (Oboe)

Purpose of Alternate Fingerings

Alternate fingerings are used primarily for technical ease on the oboe. The flexibility of the reed allows the player to make a majority of intonation adjustments. There are a few alternate fingerings, however, that improve intonation.

Using alternate fingerings to adjust the pitch of a note should be used as a "last resort" method. Students should be taught how to make intonation adjustments using the embouchure and reed with standard fingerings before alternate fingerings are taught. Not all of the fingerings included in this chart include every note on the Pitch Tendency Chart[26] nor will they be useful to every player. Some of the fingerings will be out of tune to a greater or lesser degree depending on the individual.

As stated earlier, this chart is to be used as a last resort. Whether or not this fingering chart will be distributed to students is at the discretion of the director because students may mistake alternate fingerings for the standard ones. Also, this chart would not be appropriate for students who are in the first couple years of their playing career. These students need to learn the basics of flute playing and how to make intonation adjustments with their embouchure and air direction.

How to Read the Alternate Fingering Chart

- The first column shows the note the alternate fingering affects.
- The second column shows the typical tendency of the note.
- The third column shows the alternate fingering.
- The fourth column explains how the alternate fingering will improve the intonation of that note.

[26] See page 41 for the Oboe Pitch Tendency Chart.

The pitch tendency symbols used in this fingering chart will explain the typical tendency of a note.

shows that the note tends to be slightly flat.

shows that the note tends to be slightly sharp.

shows that the note tends to be moderately sharp.

Most fingerings in this chart are actually slight deviations from the standard fingering. If a key is used in the standard fingering, it will be colored in black.

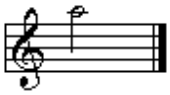
When a key is not typically used in the standard fingering, it will be colored in yellow.

There are instances where eliminating one key from the standard fingering will improve intonation. The eliminated key will have a red X placed over it.

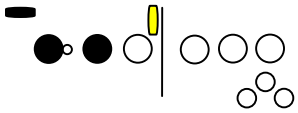
Examples of Alternate Fingerings

Most alternate fingerings that help intonation on the oboe involve the standard fingering and the addition of a right or left hand pinky key. Adding a pinky key will lower the pitch of a sharp note by slightly changing where air exits the oboe. Slight changes to the air will lower the frequency of the note slightly to make it more in tune. For

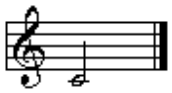
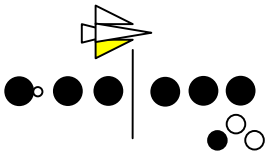
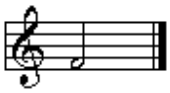
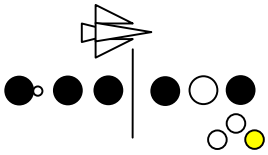
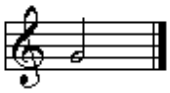
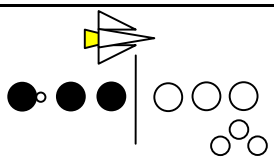
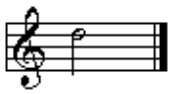
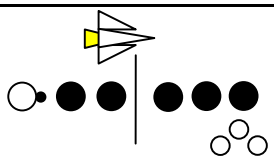
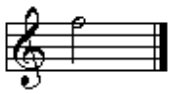
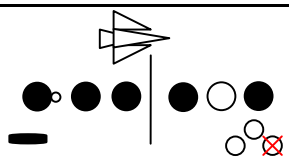
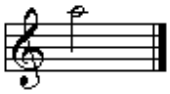
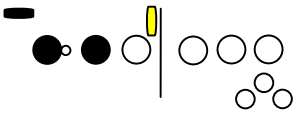
example, high A on oboe sounds moderately sharp if just the standard fingering is used:



By adding the A-flat key to the standard fingering, the pitch will lower.



Since the A-flat key is normally closed when it is not used, air will not escape through that tone hole. Opening that key when playing high A will allow some of the air that cannot exit the tone hole of the third finger to exit out the now opened A-flat key. The frequency of the air traveling through the oboe will be slower, lowering the pitch of the note.

Note	Tendency	Fingering	How It Helps
			Using the left Eb key and put more reed in mouth. This will raise the pitch of this slightly flat note.
			Used forked F fingering and the Eb key to raise the pitch of this slightly sharp note.
			Adding the B key will lower this slightly sharp note.
			Adding the B key will help lower the pitch of this slightly sharp note.
			Using the forked F fingering without the Eb key will lower the pitch of this slightly sharp note.
			Adding the Ab key will lower the pitch of this moderately sharp note.

(The Woodwind Fingering Guide, 1998-2005) (Oboe Fingerings, 2008)

Pitch Tendency Packet (Oboe)

Name_____
Date_____

Materials needed:

1. Instrument
2. Pencil
3. Electronic Tuner
4. Someone to help you (either a friend, parent, or band director)

Knowing the tendency of each note is important!

Playing the general tuning note and making a physical adjustment is not enough to play in tune. Each note on your instrument will play flat, sharp, or in tune. The purpose of the Pitch Tendency Packet is to teach you what notes are in tune and out of tune on your instrument. Once you discover what the out of tune notes are, you can manipulate the notes to play in tune by making small adjustments when you are playing.

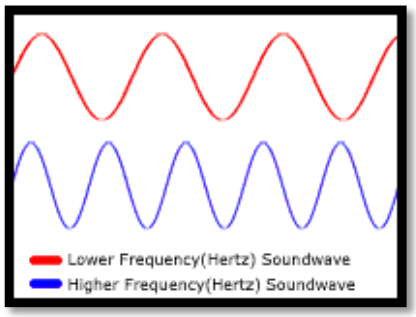
This packet will help you develop an individualized plan for tuning. As you discover which notes need special attention, it is your responsibility as a musician to figure out how **you** can play the note in tune. The tricky thing about this process is what gets you to play in tune may not work for your stand partner! Things like dynamics, reeds, embouchure, and even the brand of instrument can cause one person to play a note in tune while another plays the same note out of tune.

The last page of this packet will provide you with some tricks of the trade that you can experiment with those tricks to improve those out of tune notes. You will notice that once you start focusing on making those out of tune notes sound in tune, your tone will improve and your musician's instincts will start to anticipate intonation problems before they happen.

What is intonation?[27]

A musical pitch you hear is actually a sound wave going through your instrument. The sound wave can travel at different speeds, or frequencies, depending on what finger combinations you are using. More fingers usually means a lower pitch and a slower sound wave, but adding playing the note at a higher octave will make the sound wave move faster.

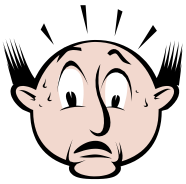
Frequency is measured in cycles per second, or Hertz (hz). One cycle per second is equal to one Hertz. Musicians have a standard frequency that we agree will make us sound the most in tune. That frequency is measured at 440 hz. Anything higher or lower than that will not agree with the musicians' or the audience's ears.



An example of sounds at different frequencies.

A Case of the "Wah's"[28]

If two musicians are playing the same note at exactly the same time, they're playing in tune, right? Not really. Have you ever heard two musicians play the same note at the exact same time, but instead it sounds like "wah-wah-wah"? This means the musicians have a case of the "wah's", a disease that cause musicians to play out of tune!



You are actually hearing the musicians play out of tune with each other. Each note's sound wave is moving at a slightly different frequency, making the sound waves clash. Both notes are fighting so much to be the main note heard that they are cancelling each other out!

One of the musicians should make an effort to get rid of the "wah's" by making adjustments to the way they are playing their instrument or by physically adjusting something on their instrument. If the musician makes the right adjustment, the "wah's" will start to disappear and the note will be in tune. However if the wrong adjustment is made, the "wah's" will move faster.

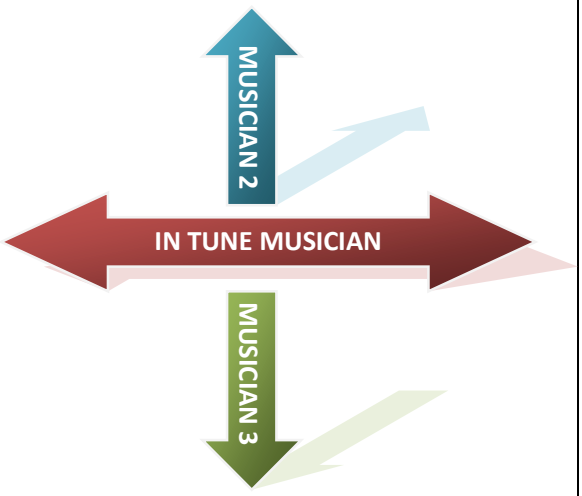
Flat vs. Sharp[29]

Musicians think of intonation as a vertical concept. The straight line below represents In Tune Musician, a musician who always plays in tune.

[27] (Pitch (music))
[28] (Hein, 1981)
[29] (Pitch (music))

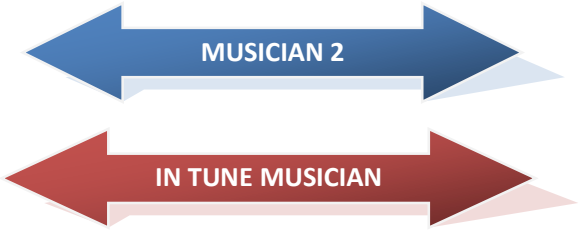
Now, another musician will play the same note along with In Tune Musician.

Finally, a third musician will play the same note with the other musicians.

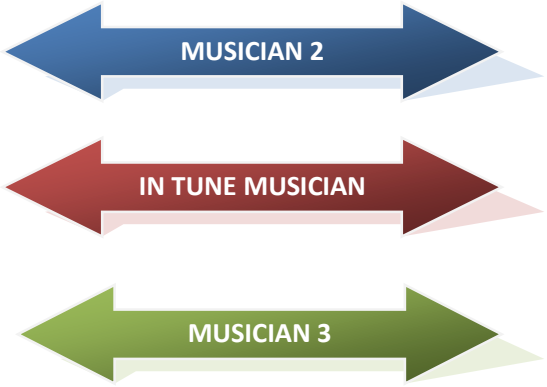


Even though all three musicians were playing the same note, Musicians 2 and 3 were playing their notes at different frequencies.

Musician 2's note was played at a slightly higher frequency than In Tune Musician. Even though the both musicians were playing the same note, Musician 2's note sounds a little higher than In Tune Musician's. When notes vibrate at a slightly higher frequency than 440 hz, they are considered sharp. Musician 2 will have to lower his frequency so he can play at the same frequency as In Tune Musician.



What about Musician 3? Well, his note was played at a slower frequency than In Tune Musician's. He sounds a little lower because his note vibrates slightly slower than 440 hz. When notes vibrate at slightly slower frequencies, they are considered flat. Musician 3 will have to raise his frequency so he can play in tune with the others.



How to Improve Intonation

Intonation will not get better by itself; it is something that will constantly need to adjust no matter your musical experience. Professional musicians struggle with intonation issues even with all the experience they have. Constant practice and reinforcement will help you understand intonation. Here are some suggestions to help you improve your intonation:

Fill out the Pitch Tendency Chart. The chart will tell you what notes are the notes you need to focus on. As you advance in your playing, your pitch tendencies may change. Continue to fill the chart out every four to six months to see if there are any changes.

Practice making the adjustments!
Remember, it is your responsibility as a member of the ensemble to play in tune. If you do nothing to improve intonation, nothing will get better. Your brain will train itself to make the adjustment automatically once you've found what works and practice making those adjustments every time you see

the note. If you focus on improving only five notes a week in your practice time, you will see huge improvements in your playing.

Use a friend, an electronic tuner, or a tuning CD to help train your ear. If your ear doesn't know what bad intonation sounds like, then you will always play out of tune. Here are some ways to help train your ear:

- Have a friend help you by having them play each note as the In Tune Musician. If you have the "wah's", then you need to adjust to cure yourself. Have them play again and see if you adjusted correctly. Remember, if the "wah's" get better, you made the correct adjustment!
- An electronic tuner will give you a visual measurement of how flat or sharp you are. Play a note you're your eyes closed and guess if it's flat or sharp. Electronic tuners are usually around $25 and can be purchased at any music store or website. Korg brand tuners are the most common.
- Some electronic tuners also have a function where they can produce pitches so you can check for the "wah's". This is a great function to use if you are by practicing by yourself.
- "The Tuning CD" is available for download on iTunes and can be purchased online. It is a CD containing all the notes of the chromatic scale that you can play along with to check the "wah's".

Memorize your pitch tendencies. You can do this by creating flashcards or writing the tendencies in your music.

The Results...

Poor intonation doesn't fix itself and is not pleasant to listen to. If you focus and stay consistent in your efforts to improve your intonation, you will also hear improvement in your tone quality. It will start to become second nature to you and you will begin to adjust your pitch without even thinking about it.

Electronic Tuner How-to Guide

1. Turn your tuner on by pushing the on/off button.
2. Check the upper left-hand corner to see if your tuner is calibrated to 440 hz. If it is not, push either the calibration up button or the calibration down button until you see 440 on the screen.
3. Set the tuner on your stand so the screen is facing you. Make sure the microphone (indicated by the word "mic") is not covered up.
4. Play a note to move the needle. The concert pitch letter name of the note you are playing will be shown in the upper right-hand corner of the screen.
5. If you are...
   ...flat, the needle will move to the left and the light next to the flat sign will light up.
   ...in tune, the needle will stand straight up and the green light will light up.
   ...sharp, the needle will move to the right and the light next to the sharp sign will light up.
6. If your tuner has the option and wish to have the tuner produce a sound while you are playing, hit the sound button on the tuner. Hitting the sound button again will turn off the sound.
7. Turn your tuner off by pushing the on/off button when you are finished using it.

The meter on a tuner measures pitches in cents. In tune notes are measured at zero cents, which makes the needle stand straight up. As a note gets progressively flatter, the needle will move to the left measuring the note in negative cents. When a note gets increasingly sharper, the needle will move to the right measuring the note in positive cents.

Completing Your Pitch Tendency Chart

Make sure you have someone to help you complete this!

1. Fill out the top portion of the guide as completely as you can. Ask your band director for help if you have questions about the brand of your instrument or reed.
2. Warm up for at least ten minutes to allow your instrument to adjust to your body temperature.
3. Give the tuner and your Pitch Tendency Chart to your partner so they can fill it out while you play.
4. It is best to start at concert B-flat and work your way down and then start again at concert B-flat and work your way to the top to get the most accurate reading. Have your partner tell you what note to play. Play the note and have your partner write down what your pitch tendency is based on the chart below.

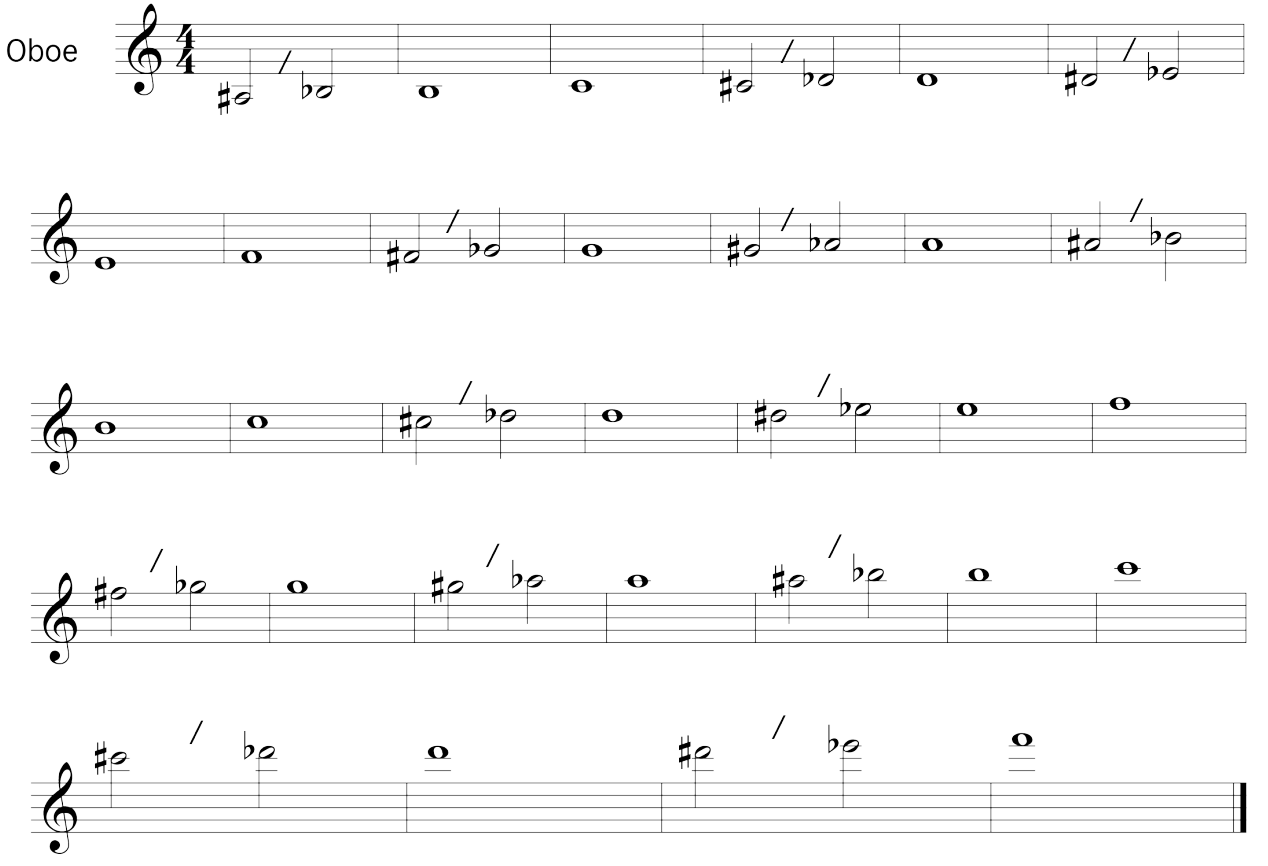
Pitch Tendency Category	Cents
Slightly flat (Sb)	-1 to -10 cents
Moderately flat (Mb)	-11 to -25 cents
Very flat	-25 cents to -50 cents
Slightly sharp (S#)	+1 to +10 cents
Moderately sharp (M#)	+11 to +25 cents
Very sharp (V#)	+25 cents to +50 cents

5. Once you have completed the chart, return it to your director. A copy will be made for their files and your completed chart will be returned to you.
6. Using the *Oboe Quick Fixes* chart and an electronic tuner, find the tricks for each note that will make them in tune. Make a note of what works and use those tricks each and every time you play.

Oboe Pitch Tendency Chart

Name_____ Make of Instrument_____

Strength of Reed_____ Brand of Reed_____



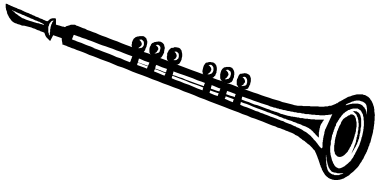
Oboe Quick Fixes

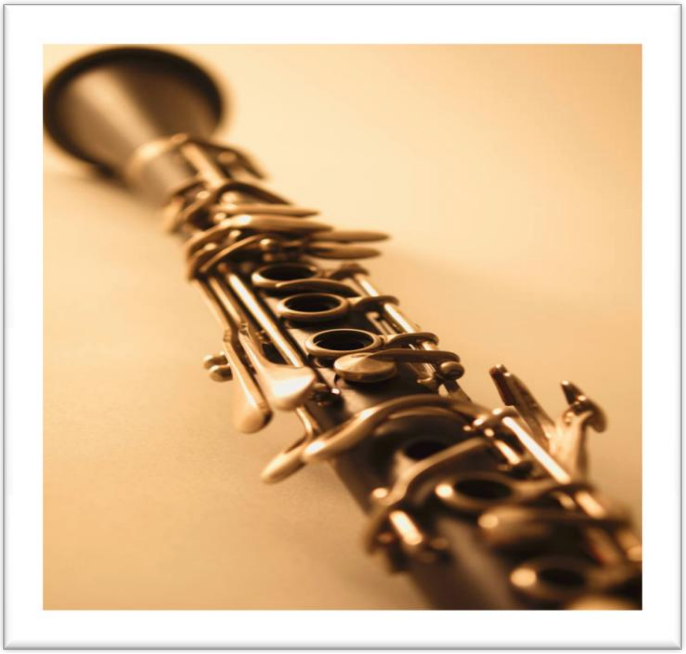
If the note sounds sharp....

- ☑ Your embouchure might be too tight putting too much pressure on the reed. Relax your embouchure a little to reduce pressure.
- ☑ You may have too much reed in your mouth. Put less reed in.
- ☑ The reed may be too hard. Play on a softer reed or ask your director to make an adjustment to the reed.
- ☑ Make sure you are holding the oboe at a forty degree angle.
- ☑ If the music is written at forte or louder, relax your embouchure and slow the speed of air entering the oboe.
- ☑ Check to see if any keys on your oboe are opening too far. Have your band director make any adjustments if they are.

If the note sounds flat....

- ☑ Your embouchure might be too relaxed. Tighten your embouchure a little to increase pressure around the reed.
- ☑ You may not have enough reed in your mouth. Take a little more reed in.
- ☑ The reed may be too soft. Ask your band director to make an adjustment on the reed or play on a harder reed.
- ☑ The reed may be too old. Ask your band director for a newer reed.
- ☑ Make sure you are holding the oboe at a forty degree angle.
- ☑ If the music is written at piano or softer, increase the amount of pressure around the reed and slow down the speed of air entering the oboe.
- ☑ Check to see if any keys on your oboe are too close to the tone hole. Have your band director make any adjustments if they are.





Clarinet

Sound Production[30]

The clarinet is a single reed instrument that cannot produce sound unless the reed is forced to vibrate against the mouthpiece by air. Once the correct clarinet embouchure is formed around the mouthpiece, the player blows air into the mouthpiece. Air enters the small space between the mouthpiece and reed as low-pressure air. The force of the bottom lip against the outside of the reed and air moving inside the mouthpiece causes the reed to press against the mouthpiece. The wave of low-pressure air moves down the bore of the clarinet and arrives at the first open hole.

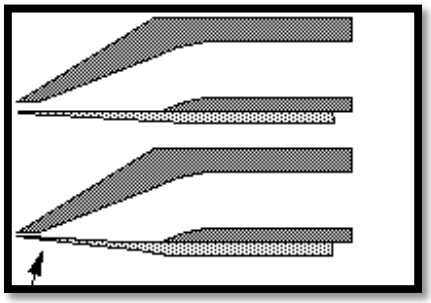


Figure 12: The movement of a clarinet reed when air moves through.

Outside air is sucked into the bore by the air moving inside the clarinet mixing with the low-pressure air to create high-pressure air. The air then moves back toward the mouthpiece, changing all the air inside the clarinet to high-pressure air and returning the reed to its original position. Another dose of low-pressure air from the player collides with the returning air and all the air moves toward the first open hole. It arrives at the open hole and forces air that is coming into the bore to exit through the hole. This continues to happen until the player stops air flow into the clarinet.

[30] (Wolfe, Music Acoustics, Physics, UNSW, 2010), (Clarinet Acoustics, 2011)

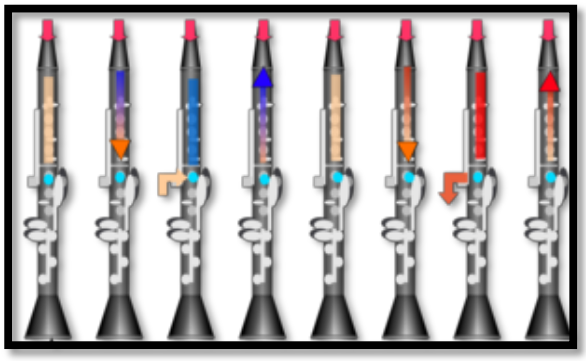


Figure 13: The process of air moving through the clarinet to create sound.

Reed vibration controls air flow into the clarinet just as much as air flow controls reed vibration—too much air flow or reed vibration will completely sop the sound. In the same light, not enough air flow or reed vibration is not enough to create a sound.

Pitch is changed when players cover tone holes and press down keys. Lower sounds are created when more tone holes and keys are covered. It will take air longer to travel through the instrument forcing it to move slower. As keys or tone holes are released, air will move faster because the air column will get shorter and sound will gradually get higher.

Natural Tendencies[31]

The clarinet's octaves break down as follows:

- The first octave occupies the fundamental.
- The second octave occupies the third partial.
- The third octave occupies the fifth partial.

The clarinet is unique in that it produces only the odd-numbered partials in its sound, making it over-blow a twelfth when the register key is used. For example, when the register key is added to the fingering for chalameau A, it sounds twelve notes higher as fourth-space E. Using the register key

[31] (Westphal, 1990)

eliminates the fundamental frequency from the clarinet sound causing the clarinet to vibrate in two parts—from the mouthpiece to the register key and then through the rest of the instrument. Air will exit through the register key which is small in diameter so air will continue to the first open tone hole. The same effect occurs when the first finger is lifted, but the third octave is heard instead.

Figure 14: The register key on clarinet.

The clarinet has several notes that teachers and students need to be familiar with to maintain good intonation. Figure 15 shows the typical tendencies of the clarinet. Most notes on the clarinet tend to be sharp, especially in the throat tone notes, and only a couple notes that are considered flat. Like on the flute, there is no set pattern when figuring out if a note is flat or sharp. Because the clarinet over-blows a twelfth instead of an octave, it tends to have more intonation problems than other woodwinds.

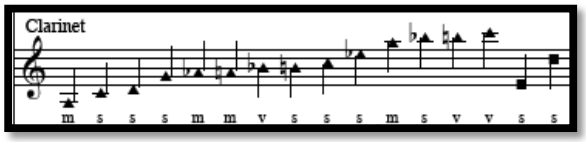
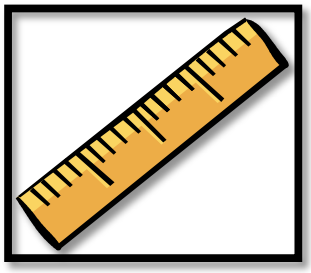


Figure 15: Pitch tendencies of the clarinet. The notes with triangle note heads are sharp notes. Notes with square note heads are flat notes. S stands for slightly, M stands for moderately, and V stands for very. The first note would be slightly sharp. Notes that are left off are considered in tune.

There are many factors contributing to poor clarinet intonation. If students are able to anticipate a problem before it happens, the overall intonation of the section and the band will improve. Directors should be aware of the clarinet's natural tendencies and be able to teach students how to fix out of tune notes. However, what may be a problem for one student may not be an issue for another because students play on different equipment. Students should be provided with an individualized tuning plan so they understand how to make every note in tune.[32]

General Tuning Procedure[33]

Before accurately tuning individual notes, the player must first get the clarinet in tune with itself to prevent the natural tendencies from getting worse. Students should follow this procedure:



1. **Adjust the barrel so that it is pulled out an eighth of an inch.**

[32] See page 54 for the Clarinet Pitch Tendency Packet.
[33] (Clarinet Tuning Chart, 2011), (Allen, 2002-2007)

Clarinets are not made to be played with the barrel pushed all the way in. Pulling the barrel out an eighth of an inch will allow the player space to adjust if they need it. If the barrel is pushed in all the way and the student needs to adjust, they cannot make the proper adjustment.

2. **Warm up for at least ten minutes.**

Cold instruments tend to play flat. By warming up for at least ten minutes, the clarinet will adjust to the player's body temperature and the reed will be vibrating properly. Avoid tuning if players have been sitting in rehearsal for a short amount of time. The reed will begin to dry out and the clarinet will start to cool down to the temperature of the room.

3. **Using a good tone, play clarion C at mezzo forte.**

Dynamics greatly affect the clarinet's intonation. A mezzo forte dynamic affects intonation the least and requires very little manipulation by the player. Students should always focus on using their best tone because a poor tone quality results in poor intonation. Clarion C (concert B-flat) is the best pitch for a clarinet to tune to because it involves all sections of the clarinet and the throat tones will be closer in tune.

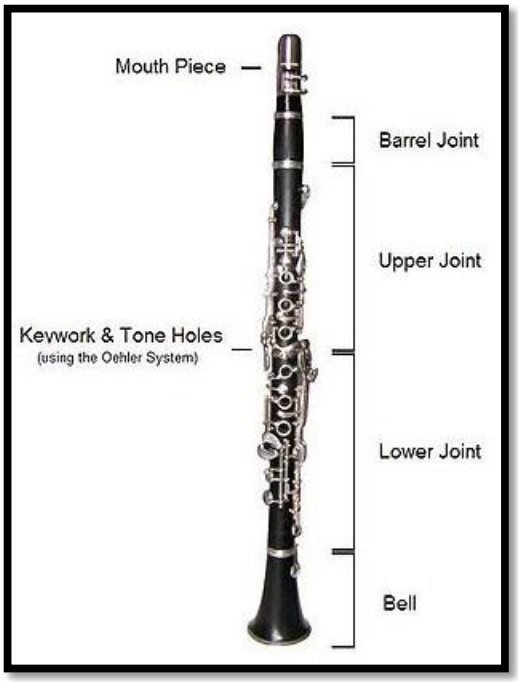


Figure 16: The barrel of the clarinet is located between the mouthpiece and upper joint.

4. **Adjust the barrel by pulling out if the C is sharp and pushing in if the C is flat.**

The clarinet can adjust its general tuning by pulling out or pushing in the barrel. Doing so will put the clarinet at a different length which will slightly change the frequency of the tuning note. It is recommended to adjust the barrel *only* for the purpose of getting the clarinet in tune with itself. If every out of tune note was adjusted with the barrel, the intonation of the natural tendencies would get worse. There are schools of thought that insist on also adjusting the middle joint of the clarinet; however this will cause the bridge key to not function properly.

Causes and Solutions to Intonation Problems[34]

Embouchure

A strong clarinet embouchure should be emphasized from the first sounds and should continue throughout a student's playing career. The embouchure is the controlling factor of intonation as well as tone quality. If the embouchure is too loose, pitch will be flat while a tight embouchure will be sharp.

If there is too much mouthpiece in the mouth, overall intonation will be flat and tuning individual notes will be very difficult. In the same light, too little mouthpiece will make clarion and high register notes sound sharp. To find the correct amount of mouthpiece that should go inside the mouth, insert a piece of paper into the space between the reed and mouthpiece. The spot where the paper stops dictates where the lips should be placed on the mouthpiece. This will give students a visual idea of how much mouthpiece need to go into their mouth. But keep in mind that small adjustments to that amount will need to be made based on the natural tendencies of the horn.

The clarinet needs to be held at a forty-degree angle so the embouchure can control the tone and support the reed. If the horn is held too close to the body, there will be too much lower lip on the reed causing the pitch to be sharp. If the horn is held above a forty-degree angle, the embouchure cannot provide the correct amount of pressure on the reed, making intonation flat. This can be verified by having a student sustain a throat tone G while moving the instrument back and forth so they can hear the change in pitch.

[34] (Westphal, 1990)

Figure 17: A clarinet reed.

Reed

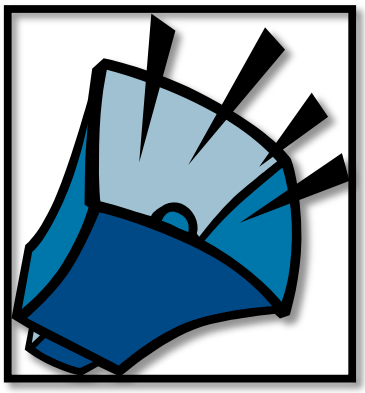
Like saxophone, oboe, and bassoon, a soft reed tends to make the clarinet sound flat while a stiff reed tends to make the clarinet sound sharp. If a student has to pull the barrel out a large amount, their reed is too stiff. Sanding the student's reed or giving them a softer reed will help. Soft reeds emphasize the clarinet's natural pitch tendencies and they do not respond well to embouchure adjustments. The director can clip the tip of the student's reed a little to make it harder or give the student a stiffer reed.

Good reeds are more likely to play in tune for the entire range of the instrument. Monitor students' reeds so that they are constantly playing on newer reeds. Older reeds tend to be softer as well and embouchure adjustments will be difficult to control. Adjustments to an old reed will also be ineffective.

Dynamics

Changes in dynamics also affect intonation. Maintaining good breath support and making subtle embouchure adjustments will help alleviate these issues. As a clarinet

gets louder, the intonation will get flatter because lower lip pressure becomes more relaxed. Lip pressure should increase around the entire embouchure to bring the pitch up. The maximum length of the reed will then vibrate and the pitch will rise. Students tend to pinch the reed with their lower lip when playing soft causing less of the reed to vibrate which also raises pitch. If they relax the lower lip to create more of an "O" shape with their mouth, more of the reed will vibrate and the pitch will naturally lower.[35] It is important to remember that when playing pianissimo and fortissimo, the amount of adjusting needs to increase to accommodate for intonation changes.

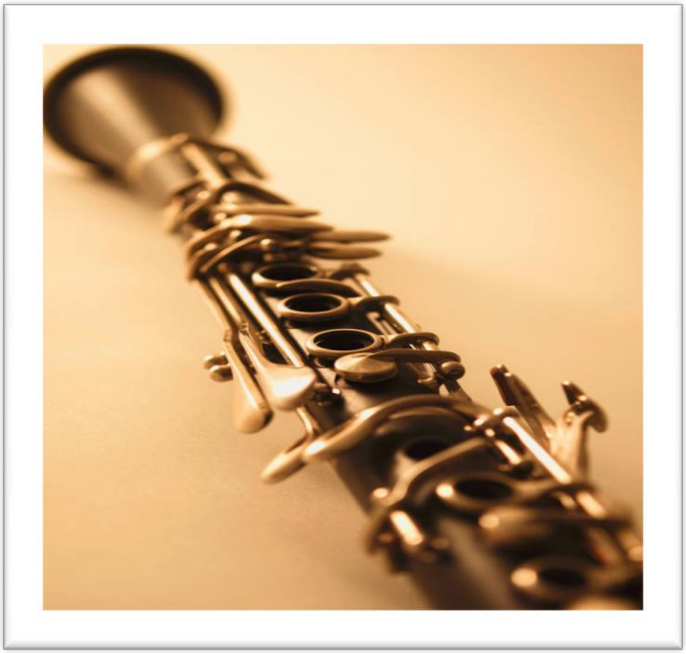


Mechanical Factors

Students should regularly be taught to monitor the condition of keys, pads, and rods on their clarinet. This will not only keep the instrument in good playing condition, but will also help intonation. Unadjusted keys will affect intonation the most when they are the first open key of a fingering. All keys should close and open at the same height. A key that is too close to the tone hole will flatten the pitch and a key that is too open will raise the pitch. Bent keys will also contribute to the flatness of a pitch. If there are mechanical problems, the band director or repair technician should fix them by tightening or loosening adjustment screws.

Dirt tends to build up in the open tone holes and can be prevented by swabbing out the instrument on a daily basis. If a mouthpiece is dirty, it can also affect intonation. Regular cleaning of the mouthpiece will remove the dirt and help intonation.

[35] (McKee, 1987)



Alternate Fingering Chart (Clarinet)

Purpose of Alternate Fingerings

Alternate fingerings are used primarily for technical ease on clarinet. However, there are fingerings that can be used to improve intonation for some notes. Using alternate fingerings to adjust the pitch of a note should be used as a "last resort" method. Students should be taught how to make intonation adjustments with the embouchure and reed with standard fingerings before alternate fingerings are taught. Not all of the fingerings included in this chart include every note on the Pitch Tendency Chart[36] nor will they be useful to every player. Some of the fingerings will be out of tune to a greater or lesser degree for some players.

How to Read the Alternate Fingering Chart

- The first column shows the note the alternate fingering affects.
- The second column shows the typical tendency of the note.
- The third column shows the alternate fingering.
- The fourth column explains how the alternate fingering will improve the intonation of that note.

The pitch tendency symbols used in this fingering chart will explain the typical tendency of a note.

shows that a note tends to be slightly flat.

shows that a note tends to be slightly sharp.

shows that a note tends to be moderately sharp.

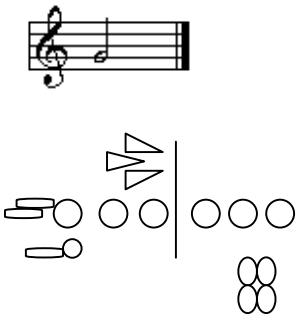
shows that a note tends to be very sharp.

Most fingerings in this chart are actually slight deviations from the standard fingering. If a key is used in the standard fingering, it will be colored in black.

When a key is not typically used in the standard fingering, it will be colored in yellow.

Examples of Alternate Fingerings

The act of closing one or more tone holes in addition to those that are normally closed in a standard fingering is called dampening.[37] Doing so will slightly lower the pitch of a note and adjust the length of the air column. For example, throat tone G requires no tone holes to be covered when using the standard fingering, forcing air to exit at the top of the horn.

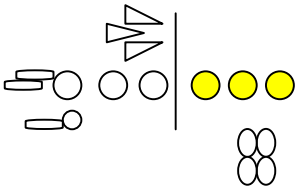


To lower the pitch of this note, add fingers four, five, and six to close the open tone holes on the lower joint of the clarinet. Air

[36] See page 61 for the Clarinet Pitch Tendency Chart.

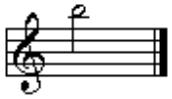
[37] (Westphal, 1990)

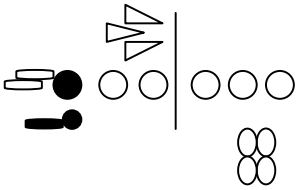
will then be forced to exit out of the upper joint of the clarinet and lower the pitch of this slightly sharp note.[38]



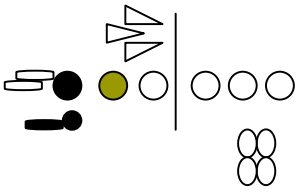
Shading is another technique clarinet players use to help improve intonation. To do this, the key of the first open tone hole is gently pushed down until the note sounds in tune. Players have to listen carefully or rely on an electronic tuner when using this technique. If the key is pushed down to completely cover the tone hole, the note will change pitch.

This technique is used to help lower the pitch of high B, which is a very sharp note. The standard fingering for this note is:



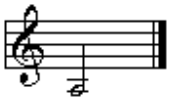
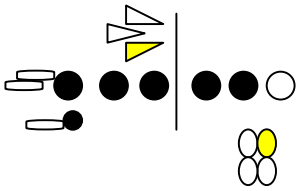
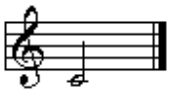
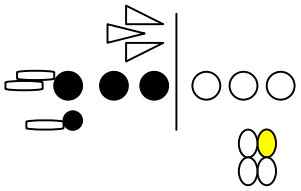
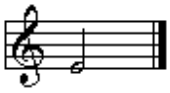
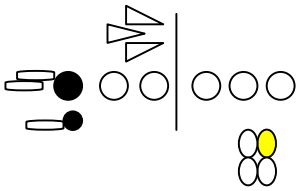
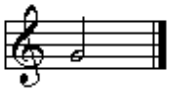
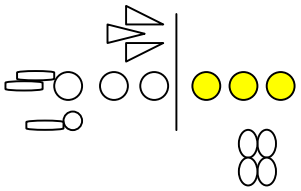
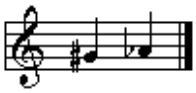
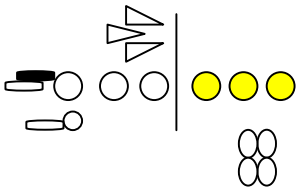
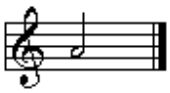
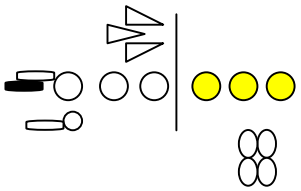


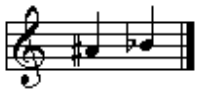
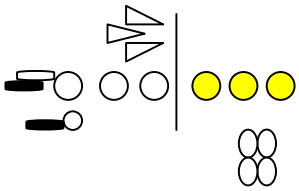
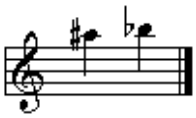
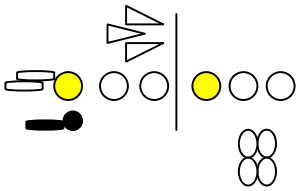
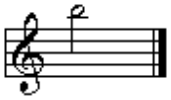
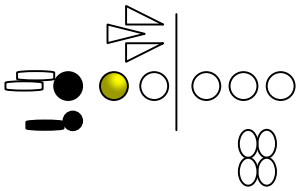
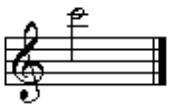
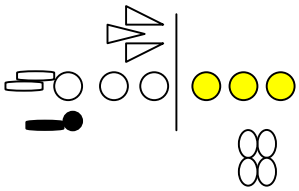
The fingering below shows finger two shading the tone hole to lower the pitch of high B:[39]



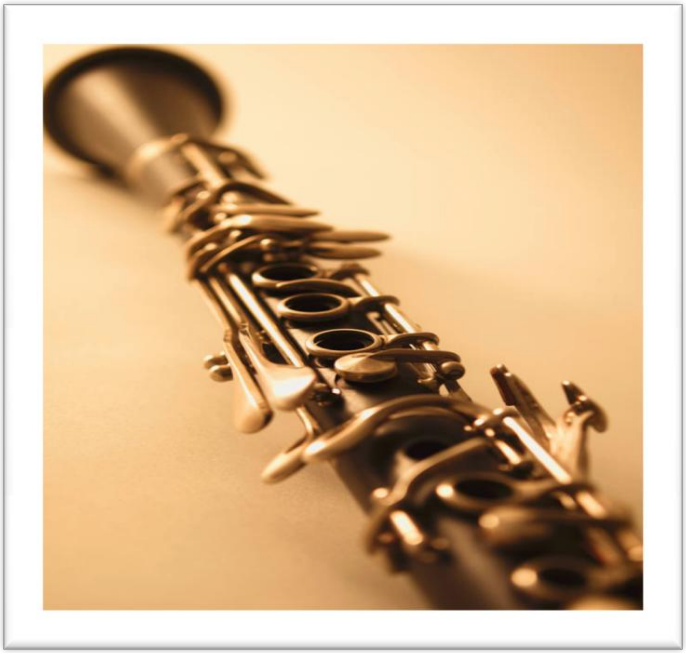
[38] (Clarinet Fingerings, 2008)
[39] (Clarinet Tuning Chart, 2011)

As stated earlier, this chart is to be used as a last resort. Whether or not this fingering chart will be distributed to students is at the discretion of the director because students may mistake alternate fingerings for the standard ones. Also, this chart would not be appropriate for students who are in the first couple years of their playing career. These students need to learn the basics of clarinet playing and how to make intonation adjustments with their embouchure.

Note	Tendency	Fingering	How It Helps
			Adding the right hand F key and left hand E key will lower the pitch of this moderately sharp note.
			Adding the right hand F key will lower the pitch of this slightly sharp note.
			Adding the right-hand F key will raise the pitch of this slightly flat note.
			Adding fingers 4, 5, and 6 will lower the pitch of this slightly sharp note.
			Adding fingers 4, 5, and 6 will lower the pitch of this moderately sharp note.
			Adding fingers 4, 5, and 6 will lower the pitch of this moderately sharp note.

			Adding fingers 4, 5, and 6 will lower the pitch of this very sharp note.
			Using the fingering of 1 and 4 will help to lower the pitch of this slightly sharp note.
			Gradually shade finger 2 over the tone hole until the pitch of this very sharp note will lower.
			Adding fingers 4, 5, and 6 will lower the pitch of this very sharp note.

(Clarinet Fingerings, 2008) (Clarinet Tuning Chart, 2011) (Kollman) (The Woodwind Fingering Guide, 1998-2005)



Pitch Tendency Packet (Clarinet)

Name_____
Date_____

Materials needed:

1. Instrument
2. Pencil
3. Electronic Tuner
4. Someone to help you (either a friend, parent, or band director)

Knowing the tendency of each note is important!

Playing the general tuning note and making a physical adjustment is not enough to play in tune. Each note on your instrument will play flat, sharp, or in tune. The purpose of the Pitch Tendency Packet is to teach you what notes are in tune and out of tune on your instrument. Once you discover what the out of tune notes are, you can manipulate the notes to play in tune by making small adjustments when you are playing.

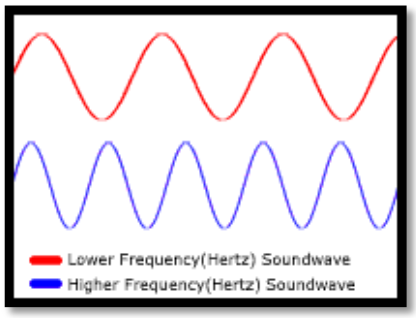
This packet will help you develop an individualized plan for tuning. As you discover which notes need special attention, it is your responsibility as a musician to figure out how **you** can play the note in tune. The tricky thing about this process is what gets you to play in tune may not work for your stand partner! Things like dynamics, reeds, embouchure, and even the brand of instrument can cause one person to play a note in tune while another plays the same note out of tune.

The last page of this packet will provide you with some tricks of the trade that you can experiment with those tricks to improve those out of tune notes. You will notice that once you start focusing on making those out of tune notes sound in tune, your tone will improve and your musician's instincts will start to anticipate intonation problems before they happen.

What is intonation?[40]

A musical pitch you hear is actually a sound wave going through your instrument. The sound wave can travel at different speeds, or frequencies, depending on what finger combinations you are using. More fingers usually means a lower pitch and a slower sound wave, but adding playing the note at a higher octave will make the sound wave move faster.

Frequency is measured in cycles per second, or Hertz (hz). One cycle per second is equal to one Hertz. Musicians have a standard frequency that we agree will make us sound the most in tune. That frequency is measured at 440 hz. Anything higher or lower than that will not agree with the musicians' or the audience's ears.

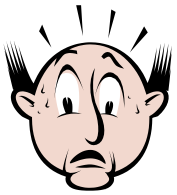


An example of sounds at different frequencies.

A Case of the "Wah's"[41]

If two musicians are playing the same note at exactly the same time, they're playing in tune, right? Not really. Have you ever heard two musicians play the same note at the exact same time, but instead it sounds like "wah-wah-wah"? This means the musicians have a case of the "wah's", a disease that cause musicians to play out of tune!

[40] (Pitch (music))
[41] (Hein, 1981)



You are actually hearing the musicians play out of tune with each other. Each note's sound wave is moving at a slightly different frequency, making the sound waves clash. Both notes are fighting so much to be the main note heard that they are cancelling each other out!

One of the musicians should make an effort to get rid of the "wah's" by making adjustments to the way they are playing their instrument or by physically adjusting something on their instrument. If the musician makes the right adjustment, the "wah's" will start to disappear and the note will be in tune. However if the wrong adjustment is made, the "wah's" will move faster.

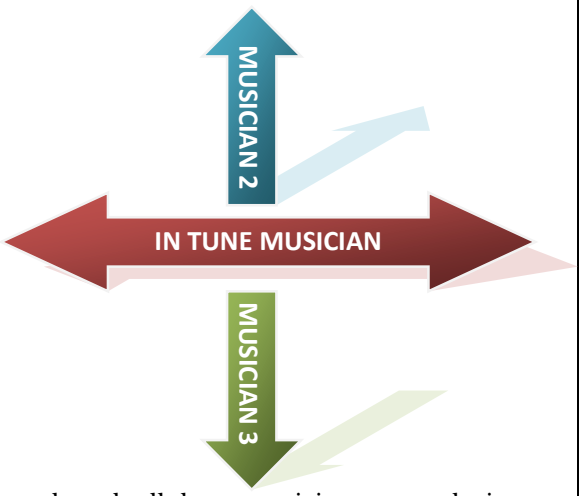
Flat vs. Sharp[42]

Musicians think of intonation as a vertical concept. The straight line below represents In Tune Musician, a musician who always plays in tune.

[42] (Pitch (music))

Now, another musician will play the same note along with In Tune Musician.

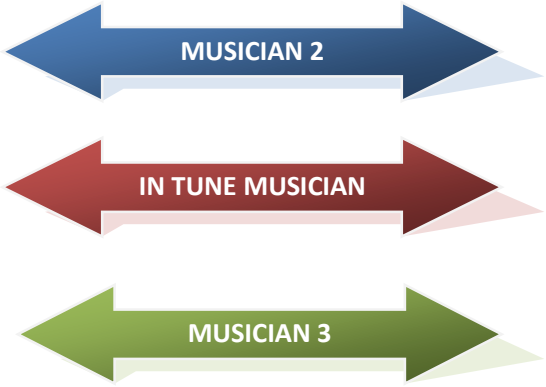
Finally, a third musician will play the same note with the other musicians.



Even though all three musicians were playing the same note, Musicians 2 and 3 were playing their notes at different frequencies.

Musician 2's note was played at a slightly higher frequency than In Tune Musician. Even though the both musicians were playing the same note, Musician 2's note sounds a little higher than In Tune Musician's. When notes vibrate at a slightly higher frequency than 440 hz, they are considered sharp. Musician 2 will have to lower his frequency so he can play at the same frequency as In Tune Musician.

What about Musician 3? Well, his note was played at a slower frequency than In Tune Musician's. He sounds a little lower because his note vibrates slightly slower than 440 hz. When notes vibrate at slightly slower frequencies, they are considered flat. Musician 3 will have to raise his frequency so he can play in tune with the others.



How to Improve Intonation

Intonation will not get better by itself; it is something that will constantly need to adjust no matter your musical experience. Professional musicians struggle with intonation issues even with all the experience they have. Constant practice and reinforcement will help you understand intonation. Here are some suggestions to help you improve your intonation:

Fill out the Pitch Tendency Chart. The chart will tell you what notes are the notes you need to focus on. As you advance in your playing, your pitch tendencies may change. Continue to fill the chart out every four to six months to see if there are any changes.

Practice making the adjustments!
Remember, it is your responsibility as a member of the ensemble to play in tune. If you do nothing to improve intonation, nothing will get better. Your brain will train itself to make the adjustment automatically once you've found what works and practice making those adjustments every time you see

the note. If you focus on improving only five notes a week in your practice time, you will see huge improvements in your playing.

Use a friend, an electronic tuner, or a tuning CD to help train your ear. If your ear doesn't know what bad intonation sounds like, then you will always play out of tune. Here are some ways to help train your ear:

- Have a friend help you by having them play each note as the In Tune Musician. If you have the "wah's", then you need to adjust to cure yourself. Have them play again and see if you adjusted correctly. Remember, if the "wah's" get better, you made the correct adjustment!
- An electronic tuner will give you a visual measurement of how flat or sharp you are. Play a note you're your eyes closed and guess if it's flat or sharp. Electronic tuners are usually around $25 and can be purchased at any music store or website. Korg brand tuners are the most common.
- Some electronic tuners also have a function where they can produce pitches so you can check for the "wah's". This is a great function to use if you are by practicing by yourself.
- "The Tuning CD" is available for download on iTunes and can be purchased online. It is a CD containing all the notes of the chromatic scale that you can play along with to check the "wah's".

Memorize your pitch tendencies. You can do this by creating flashcards or writing the tendencies in your music.

The Results...

Poor intonation doesn't fix itself and is not pleasant to listen to. If you focus and stay consistent in your efforts to improve your intonation, you will also hear improvement in your tone quality. It will start to become second nature to you and you will begin to adjust your pitch without even thinking about it.

Electronic Tuner How-to Guide

1. Turn your tuner on by pushing the on/off button.
2. Check the upper left-hand corner to see if your tuner is calibrated to 440 hz. If it is not, push either the calibration up button or the calibration down button until you see 440 on the screen.
3. Set the tuner on your stand so the screen is facing you. Make sure the microphone (indicated by the word "mic") is not covered up.
4. Play a note to move the needle. The concert pitch letter name of the note you are playing will be shown in the upper right-hand corner of the screen.
5. If you are...
   ...flat, the needle will move to the left and the light next to the flat sign will light up.
   ...in tune, the needle will stand straight up and the green light will light up.
   ...sharp, the needle will move to the right and the light next to the sharp sign will light up.
6. If your tuner has the option and wish to have the tuner produce a sound while you are playing, hit the sound button on the tuner. Hitting the sound button again will turn off the sound.
7. Turn your tuner off by pushing the on/off button when you are finished using it.

The meter on a tuner measures pitches in cents. In tune notes are measured at zero cents, which makes the needle stand straight up. As a note gets progressively flatter, the needle will move to the left measuring the note in negative cents. When a note gets increasingly sharper, the needle will move to the right measuring the note in positive cents.

Completing Your Pitch Tendency Chart

Make sure you have someone to help you complete this!

1. Fill out the top portion of the guide as completely as you can. Ask your band director for help if you have questions about the brand of your instrument or reed.
2. Warm up for at least ten minutes to allow your instrument to adjust to your body temperature.
3. Turn the electronic tuner on and get your instrument in tune with itself using the following procedure:

    1. Adjust the barrel so it is pulled out an eighth of an inch.
    2. Using a good tone, play C at a mezzo forte volume with no vibrato.
    3. Adjust the barrel by pulling out if the note was sharp or pushing in if the note was flat.
    4. Continue this process if your first attempt was not in tune.

4. Give the tuner and your Pitch Tendency Chart to your partner so they can fill it out while you play.
5. It is best to start at concert B-flat and work your way down and then start again at concert B-flat and work your way to the top to get the most accurate reading. Have your partner tell you what note to play. Play the note and have your partner write down what your pitch tendency is based on the chart below.

Pitch Tendency Category	Cents
Slightly flat (Sb)	-1 to -10 cents
Moderately flat (Mb)	-11 to -25 cents
Very flat	-25 cents to -50 cents
Slightly sharp (S#)	+1 to +10 cents
Moderately sharp (M#)	+11 to +25 cents
Very sharp (V#)	+25 cents to +50 cents

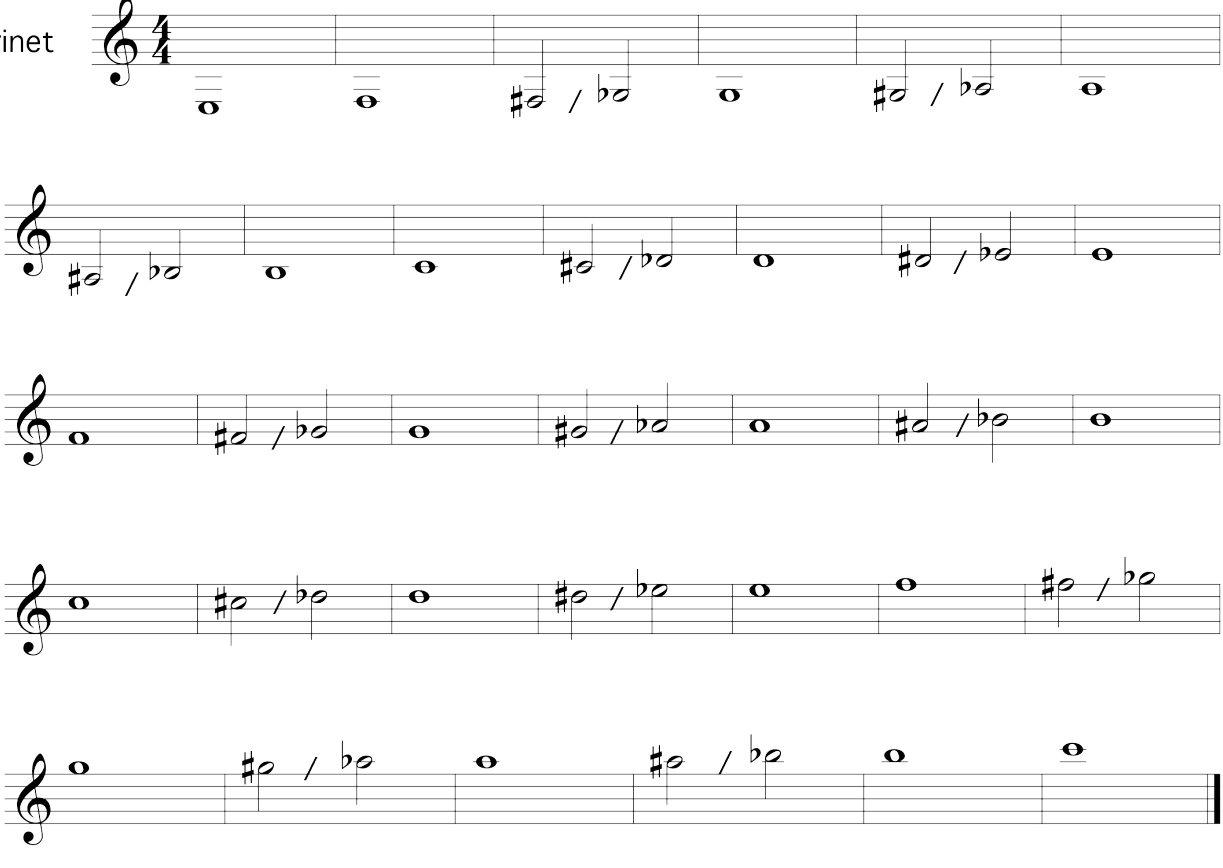
6. Once you have completed the chart, return it to your director. A copy will be made for their files and your completed chart will be returned to you.
7. Using the *Clarinet Quick Fixes* chart and an electronic tuner, find the tricks for each note that will make them in tune. Make a note of what works and use those tricks each and every time you play.

Clarinet Pitch Tendency Chart

Name_____ Brand of Instrument_____

Strength of Reed_____ Brand of Reed_____

B♭ Clarinet



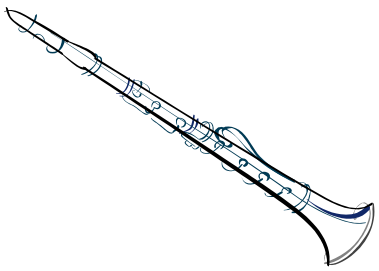
Clarinet Quick Fixes

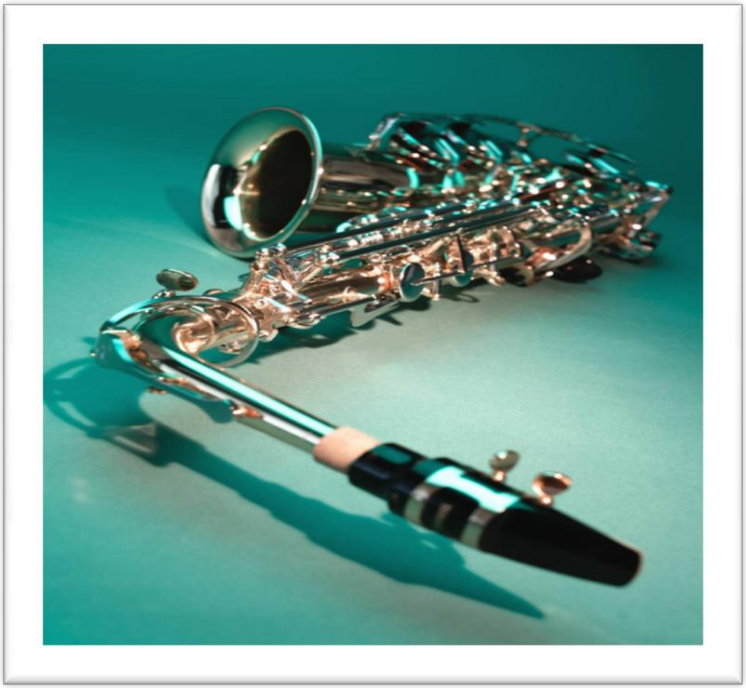
If the note sounds sharp....

- ☑ Your embouchure may be too tight. Lip the note down by relaxing the lower lip slightly.
- ☑ You may not have enough mouthpiece in your mouth. Put more mouthpiece in your mouth.
- ☑ The reed may be too hard. Ask your band director for a softer reed or if they can sand the reed for you.
- ☑ Make sure the clarinet is held at a forty degree angle.
- ☑ If the music calls for a soft dynamic, relax the embouchure slightly and slow down the speed of air entering the clarinet

If the note sounds flat....

- ☑ Your embouchure may be too loose. Lip the note up by increasing lower lip pressure on the reed.
- ☑ You may have too much mouthpiece in your mouth. Put less mouthpiece in your mouth.
- ☑ The reed may be too soft. Ask your band director for a harder reed or if they can clip the tip for you.
- ☑ The reed may be too old. Ask your band director for a new reed.
- ☑ Make sure you are blowing fast enough air into the clarinet.
- ☑ Make sure the clarinet is held at a forty degree angle.
- ☑ If the music calls for a loud dynamic, increase the pressure of your lower lip against the reed.





Saxophone

Sound Production[43]

The saxophone is a single reed instrument that cannot produce sound unless air forces the reed to vibrate against the mouthpiece. Once the correct saxophone embouchure is formed around the mouthpiece, air is blown into the instrument where it moves towards the bell of the saxophone or first open tone hole. Low-pressure air is created when air from the player's mouth is forced through the small opening between the mouthpiece and reed. The force of the bottom lip against the outside of the reed and air moving inside the horn causes the reed to press against the mouthpiece. The wave of low-pressure air moves down the bore of the saxophone and arrives at the first open tone hole. Outside air is forced into the saxophone where it combines with low-pressure air.

The air mixes together to form high-pressure air and moves back up the bore. As it progresses towards the mouthpiece, all of the air inside the saxophone changes to high-pressure air and the reed returns to its original position. Another dose of low-pressure air from the player collides with the returning air and it moves toward the first open hole. It arrives at the open hole and forces air coming into the bore to exit through the hole. This is a very speedy process and happens numerous times to create a musical sound.

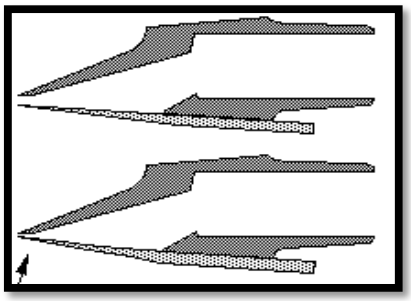


Figure 18: Saxophone reed opening and closing when air moves through the mouthpiece.

[43] (Wolfe, Music Acoustics, Physics, UNSW, 2010), (Clarinet Acoustics, 2011)

It is important to note that if the lower lip squeezes too much against the reed and presses the reed on the mouthpiece, air flow will cease. Conversely, a weak air flow will not make the reed vibrate. Pitch is changed when players press down keys to close and open tone holes. More keys and tone holes used to create a pitch will take air longer to travel through the saxophone. In this case, the human ear will hear a low sound. As the amount of keys used to create a note decreases, the bore of the saxophone is not as large. Air will travel faster through the bore and a high sound is heard.

Natural Tendencies[44]

The saxophone's natural overtone series breaks the octaves down in the following way:

- The first octave occupies the fundamental.
- The second octave occupies the second partial.
- The last few notes of the range use a combination of the second and third partials.

Opening the octave key on saxophone will force the instrument to vibrate at the top of the neck and also at the first open tone hole on the horn's body. The octave key is relatively small in diameter so air will travel through the body of the saxophone to the first open tone hole. While the fingers combine to play a specific note, adding the octave key will make the note sound eight notes higher. This breakdown causes the extreme low and high notes to be sharp while the upper portion of the second octave tends to be flat.

[44] (Westphal, 1990)

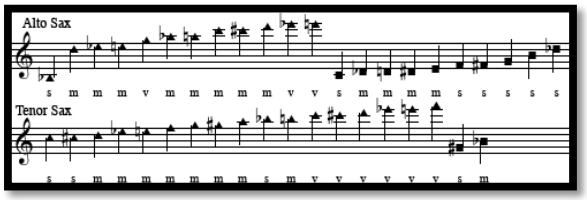


Figure 19: Pitch tendencies of alto saxophone (top) and tenor saxophone (bottom). The notes with triangle note heads are sharp notes. Notes with square note heads are flat notes. S stands for slightly, M stands for moderately, and V stands for very. The first note would be slightly sharp. Notes that are left off are considered in tune.

When broken down as individual pitches, however, there is no specific pattern to find the tendencies of the alto saxophone, but the tenor saxophone notes are mostly sharp. Figure 19 displays the typical tendencies of the alto and tenor saxophones. Each note on the chart should be played using the standard fingering with adjustments being controlled by the player. Alternate fingerings can be used, but as a last resort.[45]

It is important to mention that the natural tendencies for the saxophone presented in this book are *typical* and are not experienced by all saxophone players. A very sharp note on one saxophone could be perfectly in tune on another. Because of this, saxophone players need to be made aware of natural pitch tendencies and monitor them regularly so they understand what affects them individually.[46] The band director also should know what the natural tendencies are and provide students with techniques to play notes in tune. This will help improve the intonation as well as tone for all saxophone sections.

General Tuning Procedure[47]

Before accurately tuning individual notes, the player must first get the saxophone in tune with itself to prevent the natural tendencies from getting worse. Students should follow this procedure to set the overall intonation:

1. **Adjust the mouthpiece so that about half of it covers the cork.**

Saxophones are not made to be played with the mouthpiece all the way on the cork. Putting the mouthpiece on so it covers about half the cork will give the player some room to make adjustments if they sound flat or sharp.

2. **Warm up for at least ten minutes.**

A cold saxophone is extremely flat. By warming up for at least ten minutes the saxophone will adjust to the player's body temperature and the reed will vibrate properly. Avoid tuning if players have been sitting in rehearsal for a short amount of time. The reed will start to dry out and the horn will start to adapt to the temperature of the room.

3. **Using a good tone, play the tuning note at mezzo forte with no vibrato.**

Dynamics greatly affect the saxophone's intonation. A mezzo forte dynamic affects intonation the least and requires very little

[45] Alternate fingerings can be found on page 68.
[46] See the Pitch Tendency Packet for Saxophone on page 74.
[47] (Thomas, 2003), (Allen, 2002-2007)

manipulation by the player. Students should always focus on using their best tone because a poor tone quality results in poor intonation. Alto saxophones should use a top line F-sharp (concert A) while baritone saxophones use the lower F-sharp. Tenor saxophones should use second line G (concert F). The notes mentioned are the best notes for players to get their horn in tune with itself because they are naturally in tune notes and will require little adjustments with the embouchure. Vibrato should be avoided because it actually causes the pitch to move between flat and sharp to create the pulses.

4. **Adjust the mouthpiece by pulling out if the tuning note is sharp and pushing in if the tuning note is flat.**

The saxophone is an instrument that can adjust its general tuning by pulling out or pushing in the mouthpiece. Doing so will put the saxophone at a different length to change the frequency of the tuning note. It is recommended to adjust the mouthpiece *only* for the purpose of getting the saxophone in tune with itself. If every out of tune note was adjusted with the mouthpiece, the intonation of the natural tendencies would get worse.

Causes and Solutions to Intonation Problems[48]

Figure 20: A saxophone reed.

Reed

Good reeds will more likely play in tune for the entire range of the instrument. Monitor students' reeds so that they are constantly playing on newer reeds because old reeds make intonation difficult to control. Also, monitor the strength of the reed students are using and adjust as they advance. Soft reeds have difficulty responding to embouchure adjustments and are generally flat. A student playing on a softer reed should be given a harder reed to raise the pitch. Harder reeds tend to be sharper in pitch, but also stiffer making it difficult to adjust intonation problems.

Embouchure

Like the other woodwind instruments, a good embouchure will control intonation. A strong embouchure should be emphasized from the first sounds and should continue throughout a student's playing

[48] (Westphal, 1990)

career. If the embouchure is too loose, pitch will be flat while a tight embouchure will be sharp.

The amount of mouthpiece a student puts in their mouth will also affect intonation. If students put too little mouthpiece in their mouth, the reed cannot vibrate properly. As a result, the normally sharp upper range will be flat. Students who do not have enough mouthpiece in their mouth tend to "bite" on the reed with their lower jaw in an effort to play in tune. Too much mouthpiece in the mouth will cause the overall intonation of the horn to be flat. The vibrating area of the reed is too far in the mouth making embouchure adjustments ineffective.

To find the correct amount of mouthpiece needed inside the mouth, insert a piece of paper into the space between the reed and mouthpiece. Where the paper stops dictates how much mouthpiece should go into the mouth. This will give the student a visual idea of how much mouthpiece should go into the mouth. Keep in mind that small adjustments will still need to be made based on the natural tendencies of the horn.

The process of "lipping" a note flat or sharp can be done with the embouchure to make slight adjustments to an individual pitch. "Lipping down" a note will make a note flatter and is done by slightly relaxing the lower jaw. The opposite effect of "lipping up" is done by slightly increasing pressure of the lower jaw on the reed to make a note sharper.

Mouthpiece Angle

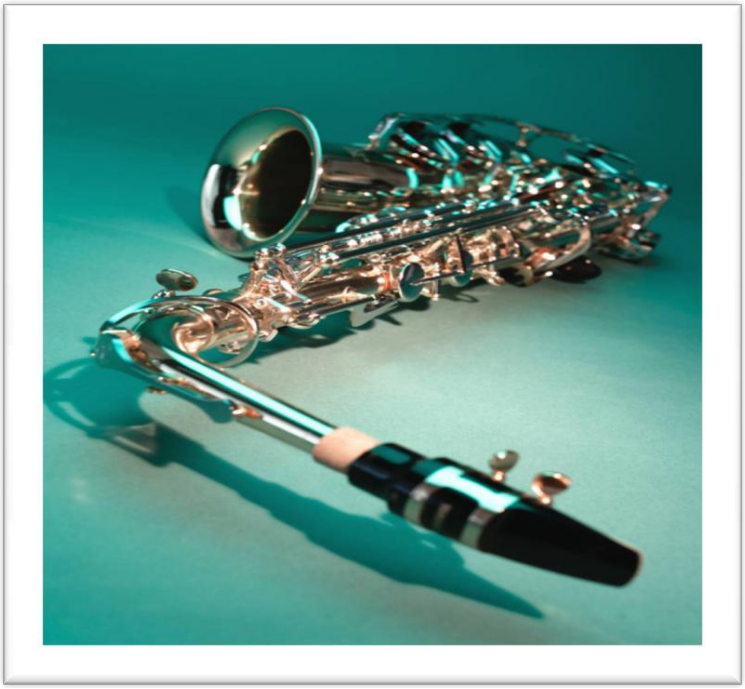
The upward angle of the mouthpiece as it enters the mouth affects intonation and is controlled by the angle the horn is held. If the horn is held too far forward, the mouthpiece will go straight into the mouth. The embouchure cannot support the reed and pitch will be flat. Students who hold the saxophone too far back will play with an overall sharp pitch. The mouthpiece will be at too much of an upward angle causing the lower lip to not support the reed. To find a student's correct playing angle, have the student sustain third-space C-sharp while moving the instrument back and forth to hear the change in pitch.

Dynamics

As saxophones play louder, they tend to flatten because pressure from the lower lip decreases. To raise the pitch, the player should open the embouchure and increase the pressure of both lips around the mouthpiece. In softer dynamics, the saxophone tends to play sharp because the player will bit with their lower jaw. To lower the pitch, drop the lower jaw and slow the speed of air entering the horn down. Dropping the lower jaw slightly will also allow the reed to vibrate at the correct speed.

Mechanical Factors

Students should be taught to regularly monitor the condition of keys, pads, and rods on their saxophone. Not only will intonation remain stable, but the horn will remain in good playing condition. All keys should open and close at the same height. Unadjusted keys will affect intonation the most when they are the first open tone hole of a fingering. A key that is too close to the tone hole will flatten the pitch, but a key that is too open will raise the pitch. Leaky keys will interfere with response and also cause the notes to be sharp. Make sure adjustments screws on each finger key are allowing keys to seal properly and check post screws to see if they are properly adjusted. Bent keys will also contribute to the flatness of a pitch. If a mouthpiece is dirty, it can also affect intonation. Regular cleaning of the mouthpiece will remove the dirt and help improve intonation.



Alternate Fingering Chart (Saxophone)

Purpose of Alternate Fingerings

Alternate fingerings are used primarily for technical ease on the saxophone. However, there are fingerings that can be used to improve intonation for some notes. Using alternate fingerings to adjust the pitch of a note should be used as a "last resort" method. Students should be taught how to make intonation adjustments with embouchure adjustments using standard fingerings before alternate fingerings are taught. Not all of the fingerings included in this chart include every note on the Pitch Tendency Chart[49] nor will they be useful to every player. Some of the fingerings will be out of tune to a greater or lesser degree.

How to Read the Alternate Fingering Chart

- The first column shows the note the alternate fingering affects.
- The second column shows the typical tendency of the note.
- The third column shows the alternate fingering.
- The fourth column explains how the alternate fingering will improve the intonation of that note.

The pitch tendency symbols used in this fingering chart will explain the typical tendency of a note.

shows that a note tends to be moderately flat.

shows that a note tends to be slightly flat.

[49] See page 81 for the Saxophone Pitch Tendency Chart.

shows that note tends to be moderately sharp.

shows that a note tends to be very sharp.

Most fingerings in this chart are actually slight deviations from the standard fingering. If a key is used in the standard fingering, it will be colored in black.

When a key is not typically used in the standard fingering, it will be colored in yellow.

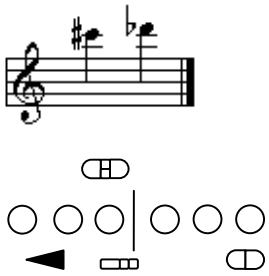
There are instances where eliminating one key from the standard fingering will improve intonation. The eliminated key will have a red X placed over it.

Some notes will have the more than one fingering for a note. The first fingering will always be the best option. Each fingering will adjust intonation, but will not be as helpful as the first fingering.

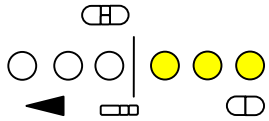
Examples of Alternate Fingerings

The act of closing one or more tone holes in addition to those that are already used in a standard fingering is called dampening. Pitch will be slightly lowered when using this technique. An example of lowering the pitch of a sharp note with dampening is high C-sharp. The standard fingering for this note does not require any

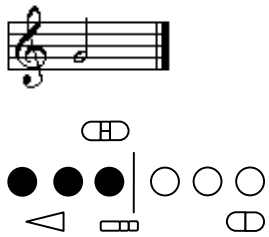
tone holes to be closed causing this note to be very sharp.[50]



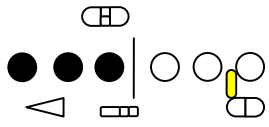
If the player uses fingers four, five, and six to close the tone holes, the pitch of this note will lower significantly.



Opening, or venting, tone holes in addition to those used in the standard fingering will help raise the pitch of typically flat notes. Second line G is a slightly flat note when played with the standard fingering:



Adding the chromatic F-sharp key will help raise the pitch.[51]



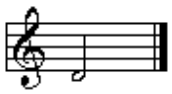
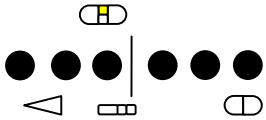
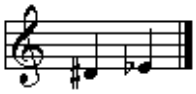
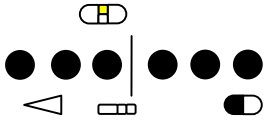
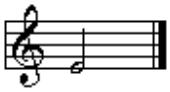
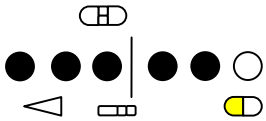
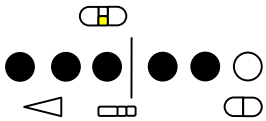
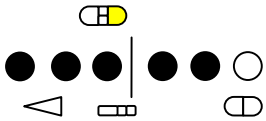
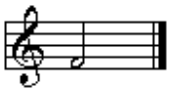
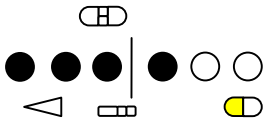
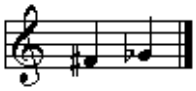
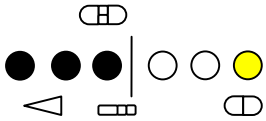
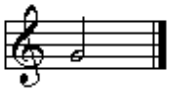
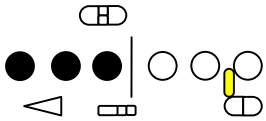
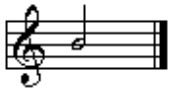
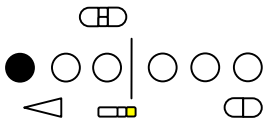
Westphal suggests some basic principles when considering venting and dampening:

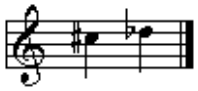
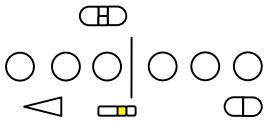
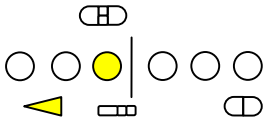
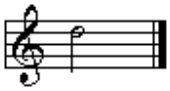
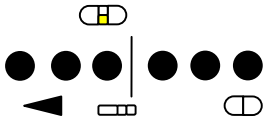
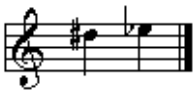
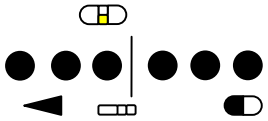
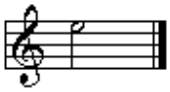
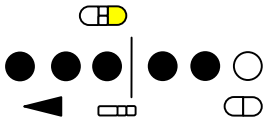
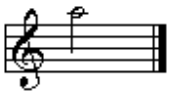
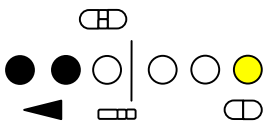
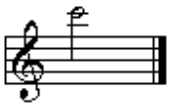
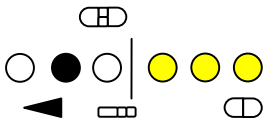
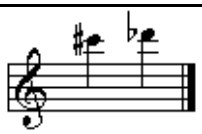
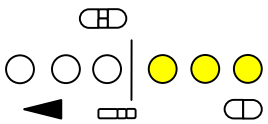
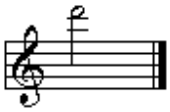
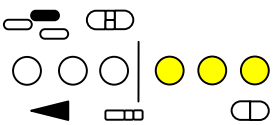
1. In general, opening tone holes will raise the pitch and closing tone holes will lower the pitch.
2. At least one tone hole, preferably two, below the last tone hole involved in the fingering must remain open.
3. The closer to this tone hole that additional holes are opened or closed, the greater the effect on the pitch; the farther from this tone hole, the less effect on the pitch.
4. One or more fingers may be added to the basic fingering to correct the pitch.
5. The amount of correction needed, if any, varies with the dynamic level being used.

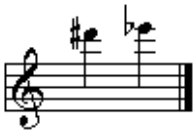
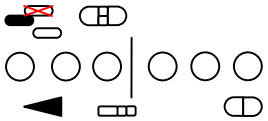
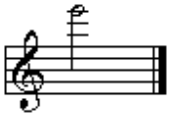
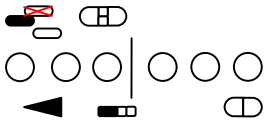
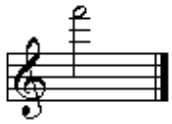
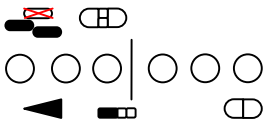
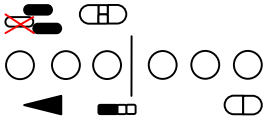
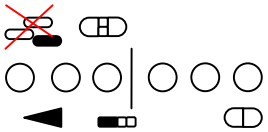
He also mentions that the use of venting and dampening varies from player to player and should only be used when embouchure and mouthpiece adjustments have not improved intonation.[52]

As stated earlier, this chart is to be used as a last resort. Whether or not this fingering chart will be distributed to students is at the discretion of the director because students may mistake alternate fingerings for the standard ones. Also, this chart would not be appropriate for students who are in the first couple years of their playing career. These students need to learn the basics of clarinet playing and how to make intonation adjustments with their embouchure.

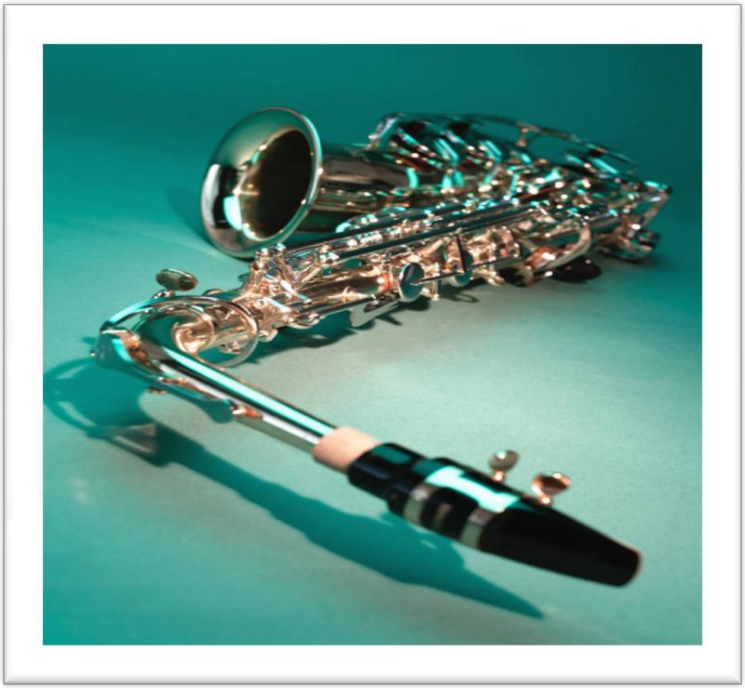
[50] (The Woodwind Fingering Guide, 1998-2005)
[51] (Saxophone Fingerings, 2008)
[52] Westphal, pg. 142

Note	Tendency	Fingering	How It Helps
	Mb		Adding the C# key will help raise the pitch of this moderately flat note.
	Mb		Adding the C# key will help raise the pitch of this moderately flat note.
	Mb		Adding the Eb key will help raise the pitch of this moderately flat note.
			Adding the B key will help raise the pitch of this moderately flat note.
			Adding the left hand Bb key will help raise the pitch of this moderately flat note.
	Sb		Adding the Eb key will help raise the pitch of this slightly flat note.
	Sb		Using finger 6 instead of finger 5 will raise the pitch of this slightly flat note.
	Sb		Adding the chromatic F# key will raise the pitch of this slightly flat note.
	Sb		Adding the left hand Bb key will raise the pitch of this slightly flat note.

			Adding finger 3 and the right hand middle side key will raise the pitch of this slightly flat note.
			Adding the octave key and finger 3 will raise the pitch of this slightly flat note.
			Adding the B key will raise the pitch of this moderately sharp note.
			Adding the B key will raise the pitch of this moderately sharp note.
			Adding the Bb key will help raise the pitch of this moderately sharp note.
			Adding finger 6 will help lower the pitch of this moderately sharp note.
			Adding fingers 4, 5, and 6 will help lower the pitch of this moderately sharp note.
			Adding fingers 4,5, and 6 will help lower the pitch of this moderately sharp note.
			Adding fingers 4, 5, and 6 will help lower the pitch of this moderately sharp note.

			Eliminating the use of the first palm key will help lower the pitch of this very sharp note.
			Eliminating the use of the first palm key will help lower the pitch of this very sharp note.
			Eliminating the use of the first palm key will help lower the pitch of this very sharp note.
			Eliminating the use of the second palm key will help lower the pitch of this very sharp note.
			Eliminating the use of the first and second palm keys will help lower the pitch of this very sharp note.

(Saxophone Fingerings, 2008) (The Woodwind Fingering Guide, 1998-2005)



Pitch Tendency Packet (Saxophone)

Name_____
Date_____

Materials needed:

1. Instrument
2. Pencil
3. Electronic Tuner
4. Someone to help you (either a friend, parent, or band director)

Knowing the tendency of each note is important!

Playing the general tuning note and making a physical adjustment is not enough to play in tune. Each note on your instrument will play flat, sharp, or in tune. The purpose of the Pitch Tendency Packet is to teach you what notes are in tune and out of tune on your instrument. Once you discover what the out of tune notes are, you can manipulate the notes to play in tune by making small adjustments when you are playing.

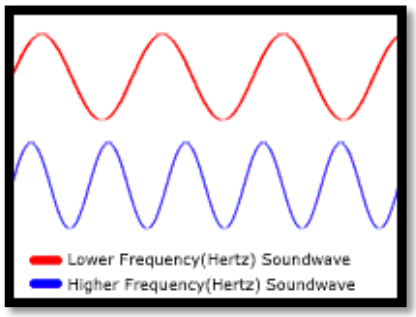
This packet will help you develop an individualized plan for tuning. As you discover which notes need special attention, it is your responsibility as a musician to figure out how **you** can play the note in tune. The tricky thing about this process is what gets you to play in tune may not work for your stand partner! Things like dynamics, reeds, embouchure, and even the brand of instrument can cause one person to play a note in tune while another plays the same note out of tune.

The last page of this packet will provide you with some tricks of the trade that you can experiment with those tricks to improve those out of tune notes. You will notice that once you start focusing on making those out of tune notes sound in tune, your tone will improve and your musician's instincts will start to anticipate intonation problems before they happen.

What is intonation?[53]

A musical pitch you hear is actually a sound wave going through your instrument. The sound wave can travel at different speeds, or frequencies, depending on what finger combinations you are using. More fingers usually means a lower pitch and a slower sound wave, but adding playing the note at a higher octave will make the sound wave move faster.

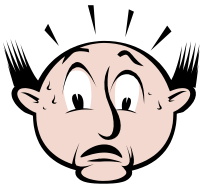
Frequency is measured in cycles per second, or Hertz (hz). One cycle per second is equal to one Hertz. Musicians have a standard frequency that we agree will make us sound the most in tune. That frequency is measured at 440 hz. Anything higher or lower than that will not agree with the musicians' or the audience's ears.



An example of sounds at different frequencies.

A Case of the "Wah's"[54]

If two musicians are playing the same note at exactly the same time, they're playing in tune, right? Not really. Have you ever heard two musicians play the same note at the exact same time, but instead it sounds like "wah-wah-wah"? This means the musicians have a case of the "wah's", a disease that cause musicians to play out of tune!



You are actually hearing the musicians play out of tune with each other. Each note's sound wave is moving at a slightly different frequency, making the sound waves clash. Both notes are fighting so much to be the main note heard that they are cancelling each other out!

One of the musicians should make an effort to get rid of the "wah's" by making adjustments to the way they are playing their instrument or by physically adjusting something on their instrument. If the musician makes the right adjustment, the "wah's" will start to disappear and the note will be in tune. However if the wrong adjustment is made, the "wah's" will move faster.

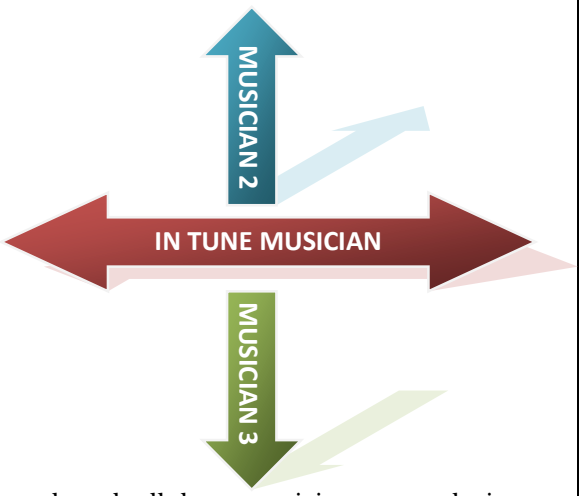
Flat vs. Sharp[55]

Musicians think of intonation as a vertical concept. The straight line below represents In Tune Musician, a musician who always plays in tune.

[53] (Pitch (music))
[54] (Hein, 1981)
[55] (Pitch (music))

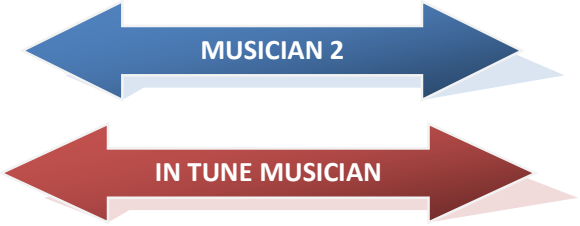
Now, another musician will play the same note along with In Tune Musician.

Finally, a third musician will play the same note with the other musicians.

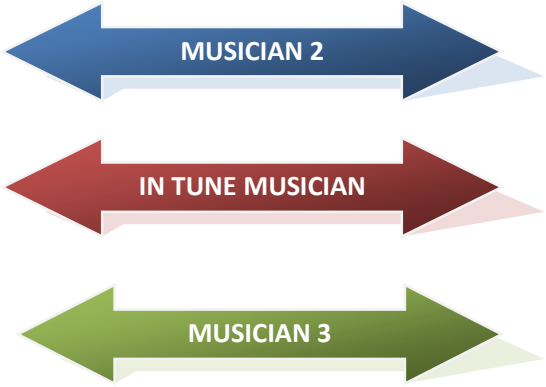


Even though all three musicians were playing the same note, Musicians 2 and 3 were playing their notes at different frequencies.

Musician 2's note was played at a slightly higher frequency than In Tune Musician. Even though the both musicians were playing the same note, Musician 2's note sounds a little higher than In Tune Musician's. When notes vibrate at a slightly higher frequency than 440 hz, they are considered sharp. Musician 2 will have to lower his frequency so he can play at the same frequency as In Tune Musician.



What about Musician 3? Well, his note was played at a slower frequency than In Tune Musician's. He sounds a little lower because his note vibrates slightly slower than 440 hz. When notes vibrate at slightly slower frequencies, they are considered flat. Musician 3 will have to raise his frequency so he can play in tune with the others.



How to Improve Intonation

Intonation will not get better by itself; it is something that will constantly need to adjust no matter your musical experience. Professional musicians struggle with intonation issues even with all the experience they have. Constant practice and reinforcement will help you understand intonation. Here are some suggestions to help you improve your intonation:

Fill out the Pitch Tendency Chart. The chart will tell you what notes are the notes you need to focus on. As you advance in your playing, your pitch tendencies may change. Continue to fill the chart out every four to six months to see if there are any changes.

Practice making the adjustments!
Remember, it is your responsibility as a member of the ensemble to play in tune. If you do nothing to improve intonation, nothing will get better. Your brain will train itself to make the adjustment automatically once you've found what works and practice making those adjustments every time you see

the note. If you focus on improving only five notes a week in your practice time, you will see huge improvements in your playing.

Use a friend, an electronic tuner, or a tuning CD to help train your ear. If your ear doesn't know what bad intonation sounds like, then you will always play out of tune. Here are some ways to help train your ear:

- Have a friend help you by having them play each note as the In Tune Musician. If you have the "wah's", then you need to adjust to cure yourself. Have them play again and see if you adjusted correctly. Remember, if the "wah's" get better, you made the correct adjustment!
- An electronic tuner will give you a visual measurement of how flat or sharp you are. Play a note you're your eyes closed and guess if it's flat or sharp. Electronic tuners are usually around $25 and can be purchased at any music store or website. Korg brand tuners are the most common.
- Some electronic tuners also have a function where they can produce pitches so you can check for the "wah's". This is a great function to use if you are by practicing by yourself.
- "The Tuning CD" is available for download on iTunes and can be purchased online. It is a CD containing all the notes of the chromatic scale that you can play along with to check the "wah's".

Memorize your pitch tendencies. You can do this by creating flashcards or writing the tendencies in your music.

The Results...

Poor intonation doesn't fix itself and is not pleasant to listen to. If you focus and stay consistent in your efforts to improve your intonation, you will also hear improvement in your tone quality. It will start to become second nature to you and you will begin to adjust your pitch without even thinking about it.

Electronic Tuner How-to Guide

1. Turn your tuner on by pushing the on/off button.
2. Check the upper left-hand corner to see if your tuner is calibrated to 440 hz. If it is not, push either the calibration up button or the calibration down button until you see 440 on the screen.
3. Set the tuner on your stand so the screen is facing you. Make sure the microphone (indicated by the word "mic") is not covered up.
4. Play a note to move the needle. The concert pitch letter name of the note you are playing will be shown in the upper right-hand corner of the screen.
5. If you are...
   ...flat, the needle will move to the left and the light next to the flat sign will light up.
   ...in tune, the needle will stand straight up and the green light will light up.
   ...sharp, the needle will move to the right and the light next to the sharp sign will light up.
6. If your tuner has the option and wish to have the tuner produce a sound while you are playing, hit the sound button on the tuner. Hitting the sound button again will turn off the sound.
7. Turn your tuner off by pushing the on/off button when you are finished using it.

The meter on a tuner measures pitches in cents. In tune notes are measured at zero cents, which makes the needle stand straight up. As a note gets progressively flatter, the needle will move to the left measuring the note in negative cents. When a note gets increasingly sharper, the needle will move to the right measuring the note in positive cents.

Completing Your Pitch Tendency Chart

Make sure you have someone to help you complete this!

1. Fill out the top portion of the guide as completely as you can. Ask your band director for help if you have questions about the brand of your instrument or reed.
2. Warm up for at least ten minutes to allow your instrument to adjust to your body temperature.
3. Turn the electronic tuner on and get your instrument in tune with itself using the following procedure:

> 1. Adjust the mouthpiece so it is halfway on the cork.
> 2. Using a good tone, play your tuning note at a mezzo forte volume with no vibrato.
>
> Alto sax—top line F#
> Tenor sax—2nd line G
> Bari sax—1st space F#
>
> 3. Adjust the mouthpiece by pulling out if the note was sharp or pushing in if the note was flat.
> 4. Continue this process if your first attempt was not in tune.

4. Give the tuner and your Pitch Tendency Chart to your partner so they can fill it out while you play.
5. It is best to start at concert B-flat and work your way down and then start again at concert B-flat and work your way to the top to get the most accurate reading. Have your partner tell you what note to play. Play the note and have your partner write down what your pitch tendency is based on the chart below.

Pitch Tendency Category	Cents
Slightly flat (Sb)	-1 to -10 cents
Moderately flat (Mb)	-11 to -25 cents
Very flat	-25 cents to -50 cents
Slightly sharp (S#)	+1 to +10 cents
Moderately sharp (M#)	+11 to +25 cents
Very sharp (V#)	+25 cents to +50 cents

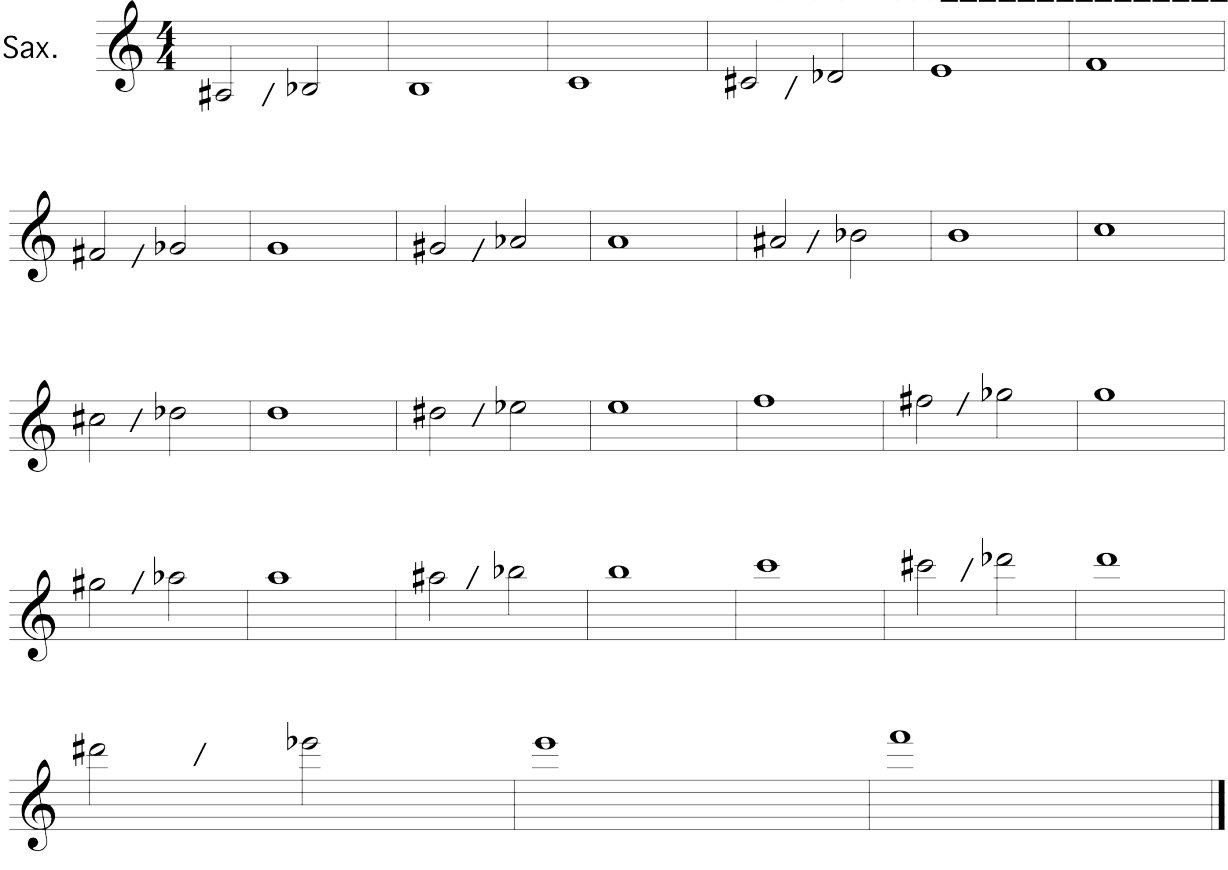
6. Once you have completed the chart, return it to your director. A copy will be made for their files and your completed chart will be returned to you.
7. Using the *Saxophone Quick Fixes* chart and an electronic tuner, find the tricks for each note that will make them in tune. Make a note of what works and use those tricks each and every time you play.

Saxophone Pitch Tendency Chart

Name_____ Type of Saxophone_____ Strength of Reed_____

Make of Instrument_____ Brand of Reed_____

Alto Sax.



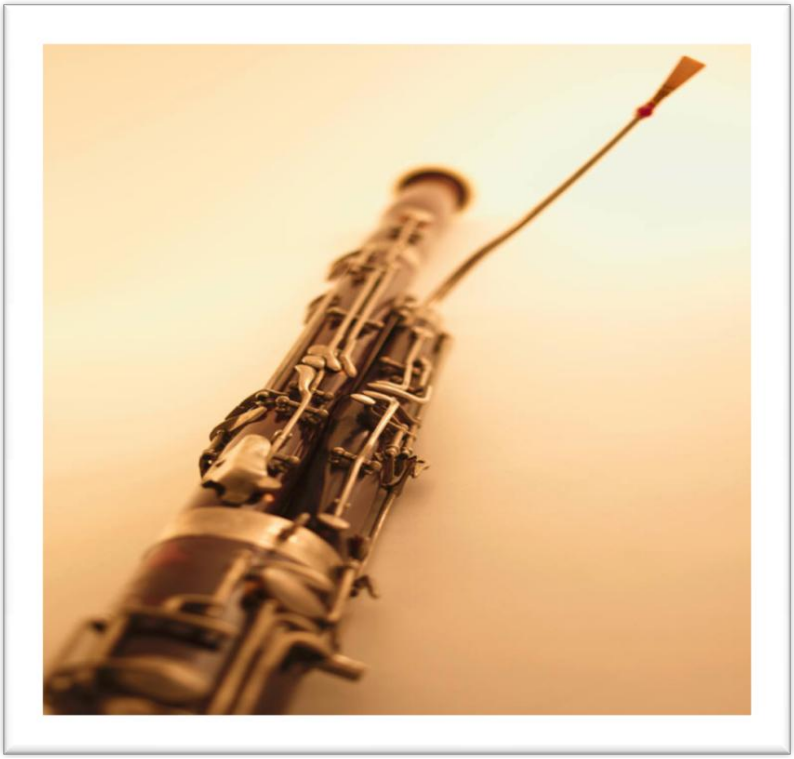
Saxophone Quick Fixes

If the note sounds sharp....

- ☑ Your embouchure may be too tight. Lip the note down by relaxing lower lip pressure on the reed.
- ☑ Your reed may be too hard. Ask your band director for a softer reed or if they can make adjustments to the reed.
- ☑ Make sure your mouthpiece is entering your mouth at a slightly upward angle.
- ☑ If the music calls for a soft dynamic, open your embouchure slightly and slow down the amount of air entering the saxophone.
- ☑ Check to see if any keys are too open or if you have felt bumpers missing from the key guards. Ask your band director to make adjustments to your horn.

If the note sounds flat....

- ☑ Your embouchure may be too relaxed. Lip the note up by increasing lower lip pressure on the reed.
- ☑ Your reed may be too soft. Ask your band director for a harder reed or if they can make adjustments to the reed.
- ☑ Your reed may be too old. Ask your band director for a newer reed.
- ☑ Make sure your mouthpiece is entering your mouth at a slightly upward angle.
- ☑ You may have the wrong amount of mouthpiece in your mouth. Use the paper test to determine how much mouthpiece should go into your mouth.
- ☑ If the music calls for a loud dynamic, open the embouchure slightly and increase the pressure of both lips around the mouthpiece.
- ☑ Check and see if keys are too closed. Ask your band director to make adjustments to your horn.



Bassoon

Sound Production

The bassoon is a double reed instrument that cannot produce sound unless both blades of the reed are forced to vibrate against each other. Like all wind instruments, air is important in producing sound on a bassoon. Air is blown into the reed when the player uses the correct embouchure. Low-pressure air is created because of the tiny space between the blades of the reed, allowing a small amount of air to enter the instrument. The pressure of the lips around the reed and the air moving inside the reed causes the blades of the reed to vibrate against each other. The wave of low-pressure air moves down the bore of the bassoon and arrives at the first open tone hole. Outside air gets sucked in by the air inside the bassoon and mixes with the low-pressure air to make high-pressure air.

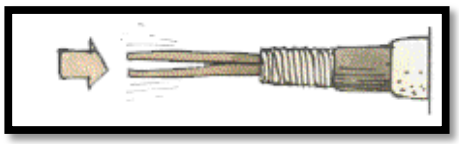


Figure 21: Side view of a vibrating double reed.

The air then moves back toward the reed changing all the air inside the bassoon to high-pressure air and returns the blades of the reed to its original position. Another dose of low-pressure air coming from the player mixes with the returning high-pressure air and moves towards the first open tone hole. It arrives at the open hole and forces air that is coming into the bore to exit through the hole. This continues to happen at a rapid pace until the player ends the air flow. Reed vibration controls air flow into the bassoon just as much as air flow controls reed vibration—too much or too little of each does not produce a sound.

Pitch is changed when players cover tone holes by pressing down keys. The bassoon has tone holes similar to those on clarinet and sound cannot be produced if a tone hole is not properly covered. If several tone holes are covered when playing a note, the air takes longer to travel through the bassoon. A low sound is heard by the listener. If the bassoonist wants to create a high sound, they cover less tone holes. This will force the air through the bassoon faster because there is less room for the air to move.

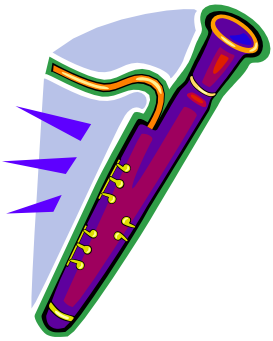
Natural Tendencies[56]

The bassoon's natural overtone series break octaves down in the following way:

- The first octave occupies the fundamental.
- The second octave occupies the second partial.
- The third octave occupies a combination of the second and third partials.

There are compromises in the design of the bassoon that allows it to play all octaves with a good embouchure.

Bassoons are not equipped with octave or register keys so higher notes are created by covering half of the tone hole on the first finger or flicking a left thumb key to play higher notes. When the bassoonist half-holes, the fundamental frequency is eliminated from the sound and the second partial is heard. The bassoon then is letting air escape at two points—the open portion of the first finger and at the first open tone hole. The same effect happens when flicking notes in the third octave although the third partial is heard.



[56] (Westphal, 1990)

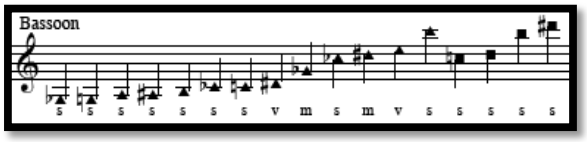


Figure 22: Bassoon pitch tendencies. The notes with triangle note heads are sharp notes. Notes with square note heads are flat notes. S stands for slightly, M stands for moderately, and V stands for very. The first note would be slightly sharp. Notes that are left off are considered in tune.

Figure 22 displays the typical tendencies of the bassoon. When broken down as individual pitches, most notes tend to be sharp however notes in the middle range of the instrument tend to be flat. Each note on the chart should be played using the standard fingering with adjustments being controlled by the player. Alternate fingerings can be used, but as a last resort.[57]

It is important to mention that the natural tendencies of the bassoon presented in this book are *typical* and are not experienced by all bassoon players. An out of tune note on one bassoon could be perfectly in tune on another. A reed could make a note sound in tune one day and terrible the next. Because of this, bassoon players need to know the instrument's natural pitch tendencies and monitor them regularly so they understand what affects them individually. The band director also should know what the natural tendencies are and provide the players with tools to improve them. This will help improve the intonation and tone for the bassoon section.

General Tuning Procedure[58]

After soaking the reed for a few minutes, the player should then warm up for about ten minutes. A cold bassoon will sound flat until it adjusts to the player's body temperature. Bassoons cannot make physical adjustments to intonation like other woodwinds because of the sensitivity of the reed. Therefore it is extremely important for the player to be aware of the natural tendencies of their instrument and how those respond with the reed that is used.[59] In this situation, it is best for students to develop their ear by playing with another instrument or an electronic pitch.

Dynamics greatly affect the bassoon's intonation. A mezzo forte dynamic affects intonation the least and requires very little manipulation by the player. Students should always focus on using their best tone because a poor tone quality results in poor intonation. Vibrato should be avoided because the pitch is actually fluctuating from flat to sharp to create the pulses heard.

Avoid tuning if players have been sitting in rehearsal for a short amount of time because the reed will dry out and the instrument will adapt to the temperature of the room.

Causes and Solutions to Intonation Problems[60]

Figure 23: Bassoon reeds.

Reed

The reed will ultimately control intonation on the bassoon. Good reeds will

[57] Alternate fingerings are found on page 88.
[58] (Allen, 2002-2007)
[59] See page 93 for the Bassoon Pitch Tendency Packet.
[60] (Westphal, 1990)

more likely play in tune for the entire range of the instrument. Monitor students' reeds so that they are constantly playing on newer reeds because old reeds make intonation difficult to control. Also, monitor the strength of reed students are using and adjust as they advance. The student's ability to stay in tune and play with a good tone will get worse if they are kept on the same reed if they are not allowed to play on a stronger reed.

Soft reeds tend to play flat, especially in the high register. Any adjustment to the reed or with the embouchure cannot be controlled so students should be given a newer reed. Clipping a tiny amount of the tip will make a soft reed stiffer. However, avoid doing this if a reed is old. Any adjustments made to old reeds will not make a difference in intonation or tone. If a student is playing on a harder reed the overall pitch will be sharp, but especially in the low register. Scraping the channels of the reed will help to soften the reed.

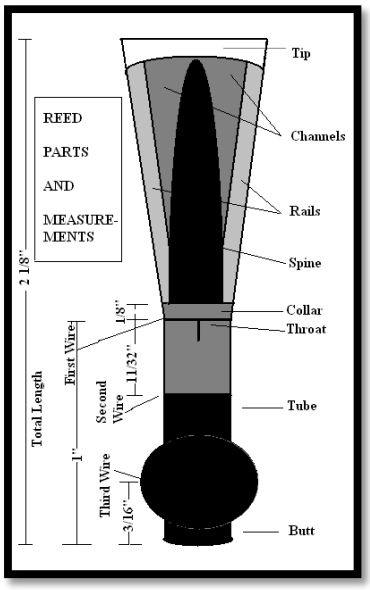


Figure 24: The parts of a bassoon reed. The channels are located below the tip.

Directors should let students experiment with different brands of reeds to find which sound the best to the players. Hand-made reeds are better than machine-made reeds because they respond well to adjustments made to improve intonation.

Embouchure

A bad embouchure will lead to poor intonation and tone. Emphasizing good embouchure habits continually and consistently throughout a player's career is important when dealing with intonation. Most solutions to individual pitch problems on bassoon use corrections made with the embouchure. The bassoon embouchure primarily supports the reed and slight changes to this support can improve intonation. Students who use a tight embouchure or "bite" on the reed are using the lower jaw to apply pressure to the reed. This will give the player a very small dynamic range and be very sharp. To fix, have the student play a second line B using the second space C fingering. The only way the pitch will drop is by using a very relaxed embouchure or dropping the lower jaw.[61] Lower notes on the bassoon will need this relaxed embouchure to play in tune while higher notes will need a tighter embouchure.

The embouchure can make very slight adjustments to pitch by adding pressure with the lips. To raise the pitch of a flat note, squeeze the embouchure around the reed to increase support. If a note is too sharp, the pressure of the embouchure needs to be relaxed. The lower jaw can also help intonation by moving back and forth. Pulling the jaw back a little will flatten pitch while moving it forward will make pitch sharp. Combining lower jaw adjustments with the amount of reed in a player's mouth will improve intonation more. However, players should not put so much reed in their mouth that it touching the first wire because pitch will then become sharp.

[61] David Rachor 2010 ABC lecture, page DR-8.

Dynamics

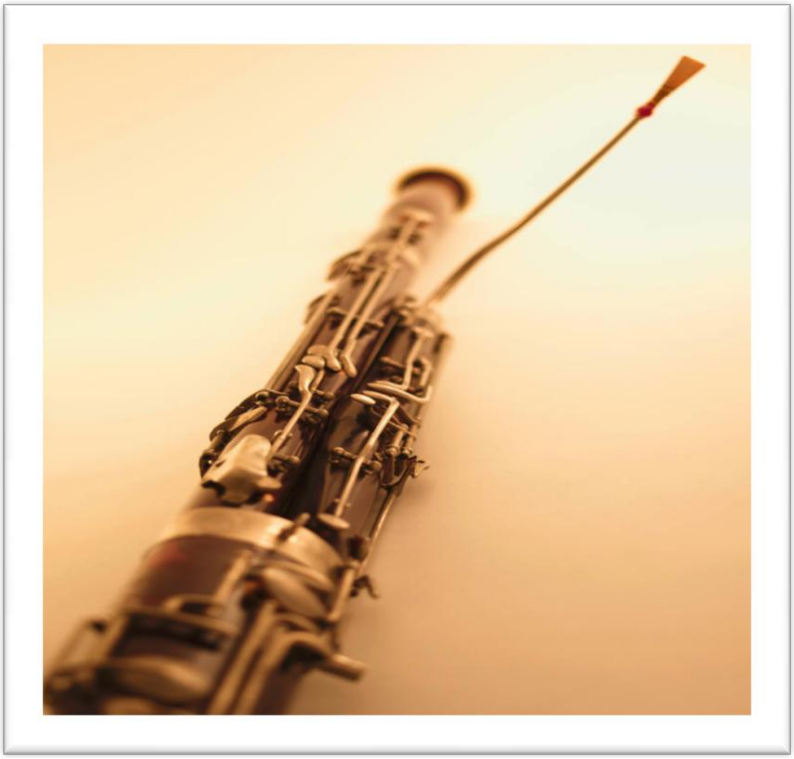
The bassoon has a tendency to play sharp when notes are loud because of increased air speed and the use of a tighter embouchure. To lower pitch, the student should maintain the faster air speed, but relax the embouchure to allow for a bigger tip opening. To raise the pitch of softer and typically flatter notes, firm the embouchure slightly to close the tip opening while using the same speed of air.

Playing Position

The bassoon needs to be held in a way that the reed enters the mouth at a slightly upward angle. If the reed is at an incorrect angle, the pressure on the reed is uneven and intonation problems are difficult to control. This can be prevented by always encouraging students to sit with the correct posture so the bassoon is held at the correct angle.

Mechanical Factors

Teaching students to regularly monitor the condition of keys, pads and rods on their bassoon will not only keep the instrument in good playing condition but also help intonation. All keys should open and close at the same height. Unadjusted keys will affect intonation the most when they are the first open key of a fingering. A key that is too close to the tone hole will flatten the pitch, but a key that is too open will raise the pitch. Bent keys will also contribute to the flatness of a pitch. Make sure adjustments screws on each finger key are allowing keys to seal properly and check post screws to see if they are properly adjusted. Dirt tends to build up in the open tone holes and can be prevented by swabbing out the instrument on a daily basis.



Alternate Fingering Chart (Bassoon)

Purpose of Alternate Fingerings

Alternate fingerings are used primarily for technical ease on the saxophone. However, there are fingerings that can be used to improve intonation for some notes. Using alternate fingerings to adjust the pitch of a note should be used as a "last resort" method. Students should be taught how to make intonation adjustments with embouchure and reed adjustments using standard fingerings before alternate fingerings are taught. Not all of the fingerings included in this chart include every note on the Pitch Tendency Chart[62] nor will they be useful to every player. Some of the fingerings will be out of tune to a greater or lesser degree.

How to Read the Alternate Fingering Chart

- The first column shows the note the alternate fingering affects.
- The second column shows the typical tendency of the note.
- The third column shows the alternate fingering.
- The fourth column explains how the alternate fingering will improve the intonation of that note.

The pitch tendency symbols used in this fingering chart will explain the typical tendency of a note.

shows that a note tends to be slightly flat.

shows that a note tends to be slightly sharp.

[62] See page 100 for the Bassoon Pitch Tendency Chart.

shows that a note tends to be moderately sharp.

shows that a note tends to be very sharp.

Most fingerings in this chart are actually slight deviations from the standard fingering. If a key is used in the standard fingering, it will be colored in black.

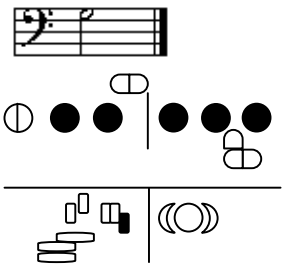
When a key is not typically used in the standard fingering, it will be colored in yellow.

Half-holed notes will be represented as:

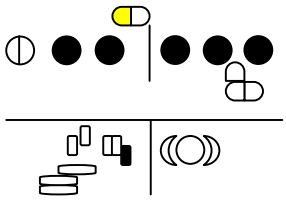
Examples of Alternate Fingerings

Most alternate fingerings that help intonation on the bassoon involve the standard fingering and the addition the E-flat key used by the left pinky. Adding the E-flat key will lower the pitch of a sharp note by slightly changing where air exits the bassoon. Slight changes to the air will lower the frequency of the note slightly to make it more in tune.

For example, fourth-space G is usually very sharp if just the standard fingering is used:

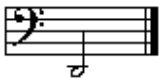
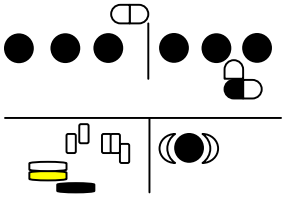
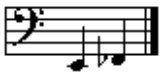
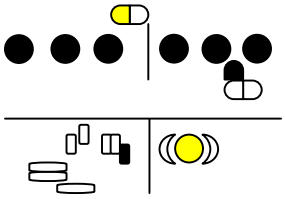
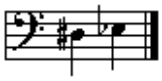
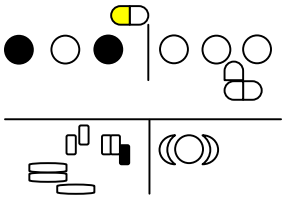
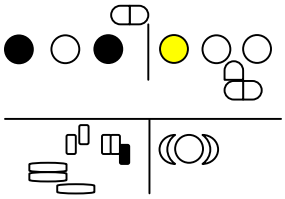
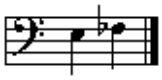
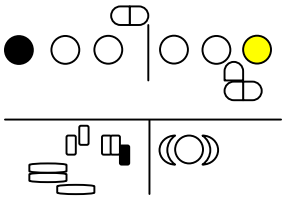
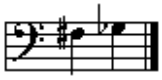
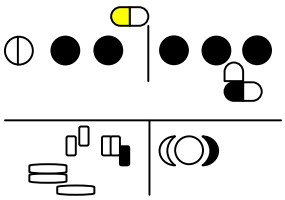
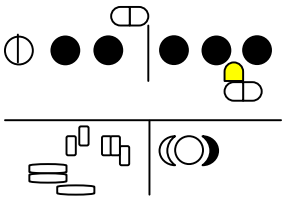


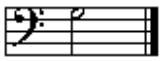
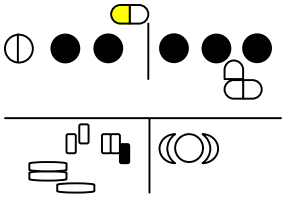
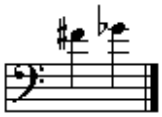
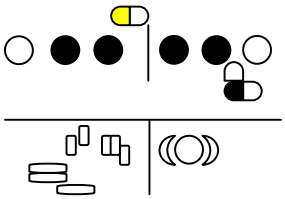
Since the E-flat key is normally closed when it is not used, air will not escape through that tone hole. Using the E-flat key to play fourth-space G will allow some air to exit out the now opened tone hole. The frequency of the air traveling through the bassoon will be slower, lowering the pitch of the note.[63]



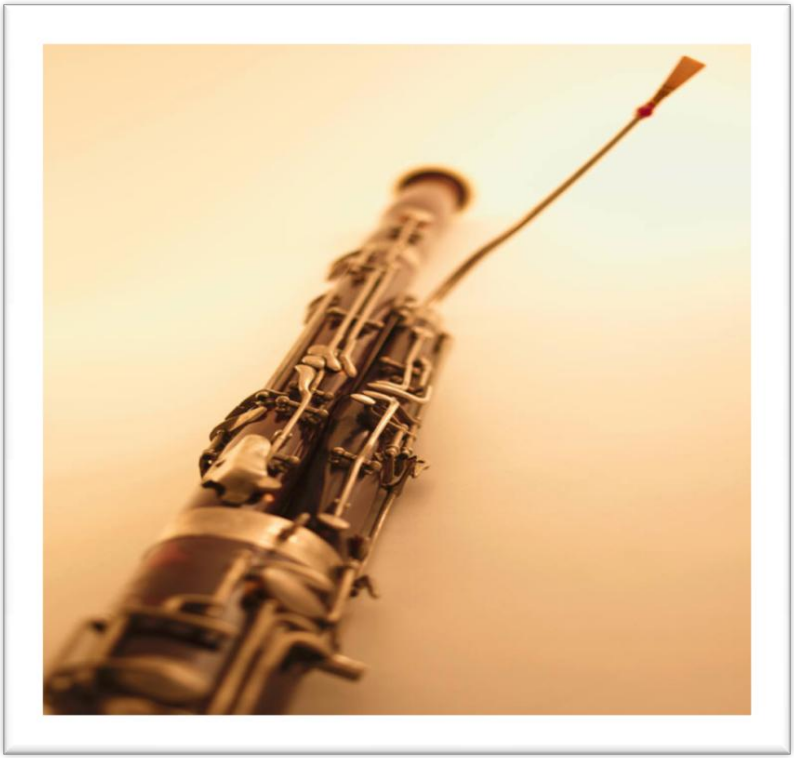
As stated earlier, this chart is to be used as a last resort. Whether or not this fingering chart will be distributed to students is at the discretion of the director because students may mistake alternate fingerings for the standard ones. Also, this chart would not be appropriate for students who are in the first couple years of their playing career. These students need to learn the basics of flute playing and how to make intonation adjustments with their embouchure and air direction.

[63] (Bassoon Fingerings, 2008)

Note	Tendency	Fingering	How It Helps
			Adding the low B key will help lower the pitch of this slightly sharp note.
			Adding the Eb key and the pancake key will help lower the pitch of this slightly flat note.
			Adding the Eb key will help lower the pitch of this slightly sharp note.
			Adding finger 4 will help lower the pitch of this slightly sharp note.
			Adding finger 6 will help raise the pitch of this slightly flat note.
			Adding the Eb key and opening more of the first finger will help lower the pitch of this moderately sharp note.
			Adding the little finger F# key on the right hand will help lower the pitch of this moderately sharp note.

			Adding the Eb key will help lower the pitch of this very sharp note.
			Adding the Eb key will help to raise the pitch of this slightly flat note.

(Bassoon Fingerings, 2008) (The Woodwind Fingering Guide, 1998-2005)



Pitch Tendency Packet (Bassoon)

Name_____
Date_____

Materials needed:

1. Instrument
2. Pencil
3. Electronic Tuner
4. Someone to help you (either a friend, parent, or band director)

Knowing the tendency of each note is important!

Playing the general tuning note and making a physical adjustment is not enough to play in tune. Each note on your instrument will play flat, sharp, or in tune. The purpose of the Pitch Tendency Packet is to teach you what notes are in tune and out of tune on your instrument. Once you discover what the out of tune notes are, you can manipulate the notes to play in tune by making small adjustments when you are playing.

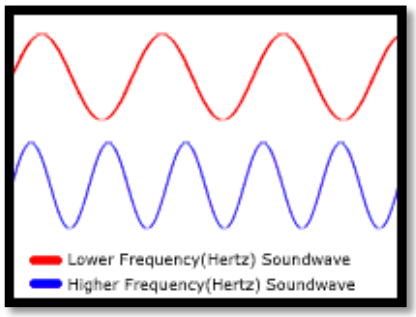
This packet will help you develop an individualized plan for tuning. As you discover which notes need special attention, it is your responsibility as a musician to figure out how **you** can play the note in tune. The tricky thing about this process is what gets you to play in tune may not work for your stand partner! Things like dynamics, reeds, embouchure, and even the brand of instrument can cause one person to play a note in tune while another plays the same note out of tune.

The last page of this packet will provide you with some tricks of the trade that you can experiment with those tricks to improve those out of tune notes. You will notice that once you start focusing on making those out of tune notes sound in tune, your tone will improve and your musician's instincts will start to anticipate intonation problems before they happen.

What is intonation?[64]

A musical pitch you hear is actually a sound wave going through your instrument. The sound wave can travel at different speeds, or frequencies, depending on what finger combinations you are using. More fingers usually means a lower pitch and a slower sound wave, but adding playing the note at a higher octave will make the sound wave move faster.

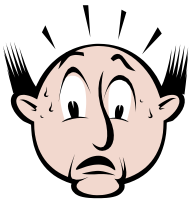
Frequency is measured in cycles per second, or Hertz (hz). One cycle per second is equal to one Hertz. Musicians have a standard frequency that we agree will make us sound the most in tune. That frequency is measured at 440 hz. Anything higher or lower than that will not agree with the musicians' or the audience's ears.



An example of sounds at different frequencies.

A Case of the "Wah's"[65]

If two musicians are playing the same note at exactly the same time, they're playing in tune, right? Not really. Have you ever heard two musicians play the same note at the exact same time, but instead it sounds like "wah-wah-wah"? This means the musicians have a case of the "wah's", a disease that cause musicians to play out of tune!



You are actually hearing the musicians play out of tune with each other. Each note's sound wave is moving at a slightly different frequency, making the sound waves clash. Both notes are fighting so much to be the main note heard that they are cancelling each other out!

One of the musicians should make an effort to get rid of the "wah's" by making adjustments to the way they are playing their instrument or by physically adjusting something on their instrument. If the musician makes the right adjustment, the "wah's" will start to disappear and the note will be in tune. However if the wrong adjustment is made, the "wah's" will move faster.

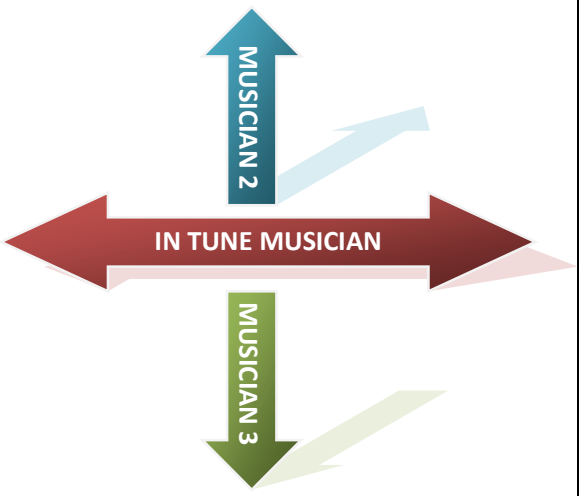
Flat vs. Sharp[66]

Musicians think of intonation as a vertical concept. The straight line below represents In Tune Musician, a musician who always plays in tune.

[64] (Pitch (music))
[65] (Hein, 1981)
[66] (Pitch (music))

Now, another musician will play the same note along with In Tune Musician.

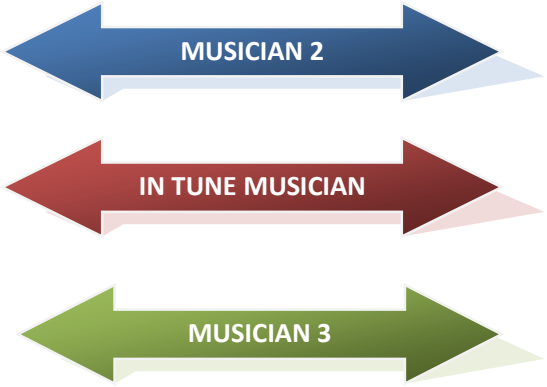
Finally, a third musician will play the same note with the other musicians.



Even though all three musicians were playing the same note, Musicians 2 and 3 were playing their notes at different frequencies.

Musician 2's note was played at a slightly higher frequency than In Tune Musician. Even though the both musicians were playing the same note, Musician 2's note sounds a little higher than In Tune Musician's. When notes vibrate at a slightly higher frequency than 440 hz, they are considered sharp. Musician 2 will have to lower his frequency so he can play at the same frequency as In Tune Musician.

What about Musician 3? Well, his note was played at a slower frequency than In Tune Musician's. He sounds a little lower because his note vibrates slightly slower than 440 hz. When notes vibrate at slightly slower frequencies, they are considered flat. Musician 3 will have to raise his frequency so he can play in tune with the others.



How to Improve Intonation

Intonation will not get better by itself; it is something that will constantly need to adjust no matter your musical experience. Professional musicians struggle with intonation issues even with all the experience they have. Constant practice and reinforcement will help you understand intonation. Here are some suggestions to help you improve your intonation:

Fill out the Pitch Tendency Chart. The chart will tell you what notes are the notes you need to focus on. As you advance in your playing, your pitch tendencies may change. Continue to fill the chart out every four to six months to see if there are any changes.

Practice making the adjustments!
Remember, it is your responsibility as a member of the ensemble to play in tune. If you do nothing to improve intonation, nothing will get better. Your brain will train itself to make the adjustment automatically once you've found what works and practice making those adjustments every time you see

the note. If you focus on improving only five notes a week in your practice time, you will see huge improvements in your playing.

Use a friend, an electronic tuner, or a tuning CD to help train your ear. If your ear doesn't know what bad intonation sounds like, then you will always play out of tune. Here are some ways to help train your ear:

- Have a friend help you by having them play each note as the In Tune Musician. If you have the "wah's", then you need to adjust to cure yourself. Have them play again and see if you adjusted correctly. Remember, if the "wah's" get better, you made the correct adjustment!
- An electronic tuner will give you a visual measurement of how flat or sharp you are. Play a note you're your eyes closed and guess if it's flat or sharp. Electronic tuners are usually around $25 and can be purchased at any music store or website. Korg brand tuners are the most common.
- Some electronic tuners also have a function where they can produce pitches so you can check for the "wah's". This is a great function to use if you are by practicing by yourself.
- "The Tuning CD" is available for download on iTunes and can be purchased online. It is a CD containing all the notes of the chromatic scale that you can play along with to check the "wah's".

Memorize your pitch tendencies. You can do this by creating flashcards or writing the tendencies in your music.

The Results...

Poor intonation doesn't fix itself and is not pleasant to listen to. If you focus and stay consistent in your efforts to improve your intonation, you will also hear improvement in your tone quality. It will start to become second nature to you and you will begin to adjust your pitch without even thinking about it.

Electronic Tuner How-to Guide

1. Turn your tuner on by pushing the on/off button.
2. Check the upper left-hand corner to see if your tuner is calibrated to 440 hz. If it is not, push either the calibration up button or the calibration down button until you see 440 on the screen.
3. Set the tuner on your stand so the screen is facing you. Make sure the microphone (indicated by the word "mic") is not covered up.
4. Play a note to move the needle. The concert pitch letter name of the note you are playing will be shown in the upper right-hand corner of the screen.
5. If you are...
   ...flat, the needle will move to the left and the light next to the flat sign will light up.
   ...in tune, the needle will stand straight up and the green light will light up.
   ...sharp, the needle will move to the right and the light next to the sharp sign will light up.
6. If your tuner has the option and wish to have the tuner produce a sound while you are playing, hit the sound button on the tuner. Hitting the sound button again will turn off the sound.
7. Turn your tuner off by pushing the on/off button when you are finished using it.

The meter on a tuner measures pitches in cents. In tune notes are measured at zero cents, which makes the needle stand straight up. As a note gets progressively flatter, the needle will move to the left measuring the note in negative cents. When a note gets increasingly sharper, the needle will move to the right measuring the note in positive cents.

Completing Your Pitch Tendency Chart

Make sure you have someone to help you complete this!

1. Fill out the top portion of the guide as completely as you can. Ask your band director for help if you have questions about the brand of your instrument or reed.
2. Warm up for at least ten minutes to allow your instrument to adjust to your body temperature.
3. Give the tuner and your Pitch Tendency Chart to your partner so they can fill it out while you play.
4. It is best to start at concert B-flat and work your way down and then start again at concert B-flat and work your way to the top to get the most accurate reading. Have your partner tell you what note to play. Play the note and have your partner write down what your pitch tendency is based on the chart below.

Pitch Tendency Category	Cents
Slightly flat (Sb)	-1 to -10 cents
Moderately flat (Mb)	-11 to -25 cents
Very flat	-25 cents to -50 cents
Slightly sharp (S#)	+1 to +10 cents
Moderately sharp (M#)	+11 to +25 cents
Very sharp (V#)	+25 cents to +50 cents

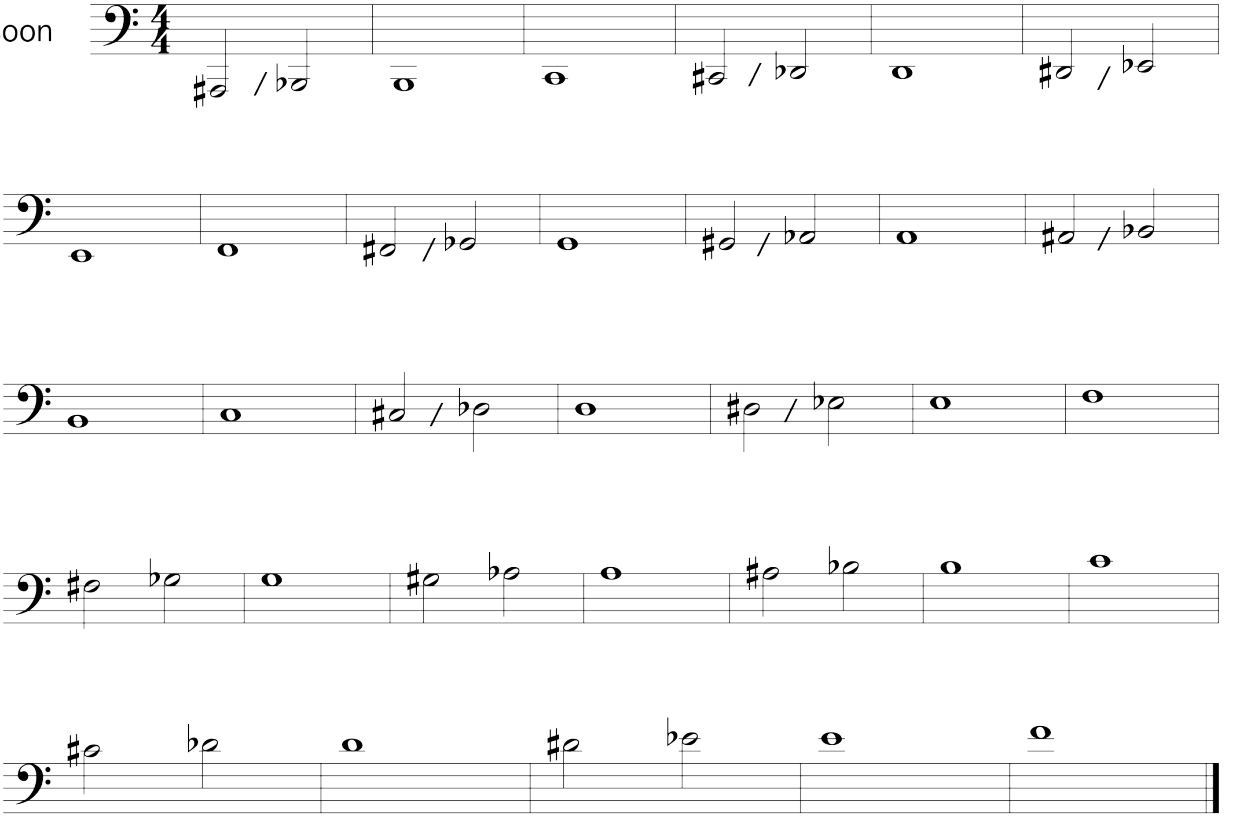
5. Once you have completed the chart, return it to your director. A copy will be made for their files and your completed chart will be returned to you.
6. Using the *Bassoon Quick Fixes* chart and an electronic tuner, find the tricks for each note that will make them in tune. Make a note of what works and use those tricks each and every time you play.

Bassoon Pitch Tendency Chart

Name_____ Brand of Instrument_____

Strength of Reed_____ Brand of Reed_____

Bassoon



Bassoon Quick Fixes

If the note sounds sharp....

- ☑ Your reed may be too hard. Ask your band director for a softer reed or if they can make adjustments to the reed.
- ☑ Your lower jaw will need to be pushed slightly forward.
- ☑ Your embouchure may be too tight causing too much pressure on the reed. Relax your embouchure.
- ☑ You might not have enough reed in your mouth. Take more reed in your mouth.
- ☑ If the music calls for a loud dynamic, relax the embouchure.
- ☑ Check to see if you have any keys that are too open. Ask your band director to make adjustments.

If the note sounds flat....

- ☑ Your reed may be too soft. Ask your band director for a harder reed or if they can make adjustments to the reed.
- ☑ Your lower jaw will need to be pulled slightly back.
- ☑ Your embouchure may be too loose and not enough pressure may be on the reed. Tight your embouchure slightly.
- ☑ You may have too much reed in your mouth. Put less reed in your mouth.
- ☑ If you are playing high notes, take more reed in your mouth. Be careful not to let the upper lip touch the first wire.
- ☑ If the music calls for soft dynamic, tighten the embouchure slightly.
- ☑ Check to see if you have any keys that are too close to the tone hole. Ask your band director to make adjustments.

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Works Cited

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