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THIRTY VOLUMES

VOLUME SEVENTEEN

LITERATURE, MUSIC AND ART, ARE AIDS TO SUCCESSFUL EXPRESSION. LITERATURE AS AN EXPRESSION OF LIFE. EYE AND EAR TRAINING. ARTISTIC, ESTHETIC, AND HYGIENIC VALUES OF MUSICAL STUDY. THE HIGHEST AND BEST EXPRESSION IN SCULPTURE AND PAINTING BY THE WORLD'S GREATEST MASTERS

"Be not careless in deeds, nor confused in words, nor rambling in thought," MARCUS AURELIUS

"No man ever wetted clay, and then left it, as if there would be bricks by chance and fortune." PLUTARCH

"It is the glory and good of Art
That Art remains the one way possible
Of speaking truth." BROWNING

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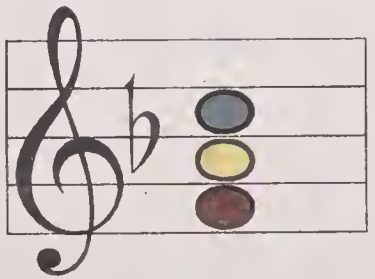
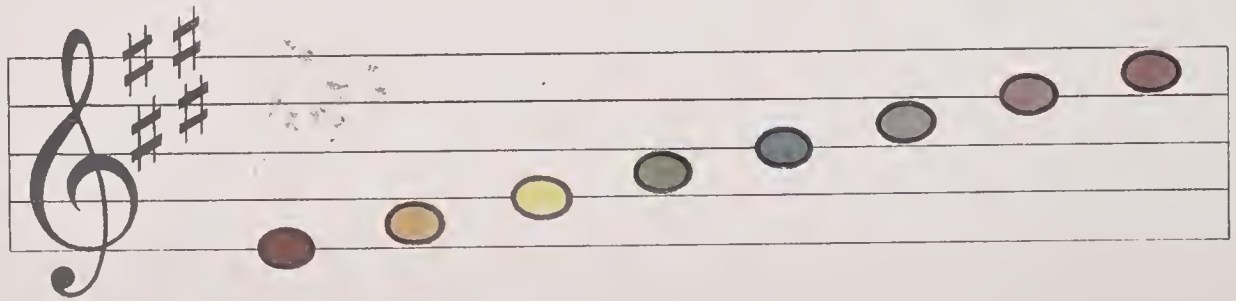
Notice the beautiful flow of color in the spectrum, giving a sense of melody to the eye, as the sweep of tones in the musical scale affects the ear.

Contrast the warm strong red with the clear cool blue, and then notice how these are harmonized by the golden yellow. Here we have a three-fold appeal to our vital, intellectual and moral sympathies. This is the groundwork upon which the artists construct their color harmonies.

Now listen to the strong tonic of the scale, which stirs the vital pulses; the ringing fifth which arouses the imagination, and the calm sweet third, which speaks to the heart, and in these three tones you have the great chord which lies at the foundation of all tone harmonies.

Tones and colors, properly understood, have one and the same deep meaning. They illustrate the universal harmony which binds all things into one perfect whole.





DING, DONG, BELL.

Words from MOTHER GOOSE.

D. BATCHELLOR.

Ding, dong, bell; Pussy's in the well! Who put her in?

p *mf*

Little Johnny Green. What a naughty boy was that To

mp

softly and slowly.

drown poor lit - tle pus - sy cat. Let us now ring pus-sy's knell, Ding, dong, bell!

pp *ppp*

Color Music for Children.

THE NURSERY PERIOD.

We are beginning to see with greater clearness the supreme importance of a good start in education. The child's education begins long before the school age; hence the importance of the kindergarten. This, however, is not the beginning, for when he enters the kindergarten one chapter of his life is already closing, and to get a good start we must go back to the nursery life. Even here we are often hampered by harmful hereditary tendencies, since many children are denied the inestimable privilege of being well born. As Theodore Parker used to say, "Generation is more important than regeneration." But without taking into account pre-natal influences, it is safe to assert that the child's individual education is going on from the day of his birth.

Education in its true meaning is the development of all the child's powers—vital, intellectual, and spiritual; and the best system of education is that which provides for the most complete expression of all these faculties. They do not develop simultaneously. As the plant has its proper time for bringing forth leaf, flower, and fruit, so the child's nature unfolds by successive stages.

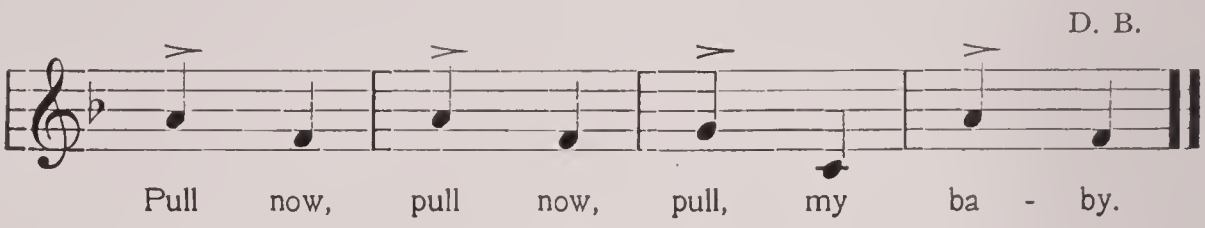
The most noticeable thing in babyhood is the rapid physical growth. Therefore, the first necessity in the child's education is to provide proper nourishment for his body. But this is not all. From the first there is a dawning intelligence, which finds expression in self-activity.

During the first years of life this intelligence manifests itself through the senses, which are the avenues of communication between the inner self and the outer world. It follows, then, that the proper work of education at this time is to call out the five senses, and to train them by healthy reactions, so that they may report correctly and fully all that lies in the child's environment. The training of the senses is the bed-rock foundation upon which any superstructure can be raised.

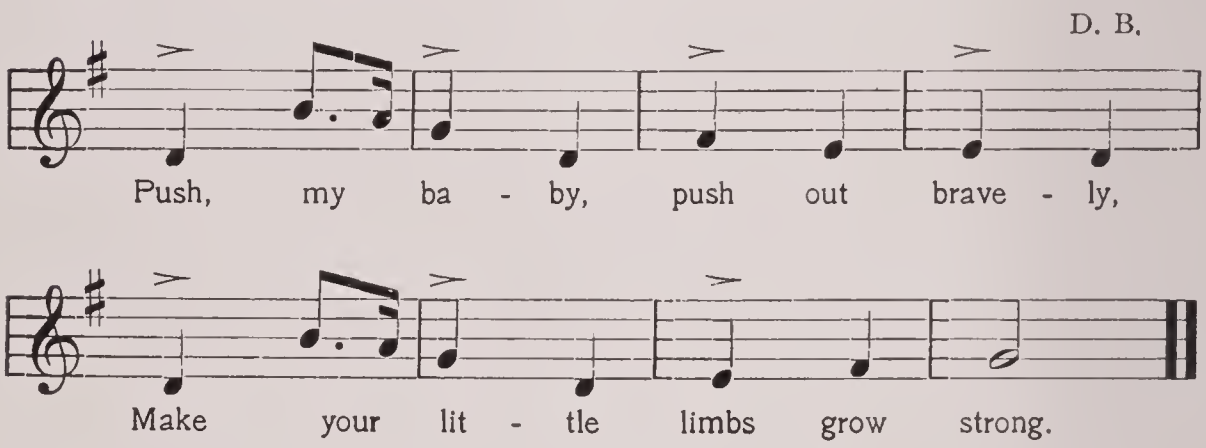
THE MUSCULAR SENSE.

The earliest sense to become active is the muscular sense. We see its first manifestation in the voluntary movement of arms and legs. The first instinctive movement is shown by the act of suction, and for some time to come the baby's way of bringing every new thing to its mouth shows how the dawning intelligence works through this channel. As this form of muscular activity is so much used in feeding it will not need any other development.

If the finger be placed in the baby's hand he will grasp it with energy. Notice also that if the hand be placed under his feet he will kick out against it. These actions are very significant, for they mark the first attempt of the baby's will power to master his environment. These impulses may be called forth by offering enough resistance to excite the muscles to action, but not enough to overpower their effort. This should be done to a slow and gentle rhythmic movement, allowing the muscles to relax after each effort, and it will be better to accompany it with some simple refrain, such as:

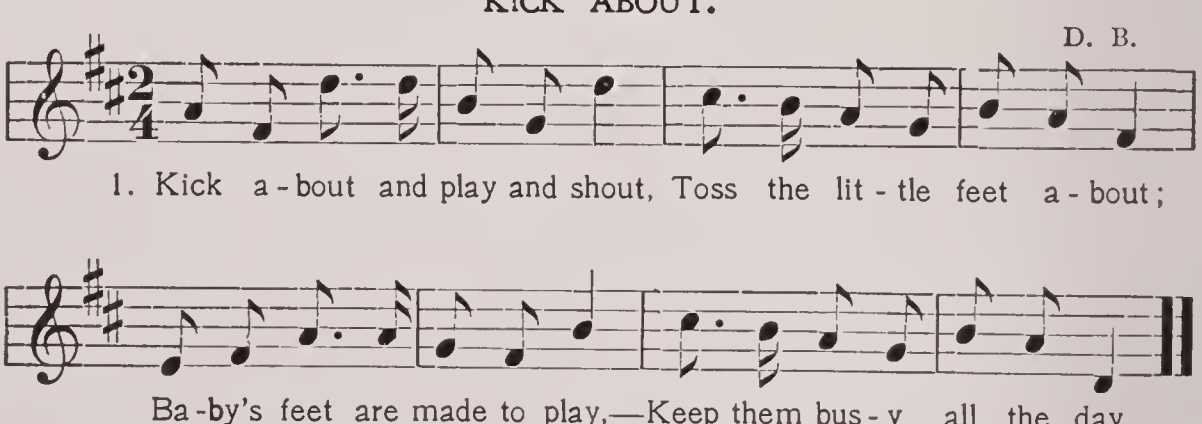


Or, as an accompaniment to the kicking exercise:



As the muscles become more alert they may be exercised to this more vigorous song:

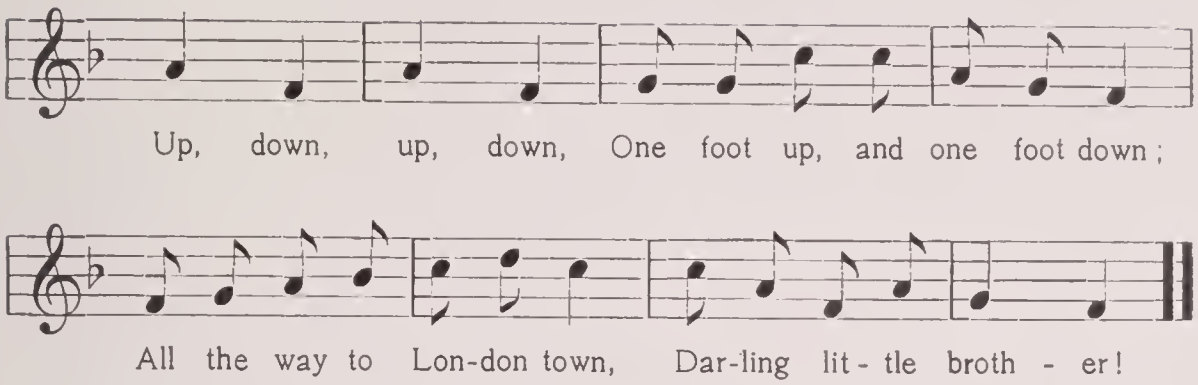
KICK ABOUT.



2 Hold the little hands up high;
Clap them now to go bye-bye;
Little hands were made to play,—
Keep them busy all the day.

The following little nursery rhyme can be used as an accompaniment to the earliest stepping exercises:

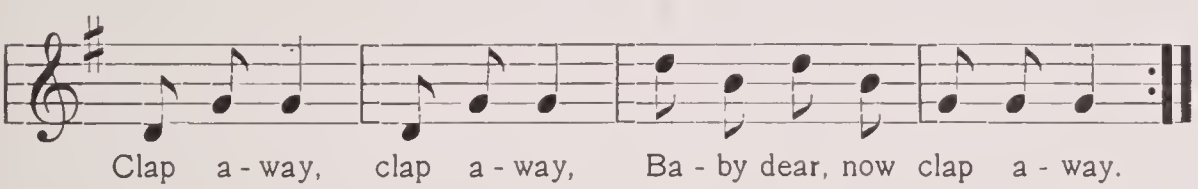
D. B.



2 High, low, high, low,
All the way to town we go;
Baby is quite big, you know;
Precious baby brother!

Long before the baby understands the sense of the words he will be impressed with the measured movement of the rhythm, to which his muscles will sympathetically respond, and the pleasant tones of the mother's voice are laying the foundation for a refined sense of hearing.

Clapping the hands is one of the earliest forms of baby play. The little hands will be at first passive in the mother's hands; but gradually the movement becomes voluntary and subject to the child's self-control. From the first the hands should be moved to a gentle but definite rhythmic action. This will be greatly assisted by singing some such refrain as the following:



At first the muscles move in mass, and only by degrees do they become differentiated. We should, therefore, be content for some time with an increasing vigor and elasticity in the limbs as a whole. There is danger in premature differentiation, and if we attempt to train the finer muscles before they are naturally alert it will be at the expense of the nervous system.

SENSE OF TOUCH.

Although this is a manifestation of the muscular sense, it is comparatively late in development. The tactual muscles of the fingers and tip of the tongue are servants of the intellect, and do not become well developed

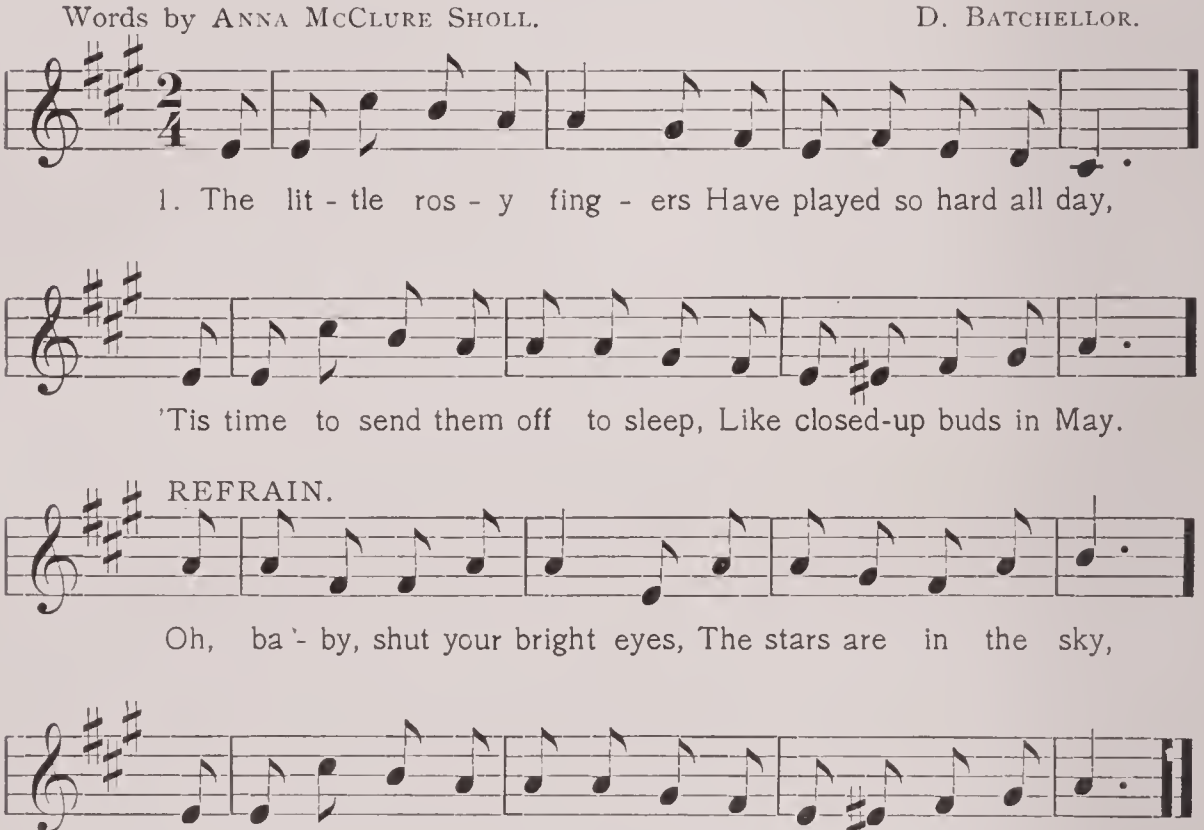
until the mental powers are awakened. Therefore, the little child should not be required to do any fine or small work. Let there be free expansion in everything. Definition belongs to a later phase of life.

One of the earliest Mother Goose games is "pat-a-cake, pat-a-cake, baker's man." For one thing it has a pronounced rhythm to which the baby can clap. Then it is mainly action of the whole hands, although in the "prick it and mark it" comes a foreshadowing of the separate finger work.

"This pig went to market" is a natural introduction to the differentiation of fingers and toes. Notice that the baby does not yet use these members himself; he is learning to observe them only as his mother points them out. So, too, with the finger-piano exercises; the mother places her fingers on the corresponding fingers of the child while she softly sings, "One, two, three, four, five;" "La, la, la, la, la." As the child begins to observe the separate fingers, they may be pointed out to the accompaniment of the following little song:

THE LITTLE ROSY FINGERS.

Words by ANNA MCCLURE SHOLL. D. BATCHELLOR.



2 Good-night to Mr. Thumbkin,
Good-night to Pointer too,
You must be very, very tired,
With so much work to do.
—REFRAIN.

3 Good-night unto the Giant,
To Mr. Ringman here;
Good-night to baby-finger small,
And every finger dear.
—REFRAIN.

This process should now be applied to all parts of the body, first, touching and naming them, then saying or singing something of their use. In this way the child is becoming conscious of his identity, and is learning to observe points of contact between himself and his surroundings.

It is more difficult to trace the first awakening of the other senses. Although at a later period the eye and the ear become the leading avenues of sense intelligence, their first awakening is lost in obscurity. No one can say with any degree of certainty when the baby begins to see. The mother watches anxiously for that interesting period which is usually called "taking notice." The eye will first be attracted by a bright light, and it will not be long before the gaze will be fixed upon the mother's eyes. From this time the sense of seeing develops rapidly, both in perception and in responsive glances of intelligence.

Intelligent listening seems to be slower in growth; but this ultimately becomes the most profound of the senses.

Taste and smell seem to be quite sluggish in the very young. These senses are of leading importance with some animals; but in our lives they take only a minor place as agents of mental development and will not need to be further considered in this work, except that smelling exercises may be used as an aid to breathing.

SEEING AND HEARING.

Although the muscular sense is most important in early childhood, it is not long before seeing and hearing become the leading faculties. Through these the child is brought into relation with a larger environment, and life broadens out before him. The training of sight and hearing, therefore, is a matter of great importance.

If we compare these two leading senses we find striking points of difference between them. In a general way we may say that sight is the intellectual sense, while hearing is the emotional sense. But this distinction must not be taken as absolute, for there is much of the intellectual in listening, while the color sensations received through the eye are largely sensuous.

The sense of sight is extremely rapid and comprehensive; but the hearing sense, although comparatively slow and limited, is more discriminating. One discordant element in a landscape does not greatly mar its beauty to the eye; yet one discordant tone falling upon the ear will utterly destroy the sweetness of the harmony. Color blindness is rightly regarded as a serious defect. It is a suggestive fact, however, that girls and women are rarely color blind, and that boys who have been trained in the proper way have always a keen sense of color. In like manner what is called "no ear for music" is really a sluggish and undeveloped sense, which can easily be quickened into normal activity during early childhood.

FIRST LESSONS IN EYE AND EAR TRAINING.

In their first awakening we find that the senses are inert and respond only to vigorous stimulation. See this in the bright light which attracts the baby's eye. A more striking illustration may be found in the vibrations of a tuning fork. If we strike this instrument vigorously and then lay one of the prongs upon the tongue, it causes an intense tickling sensation which lasts for a considerable time. The second or third contact would be unbearable; but a very young child takes no notice of a fork laid upon the tongue. As he gets older it seems to produce a mild, pleasant sensation, for he will hold his tongue ready to be touched again and again; but very soon after this the nerves become so sensitive that he shuts his mouth after the first contact of the fork with the tongue.

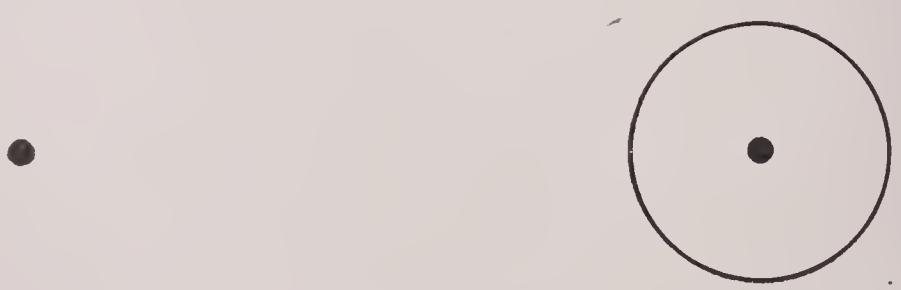
With all of the senses vigorous stimulation rapidly develops exuberance of response. So the child loves vivid colors and loud sounds; everything is exaggerated, like the gigantic leaves put forth by a little sapling. As this is the natural order of things, it will be better at first to let this vigorous expression have free play. If checked now it may break out rudely at a later period of life.

TRAINING BY CONTRASTS.

The best way to call out the use of the faculties is by reaction from one extreme to another. The muscular sense of the child will freely respond to such contrasts as hot and cold, hard and soft, rough and smooth, etc.

So his visual sense will respond to the contrast of light and dark, extreme tints and shades, and complementary colors. The latter exercise is especially valuable, as it is the basis of harmonious coloring, and we shall presently see the same principle underlying all tone harmonies. To get an intelligent appreciation of this, test it with your own vision. Look steadily at the red circle in figure 1 until there seems to be a bluish green halo around it. Then fix the eye upon the black dot in the white circle at the side, and in a second or two, a faint image of the circle will appear in bluish green. To vary the experiment, look at a green circle, or at a yellow, and in each case the complementary color will appear. In some cases the first experiment may not be satisfactory, but try again; with practice the nerves of the eye will react more freely and promptly.

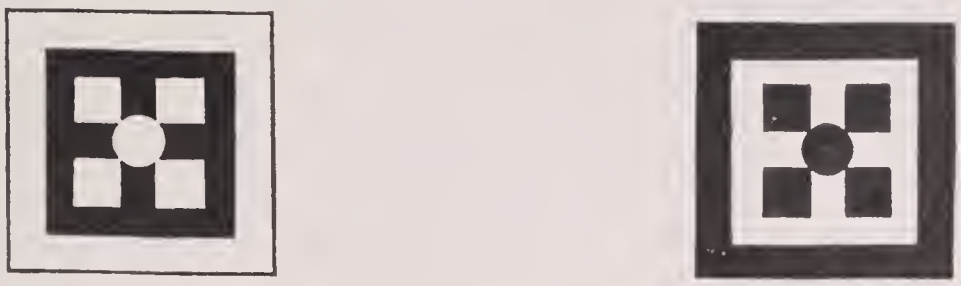
FIGURE 1.



Black reacts to white, and white to black. In figure 2 the contrast between *a* and *b* is at once evident. Look steadily at the white spot in the

center of *a*, and then an image of *b* will appear upon any blank surface. If the gaze be fixed upon the black spot in *b* the reverse figure will appear upon any blank surface.

a. FIGURE 2. *b.*



It is not to be expected that little children can gaze steadily enough to call out this sympathetic reaction; but they may be shown first one color and then its reacting color. For instance, let a red ball be swung very gently at a little distance from the baby's eyes, and when that has made its impression, substitute a green ball. At another time use the orange and the blue, or the yellow and the violet balls. A little later, dolls or other toys may be used in the same way. Again the exercise may be varied by the use of appropriate pictures in which the desired color predominates.

As the children grow older, and the vision becomes more comprehensive, the two complementary colors may be placed side by side. Here the reaction is shown by the vividness with which the colors stand out: the red making the green greener, and the green making the red redder. At first the eye revels in these contrasts; but after a while the children will begin to appreciate quieter harmonies, such as tints and shades of the complementals, of which endless combinations can be used. It is interesting to notice that the most pleasing harmonies are those of colors which are a little removed from the true complementals. In like manner we find that our sweetest music is that in which there is a tinge of dissonance. Turning to the tone sense, we find that the same general principles apply to the ear as to the eye. Contrasted tone effects will serve to call out the listening faculty. The baby seems to notice first the difference between high and low tones of the voice, and the mother instinctively responds to this by the way she sings "peep bo." This change of intonation is always attractive to children. The story of little "Golden Hair" would lose its chief charm without the different voices of the three bears. More will be said upon this subject when we come to the vocal training of the child.

EMOTIONAL EFFECT OF TONE.

We have already seen that hearing is the emotional sense. This being the case, we can understand that the finer nerves, which are closely connected with our emotional states, are powerfully influenced one way or the other by harsh or gentle tones. This principle is so well understood

that careful masters will not allow the disposition of their horses to be spoiled by harsh tones from their drivers. The importance of pure, sweet tones in the mother's voice cannot be overestimated. The baby may seem to take no notice; but every tone is making an impression upon his delicate sensorium, and his later expressions will be a faithful reproduction of those impressions. The mother's lullaby is not only soothing the baby for the time being, but is also forming his style for life.

DRAWING OUT THE LISTENING FACULTY.

Next to addressing the little child with sweet musical tones, the mother's aim should be to awaken his listening faculties. For want of this early training, most of us observe only a small fraction of the sounds by which we are surrounded.

Fortunately the children enjoy listening exercises. Hold a watch to the little one's ear and notice how intently he will listen to its "tick, tick." When he gets a little older he should be taken to the clock to see the pendulum swing, and to hear its steady "tick, tock." Then he may listen to the birds singing, or to any of the sounds about him; but call his attention chiefly to pure and gentle tones.

CO-OPERATION OF THE SENSES.

Each of the senses is a separate avenue through which the mind holds intercourse with the outer world; but most of our impressions are complex in character, coming through more than one of the senses. The more co-operation there is between them, the richer will be the concepts stored in the mind.

Whatever the little child sees he tries also to handle, so that his vision may be reinforced by the sense of touch, with which he is more familiar.

Impressions of beauty are received mainly through the eye and ear, and where these two can work in full co-operation, the impressions are full and sensuous. Acting upon this principle, the mother when she swings the ball before the baby, should sing some little song about it, or perhaps softly sing its name, as Do for the red ball, So for the blue ball, or Me for the yellow ball. Sometimes it may be well to chant a simple line upon the appropriate tone, such as this:

I'm a pretty red ball, Do, Do, Do; I'm a pretty blue ball, So, So, So;

I'm a pretty yellow ball, Me, Me, Me;—So the lit-tle balls do all a - gree.

So far the child has been mainly observant and receptive. By this time his mind is stored with sense impressions and his sense faculties are trained and strengthened by exercise. He now passes from the passive to the active condition. His waking hours are marked by ceaseless activity, in which he is striving to gain mastery over his environment.

For another thing, we find a surprising development of the imagination. This is the first stage of spontaneous thought-activity in the child. As yet nothing is clearly defined in his mind; he mixes himself up with animals and objects in a bewildering way, and, without a purpose of falsifying, will tell the most preposterous stories. He revels in make-believe, which is very real to him at the time. In all this exuberance lie embedded the germs of mental and moral greatness. Let us see that they are not neglected, nor, on the other hand, thwarted by unwise interference.

Now is the time for sympathetic watchfulness on our part. Every act and word of the child is significant. It is the manifestation of a God-given impulse which, rightly guided, may lead to noble issues. But how shall we begin? That is not required of us. The child has already begun, and our wisest course is to carry out whatever idea he has initiated. For example, city children soon have their attention attracted by the loud clang of the fire-engine bells, and naturally enough they like to be firemen, using chairs for engines, etc. All they think about is the noise and excitement, but that has thoroughly aroused their interest. Now the mother joins in the game, and gives it a larger meaning. She tells how the firemen are hastening to save life and property, and how careful they must be not to run over anybody. That is what the bell means:

Clang! Clang! haste away;
Clang! Clang! clear the way;
See the firemen danger braving,
From the fire the people saving:
Clang! Clang! don't delay,
Clang! Clang! clear the way.

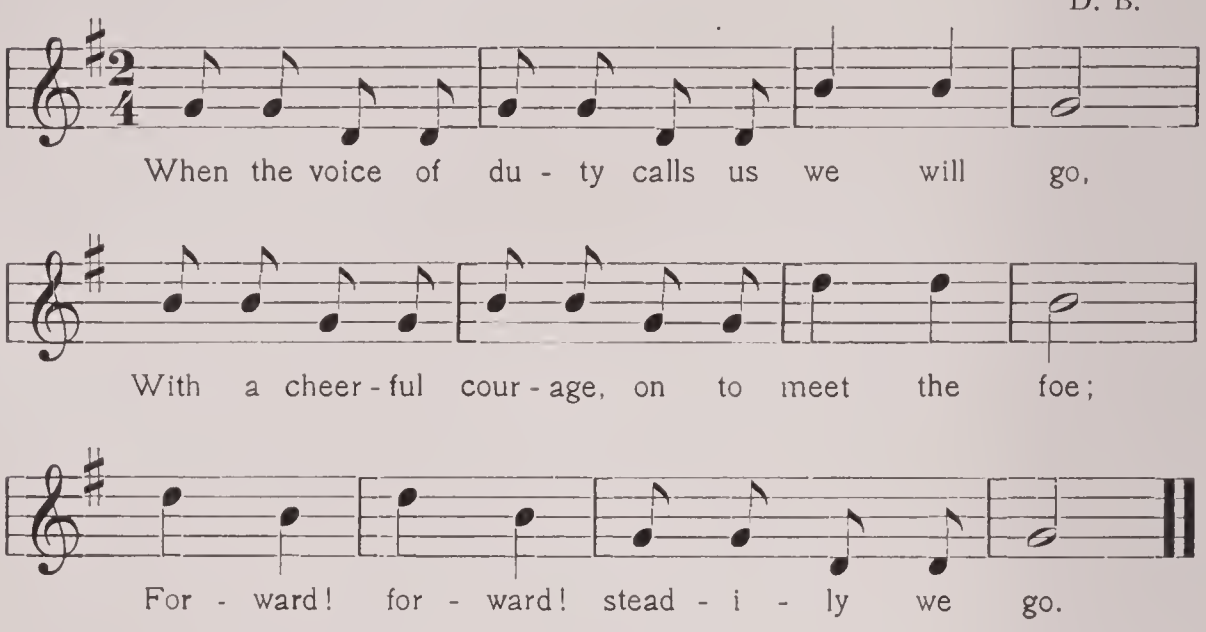
A kindred game that the children like to play is the "Choo, choo" of the railway engine. This also appeals to their exuberant vitality. Again let the mother join in and give a fuller meaning to the game. Call attention to the responsibility of the engineer and conductor. Invent little stories about the passengers. Some are going out for a pleasant holiday. Here a little child has been away from home, and now is glad to get back to father and mother. There is a mother who is hastening to her sick child. Or it may be a freight train bearing treasures from one city to another. Perhaps a relief train carrying food and clothing to starving people a long way off. The "Choo, choo" of the engine begins to have a tremendous significance in the child's mind, as he feels nobler impulses stirring within him.

All children seem to like to play at soldiers. If not carefully guarded there is danger that this will develop the fighting spirit, for the slumbering

savage is easily awakened in the child. But the soldier game may be used in such a way as to teach prompt obedience, good bearing and patriotism. This is also a good means to secure rhythmic marching and trotting. The following little marching song is easy and conveys a healthy sentiment:

DUTY'S CALL.

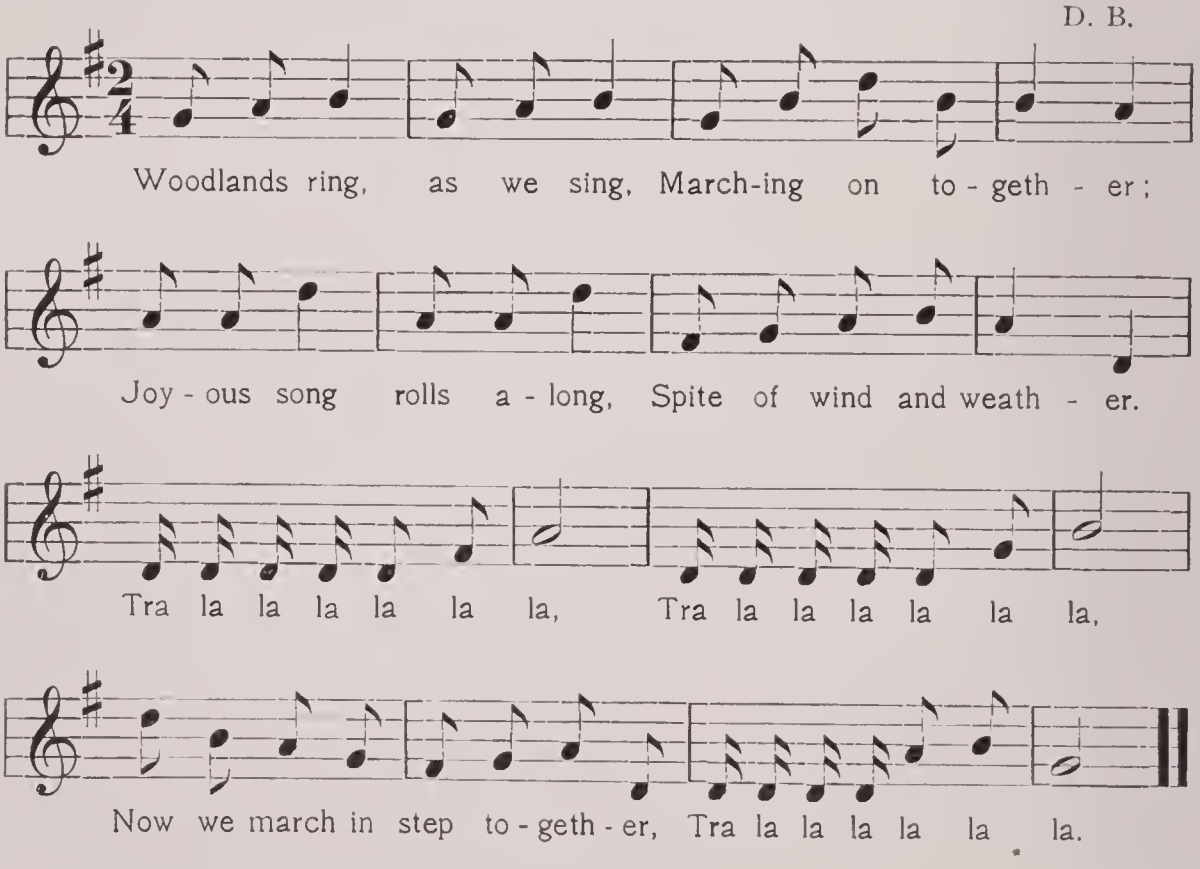
D. B.



Here is another lively little vocal march for the nursery:

WOODLANDS RING.

D. B.



DEVELOPMENT OF RHYTHM.

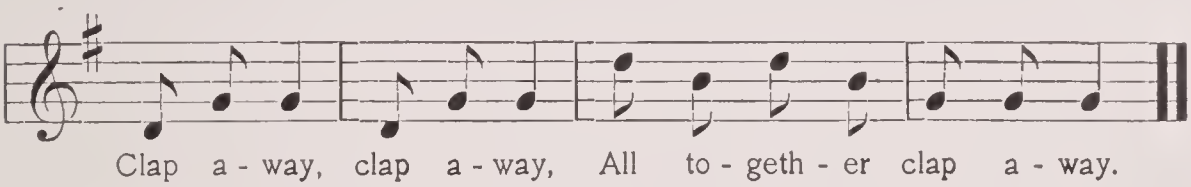
All healthy movements consist of action and reaction, the regular alternation of movement and rest. When we consider that every muscular contraction destroys more or less of the tissue, we see how important it is that there should be a succeeding interval of repose, in which the vital forces may repair the waste, and build up more and better tissue. This is the condition of healthy growth—tearing down the old and building up the new. Working in obedience to this law, the nerves and muscles grow in strength and elasticity. The normal child is not lacking in vital impulses; it should be our aim to provide for them a free and joyous expression.

Rhythm is the poetry of the muscular sense; it is the very essence of gracefulness, therefore, every movement of the child's body should flow rhythmically. But this desirable condition cannot be secured all at once; we must get one thing at a time, and the easiest thing first.

RHYTHMIC CLAPPING OF HANDS.

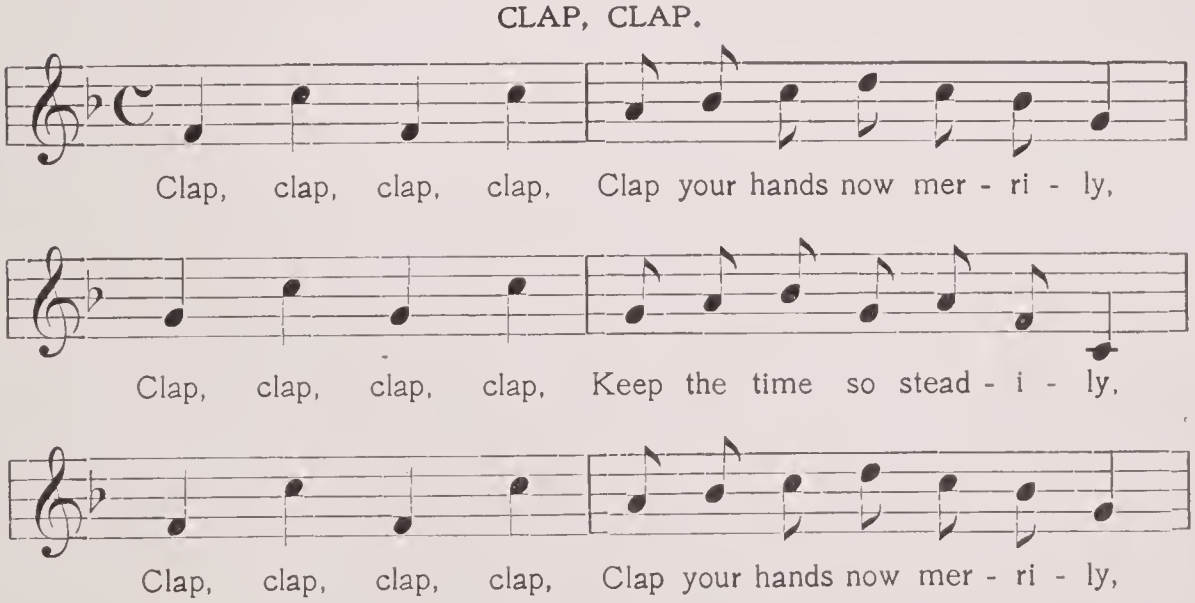
The child first gains control of his hands, so we will begin there. Let the hands "talk together." If the clapping is too vigorous, remind the children that ladies and gentlemen do not shout when they are talking. The hands must learn to talk politely, and be gentle to each other.

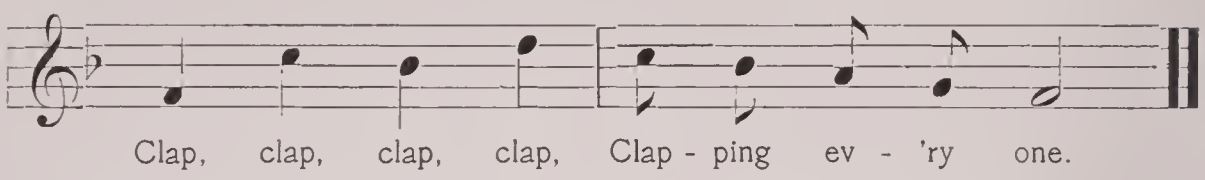
This next thing is to get the hands all to talk at the same time. To secure this sing some familiar little melody with well marked rhythm, such as this:



or this:

CLAP, CLAP.





At first the children will be inclined to strike the palms together in clapping; but by degrees they may be led to press the fingers of one hand upon the palm of the other, and they will then begin to get a more delicate feeling of the rhythm. They will do this the more unconsciously if the passive hand be called a little drum, upon which the fingers of the other hand tap out the music.

As this is the period of vital impulse rather than of thought, the less the attention of the children is called to the harder and softer taps the more perfect will be the elasticity of the rhythm.

RHYTHMIC MOVEMENT OF THE FEET.

Next to the hand clapping the children can readily control the action of their feet. We, therefore, follow nature's leading by getting these into well-timed movement. Marching exercises come in very appropriately here. As a general thing, children of the nursery age should not be perplexed by having their attention called to the right and left foot. It is enough for the present if they move to the music with a definite, elastic step. A tendency to drag the feet carelessly may generally be corrected at once by a more pronounced rhythm in the music. Frequent change of tune is desirable, for if the same music is played too long they lose interest in it.

When the children are seated in the ring, rhythmic tapping of the feet may be alternated with the clapping of the hands. Some of the little ones will at first lift up their feet and stamp; but after awhile they learn to rest the heels and softly tap with the toes. They enjoy the idea of having the floor within the ring for a great drum, upon which their toes act as drumsticks. The melodies on page 11 given for the hand clapping exercise will serve for the tapping of feet, by making the necessary alteration in the words.

COMBINED RHYTHMIC ACTION.

At first the children should give their undivided attention to the action of the hands or feet alone; but as these simple movements become easy, and, in a measure, automatic, new interest can be awakened by combining them. So far the children have been too much occupied with the movement of their limbs to think of voice work, and the singing has been carried on by the mother; but now the tongue bugles should be called into action. When this becomes easy and spontaneous we may accompany the tongue bugles with the hand drums; then with the floor drum, and lastly, with all three combined.

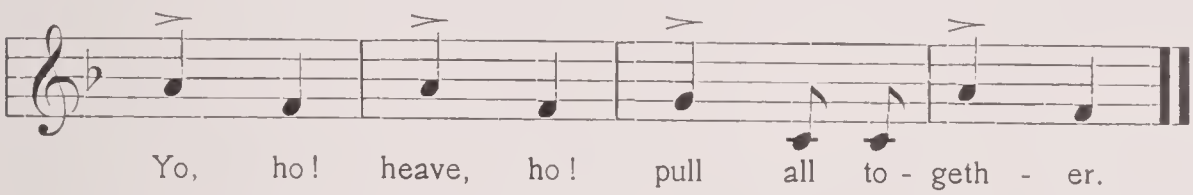
BRAIN CULTURE.

Do not lose sight of the significance of these actions. It is not simply that the hands, feet and tongue are acquiring the knack of rhythmic expression. Through their activity important brain centers are being developed, and the rhythmic faculty is growing in the mind. As the inner sense becomes more alive the outward expression of hands and feet may gradually be subdued, until, without their aid, the child can feel the inward pulsations of rhythm.

RHYTHMIC GYMNASTICS.

But we shall need plenty of rhythmic action for the cultivation of the child's physical powers. Some philosophers claim that the world is built upon a musical plan; however that may be, it is certainly true that the human body should be developed by rhythmic impulses.

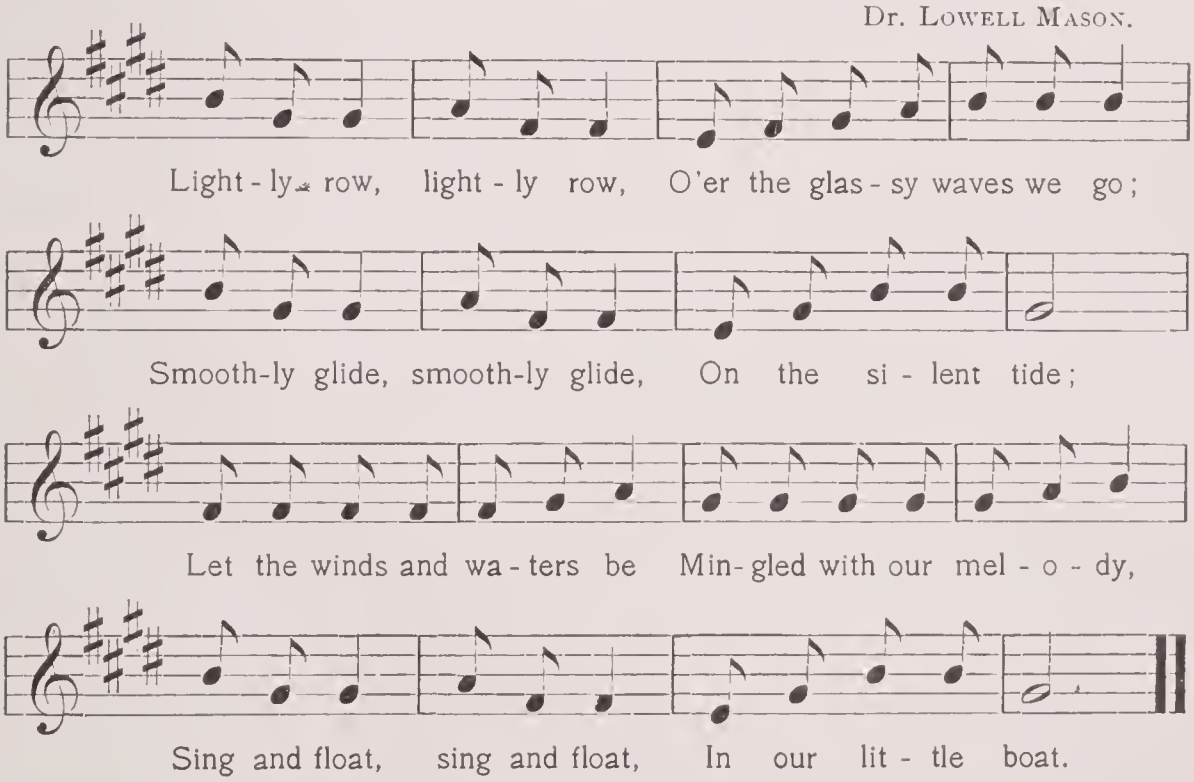
The child's dramatic instincts will make this an easy and pleasant exercise. For instance, he is a sailor in a ship; now let him pull on the ropes, keeping time to the sailor's chorus:



Children are generally fond of boating songs. Here is one that has long been a favorite. It is so simple both in rhythm and melody that little children can sing it to "la la." They also like to listen to the music of the words, even if they do not understand their meaning very clearly.

LIGHTLY ROW.

Dr. Lowell Mason.

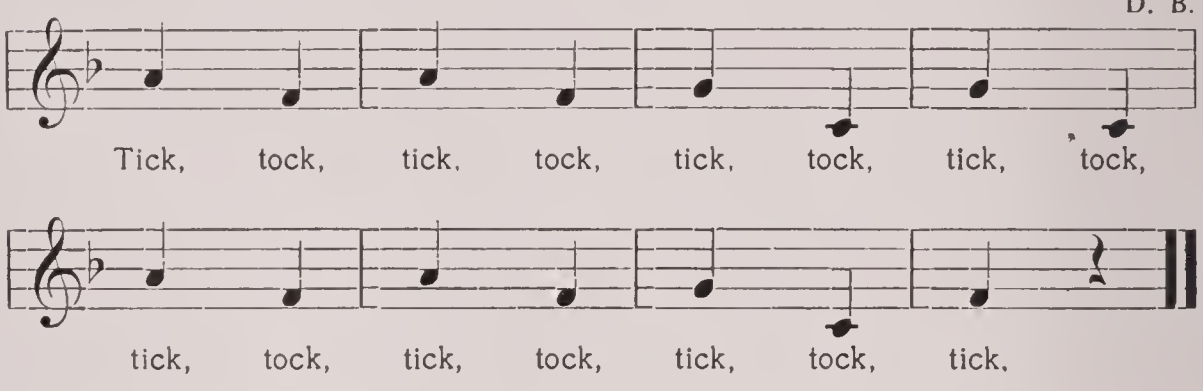


The children can accompany this song with a steady swing of the arms, as if pulling an imaginary boat. A more vigorous exercise of the waist muscles can be had by letting two of the children make a boat. For this purpose they sit opposite to each other on the floor, feet against feet, and grasp hands. Then they move backward and forward to the swing of the music. Of course, it is more exciting if two or more couples join in a boat race. It is not safe for the children to sing while engaged in such vigorous action as this.

There seems to be a fascination for children in the idea of a clock ticking away the time. Take a pendulum* and let it swing back and forth while you sing softly, but with well-marked rhythm:

THE CLOCK SONG.

D. B.



Then these words may be sung to it:

What does the clock say?
"Time is passing;
Use it wisely,
Tick, tock, tick."

The children will be so much interested in the swinging of the pendulum, especially if they are allowed to swing it, that at first they will neglect the vocal accompaniment; but if a preference be given to those who sing the song, they will soon find their voices.

All sorts of clocks may be impersonated. One child will choose to be the church clock, and as the pendulum must be very long, he can use a chair for a pedestal. This clock up in the tower has a slow and deep voice. Others will choose the hall clock, the mantel clock, etc., and in this way the children are becoming accustomed to different rates of movement.

Beside the tape—or ball—pendulum, the children may swing their right arm to the music, then the left, and afterward both arms together. Then let them practice swinging each leg in turn. For some time they will need to steady themselves by holding on to a chair; but it will be a great gain when they can balance themselves without external support.

* The pendulum may be made of a ball, or any other weight attached to a string. But it will be better to use a spring tape measure with a stop catch attachment, so that it can be swung at any length.

Remember that in all these exercises the ultimate aim is, through rhythmic movement, to secure mental poise, and any form of movement which tends to this result is beneficial.

DEVELOPMENT OF CHILDREN'S VOICES.

Of all the means by which we express ourselves, none is more important than the voice, and this for various reasons.

Let us look at the matter from a physiological point of view. A glance at the vocal organs—the throat, lungs and diaphragm—will show how intimately the voice is connected with some of the most important vital processes.

Since breath is the raw material of which tone is made, it follows, first, that a more generous use of the voice requires fuller breathing, and, secondly, that proper control of the voice demands a perfect habit of breathing. This means an increased girth of chest, with a more elastic condition of the diaphragm and rib muscles. Again, the fuller breathing conveys more oxygen to the lungs, and thus cleanses and vitalizes the blood, which is then able to build up healthier tissue all over the body.

Notice next the effect of tone upon the nervous system. The nerves seem to furnish a connecting link between the body and soul. On the one hand they control muscular activity and the general physical condition, while on the other, they are intimately connected with our mental state. To understand the effect of tone upon the delicate nerve fibers we must remember that pure tones are perfectly timed vibrations. Now there is a principle of sympathy running everywhere through nature, by virtue of which like always responds to like. A well-known illustration is that of the tuning fork. Set the prongs vibrating, and then if the fork be stood upon any resonant surface it will call forth a clear musical tone. Another simple experiment is to sing forcibly near the strings of a silent piano, and those strings which are attuned to the given sounds will tremble forth in musical response. But the human nerves are more sensitive to tone vibrations than sounding board or stretched wire. We all know the "teeth on edge" sensation when we hear shrill or scraping noises, and we also know how sweet and soothing it is to listen to pure tones.

Although the voice is due to the vibration of a small organ in the throat, it causes sympathetic vibrations in other parts of the body, especially in the chest and head cavities, and the more perfectly the tones are produced the more freely they vibrate along the whole nervous system. It is a significant fact that professional singers rarely suffer from nervous disorders. The vibration of the chest, ribs and diaphragm not only greatly enrich the tone, but they also stimulate the vital functions. A good tone has also much to do with the healthy condition of the throat and nasal passages.

VOICE TRAINING.

The idea of training little children's voices may be alarming to the professional mind, and not without reason, seeing that the tender vocal

organs can bear very little strain without injury, and much harm may result from injudicious treatment. But we must remember that some form of training is already in progress. The cries of babyhood, the laughter and shouting of children's play, and the ordinary exercises of speaking and singing, are all helping for good or bad to develop the children's voices. These exercises are for the most part strengthening and in the natural order of development; but along with this healthy growth many bad habits will be formed, which if unchecked will result in a coarse quality of voice, and in some cases, where the organs are unusually delicate, may lead to actual forms of disease.

Listen to the sweet silvery tones of the infant, and then notice the comparative roughness of the older children's voices. Very few children retain the crystal clearness of their natural voice. What causes this deterioration?

Bad Example.—One cause is the faulty pattern set by older people. Children are essentially imitative, and they are very quick to copy our faults and mannerisms. Then if we do not wish to see these faults in the children, we must reform them in ourselves. The first requisite on the part of the parent or teacher is a pleasant and healthy voice.

Shouting and Screaming.—Another source of injury to the child's voice is shouting and screaming, especially under the influence of anger. This always causes straining of the throat. We have spoken on page 8 of the influence of the mother's voice upon the child, and it will be well to consider here the reflex influence of the child's own voice upon himself. Cries of anger are not only the effect of bad feeling, but also a cause of more intense bad feeling. If a harsh tone angers the listener, still more does it anger the speaker. On the other hand, "a soft answer turneth away wrath," and the child who learns to control the tones of his voice will be able to control his emotional condition. Less harmful than cries of anger, but still injurious to a fine quality of voice, are the loud tones of boisterous play. This does not mean that the voice must always be subdued. Clear laughing tones are both strengthening and purifying to the voice.

Singing with Older People.—And a third cause of coarseness in the voice is the ordinary heavy style of singing. Children when left to themselves naturally use the light "head voice," but in singing with older people they unconsciously imitate the fuller tones of the adult voice, and get into the habit of using "chest tones." Then they carry this quality of voice into the higher tones and strain their throats. Easy action of the throat will be considered presently. As a remedy for the troubles here mentioned be sure that the children sing softly, and do not pitch their tunes in too low a key.

BREATHING EXERCISES.

A good use of the voice depends very largely upon proper habits of breathing, and this is a matter of first importance in the education of the

child. Yet no subject is more difficult to teach to little children. Sustained breathing calls for more will power and self-control than they possess. Therefore the nursery breathing exercises must be those which come unconsciously to the children in the course of the play.

Breathing Through the Nose.—Let the children stand in a circle with their hands folded behind them. Now take some flowers, and let the children in turn take a good long smell. Then place the flowers in the center for a flower garden, while the children all smell together two or three times in succession. Interest in this exercise may be sustained day after day by offering different perfumes to the children to smell. This they must do with closed eyes, afterward guessing what perfume they have smelled. Still another variation will be to stop one of the nostrils and to smell with the other in order to see which can smell the better. At first the perfumes may be of a pronounced character, but as the faculty of smelling develops, use fainter and fainter perfumes, which will compel more careful and sustained smelling. Sometimes the children will enjoy smelling imaginary flowers, etc. All this time the habit of healthy nasal breathing is being established. It is not generally known what a sympathetic relation there is between free breathing through the nose and normal brain activity. The child who has a healthy habit of breathing will develop more intelligence than will the one who does not breathe so well. One reason for this is that the fuller breathing more completely vitalizes the blood in the lungs, so that better brain tissue is built up, but another reason is that vigorous nasal breathing stimulates the flow of blood through the channels which feed the brain.

Strengthening the Waist Muscles—The vigor and control of the breath will be proportioned to the elasticity of the diaphragm and waist muscles. For this purpose the boating exercise mentioned on page 14 will be useful. Another game in which the children will enjoy breathing is the "tug of war." Take one end of a rope and let the child take the other end. In this act of pulling he will necessarily exercise the diaphragm and waist muscles. Regulate your resistance to his pull, so that while he has to put forth all his power, the strain is not too severe nor too long continued. It will be better to let him generally gain the advantage, so that he may be encouraged to renewed effort. Always stop when there are signs of labored breathing. When the children have been well trained in this way they may sometimes have a tug of war among themselves; but always under the mother's careful supervision.

The waist muscles may also be strengthened by blowing games. Suspend a feather on a string in front of each child and see who can blow it to the greatest distance. Little paper windmills may also be employed, and if trumpets with a soft musical tone can be procured, they will engage the children's interest for some time. But perhaps the most exciting game will be to hold a lighted taper just out of the children's reach, so that they may try who can blow it out. In all of these exercises the children are

not thinking of the act of blowing, but of the effect produced, and so they breathe all the better because unconsciously.

Flying exercises with the arms are good for the waist muscles, and so are efforts at climbing a pole. Indeed, any form of upreaching with the arms is beneficial, and tends to symmetrical development of the body.

It will be seen that these exercises can be varied indefinitely. But perhaps the most essential thing is that the mother or leader should herself breathe well; for the children will follow her example, and especially will imitate her faults. The old adage will bear a new reading:—"If you want a thing done, do it yourself."

TONE EXERCISES.

Remember that our chief concern with a child's voice is to guard against the formation of bad habits. Nature has gifted him with a beautiful instrument, but it is peculiarly liable to injury. It should be our aim to secure for it natural and easy expression, free from forcing or strain of any kind.

At the outset we find ourselves confronted with two difficulties in the tone exercises: some of the children use their voices too vigorously, and some do not use them at all. In either case it will be well to take the children out of themselves—to free them from self-consciousness. It is said that the human embryo passes in turn through all the typical phases of animal life. Perhaps this is why children like to play that they are animals. Nature here gives us a hint how to begin. Let us play animals.

Animal Sounds.—The children are to tell by your voice whether you are a dog, a cat, a sheep, a cow, etc. Then they try to talk like these animals. It will not be long before the most timid child will lose self-consciousness and use the voice freely.

Apart from the fun of the thing, these animal sounds, properly used, furnish good voice-developing exercises. Thus in the barking of the dog we get a definite action of the diaphragm and good attack of tone. Of course, we must be prepared for the vigorous child who barks with more zeal than discretion, to the detriment of his vocal organs. This may generally be corrected by suggesting that he sounded like a coarse, disagreeable dog that nobody likes, and we are trying to be well-bred dogs who have been taught to bark politely.

When the voice imitates the lowing of cattle it encourages a sustained action of the diaphragm, which serves to counteract the short spasmodic use of the voice so common to children. In giving them the example begin gently, and let the voice swell as it slowly slides upward:—

m oo OO OO OO oo

Varied Intonation.—The animal sounds may also be used to secure varied intonation of voice. The children should be led to discriminate between a large dog, a puppy, and a middle-sized dog, etc. Or if they are playing sheep, the children will enjoy crying like a baby lamb that

has lost its mother, and then giving the answering cry of the mother, while occasionally father ram's deeper "baa" may be heard. These exercises may be combined with talks upon natural history.

Ideal Tones.—All kinds of animal sounds may be used, and by this dramatic play the child's sympathies are being broadened, and the foundation is laid for a loving study of Nature later on. But, as a means of voice culture, it is not well to give too realistic an imitation of the actual sounds; since, compared with human tones, they are crude and harsh. The purpose is rather to give a musical suggestion of them, as for instance, when the cow's lowing is heard in the distant pasture, and not as it would sound close at hand. Each animal tone can be idealized, and used as a means of enriching the human voice.

From animal sounds, especially such as the humming of bees, etc., it is an easy transition to the murmuring of the wind through the trees, or the rippling of a brook, and this will lead to a fuller appreciation of some of the rote songs.

So far we have been considering only the foundations of singing. We have now to take up melodic exercises, but they must still be in the form of play.

Singing Fairies.—Simple scale runs are best adapted for getting a smooth upward and downward swing of the voice. Children are fond of anything fairylike, and it helps them to think of the voice as a little fairy tripping up and down the musical stairway. Sometimes it is a thoughtful fairy going carefully up and down. Then a light-hearted fairy who trips rapidly up and down a higher flight. Take in turn a laughing fairy; a crying fairy; one who goes up crying and comes down laughing; a mischievous fairy who trips up and slides down; one who does the reverse; a jolly fairy who bounds up and down with short detached steps, etc. There may be endless variety; but the voice must always be fairylike, *i. e.*, soft and gentle.

UNMUSICAL CHILDREN.

No child possessing the faculties of hearing and speech need grow up unmusical. What is commonly called "no ear for music" is really a backward sense of tune perception, which needs proper stimulus. If left to mature age, this training becomes difficult and sometimes hopeless, but in early childhood the tone sense is easily quickened. The development of no two children is alike, and so we must be prepared to find some slower in musical attainment than are others. It is also necessary for some to take a simpler starting point. Thus one child may be able to join in singing a melody, while another child can only imitate single tones, and yet another cannot even produce a single given tone at first; but it is only a question of degree in attainment. Begin with the child's capacity and lead on from that point.

Musical Impressions.—The importance of the mother's voice has already been pointed out. The child's musical education begins in earliest infancy. His first singing lessons are taken while listening to the mother's lullaby or nursery jingles, and just as the child who hears nothing but refined language grows up to speak in a refined manner, so in singing, the tones that fall upon the ear, gentle or rough, will reproduce themselves in the unconscious imitation of the child's vocal utterance. The expression will correspond with the foregoing impressions.

The Mother's Voice.—This shows the importance of the mother's voice. Her tones should be well modulated both in speech and in song. It is unfortunate that mothers in general do not sing enough to their children. The little child should be soothed to rest by a sweet lullaby, and its first waking experience should be the bright music of the mother's voice. Indeed, every changing experience of the nursery life should have its song accompaniment. For a long time, it may be, the child does not seem to be taking notice of it; but little by little we find him listening; and after awhile he makes the attempt to join in the song.

Beginning to Sing.—This opens up the question, when do children begin to sing? The faculty does not awaken in all children at the same age. Some begin to sing as soon as they learn to speak, and even earlier. But the average child does not sing songs until he is four or five years of age, and it is not unusual for children to wait until the sixth year is completed. Later than this will indicate a backward musical faculty that needs special attention.

The Value of Listening.—Some children will listen for a long time before they join in singing. If they are interested in the music let them listen: the impressions which they are storing will find expression in due time. If they are not interested find out how to engage their interest.

ROTE SONGS.

We now naturally come to the consideration of rote songs, *i. e.*, songs learned by ear. From what has just been said, it is evident that in the nursery the mother must expect to do most of the singing. But she should not underrate the exercise on that account. If the children are not singing they are forming impressions which will determine their musical style. Later studies may modify it; but the foundations laid in the nursery will remain through life. The mother should feel as great a responsibility as does the public singer before an audience. A song sung with feeling will not only impress the tender heart of the child now, but will thrill his soul long years after the singer's tongue has become silent.

Good Songs Needed.—Therefore it is essential that the songs should be good both in words and in music. Nothing of a tawdry or vulgar character should ever be tolerated in the nursery. This does not by any means shut out the element of fun. Children have a keen appreciation

of humor, as is shown by their interest in Mother Goose. Real humor is always humanizing, and should be welcomed in the song circle.

Unfortunately, the supply of genuine child songs is quite limited. But although there is a dearth of songs of genius, several can be found which embody real talent. Perhaps the children themselves are the best judges of what songs are good for them; let them have those which best excite and hold their interest.

HOW TO TEACH ROTE SONGS.

The teaching of rote songs to the children forms an important part of their education. The way in which they learn to sing these songs will materially affect the ease, force and refinement of their vocal expression in later life. It is a well-known saying that, other things being equal, singers speak better than non-singers. This is natural enough even from a physiological point of view. Singing requires a steady control of the breath, and this is dependent upon a free and healthy action of the lungs. It is interesting to note that, as a rule, the Scotch and Germans among us have fuller chest development and more lung power than their neighbors, and this has been attributed to the ancestral custom of daily singing the long-drawn psalms and chorals in their family worship.

Good singing also necessitates a definite placing of the organs of speech, and this is an excellent preparation for the clear enunciation of speech. In addition to this the smooth flow of the tone in singing conduces to a fuller inflection of the voice in talking.

Looked at from a psychological point of view, it is easy to understand that the tone feeling called forth in song must add to the sympathetic quality of the speaking voice.

So the practice of good singing imparts to the voice power, clearness and sympathy. This does not mean that the uncultivated singer will speak better than a person of refinement who does not sing; but that, with an equal degree of general culture, the singer will speak in a more pleasing and effective manner than the non-singer.

Let it be clearly understood that these songs are forms of language. The words belong to the language of thought. The tone belongs to the language of feeling. Combined in the song they give us the language of sentiment, which is blended thought and feeling.

It is necessary first to impress the children with the general spirit of the song. Tell them some little story which shall prepare them to listen with sympathetic intelligence. Then let them hear the song. Give it as perfect a rendering as possible, for much depends upon the first impression. It may be necessary to sing it through two or three times before they get a clear idea of it as a whole; but in this you will be guided by their interest in the matter. Do not be impatient to get a response from them. When they have been properly impressed they will be ready enough to give expression to it.

The children will catch the melody more easily than the words, so it will be better to let them *la* through the tune form without the words for a few times. Secure first the true swing of the rhythm. When this goes smoothly, look out for the leaps in the melody. At these points there is danger of false intonation and voice straining, so the voice should learn to spring lightly over these leaps before the words are attempted. Take for instance, the song "I love little pussy." There are four upward leaps to this song, of which the first and third are easy. The second leap to the words "hurt her" is more unusual and will need a little more care to get the true tone. But the fourth leap to the words "love me" is the most critical. If not prepared for it, the children will generally give the "me" with a hard squeaking voice. And yet the tone is not at all beyond the children's range if taken in the light "head voice." Let them sing it to *la* with their mouths well open, and then take it to the words in a pleasant, smiling way.

The question here presents itself whether it is better to sing with the children or to give the pattern for them to imitate. The latter is the better way when the children are able to do it. Those who are old enough should listen to the tune and then imitate it line by line. But the little children of nursery age generally need to be led along for a time. At first the mother's voice will take the lead; then as the young voices gain confidence she withdraws, little by little, until they can sing the melody alone. She will listen carefully for any false intonation, or halting in the rhythm, and at once repeat the pattern. A lover of nature once watched a wren giving a singing lesson to his nestlings. The bird sang his song over and over until the young ones tried to imitate it. At first they could only give one or two faint chirps; but the father always took up the song where they broke down, and carried it through to the end. So they were encouraged to try again and soon learned it all through. He was not a bad singing teacher!

When the children can vocalize the melody pretty well, let them repeat the words after you, phrase by phrase, in a pleasant speaking voice. Be careful to explain any unfamiliar word, or the children will be sure to put in some familiar word which happens to sound like it, regardless of sense. This habit is a very common one even with older people. To take a well-known illustration, the harsh chestnut becomes horse-chestnut, and harsh radish becomes horse-radish. Among people unfamiliar with the terms of falconry, "I know a hawk from a hernshaw" became "I know a hawk from a handsaw." Children are very prone to this habit, and as every misfit word becomes a mental blur and encourages loose thinking, it is well to pay special attention to the correct use of words.

The following incident will teach us the importance of discarding difficult words from the child-songs. Some children in a mission kindergarten were singing a song which interested them greatly. They had often

asked for it, and knew it pretty thoroughly. The first two lines of it were:

"Can a little child like me
Thank the Father fittingly?"

The listener was curious to know what the little tots would do with that last word. Most of the children blurred it over, not having any word ready to match it. But there were two or three bright exceptions. One of the older children made a dubious attempt at "feelingly." A three year old chubby-faced maiden looked up most pathetically as she sang, "Thank the Father, pity me." Another girl two or three years older sang with great confidence, "Thank the Father, fitting me."

When the children can repeat the words as a little poem, the melody can be added, and they will then sing with clearness and intelligence.

From this description the process may seem a tedious one; but it is really a saving of time in the end. There is nothing to unlearn, and the song makes a clear and lasting impression. Besides this, it forms an important language lesson, and has a direct bearing upon conversation and reading later on.

Emotional Character of Songs.—Everybody knows, in a general way, what a powerful influence music exerts upon the mind, but the mother or kindergartner should know what kind of song is best adapted to awaken desirable thoughts and feelings in the children, or to repress those which are undesirable. One song may be used to stimulate and another to soothe. Children of a sluggish temperament need songs with energetic rhythm and a lively swing of melody; while other children of a nervous or excitable disposition—and especially those in whom the mental nature is over active—should have melodies of a quieter character. This is naturally found in devotional songs and lullabies.

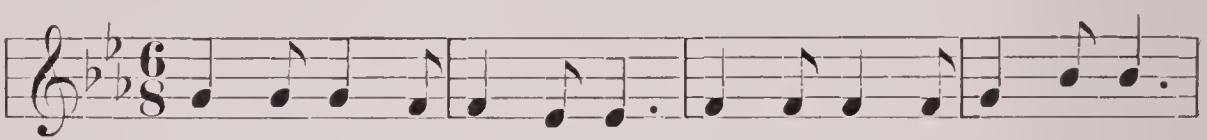
Devotional Songs.—The songs which take the strongest hold upon children are of a devotional character. Childhood is essentially religious. To one who is in close touch with the child there is profound meaning in that saying—"Their angels do always behold the face of my Father in heaven." The children never tire of songs which breathe faith, trust and thanksgiving. Hence devotional songs should be an essential part of the child's daily life. The morning and evening hymn are the natural expression of that spiritual impulse which has not yet become deadened, and they are the best preparation for a truly religious life.

One hymn which has long been a favorite with the children is "Father, We Thank Thee." (P. 3229.) After the interchange of morning greetings, and a glad welcome to the new day, a hush comes over the children as they softly hum the music before singing the words. They also hum over the last line as an interlude between the verses. This organ-like effect adds to the quiet devotional character of the hymn.

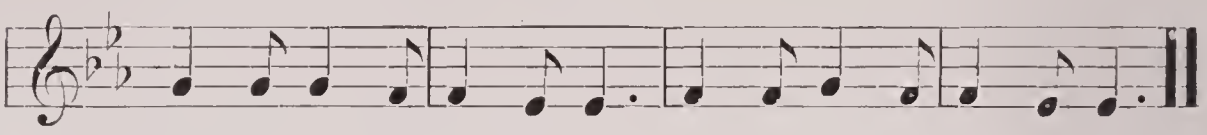
Songs of Repose.—Our American children are, as a rule, sufficiently energetic, and more likely to suffer from over-stimulation than from too

much quietness. This shows the need of reposeful songs. If the children are excited and restless, a good plan is to have a lively song, followed by one of a slow and gentle character. Here is a suitable selection—

THE BIRDIE'S LULLABY.



1. Close beneath thy mother's wing, Bird - ie, lay thy lit - tle head;



I will watch thy slumbers light, I will guard thy down-y bed.

2 Nestle, nestle gently down,
Close thine eyes to sleep, my dear;
Safe within our Father's love,
You and I have nought to fear.

This may be dramatized in a simple way. One of the children represents a mother bird, and selects a smaller child for her baby bird. The rest of the children group themselves about as trees, under one of which the birdies have their nest. The tree children now wave their arms gently as they hum the music to represent the breeze murmuring through the branches. Then the mother bird sings the first verse of the song, after which the trees again wave, and hum the refrain in the last line. Once again the little mother sings to her babe, "Nestle, nestle gently down," and at the close of the song the trees again hum the refrain more and more softly, until it dies away into silence. They now stand perfectly still, while the baby bird sleeps. At a given signal all join in a bright little song to waken the baby, and the game is over.

Nature Songs.—Next to devotional songs, and songs which embody the family sentiment, children love nature songs. Indeed, nature is an extension of the home idea, and they find the family relations extending through every part of it. To give expression to this part of the child's life a number of nature songs will be found in the following collection.

The ideal family life is well typified in "The Little Doves," a song which easily lends itself to dramatic representation. Then the gladness of the family life is suggested in "A Little Bird Sang."

In the nature songs the child is led to welcome each new experience as a thing of beauty and joy. There is a bright side to everything, and the child learns to look for that. There has been great advance made in this respect. Compare the old refrain:

"Rain, rain, go away,
Come again another day."

with "See millions of bright raindrops," or indeed any other of our modern rain songs. And so with all changes of weather—as the "Weather Song" says,

"Wonderful, Lord, are all thy works;
Wheresoever falling,
All their various voices raise,
Speaking forth their Maker's praise."

Then, too, the nature songs are sometimes parables which teach lessons of hope and courage. In the story of "Daffy-down-dilly" the children feel an incentive to earnest, hopeful effort.

And so what would otherwise be commonplace becomes transfigured, for everything has its spiritual significance. The time is coming when the children will all find

"Tongues in trees,
Books in the running brooks, sermons in stones,
And good in everything."

The Rote Songs in the following collection are for the most part original, and many of them have been written and composed for this work. As far as possible, they are arranged to secure steady progression from songs which are suitable for the youngest children to those which are better adapted to children of more matured minds.

First come the devotional songs. Then come the Mother Goose and other nursery songs, followed by those in which the older children will be more interested. It is not possible to make a clear line of demarcation. The children will naturally turn to those songs which are most suitable to them.

Rote Songs.

SLEEP, LITTLE BABY.

A Lullaby.

Legato. D. Batchellor

1. Sleep, lit - tle ba - by of mine, Night and the dark-ness are here;.. T

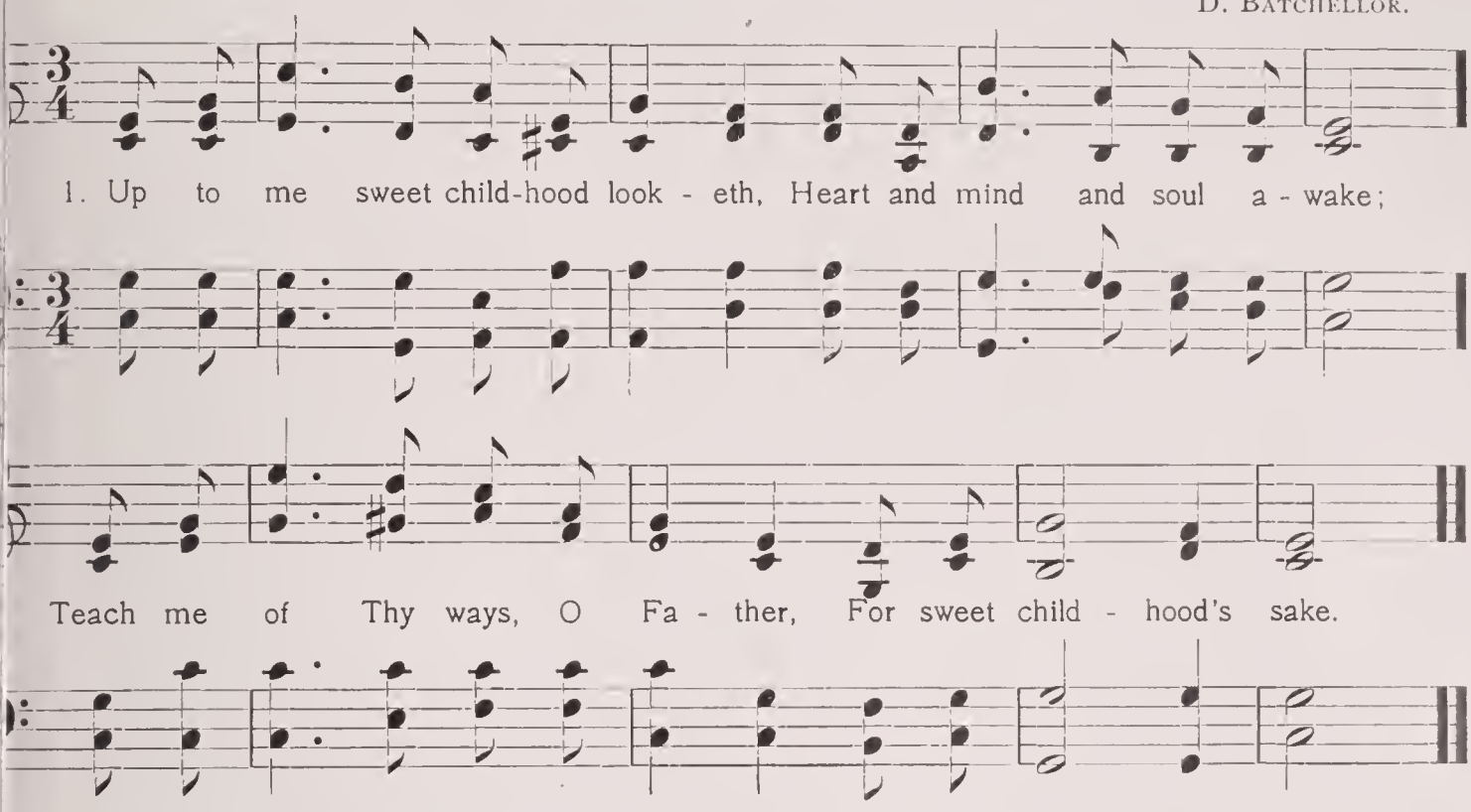
Father looks down on the shadows that frown, And ba - by has noth-ing to fear.....

2.

Oh, darling baby of mine,
What can you know of the bliss,
The comfort I take, asleep or awake,
Because I am certain of this!

MOTHER'S HYMN.

D. BATCHELLOR.



2 In their young hearts, pure and tender,
Guide my hand good seed to sow,
That its blossoming may praise Thee,
Wheresoe'er they go.

3 Father, order all my footsteps,
So direct and guide my way
That, in following me, the children
May not go astray.

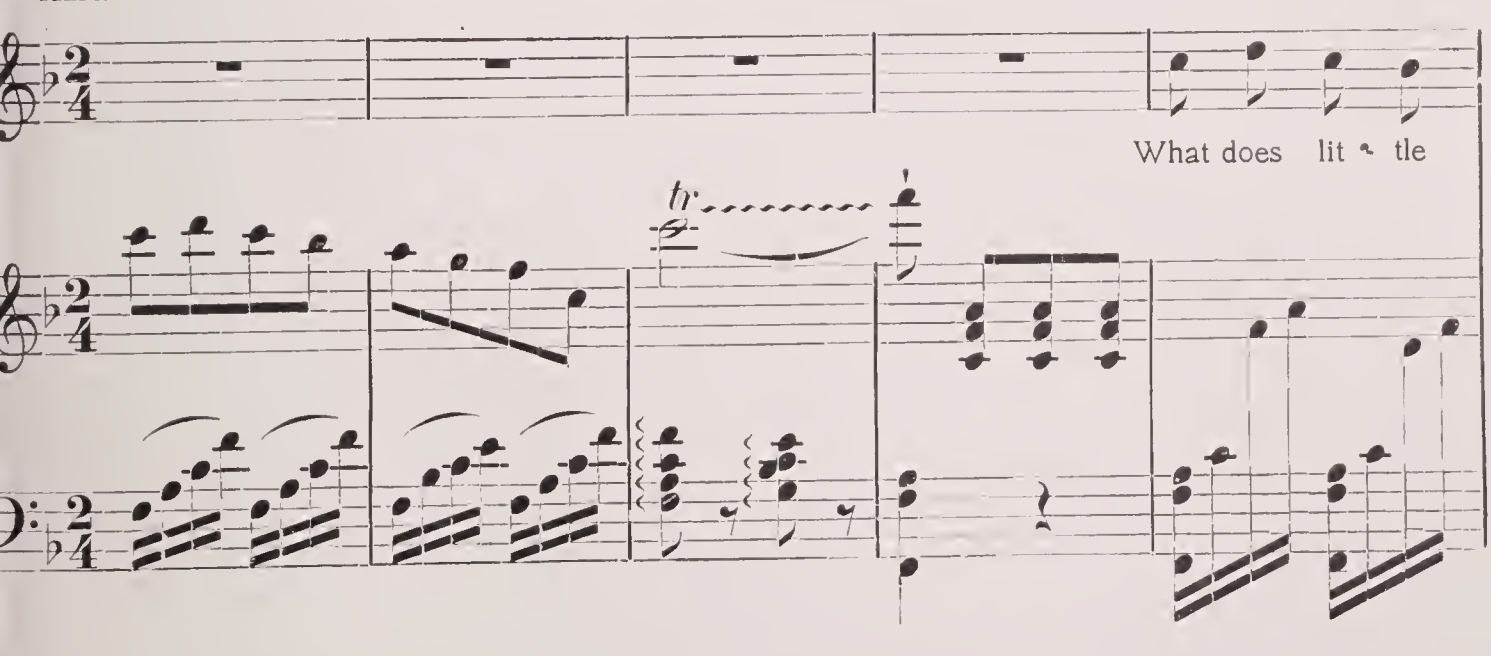
4 Let Thy holy counsel lead me;
Let Thy light before me shine,
That they may not stumble over
Word or deed of mine.

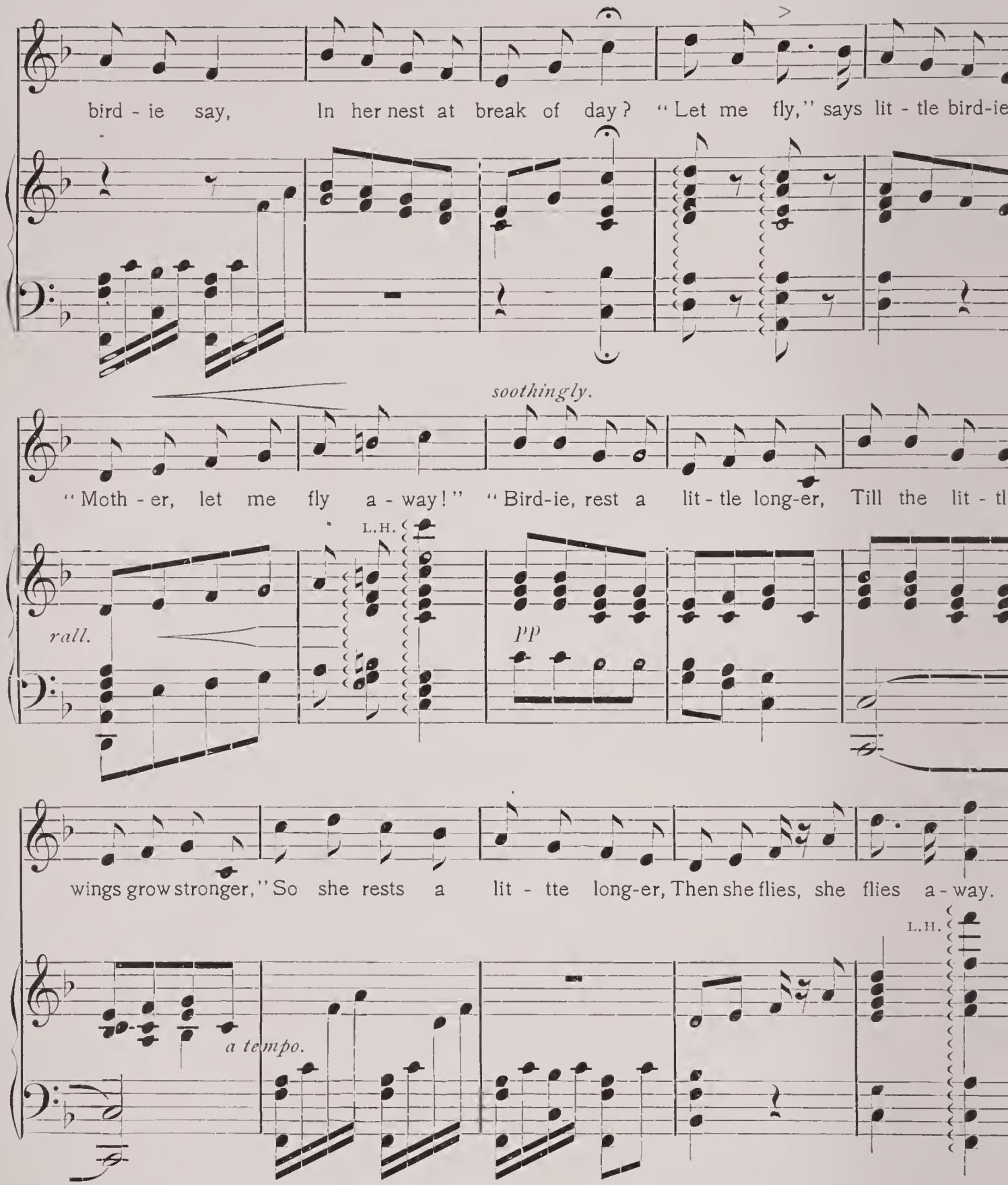
5 Give to me a cheerful spirit,
That my little flock may see
It is good and pleasant service
To be taught of Thee.

WHAT DOES LITTLE BIRDIE SAY?

ALFRED TENNYSON.

D. BATCHELLOR.



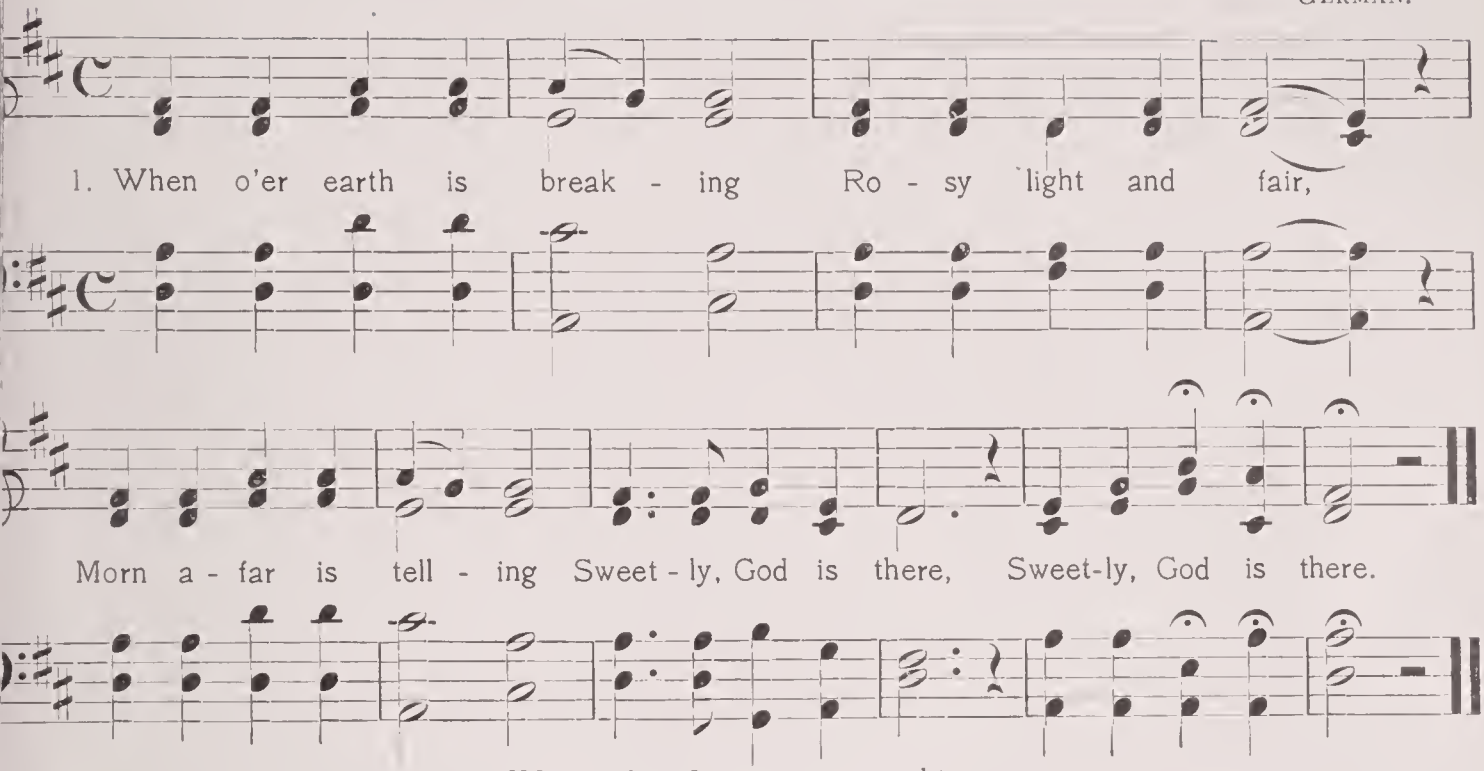


2 What does little baby say,
In her bed at peep of day?
Baby says, like little birdie,
"Let me rise and fly away."
"Baby, sleep a little longer,
Till the little limbs are stronger,
If she sleeps a little longer,
Baby, too, shall fly away."

GOD IS THERE.

3229

GERMAN.

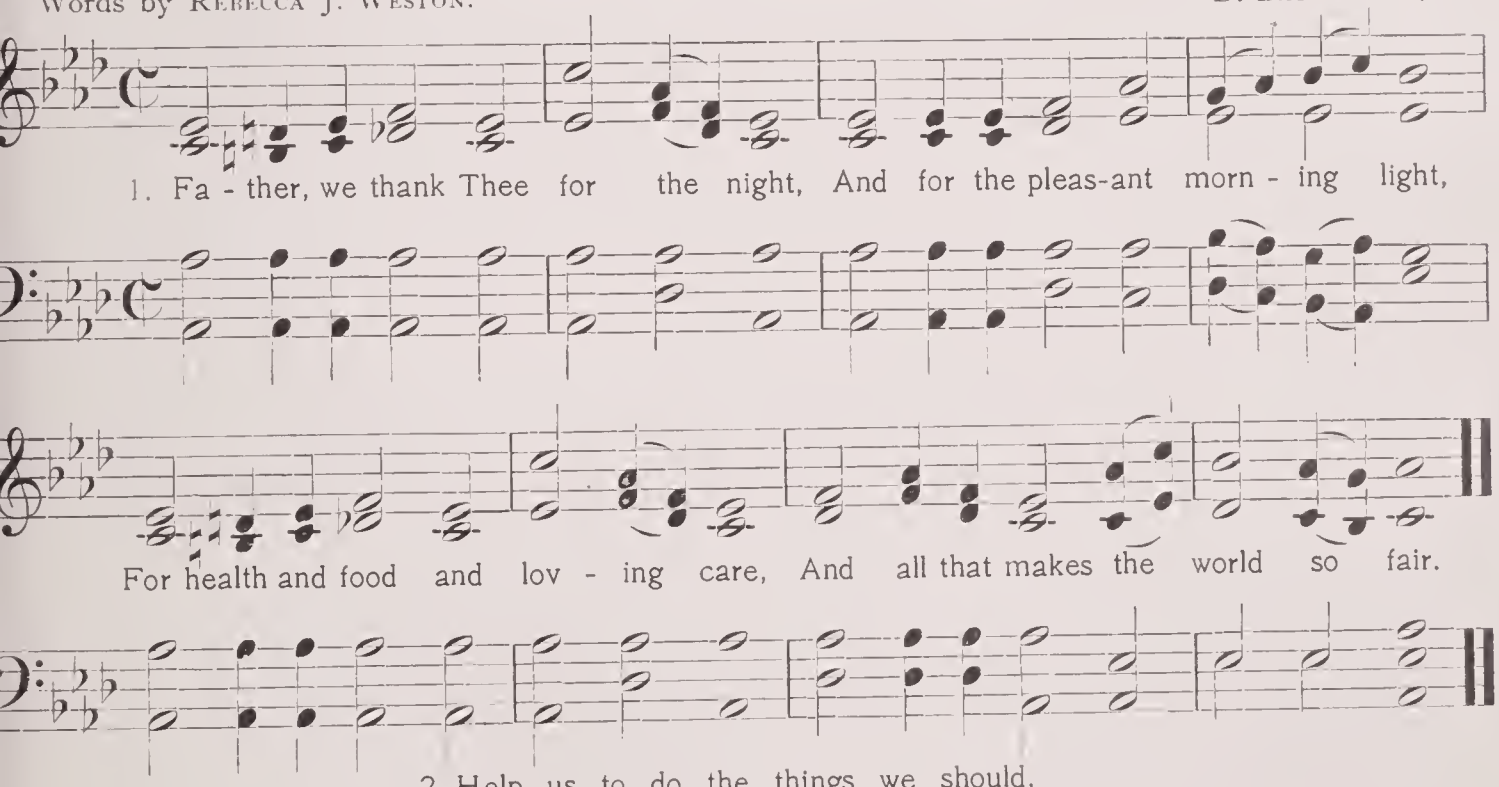


2 When the Spring is wreathing
Flowers rich and rare
On each leaf is written
‖: Nature's God is there, :‖

FATHER, WE THANK THEE.

Words by REBECCA J. WESTON.

D. BATCHELLOR.

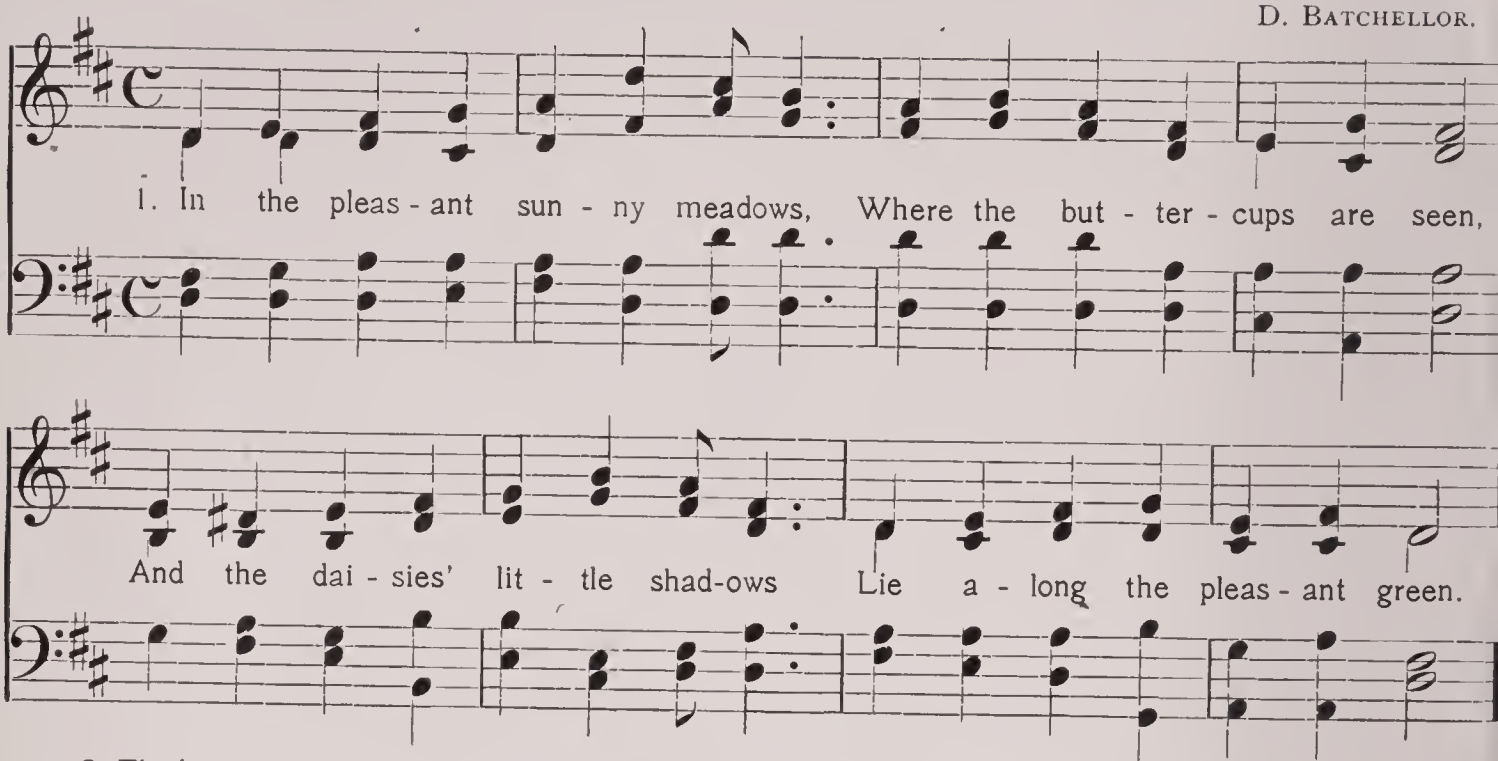


2 Help us to do the things we should,
To be to others kind and good;
In all we do, in work or play,
To grow more loving every day.

3230

IN THE PLEASANT SUNNY MEADOWS.

D. BATCHELLOR.



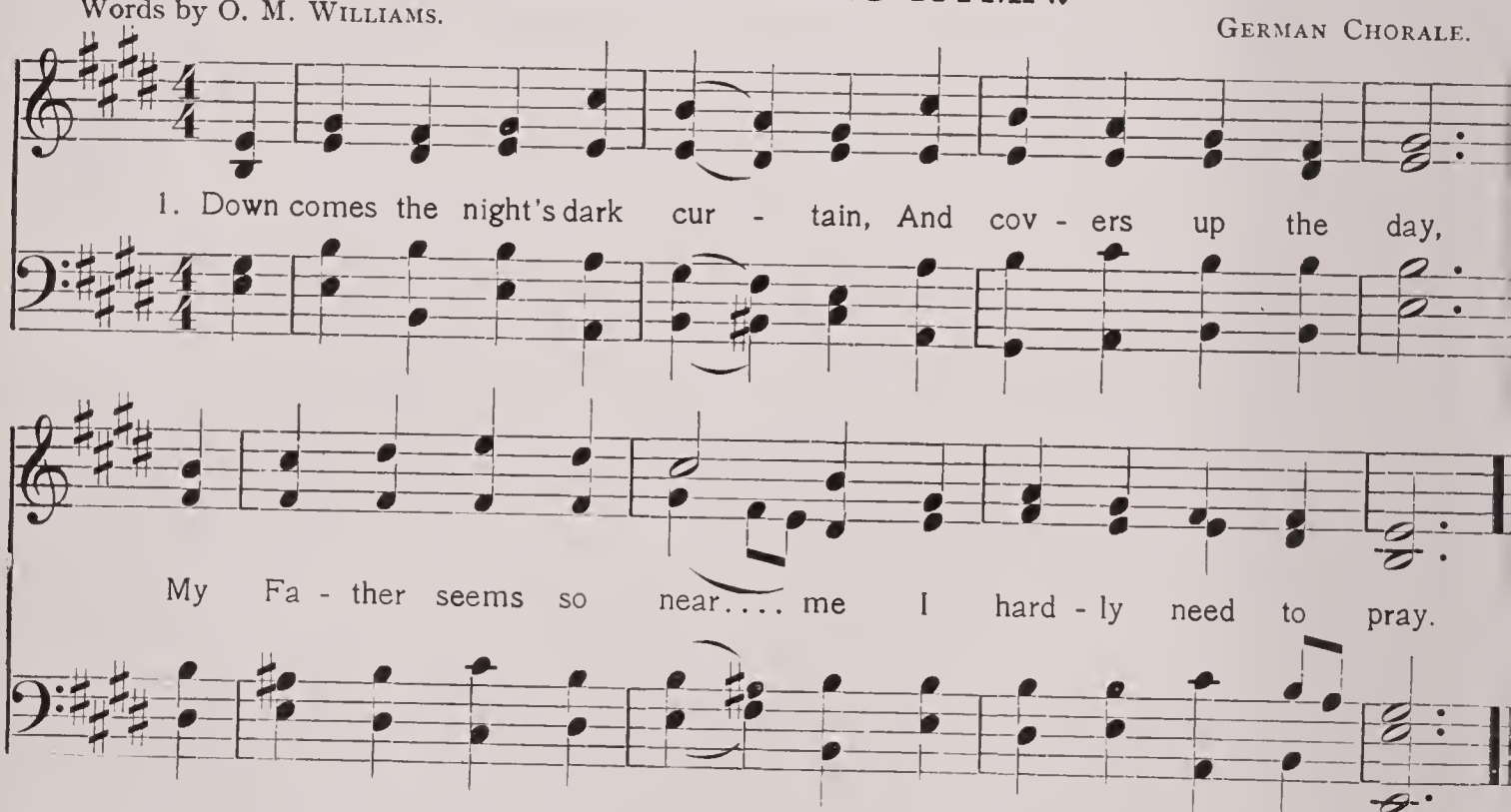
2 Flocks of quiet sheep are feeding,
Little lambs are playing near,
And the watchful shepherd, leading,
Keeps them safe from harm and fear.

3 Like the lambs, we little children
Have a Shepherd, kind and good,
It is God, who watches o'er us,
Gives us life and daily food.

CHILD'S EVENING HYMN.

Words by O. M. WILLIAMS.

GERMAN CHORALE.



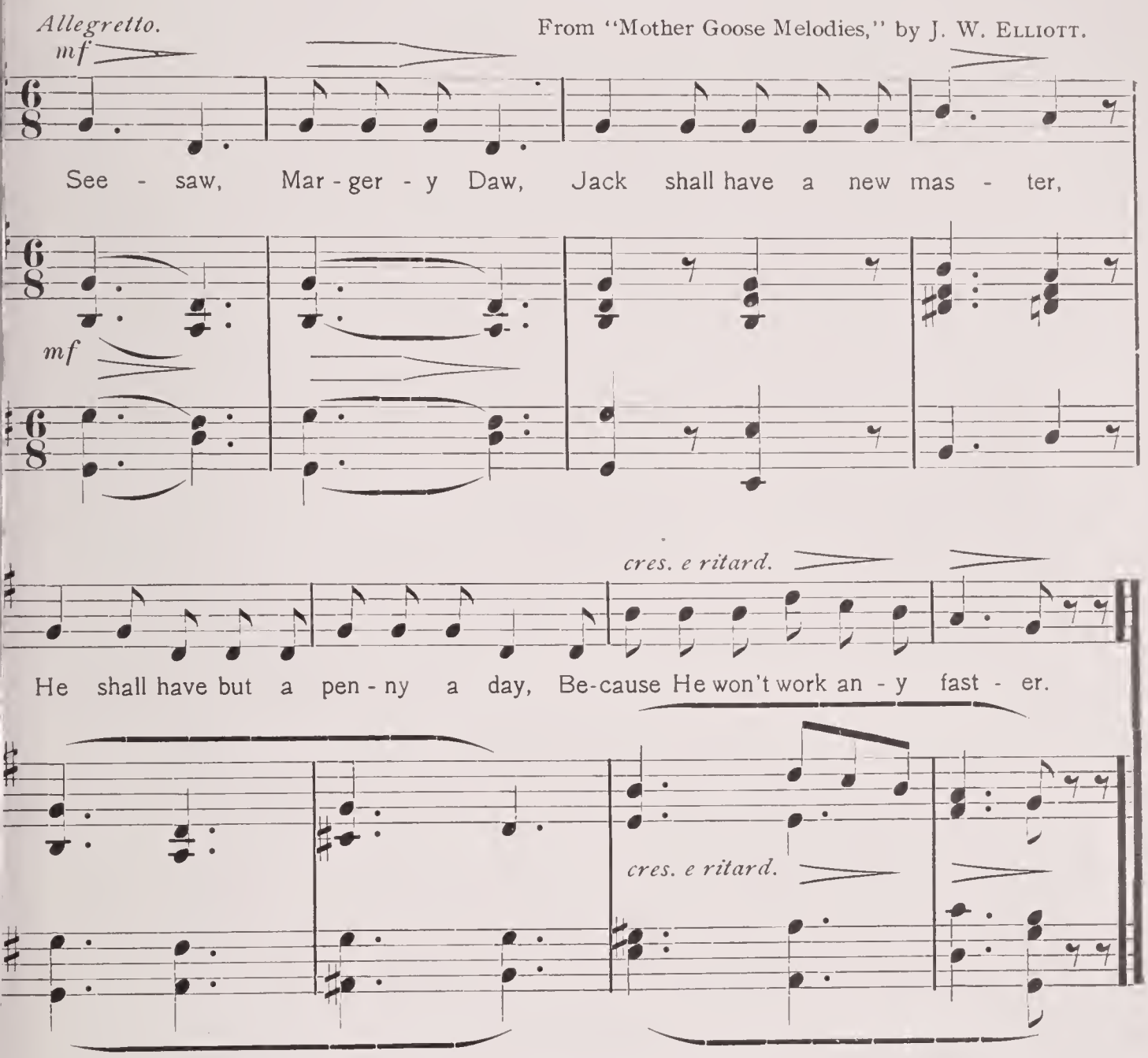
2 His eye is watching o'er me
To keep me from all harm,
And in the deepest darkness
I feel His clasping arm.

3 For He has said He carries
His lambs upon His breast,
And in that loving shelter
I sweetly sink to rest.

SEE-SAW, MARGERY DAW.

A Nursery Rhyme.

From "Mother Goose Melodies," by J. W. Elliott.



Note.—This is one of the earliest of the nursery play-songs. It should be used as an accompaniment to the light spring of the child upon the lap. Let it be an easy rhythmic movement, and free from jolting. At a later period it may be used when the child sits astride his father's foot. It will add to the interest if it is taken at different times to different rates of movement.

LITTLE BO-PEEP.

From "Mother Goose Melodies," by J. W. Elliot

p

1. Lit-tle Bo-Peep has lost her sheep, And can't tell where to find ther

p

cresc. *f* *dim.*

Leave them a - lone, and they'll come home, Wagging their tails be - hind them.

fz *dim.*

2 Little Bo-Peep fell fast asleep,
And dreamt she heard them bleating;
When she awoke, 'twas all a joke —
Ah! cruel vision so fleeting.

3 Then up she took her little crook,
Determined for to find them;
What was her joy to behold them nigh,
Wagging their tails behind them.

DING, DONG, BELL.

Words from MOTHER GOOSE.

D. BATCHELLOR.

Ding, dong, bell; Pussy's in the well! Who put her in?

p *mf*

Little Johnny Green. What a naughty boy was that To

mp

softly and slowly.

drown poor lit - tle pus - sy cat. Let us now ring pus-sy's knell, Ding, dong, bell!

pp *ppp*

FORM A RING.

Melody from MOZART. Arr. by D. BATCHELLOR

- Form a ring, form a ring so sweet - ly, Form a ring as sweet as can be;

Form a ring, form a ring so sweet - ly, And stand quite still with me, with m

This music is also appropriate to the following exercises:

2.

Roll the hands, roll the hands so slowly,
Roll the hands as slow as can be;
Roll the hands, roll the hands so slowly,
And stand quite still with me.

3.

Roll the hands, roll the hands so quickly,
Roll the hands as quick as can be;
Roll the hands, roll the hands so quickly,
And stand quite still with me.

4.

Go to sleep, go to sleep so quietly,
As quiet, as quiet can be;
Go to sleep, go to sleep so quietly,
And shut your eyes with me

5.

Now wake up, wake up so brightly,
As bright, as bright can be;
Now wake up, wake up so brightly,
And look all around with me.

RIDE A COCK-HORSE TO BANBURY CROSS. 3235

Words from MOTHER GOOSE. D. BATCHELLOR.

Spirited.

Ride a cock-horse to Ban - bu - ry Cross, To see a fine la - dy up -

Vivace.

on a white horse, Rings on her fin - gers, and bells on her toes,

She shall have mu - sic wher - ev - er she goes.

WHAT DOES THE CLOCK SAY?

D. BATCHELL

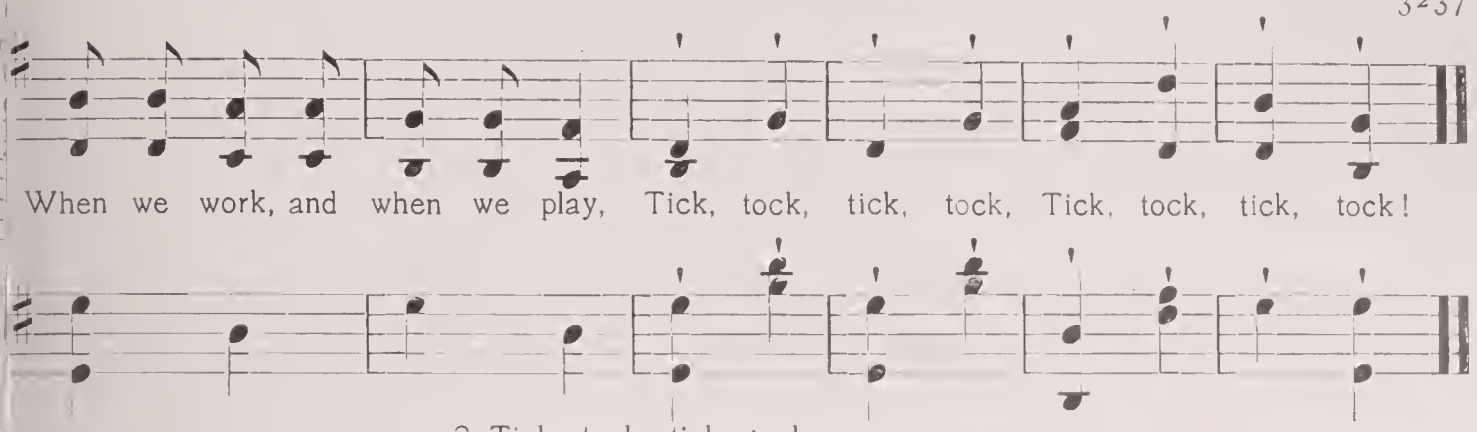
Sing to different rates of movement.

What does the clock say? "Time pass - ing; Use it wise - ly, Tick, tock, tick!"

TICK, TOCK.

D. BATCHEL

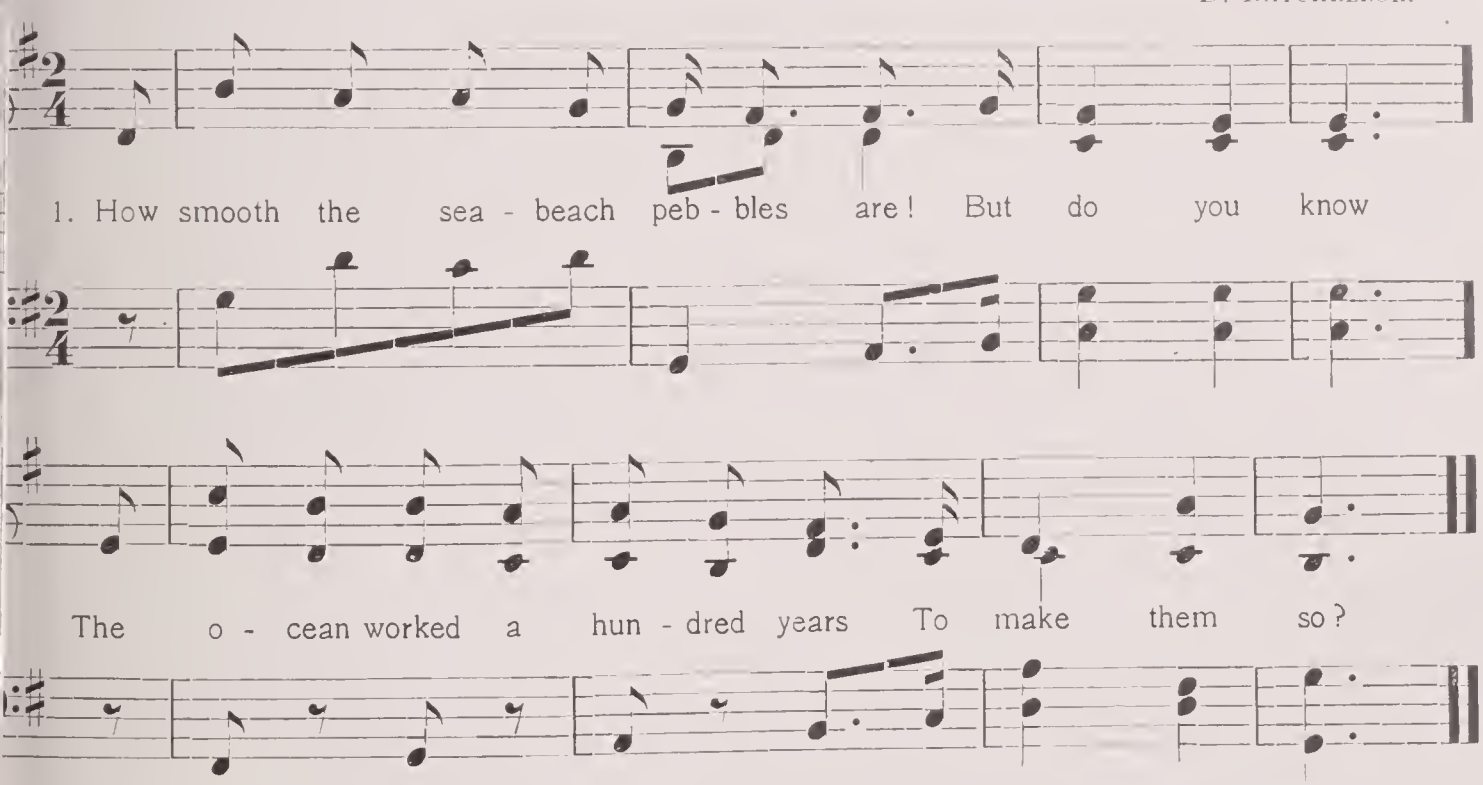
1. Tick, tock, tick, tock, What a fun - ny lit - tle clock! Ev - er tick - ing night an



2 Tick, tock, tick, tock;
What a patient little clock!
When we all are fast asleep
Faithful watch you ever keep,
Tick, tock, tick, tock,
Tick, tock, tick, tock.

THE PEBBLES' LESSON.

D. Batchellor.



2.

And once I saw a little girl,
Sit down and cry,
Because she could not mend a fault
With one small "try!"

THE RAINDROPS' RIDE.

D. BATCHELLOR

In a playful manner.

1. Some lit - tle drops of wa - ter, Whose home was in the sea,

Scherzando.

go up - on a jour - ney Once hap - pened to a - gree.

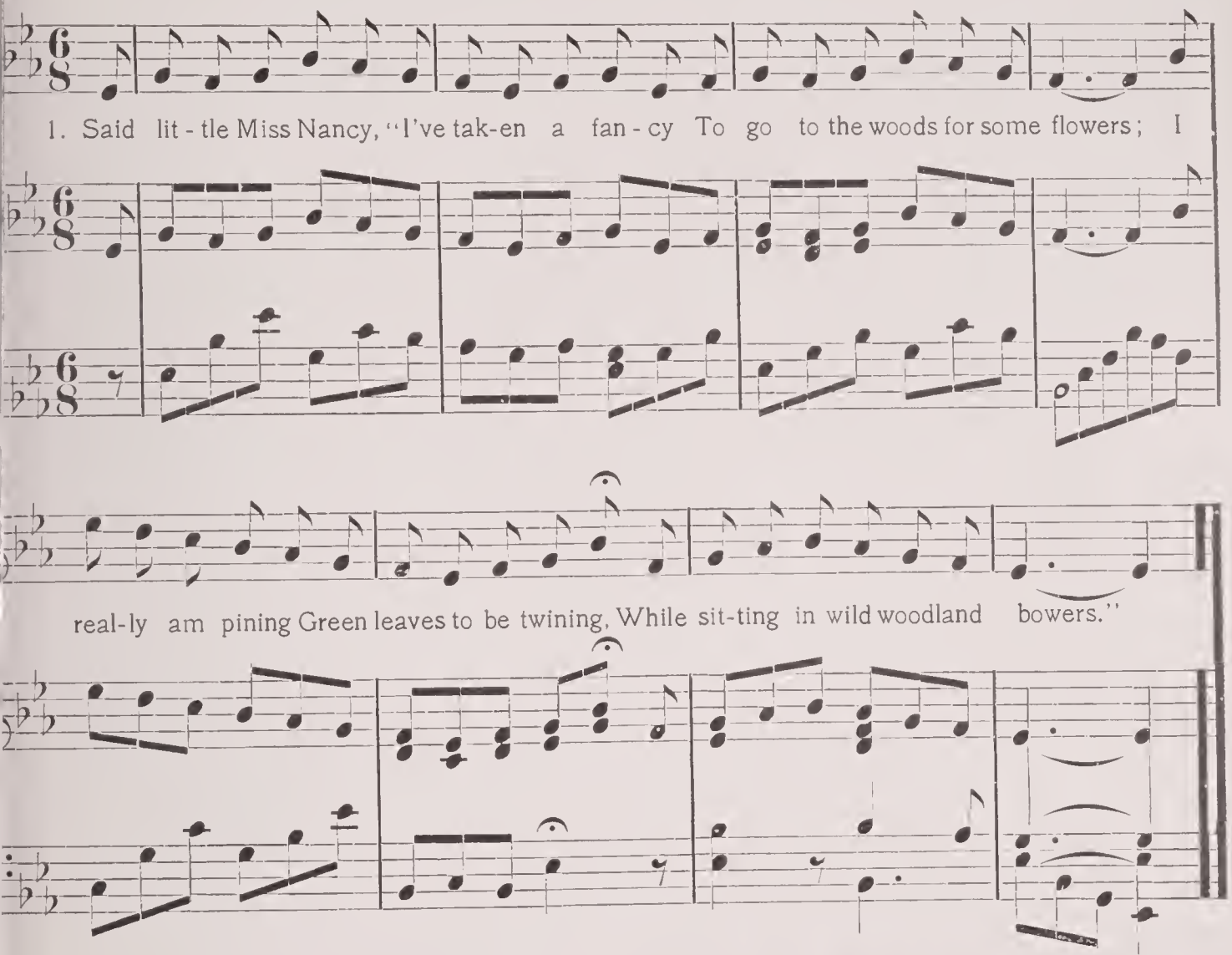
2 A cloud they had for carriage,
They drove a playful breeze,
And over town and country
They rode along at ease.

3 But oh! there were so many
At last the carriage broke,
And to the ground came tumbling
These frightened little folk.

4 And through the moss and grasses
They were compelled to roam,
Until a brooklet found them
And carried them all home.

LITTLE MISS NANCY.

D. BATCHELLOR.



2 So she donned her sunbonnet,
With white frills upon it,
And took up her basket and spade,
And off she went tripping,
A wood-nymph a skipping,
The dear little, sweet little maid.

3 She heard the birds sing
About Spring, gentle Spring,
As she sat herself under the trees;
But the truth must be told
That she caught a bad cold,
And has done nothing since but just sneeze:—
"Atchoo."

ONCE I SAW A LITTLE BIRD.

NURSERY RHYME. D. BATCHELOR

Once I saw a lit - tle bird coming hop, hop, hop, And I said, "Lit-tle bird, will

stop, stop, stop?" I was go- ing to the win-dow, to say, "How do you do?" But h

shook his lit - tle tail, and a - way he flew.

I LOVE LITTLE PUSSY.

From "Mother Goose Melodies," by J. W. Elliott.

p With tenderness.

I love lit - tle Pus-sy, her coat is so warm, And

if I don't hurt her, she'll do me no harm. I'll sit by the fire and I'll

ten.

ten.

cresc.

dim. e ritard.

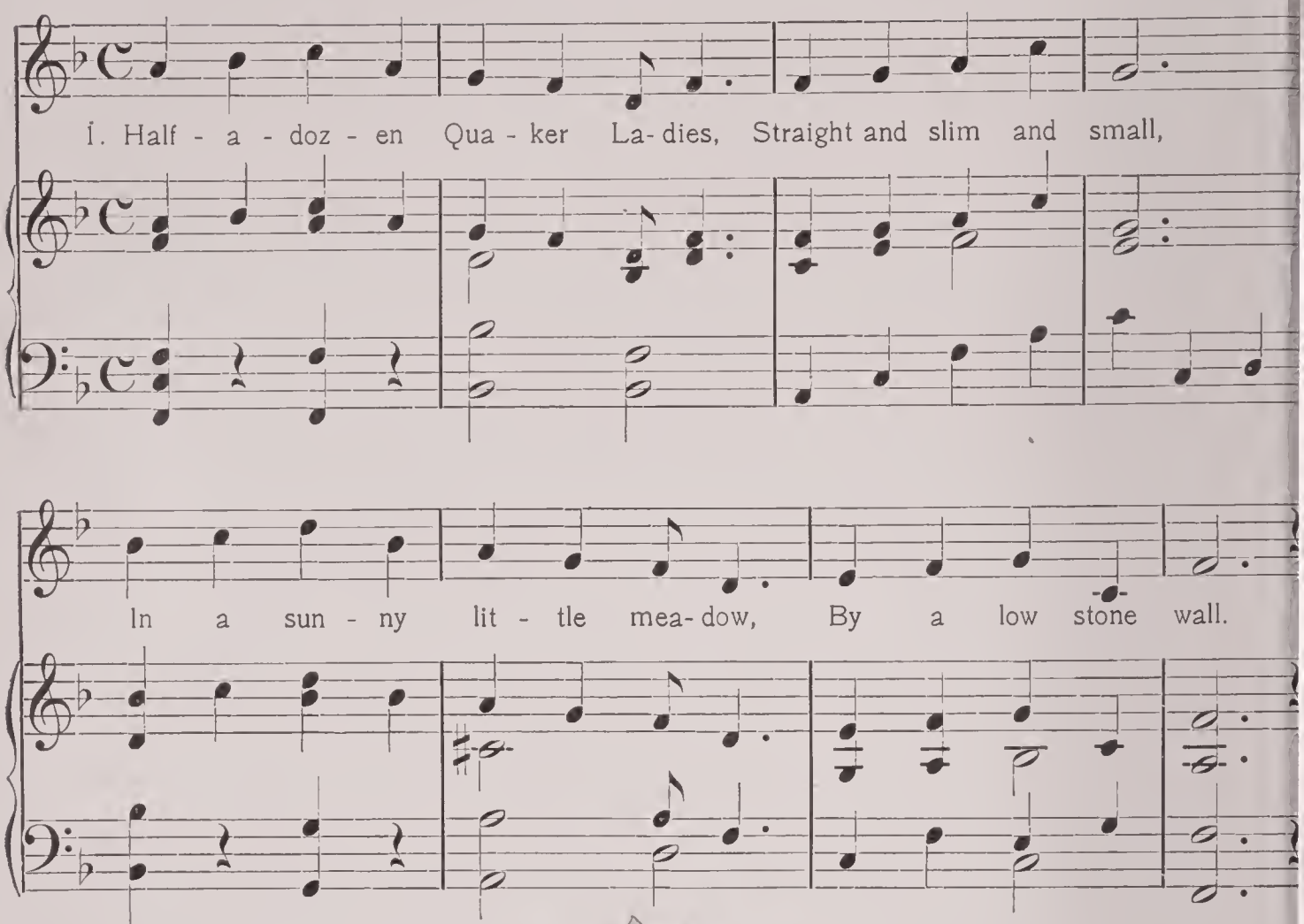
give her some food, And Pus - sy will love me be - cause I am good.

fz *fz* *p* *pp*

3242

QUAKER LADIES.

Words by SARAH J. DAY. D. BATCHELOR



2.

"Is thee come to Yearly Meeting?"
"Yea, and thee too?" "Yea."
"Verily, and thee is early:
Opens next First Day."

3.

And in truth, the next May Sabbath,
All the meadow fair
Scarce could hold the Yearly Meeting
Set for session there.

4.

In their little gray-blue bonnet
Chatting brim to brim,
Half a million Quaker ladies,
Straight and small and slim

FLY AWAY, BUTTERFLY.

D. BATCHELLOR.

1. Fly a - way But-ter - fly, fly a - way home, The sum - mer is end - ed and

END.

au - tumn is come, The as - ters all bloom - ing, the nuts are all ripe, Jack

FINE.

Frost comes to see us al - most ev-'ry night...

2 Fly away, Butterfly, fly far away
To the land where the sunshine and sweet roses stay;
And when in the springtime the sunshine is here
You must return and be welcomed, my dear.
Fly away, Butterfly, fly away home,
The summer is ended and autumn is come.

LITTLE SNOWFLAKES FALLING LIGHTLY.

Words by ANNE M. PRATT.

D. BATCHELLO

Very lightly.

Lit-tle snowflakes falling light - ly, Lit- tle snowflakes fa

p

whitely, Cover up the sleeping flow'rs, Keep them warm thro' winter h

pp

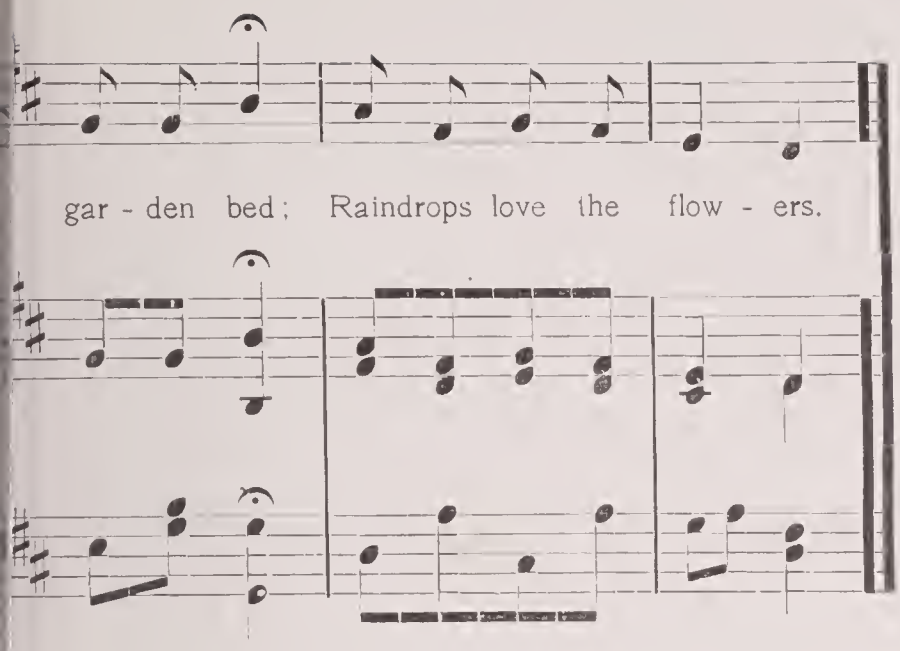
RAIN SONG.

D. BATCHELLOR

Lightly.

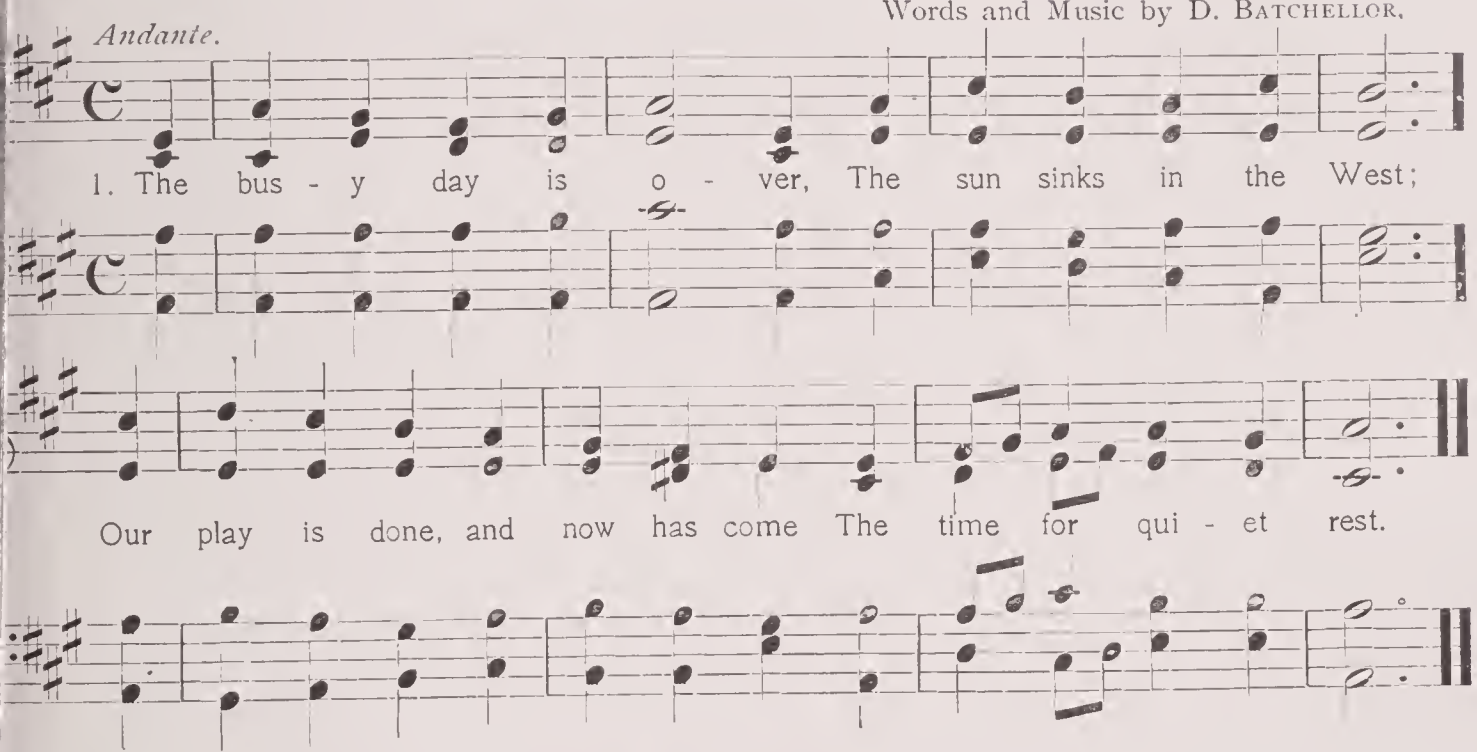
Pat- ter, pat- ter, here they come, Gen - tle lit - tle show - ers; Drop here in

Semi-staccato.



THE BUSY DAY IS OVER. 23

Words and Music by D. BATCHELLOR.



2.

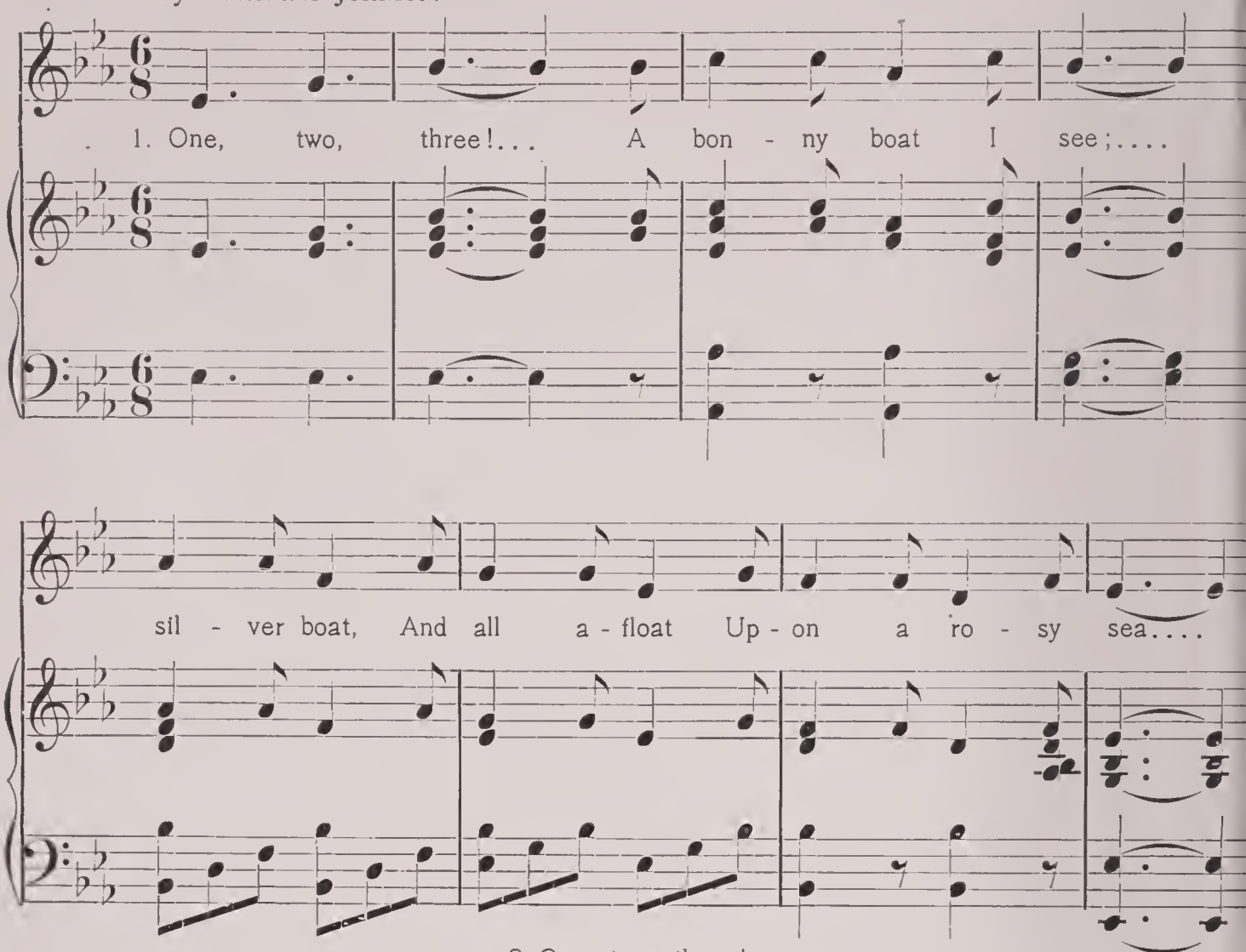
...e angel eyes above us
...The stars begin to peep;
... thro' the night till morning light
...Their loving watch they keep.

3.

Dear Father, guard and keep me,
From sin and danger free,
That I alway, by night and day,
Thy loving child may be.

ONE, TWO, THREE!

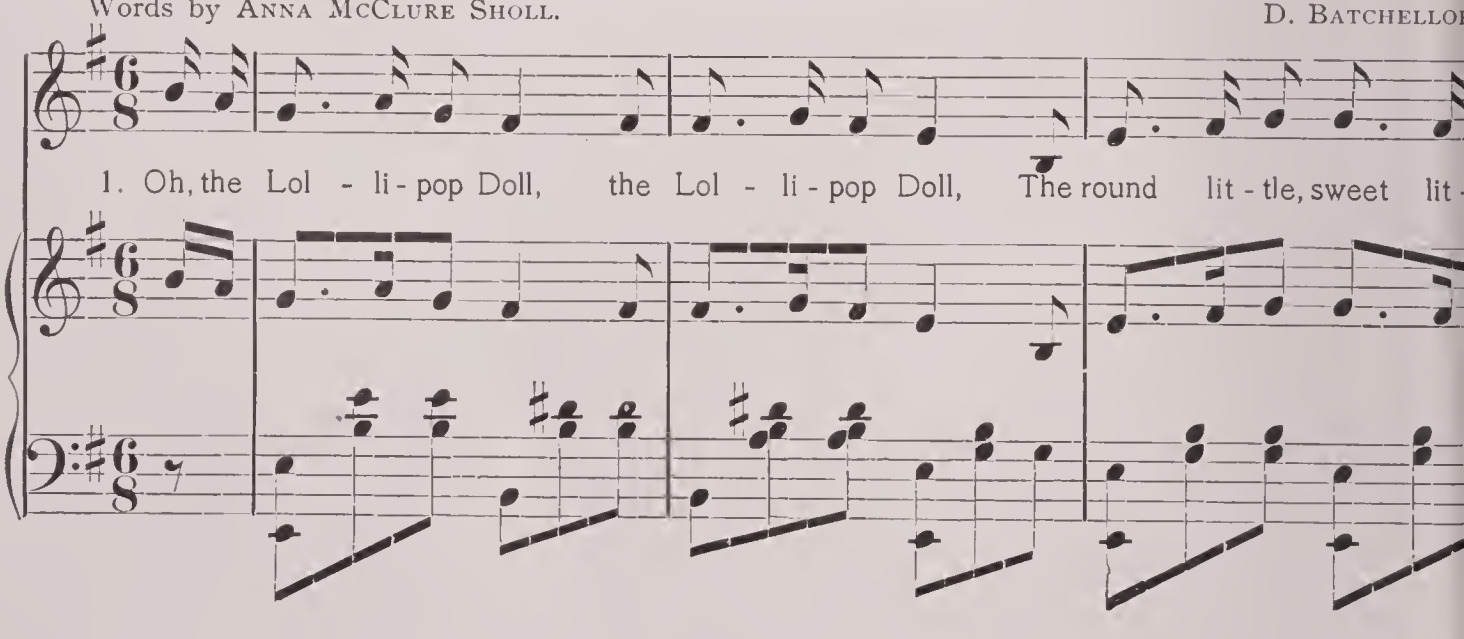
Words by MARGARET JOHNSON. D. BATCHELLO

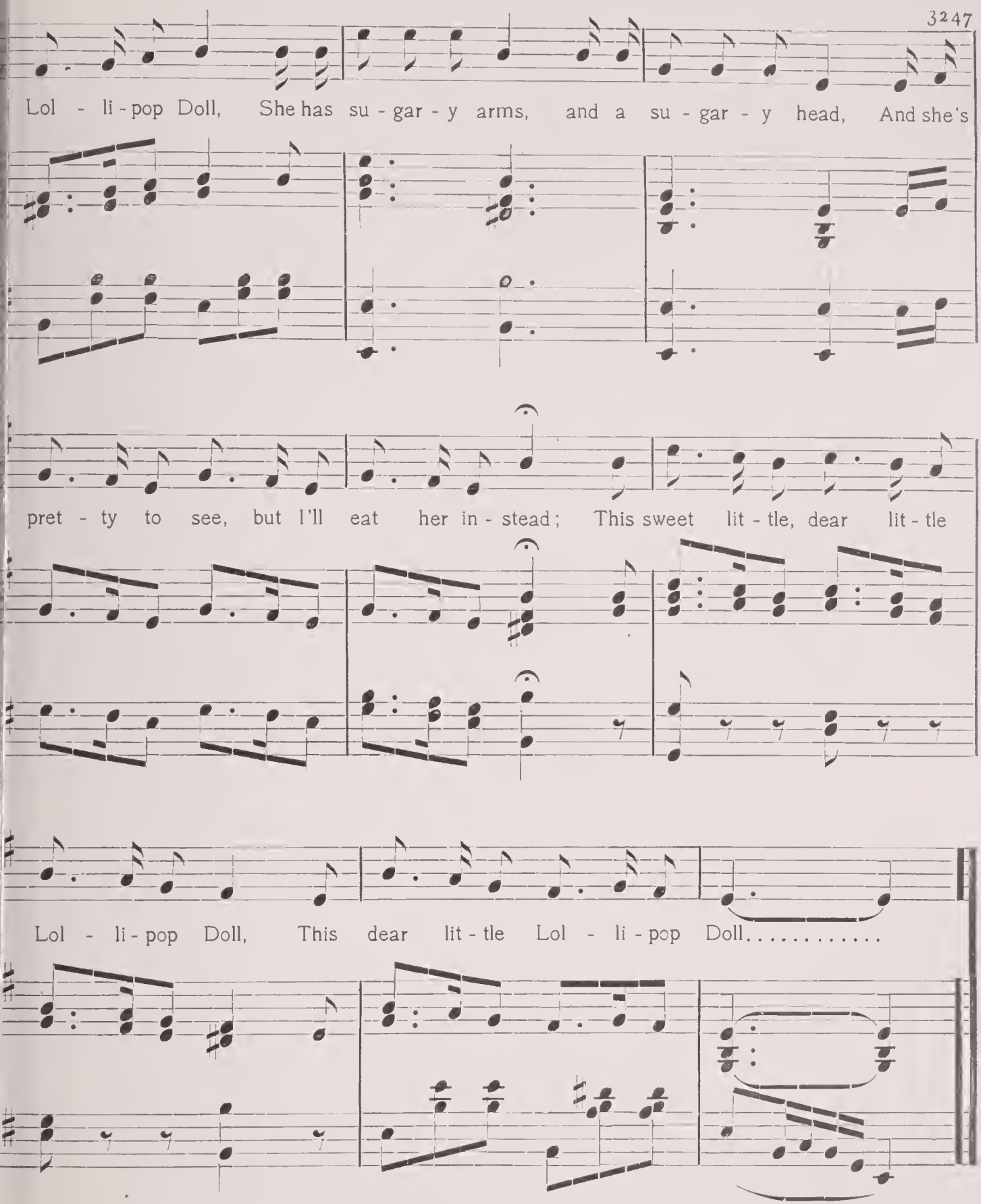


2 One, two, three!
The riddle tell to me,
The moon afloat
Is the bonny boat;
The sunset is the sea.

THE LOLLIPOP DOLL.

Words by ANNA MCCLURE SHOLL. D. BATCHELLO

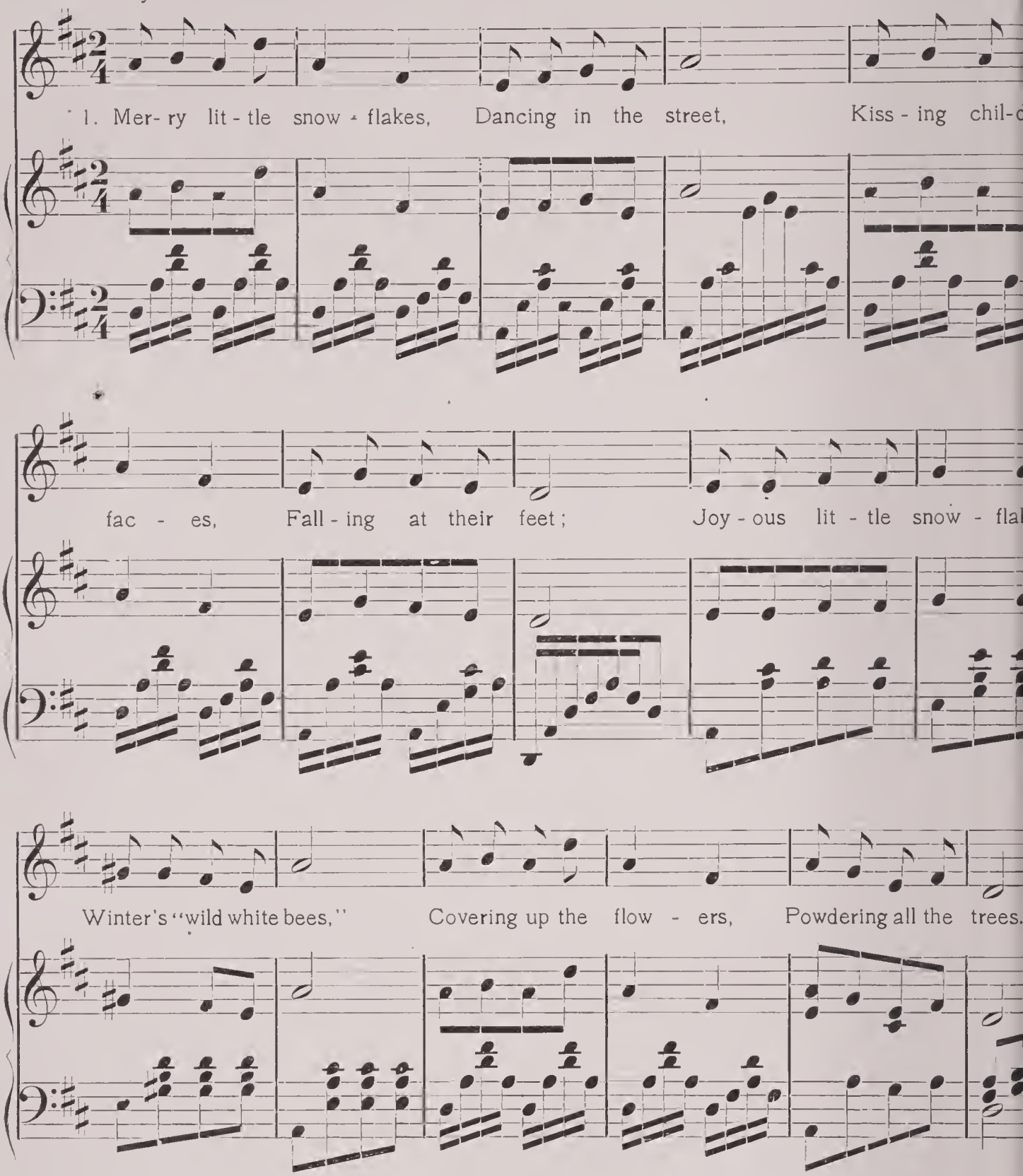




2 Oh, the Lollipop Doll, the Lollipop Doll,
A sorrowful sight is the Lollipop Doll,
She's lost both her arms and her head s going fast,
And I can't really tell you how long she will last,
This poor little, sweet little Lollipop Doll,
This poor little Lollipop Doll.

MERRY LITTLE SNOWFLAKES.

Words by ANNA BARNARD. D. BATCHELL



2 Downy little snowflakes,
Floating through the air
Did you see the shining
Of the stars so fair?
Gentle little snowflakes,
In the heaven above,
Did you hear the angels
Sing their songs of love?

3 Happy little snowflakes,
Flying through the sky,
Keeping time to music
In the stars so high.
Darling little snowflakes,
We would be like you;
Help us to be loving,
Clean, and pure, and true.

THE WINDMILL.

Words by HELEN T. CLARKE.

Arr. by D. BATCHELLOR.

1. When the wind blows fresh and free, Goes the wind - mill
heat.— Mak - ing bread for you and me, While the wind blows

8va.

FINE.

mer - ri - ly. Round and round it swings its arms,
fresh and free.

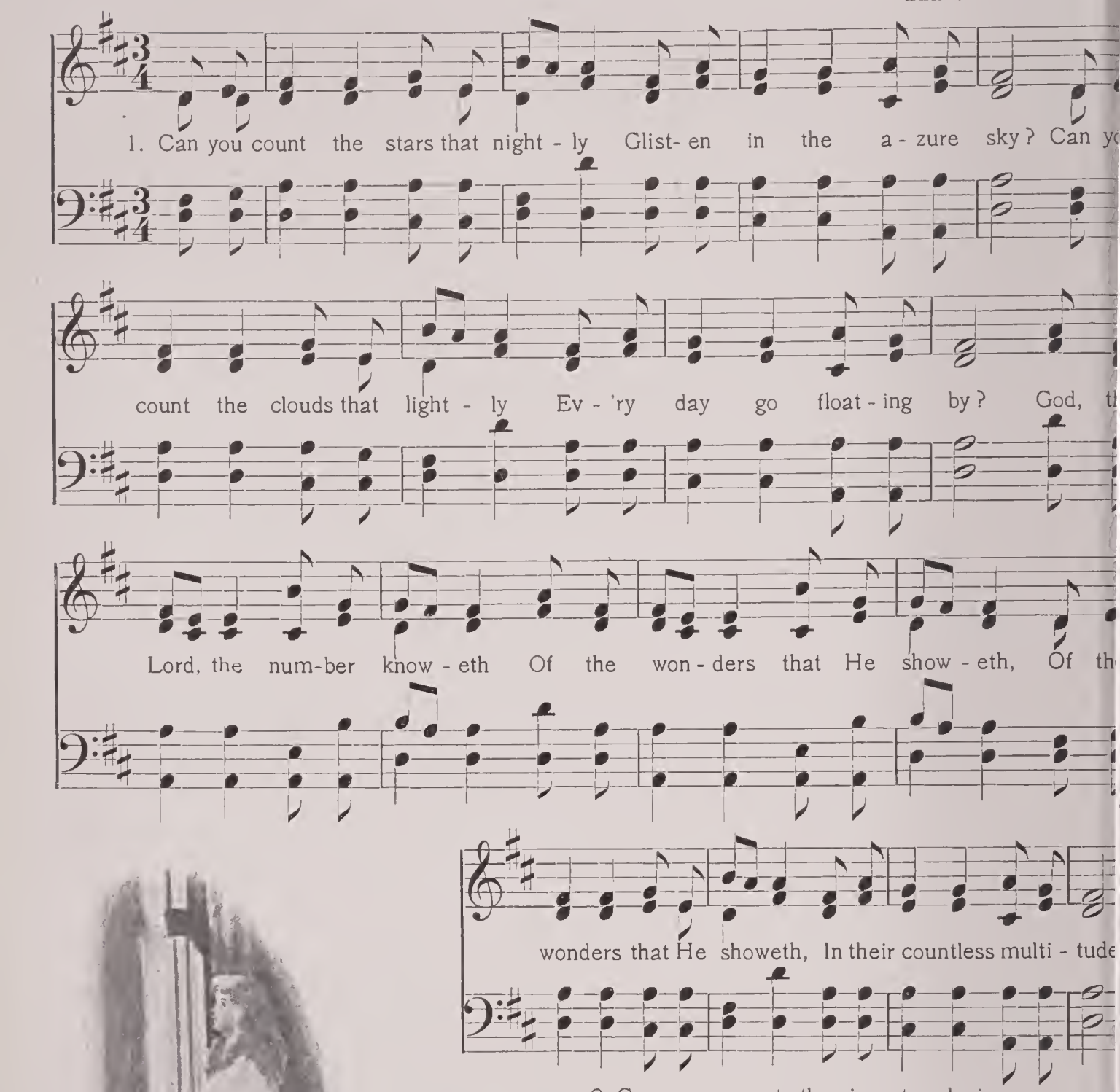
8va.

Grind- ing wheat from fields and farms.

2 When the air is soft and still,
Silent, silent stands the mill;
Rests from work and duty done,
Sleeping in the summer sun;
When the air lies soft and still
Over field and farm and hill.

CAN YOU COUNT THE STARS?

GERMAN CHILD SONG.



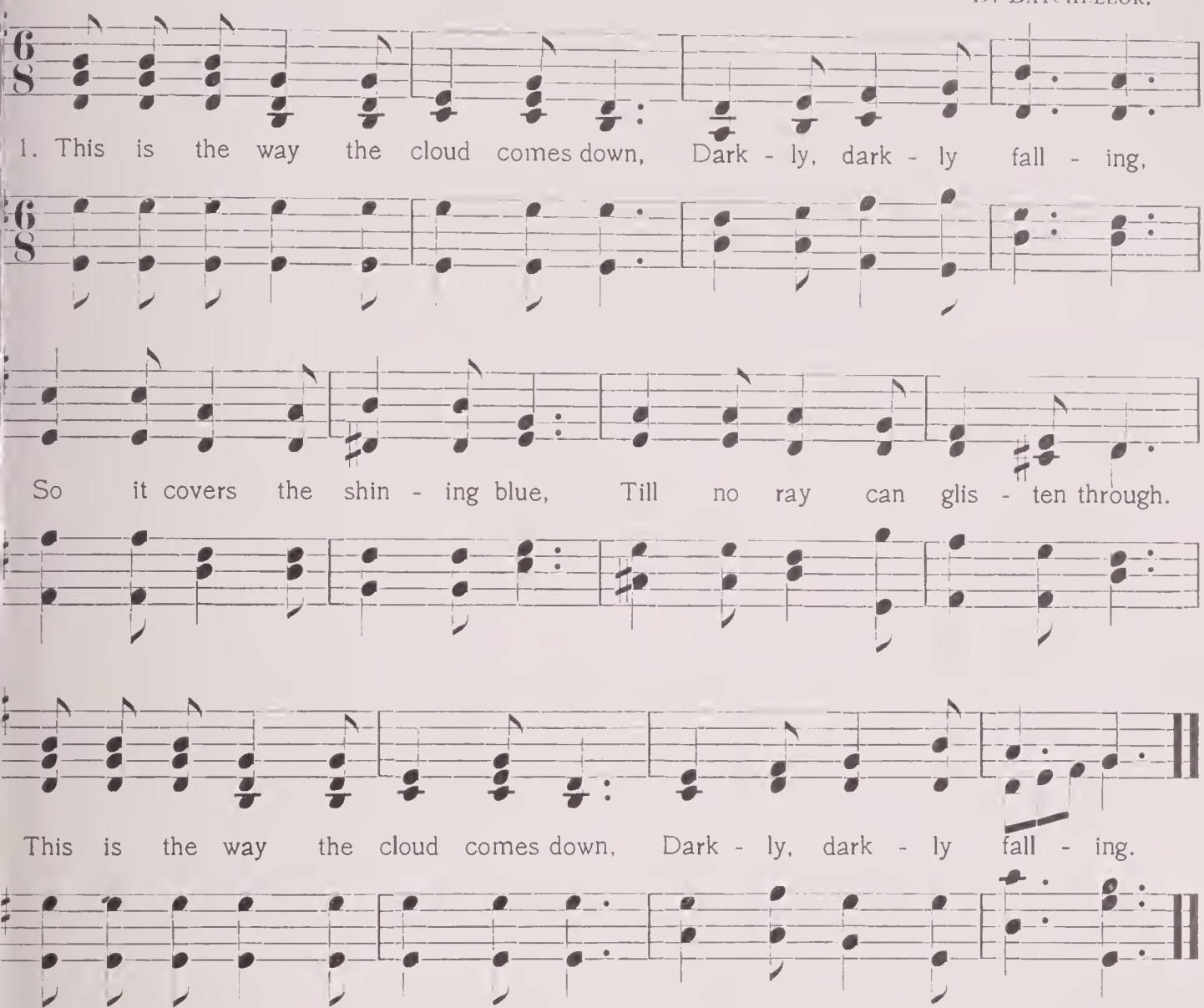
2 Can you count the insects playing,
In the sunshine's golden light?
Can you count the fishes straying
In in the sparkling waters bright?
God, the Lord, a name hath given
‖: To all creatures under heaven:‖
When He called them into light.

3 Can you count how many children
Go to little beds at night,
Sleeping there so warm and cosy,
Till they wake at morning's light?
God, the Lord, each name can tell,
‖: Knows them all and loves them well :‖
God, the Lord, each name can tell.

WEATHER SONG.

Words by Mrs. M. B. SLADE.

D. BATCHELLOR.



This is the way the rain comes down,
Swiftly, swiftly falling;
So He sendeth His welcome rain
Over field and hill and plain.
This is the way the rain comes down
Swiftly, swiftly falling.

This is the way the snow comes down,
Softly, softly falling;
So He giveth His snow like wool,
Fair and white and beautiful.
This is the way the snow comes down,
Softly, softly falling.

4 This is the way sunshine comes down,
Sweetly, sweetly falling;
So it chaseth the cloud away,
So it waketh the lovely day.
This is the way sunshine comes down,
Sweetly, sweetly falling.

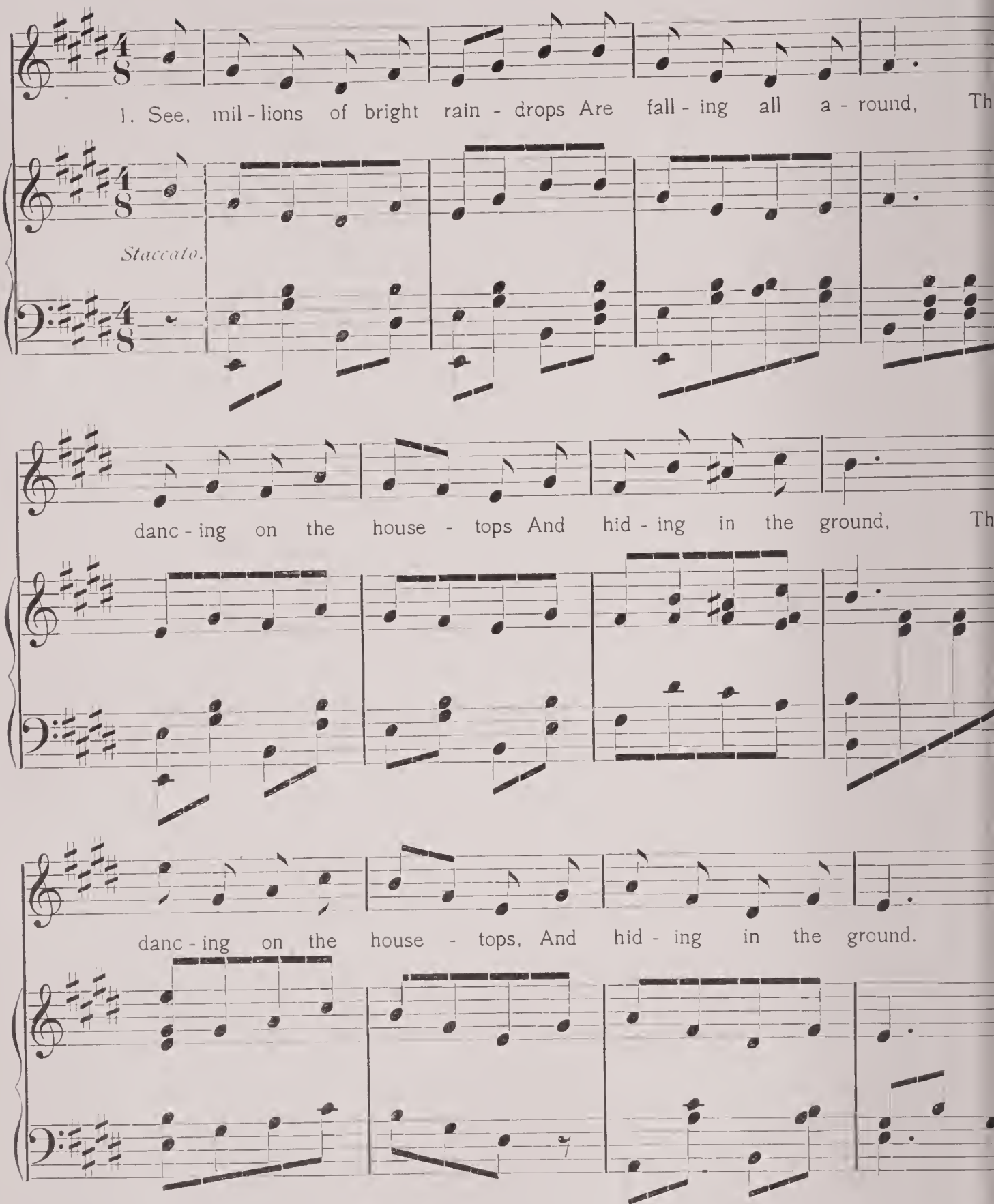
5 This is the way the leaves come down,
Gently, gently falling;
In gold and brown and crimson drest,
Plucked by the wind, they lie and rest.
This is the way the leaves come down,
Gently, gently falling.

6 Wonderful, Lord, are all Thy works,
Wheresoever falling;
All their various voices raise,
Speaking forth their Maker's praise.
Wonderful, Lord, are all Thy works,
Wheresoever falling,

NOTE.—Sing whichever verse is appropriate, always using the last verse as a refrain.

SEE MILLIONS OF BRIGHT RAINDROPS.

D. BATCHELLO



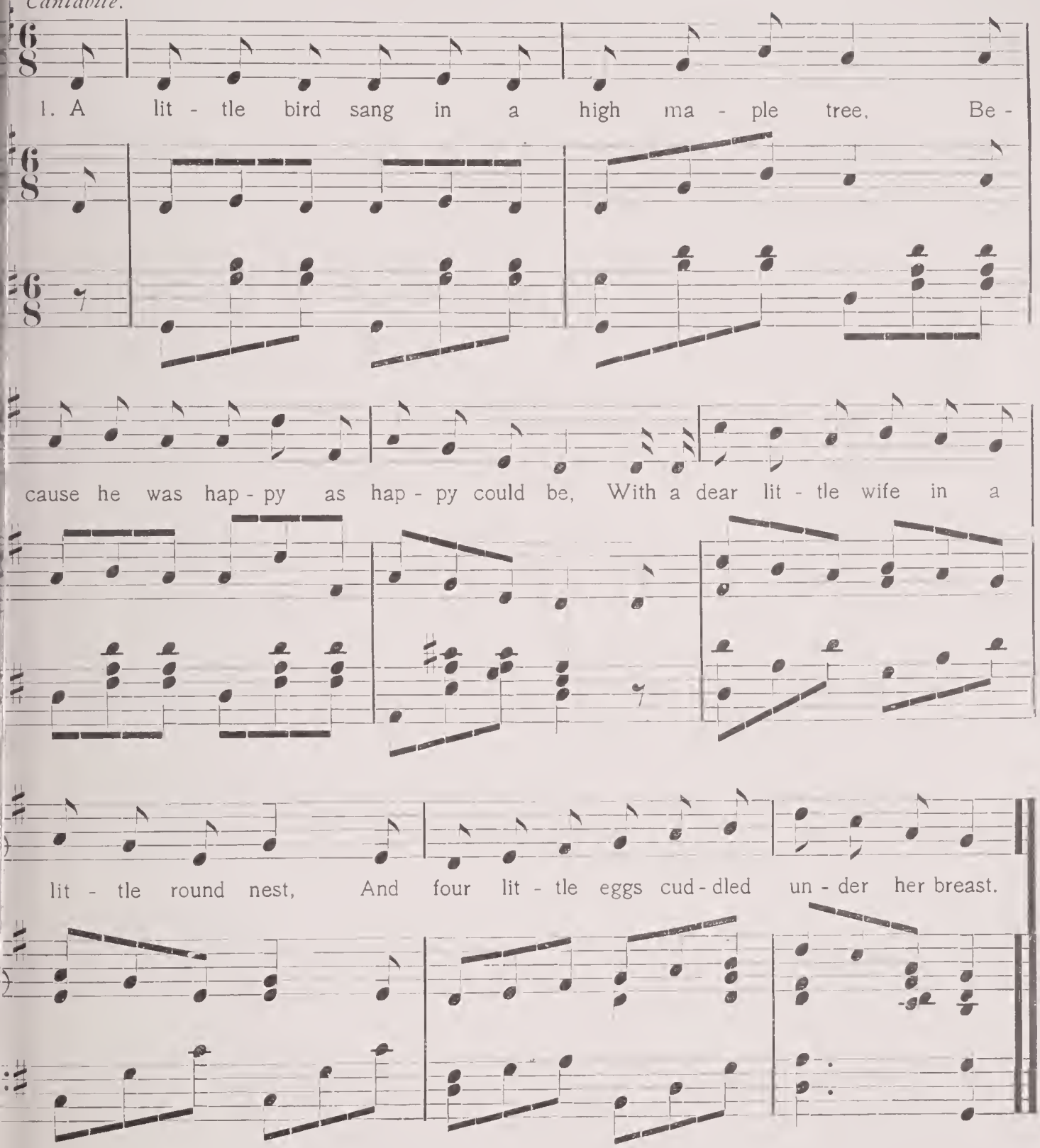
2 These fairy-like musicians,
With anything for keys,
‖: Play tunes upon the windows,
Beat time upon the trees. :‖

3 We happy little children
Musicians, too, will be,
‖: And with the rain's sweet music
Keep time so joyously. :‖

A LITTLE BIRD SANG.

Words by Miss Anna Price. D. Batchellor.

Cantabile.

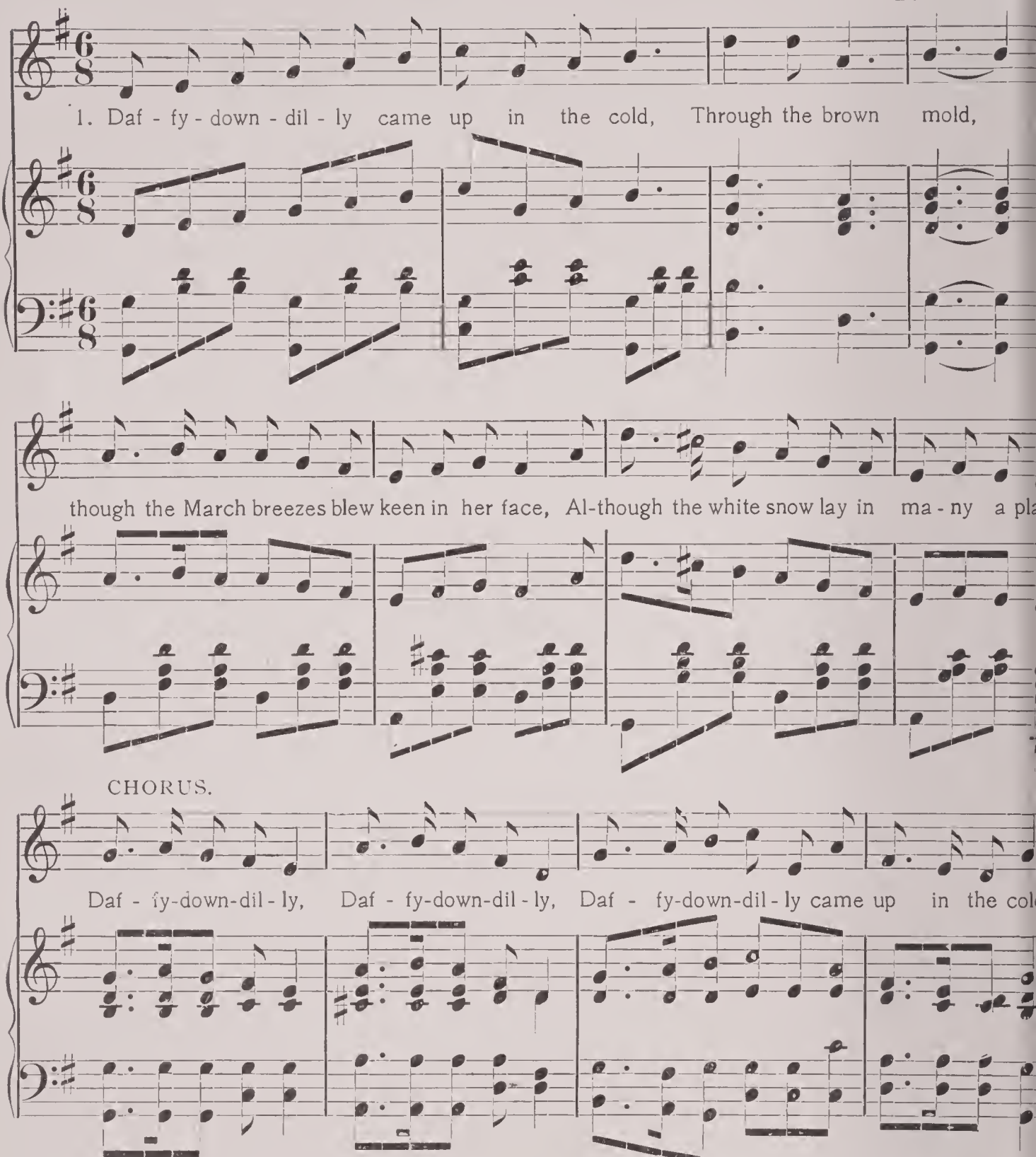


2 So he sang, "Oh, how pleasant this blithe, sunny day,
With the sunshine all 'round and the green leaves at play;
The snows are all gone and the winter winds rest,
And I've four little eggs in a sweet little nest.

3 And my little wife says that, if all things go well,
A birdie will come out of each speckled shell;
So I sing her a song as she sits on the nest,
With those four little eggs cuddled under her breast.

DAFFY-DOWN-DILLY.

D. Batchello



2 There was snow all about her, gray clouds overhead;
The trees all looked dead;
Then how do you think that poor Daffy-down felt,
When the sun would not shine, and the ice would not melt?

3 Cold weather, thought Daffy, still working away,
The earth's hard to-day,
There's but a half inch of my leaves to be seen,
And two thirds of that is more yellow than green

4 I can't do much yet, but I'll do what I ca
It's well I began,
For unless I can manage to lift up my he
The people will think that the Spring her
dead.

5 So little by little she brought her leaves o
All clustered about,
And then her bright flowers began to unfol
Till Daffy stood robed in her spring green and

GOOD MORNING, SWEET APRIL.

3255

In a light tripping manner.

D. BATCHELLOR.

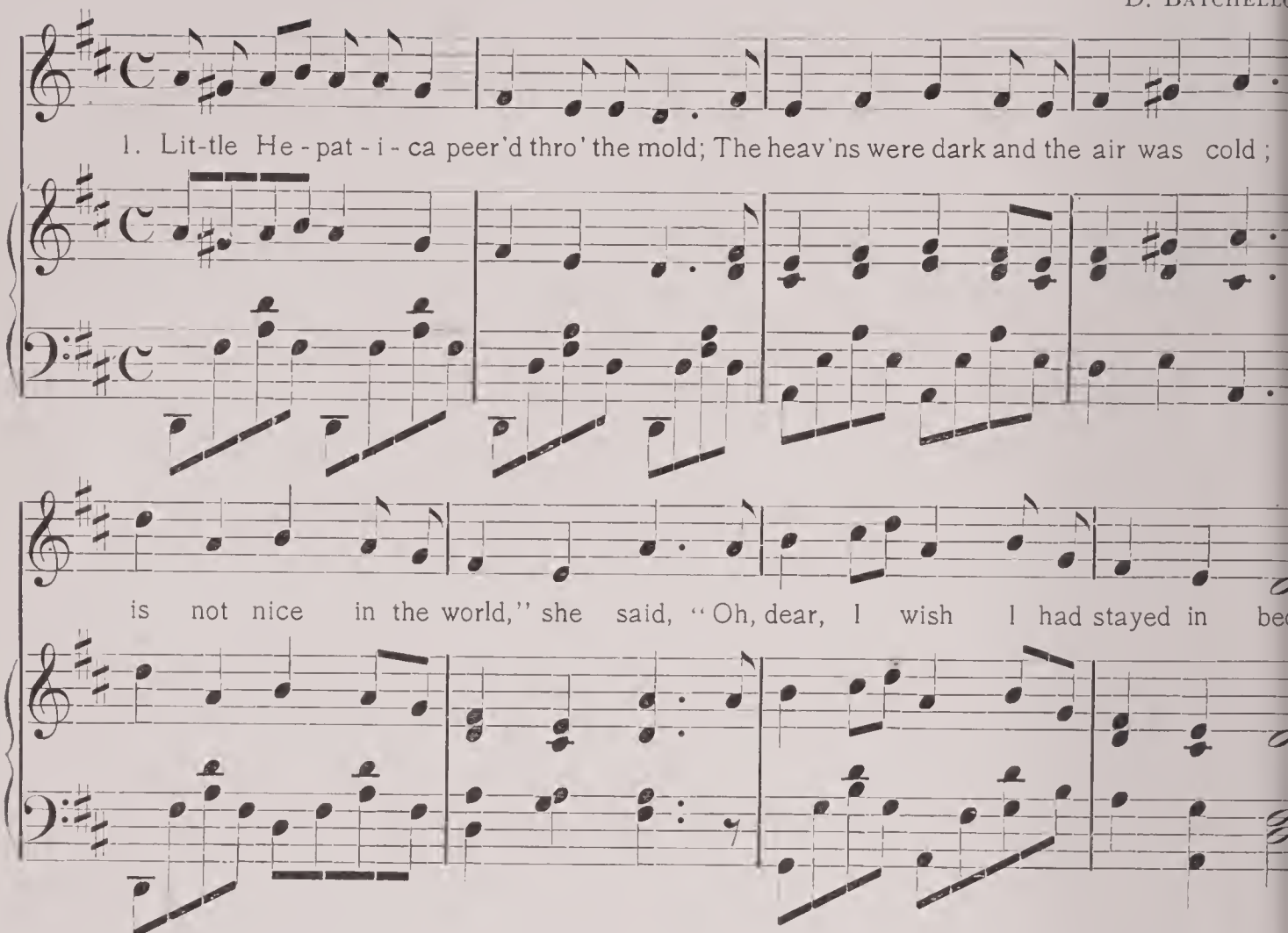
1. Good morn-ing, sweet A - pril, so win - some and shy, With a smile on your lip, and a tear in your eye; There are pret - ty he - pat - i - cas hid in your hair, And bon - nie blue vi - o - lets clus - ter-ing there.

2 The Spring beauties wake for the girls and the boys,
And earth groweth green without bustle or noise,
From tiny brown buds now wrapped fold upon fold
The loveliest garlands will soon be unrolled.

3 Ah! welcome sweet April, whose feet on the hills
Have walked down the valleys and crossed o'er the rills;
The pearls that you bring us are dews and warm showers,
And the hem of your garment is broidered with flowers.

LITTLE HEPATICA.

D. BATCHELL



2 Little Hepatica shivered and shook,
She spied some ice in her favorite brook.
"I'll wrap myself well from the cold," she said,
"With my woolly great coat pulled over my head."

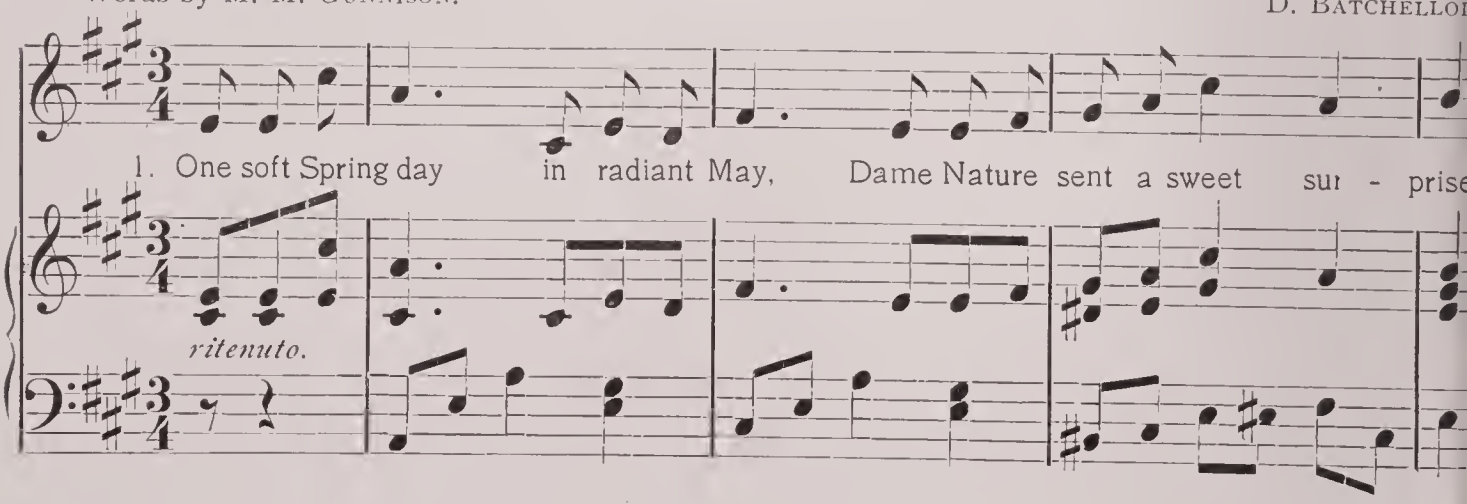
3 Then the happy sweet rain came tumbling do
And a great green smile wore the earth, so b
And little Hepatica nodded her head,
"My coat is getting too warm," she said.

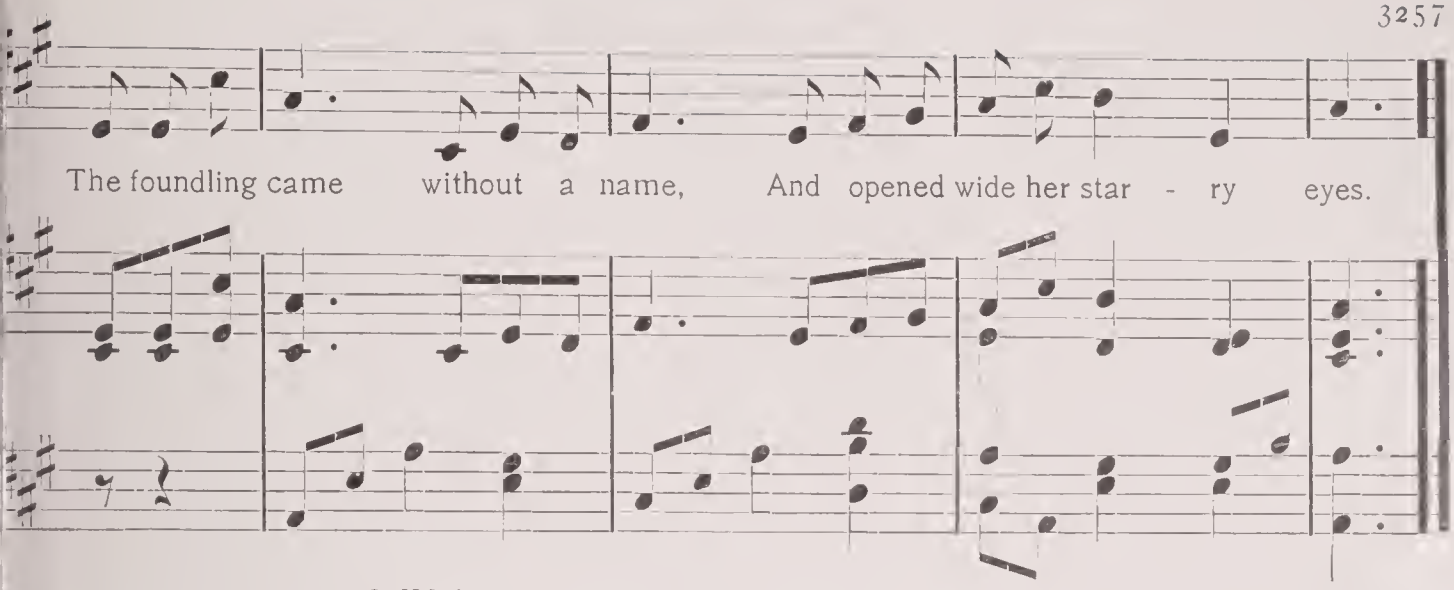
4 Out burst the merry bright sun like gold,
And a robin sang out so blithe and bold;
And little Hepatica laughed in glee,
"Why, it's Spring! I declare, it's Spring!" said she.

ARBUTUS.

Words by M. M. GUNNISON.

D. BATCHELLO

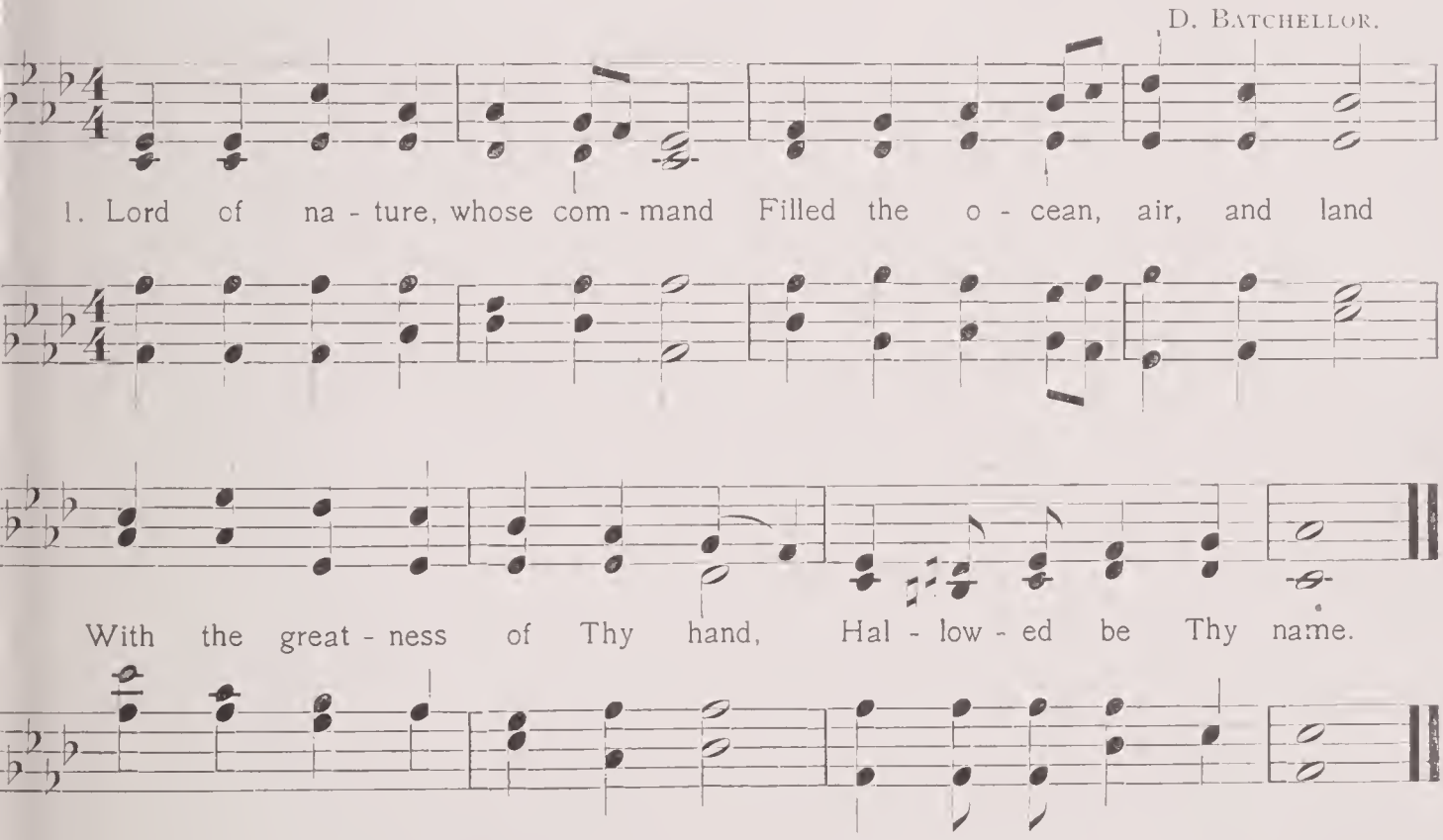




2 With timid face, and blushing grace,
She said, if it would suit us,
She'd like to grow beneath the snow,
And call her name Arbutus.

A THANKSGIVING HYMN.

D. BATCHELLOR.



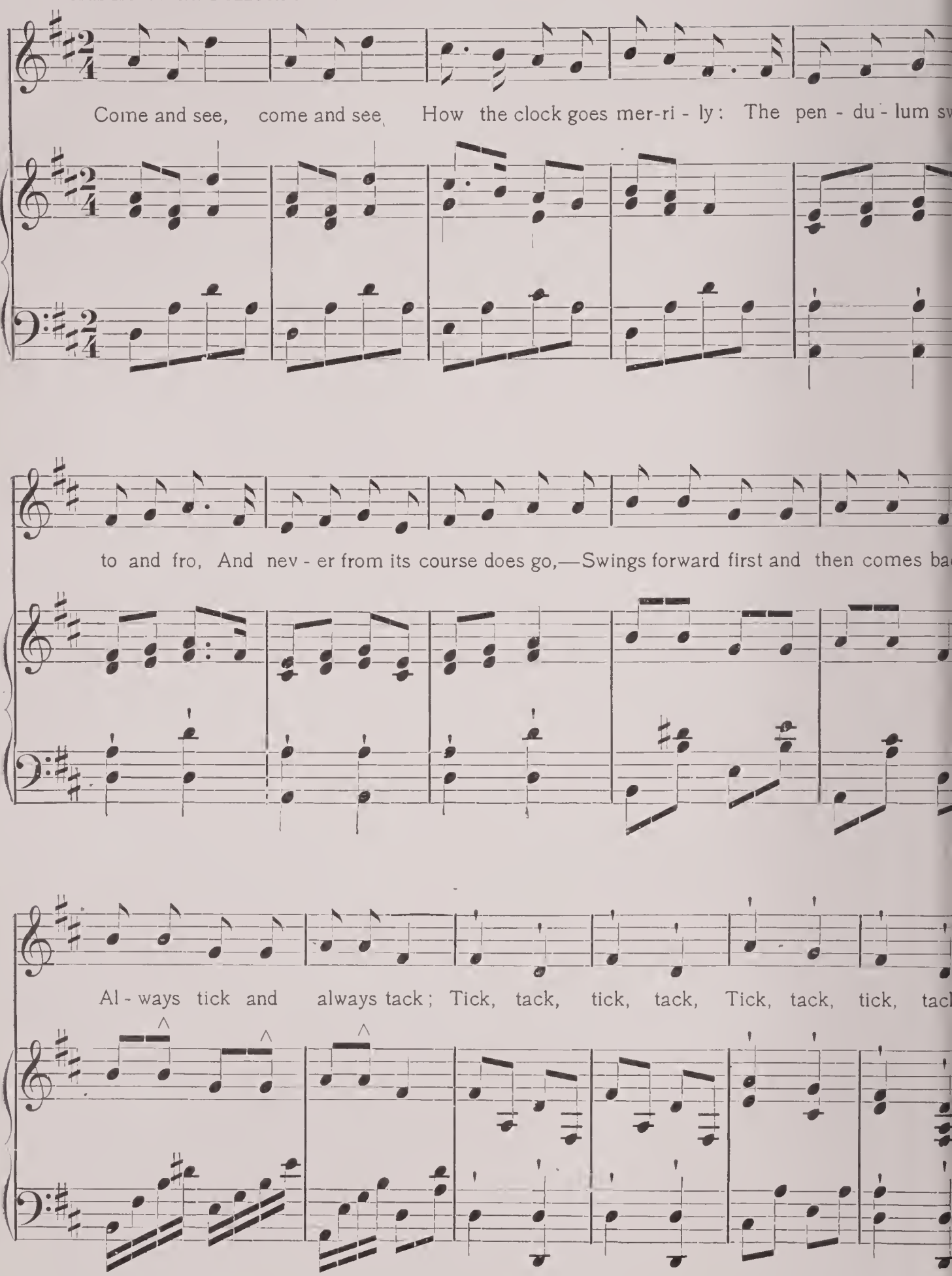
2 In the freshness of the Spring,
For the flowers' blossoming,
Birds that in the dawning sing,—
Hallowed be Thy name.

3 For the glorious days of June,
For the splendor of its noon,
For the Summer's every boon,—
Hallowed be Thy name.

4 For the Autumn's bounteous yield,
For the fruits of tree and field,
For the Winter's snowy shield,—
Hallowed be Thy name.

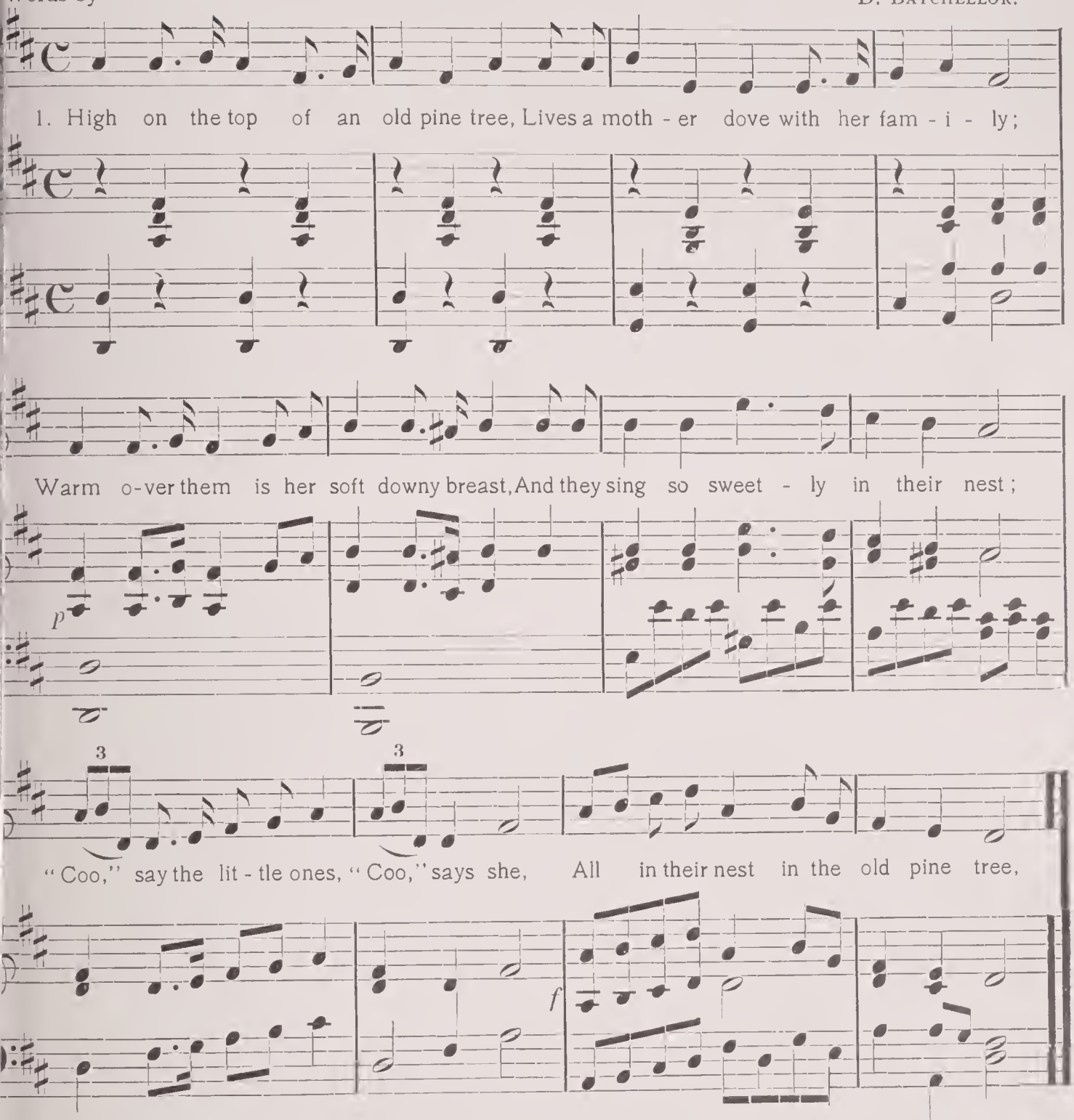
THE CLOCK.

Words from Mrs. Pollock's "Kindergarten Manual." D. Batchellor



THE LITTLE DOVES.

Words by D. BATCHELLOR.



Soundly they sleep through the moonshiny night,
Each young one covered and tucked in tight;
Morn wakes them up with the first blush of light,
And they sing together with all their might.
"Coo," say the little ones, "Coo," says she,
All in their nest in the old pine tree.

When they are fed by their tender mother,
One never will push nor crowd the other,
Each opens wide its own little bill,
Then patiently waits, and gets its fill.
"Coo," say the little ones, "Coo," says she,
All in their nest in the old pine tree.

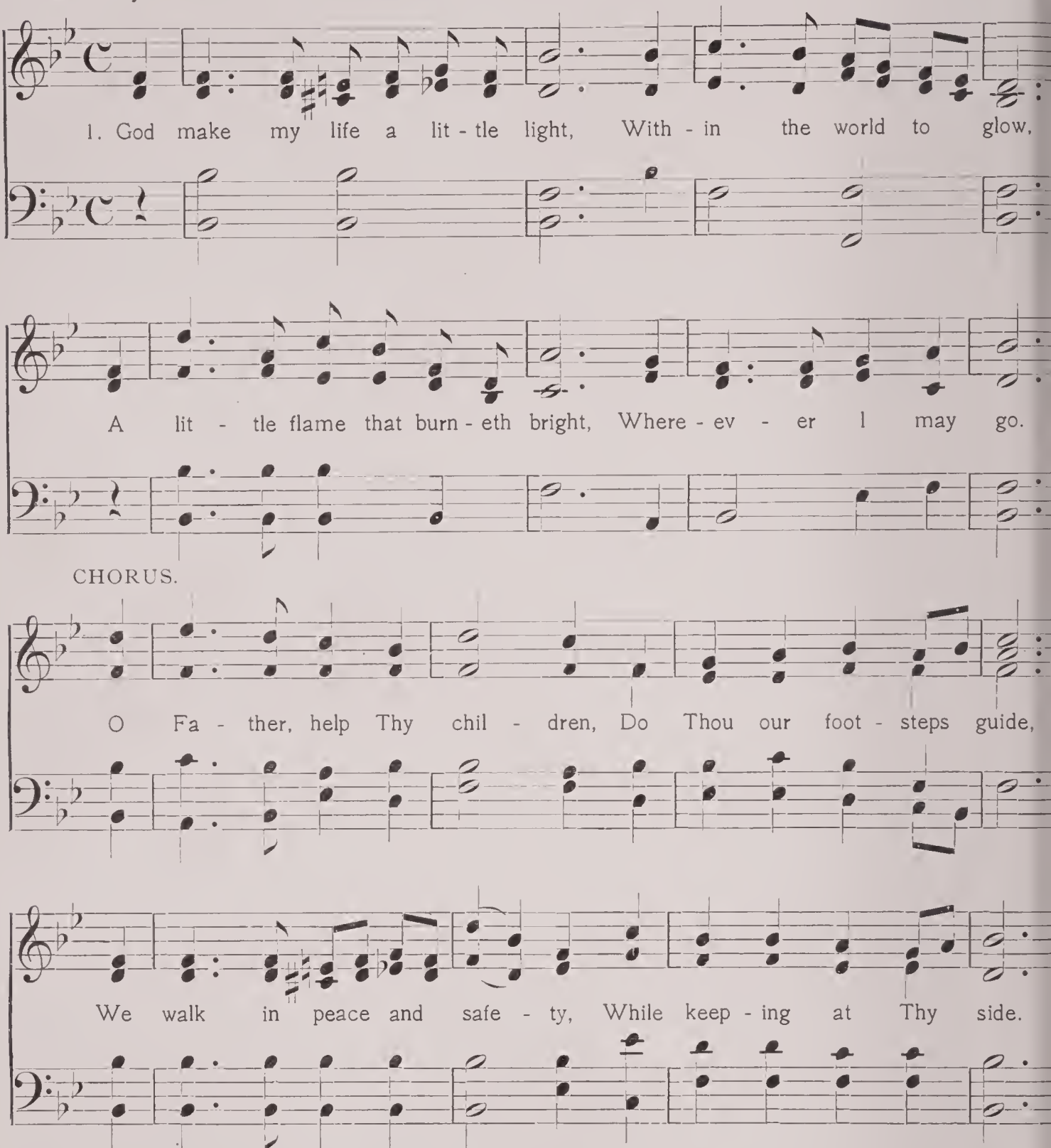
4 Wisely the parents begin by and by
To teach their young ones how to fly,
Just for a little way over the brink,
Then back to the nest as quick as a wink.
"Coo," say the little ones, "Coo," says she,
All in their nest in the old pine tree.

5 Fast grow the young ones, day and night,
Till their wings are plumed for a longer flight,
And unto them at last draws nigh,
The time when they all must say, "Good bye!"
"Coo," say the little ones, "Coo," says she,
As they all leave their nest in the old pine tree,

3260

GOD MAKE MY LIFE A LITTLE LIGHT.

Words by Mrs. M. B. Edwards. Duet and Chorus. D. Batchellor.



2 God make my life a little flower,
That giveth joy to all,
Content to bloom in native bower,
Although its place be small.

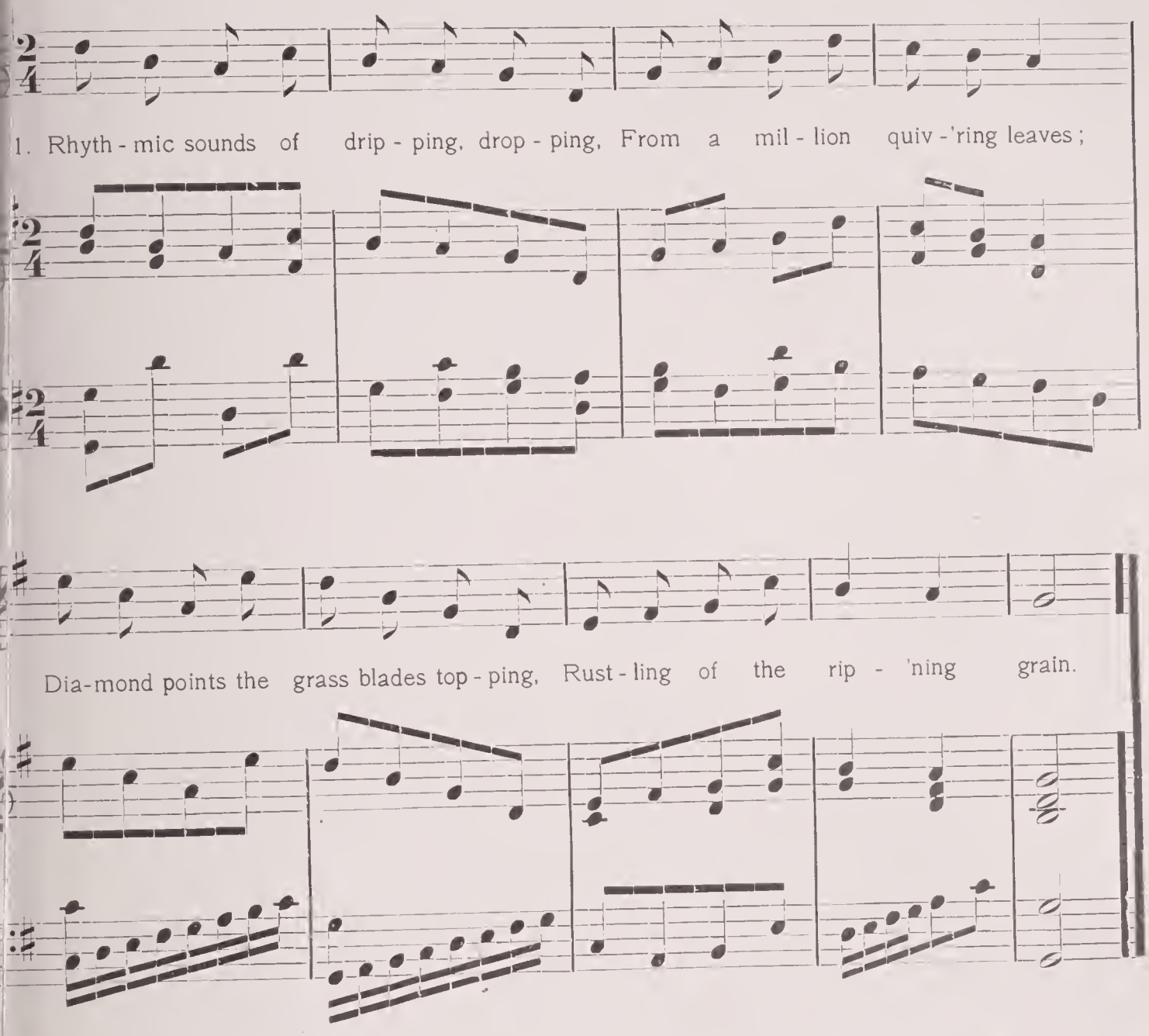
3 God make my life a little staff,
Whereon the weak may rest,
That so what health and strength I have,
May serve my neighbor best.

4 God make my life a little song,
That comforteth the sad,
That helpeth others to be strong,
And makes the singer glad.

5 God make my life a little hymn
Of tenderness and praise,—
Of faith, that never waxeth dim
In all His wondrous ways.

AFTER THE RAIN.

Words by MARTHA J. ANDERSON. D. BATCHELLOR.



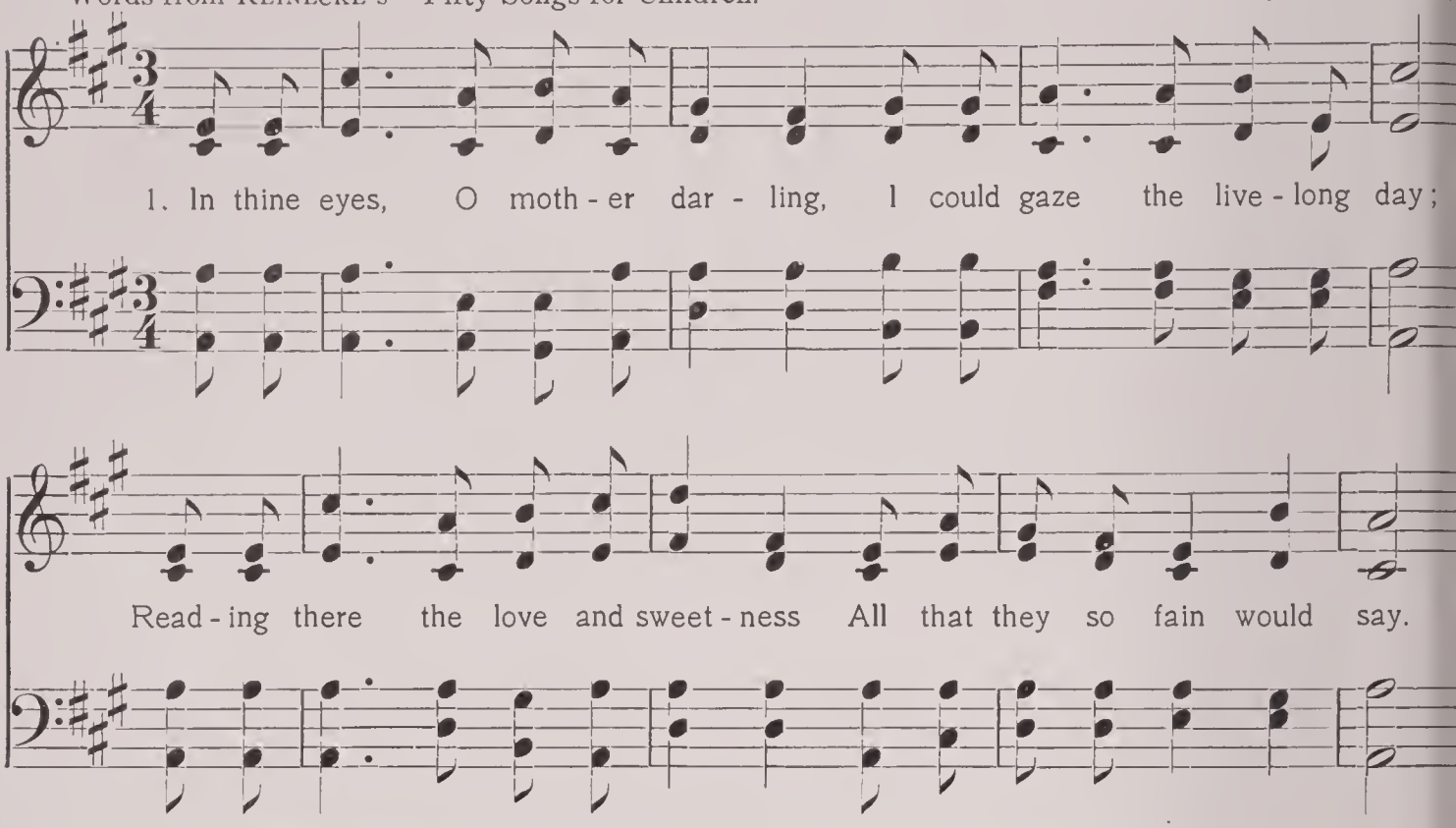
2 Sunshine quivering through the rifting
And the scattering of the clouds,
Through the valley light mists drifting,
Looking just like fairy shrouds.

3 Down the hillsides full and gushing
Laughing streams in gladness flow,
Bright eyed daisies lightly brushing
Tall grass in the meads below.

4 Hark! the sound of gladsome voices
From the leafy grove and bower:
All creation's heart rejoices
In the sweet refreshing shower.

IN THINE EYES, O MOTHER DARLING.

Words from REINECKE'S "Fifty Songs for Children." D. BATCHELLOR.



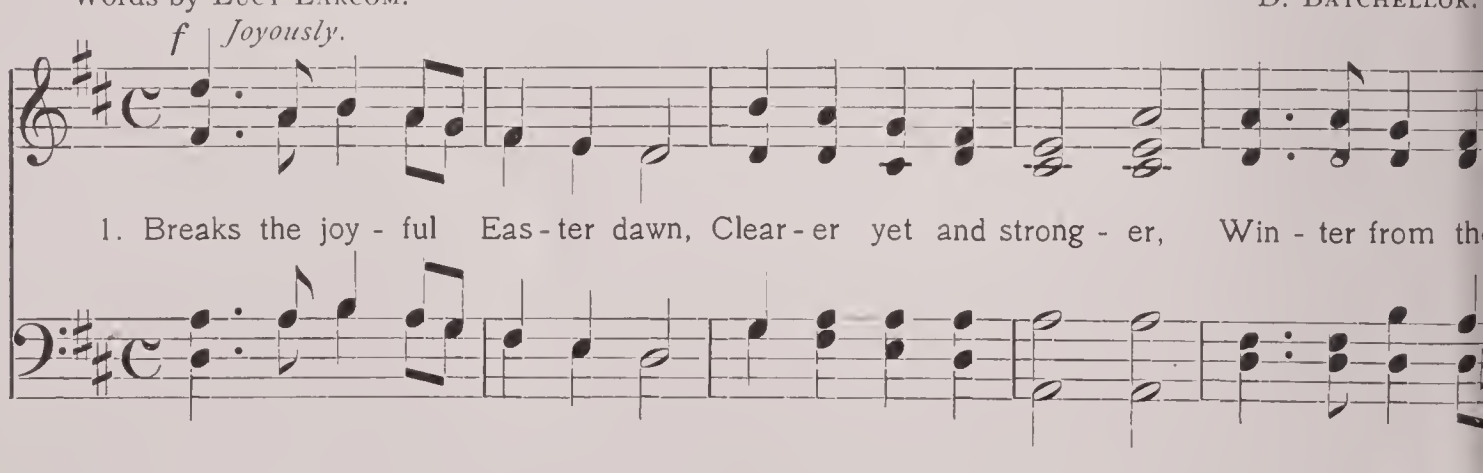
2 By my cradle, mother darling,
Thy dear eyes have lingered long,—
Watched me soft in slumber lying,
Lulled to rest by thy sweet song.

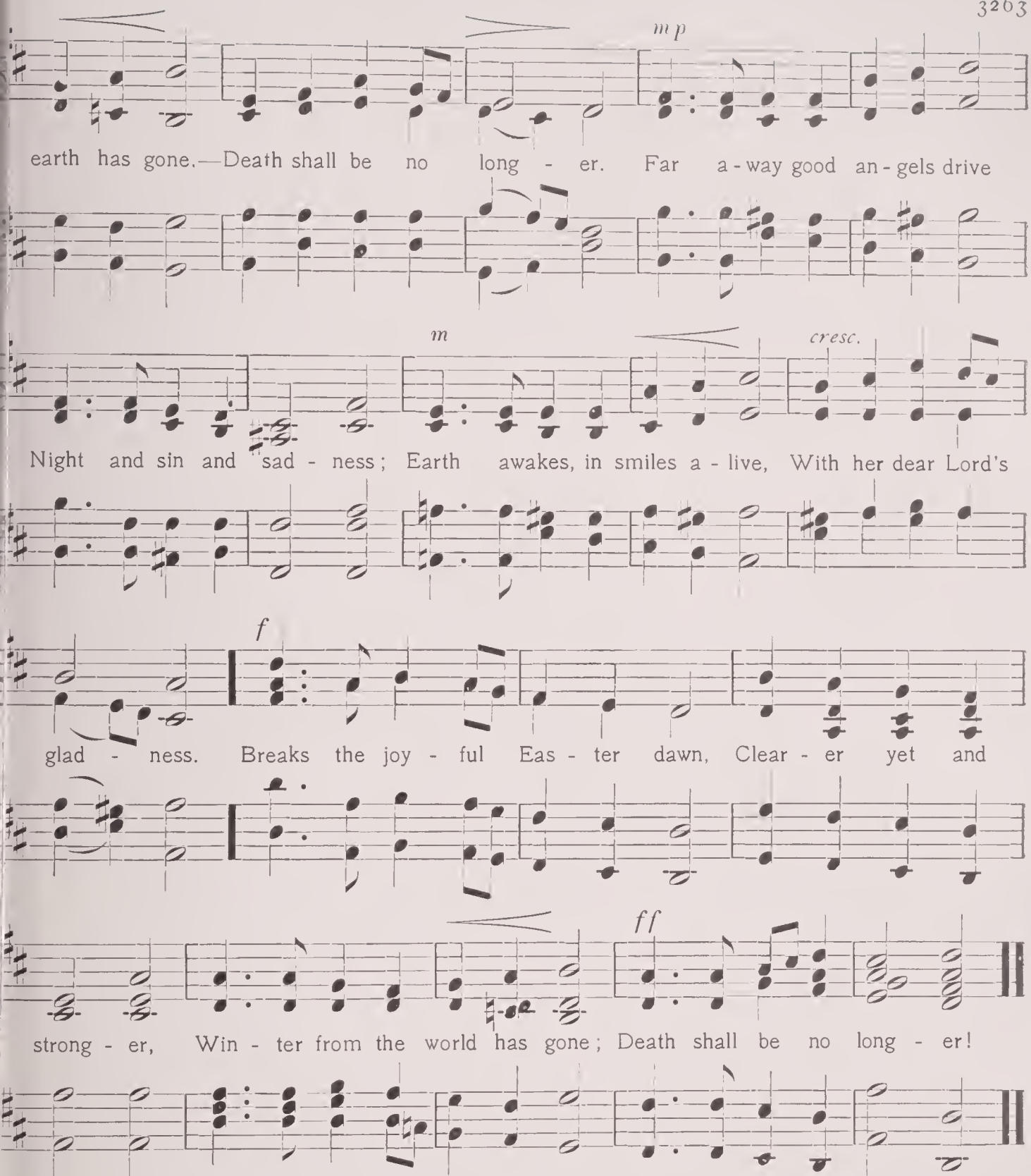
3 By my sick bed, mother darling,
Thou hast watched full many a night,
Praying to the Lord to save me,
Thy poor child, from death's dark night.

4 In thine eyes, O mother darling,
Let me gaze the livelong day;
Reading there the love and sweetness,
All that they so fain would say.

BREAKS THE JOYFUL EASTER DAWN.

Words by LUCY LARCOM. D. BATCHELLOR.



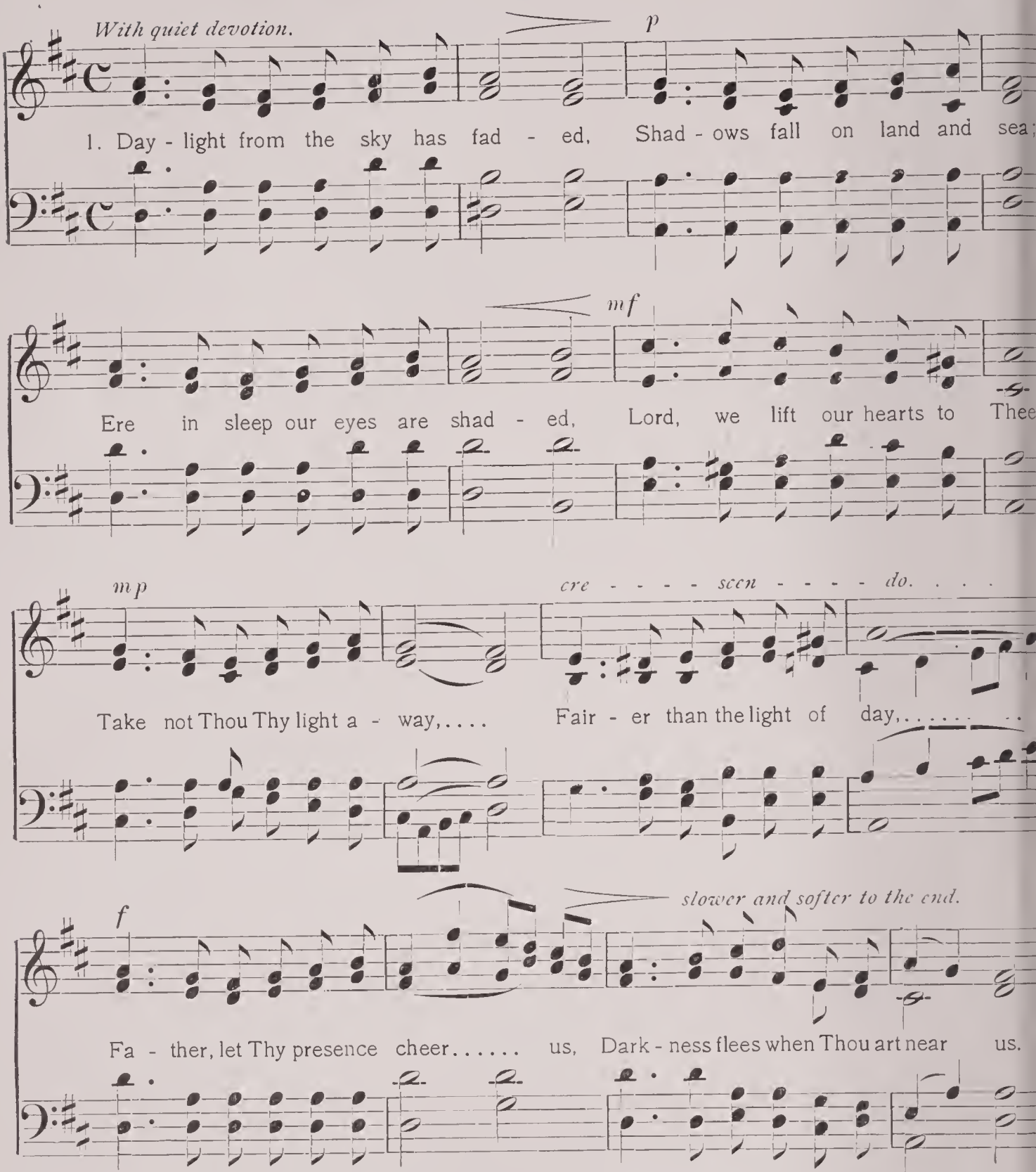


2 Roused from long and lonely hours,
Under snowdrifts chilly,
In his hand he brings the flowers,
Brings the rose and lily:
Every little buried bud
Into life he raises;
Every wild flower of the wood
Sings the dear Lord's praises.
Breaks the joyful Easter dawn, etc.

3 Waken, happy buds of Spring,
For the sun is risen;
Through the sky glad voices ring,
Calling you from prison.
Little children, dear, look up,
Toward his brightness pressing,
Lift up every heart,—a cup
For the dear Lord's blessing.
Breaks the joyful Easter dawn, etc.

DAYLIGHT FROM THE SKY HAS FADED.

D. BATCHELLOR.



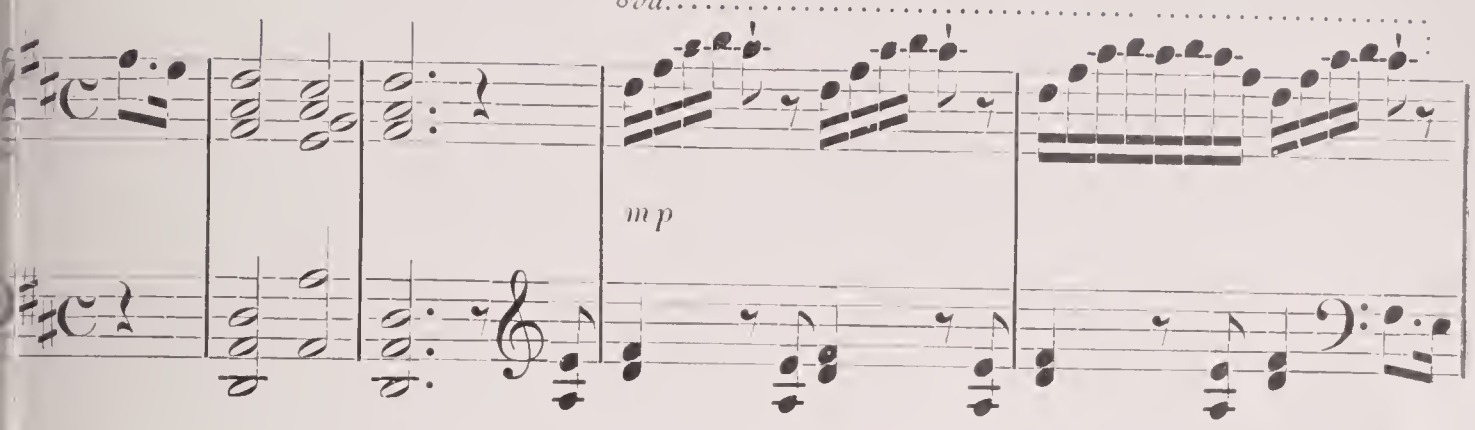
2 Flowers, amid the calm of even,
Lift their heads, refreshed with dew,
Weary hearts look up to heaven,
There to find their strength anew;
Thus we thirst for Thee, O Lord,
Let Thy grace on us be poured;
Cleanse and pardon and restore us,
Shed the dew of blessing o'er us.

3 Babes, their trustful eyelids closing,
Slumber on their mothers' breast;
Little birds, in peace reposing,
Under parent-wings find rest:
Whither shall Thy children flee,
Heavenly Father, but to Thee;
Thou wilt watch, while in Thy keeping
Calm and peaceful we are sleeping.

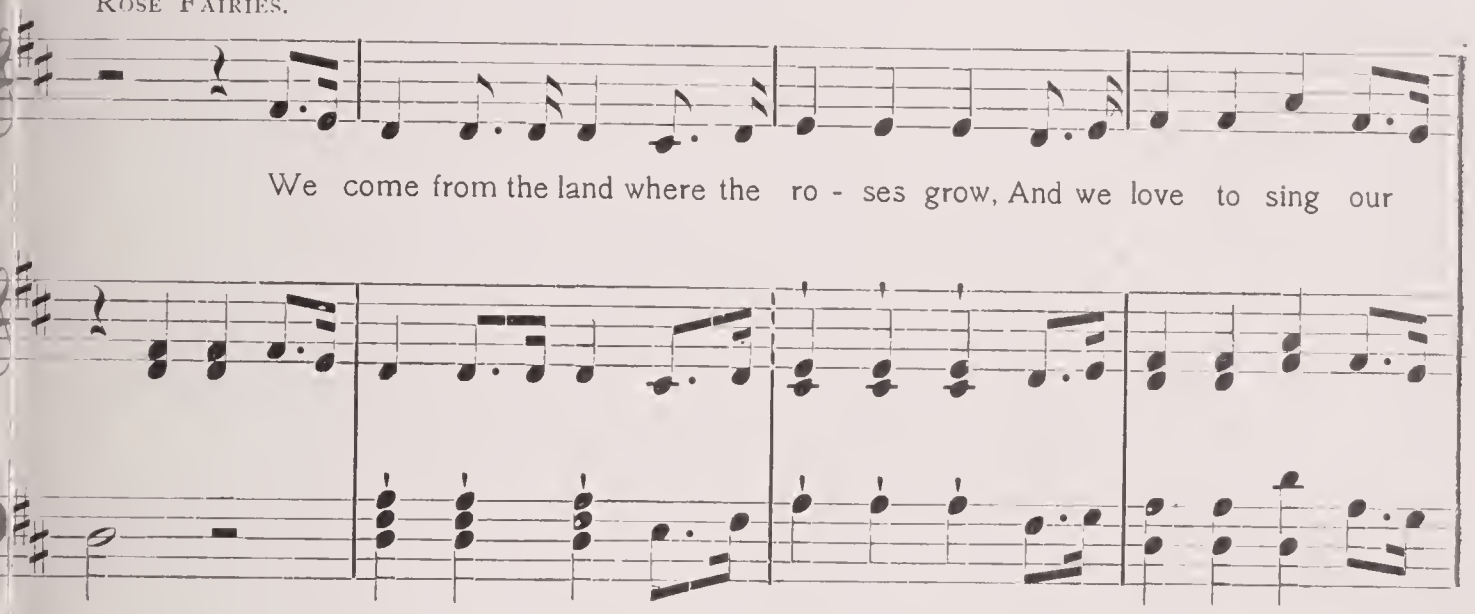
THE FLOWER-FAIRIES.

D. BATCHELLOR.

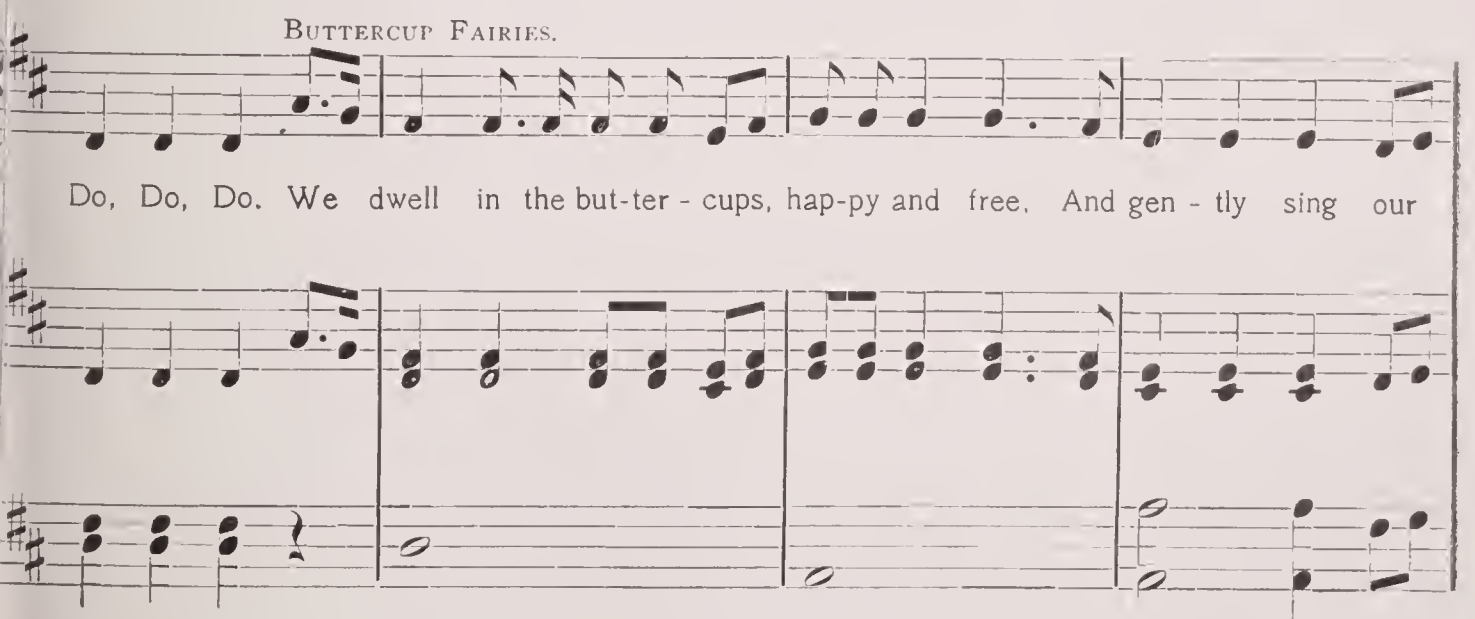
CALLING THE FAIRIES.

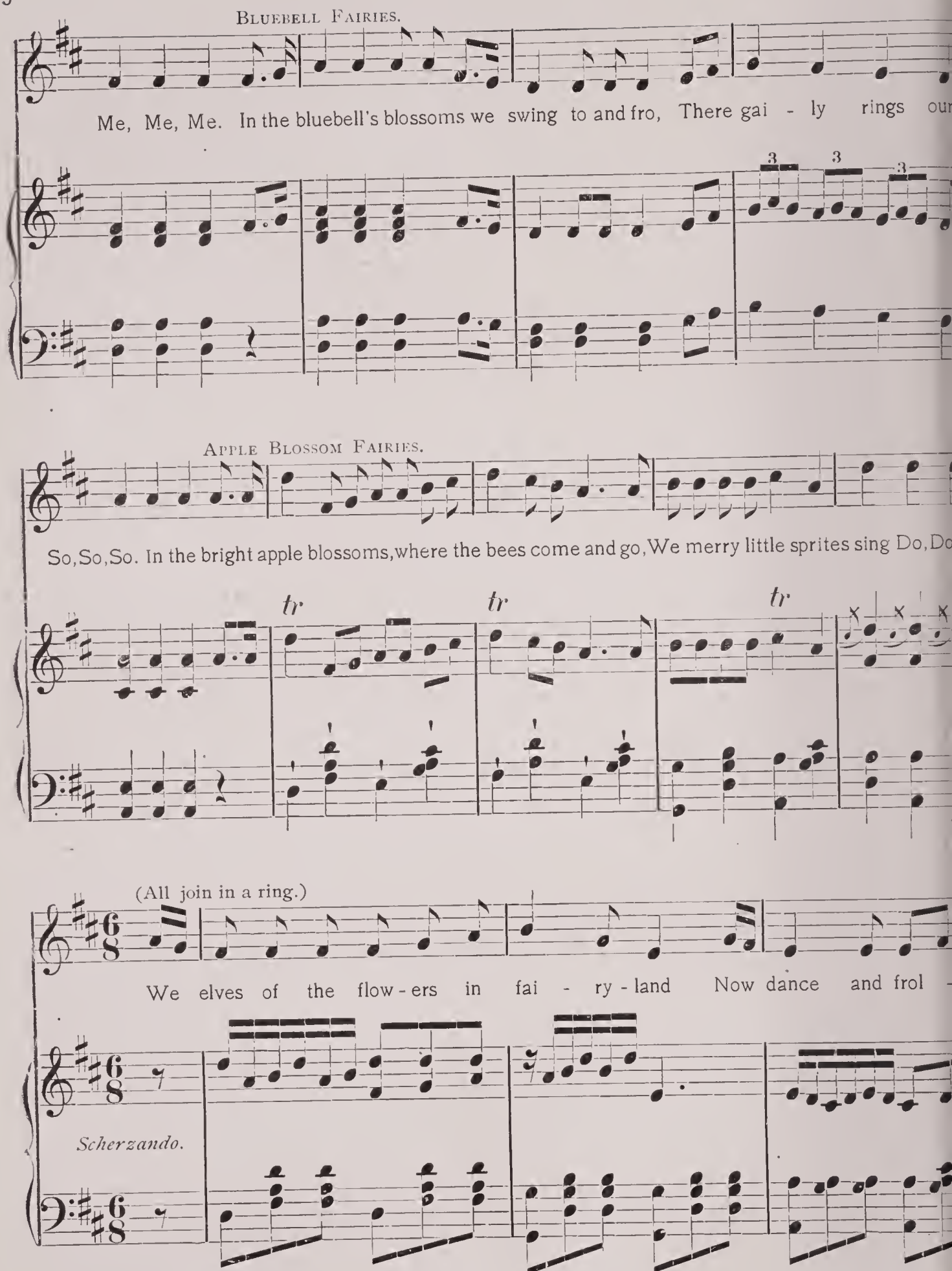


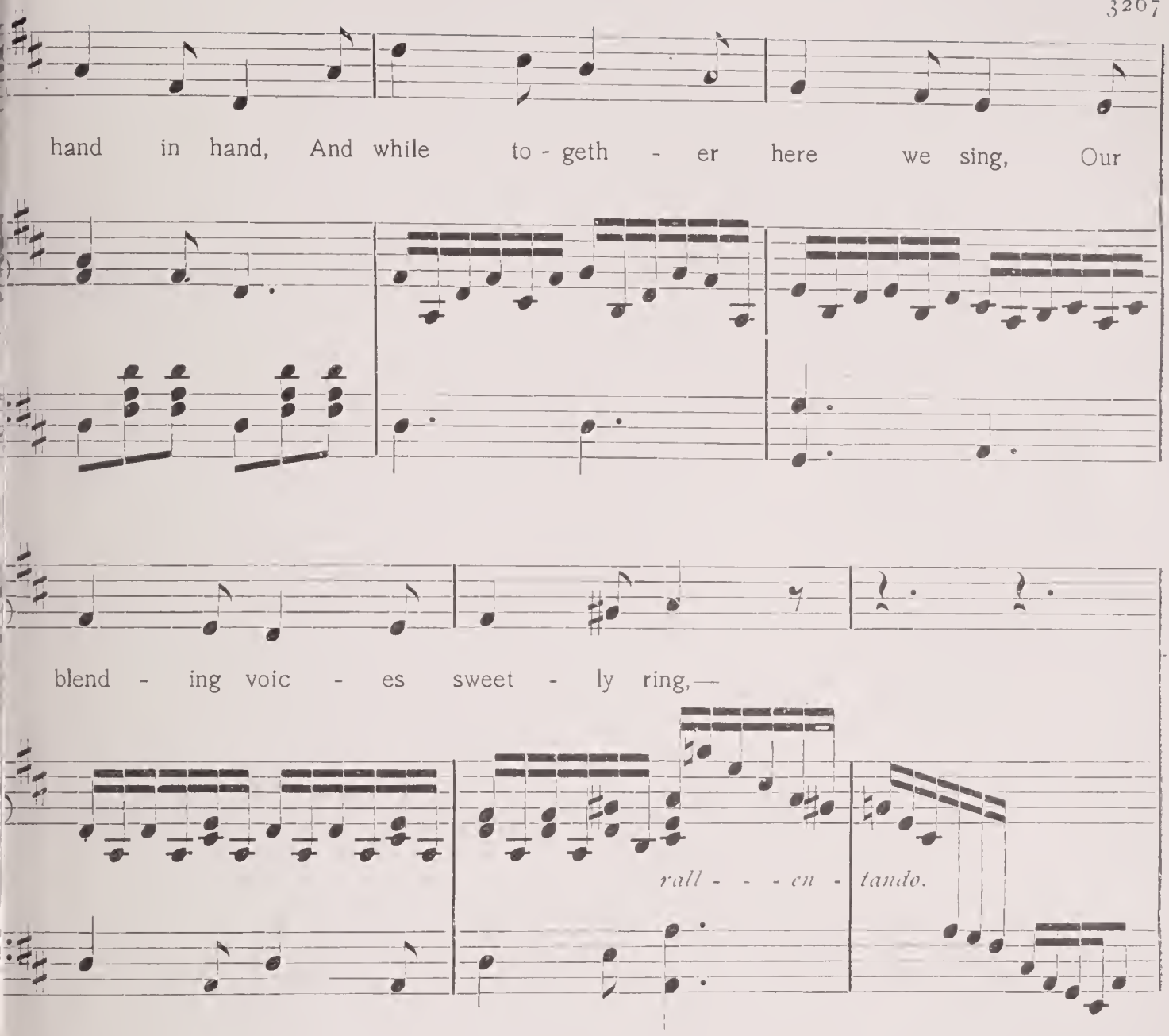
ROSE FAIRIES.



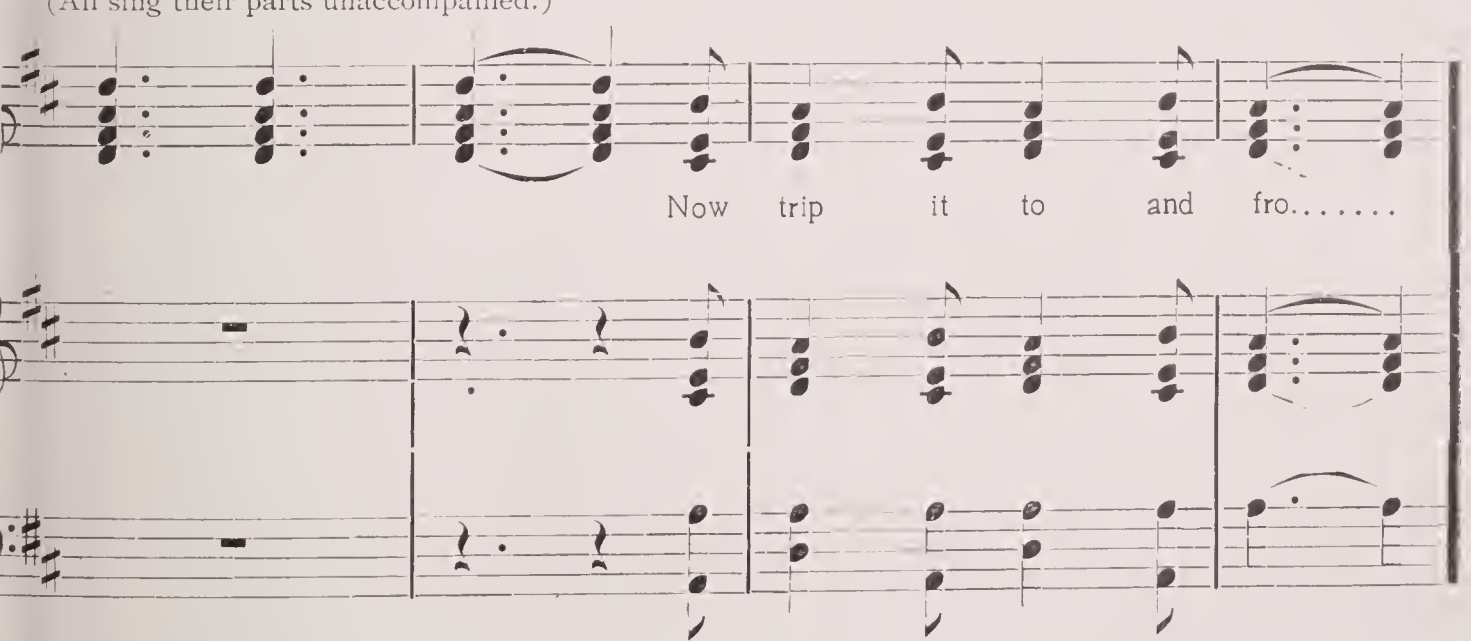
BUTTERCUP FAIRIES.



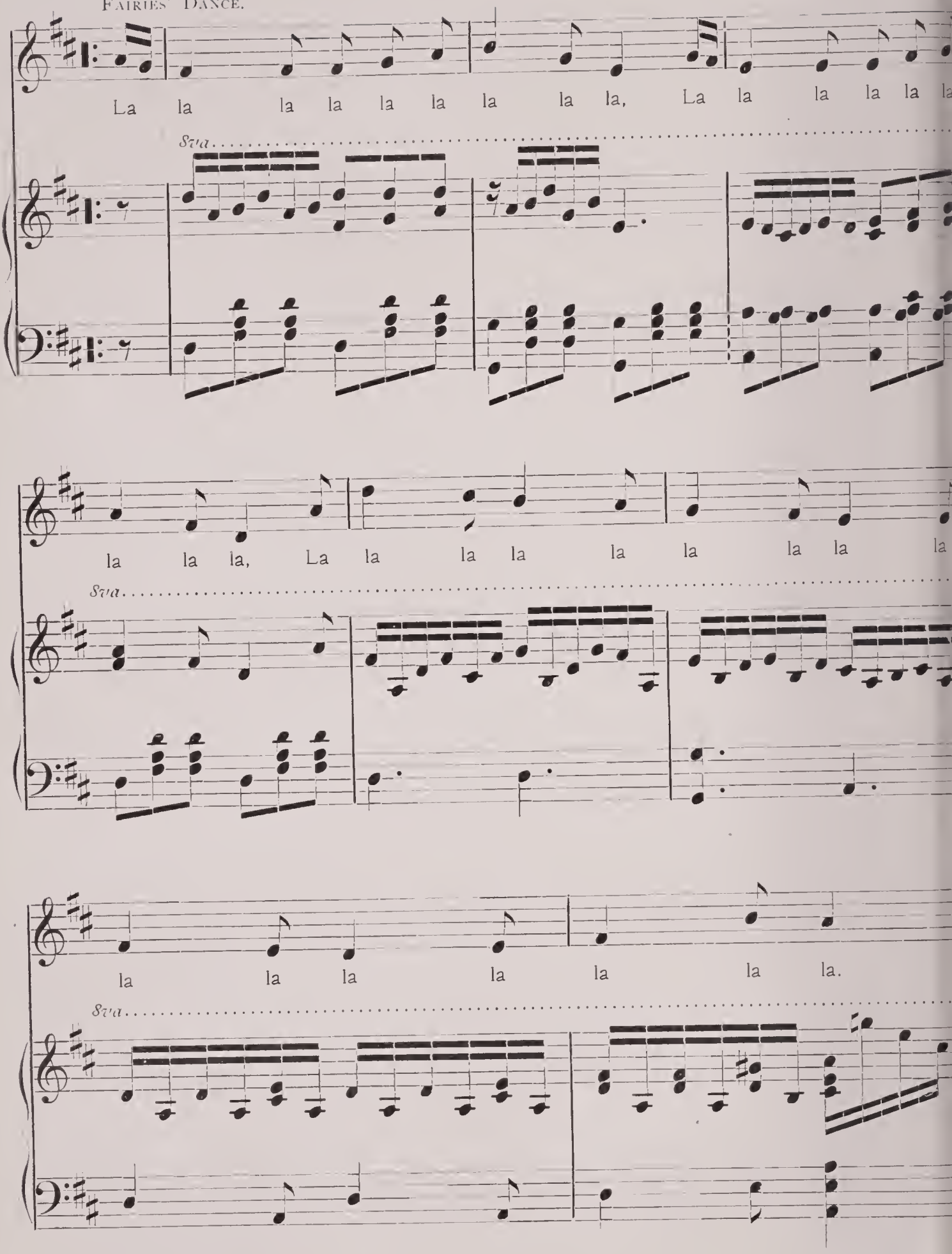

Bluebell Fairies.
Me, Me, Me. In the bluebell's blossoms we swing to and fro, There gai - ly rings our
Apple Blossom Fairies.
So, So, So. In the bright apple blossoms, where the bees come and go, We merry little sprites sing Do, Do
tr
tr
tr
(All join in a ring.)
We elves of the flow - ers in fai - ry - land Now dance and frol -
Scherzando.



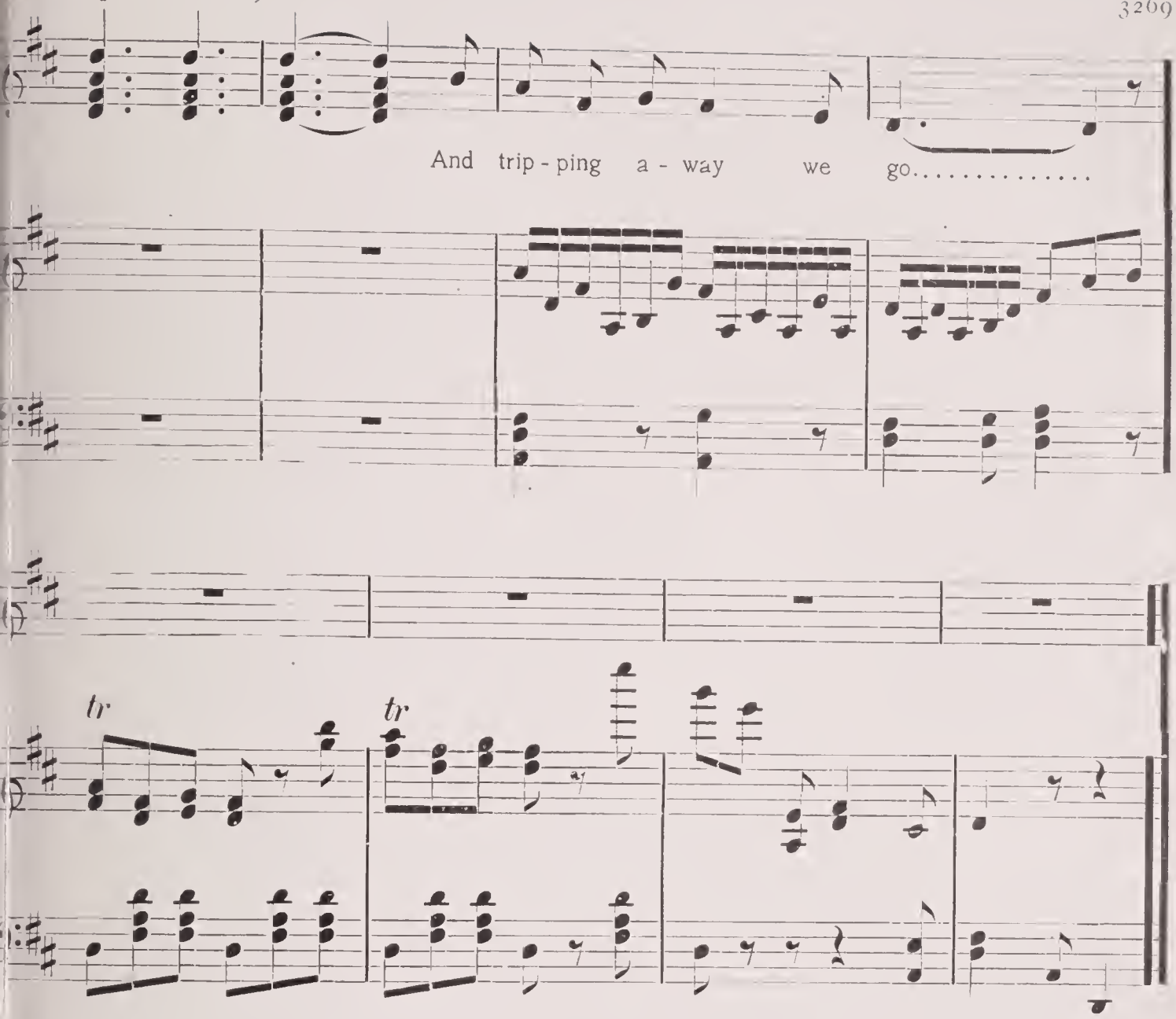
(All sing their parts unaccompanied.)



FAIRIES' DANCE.



(Grouped in chords.)



NOTE.—This may be made into a very pretty play, although it is too complex for little children. The meaning which underlies it is the development of the Tonic Chord. It may be played by four persons, but will be more effective with any multiple of four. Suppose, for instance, we have four persons to personify the rose fairies, and four for each of the other kinds. Let there be a group of fairies in each corner of the room, and when the piano has played the prelude "Call of the Fairies," the Rose Fairies come from each corner, join hands and dance around while singing their part. They then fall back on each side while the Buttercup Fairies make their entrance. These fall back, each beside a Rose Fairy, while the Bluebell Fairies enter, and so on. When all have made their entry, they join hands in a ring, and sing together "We Elves of the Flowers," while the ring alternately contracts and expands. At the close of this movement they separate into groups of four, so that each group wheels upon its centre while singing the common chord. They then join in a fairy dance, in which the "grand chain" may be effectively used, after which they again group themselves for the chord, and then vanish. It will be seen that any amount of decoration may be introduced in the way of flowers or dress to add to the scenic effect.

Tone-Color Music.

THE KINDERGARTEN AND SCHOOL PERIOD.

The kindergarten vocal training should be a natural outgrowth from that of the nursery. As the latter covered the period of sense intelligence, while the intellectual faculty was as yet lying dormant, the musical education was necessarily through the exercise of the senses, in which the muscular sense took a very active part.

Although the conditions are now different, there must be no sudden breaking away from the earlier methods of training. Evolution is always better than revolution. It is true that the child is developing new mental powers, but he still is largely under the sway of the senses, and sense training will continue to form an important part of his education. But now the eye and the ear will take the leading part, and the muscular sense will fall into a secondary place. In the nursery the play of the senses was largely unconscious; now the plays will be accompanied by a growing thought activity.

This thought takes the form of imagination, or intellectual play, and will be largely influenced by the sense images which have been stored in the child's mind. Not that the process of storing concepts is finished; indeed it is only fairly started.

We have before considered the co-operative use of the senses (page 3208) and their effect upon brain culture (page 3213). Let us study this matter a little more closely.

When we look at an object it excites that particular region in the brain which is stimulated by the act of seeing. If it is a new thing, and unlike anything we have ever seen before, it leaves but a faint and imperfect image in the mind, whereas even a glance at a familiar object calls up a clear mental image. This is because the present vision of the well-known thing is reinforced by the accumulated effect of many past stimulations in that brain region. So, too, when we grasp an object, be it hot or cold, hard or soft, round or square, the muscular sense reports with a convincing power proportioned to the accumulated force of all such previous muscular impressions, registered in a different brain region from that of sight. Obviously, the same thing is true of the other senses.

Now comes another form of co-operation. Two or more of the sense centers which have been excited in proportion to all their past stimulations, coalesce in a more complex stimulation. To illustrate by analogy: three separate tones may combine to form a beautiful chord; or different colors may blend into a larger vision of beauty. So we may have a harmonious

combination of the different sense perceptions in a fuller and richer mental conception. This gives a larger and more intense stimulation. These fuller concepts may, in turn, combine to secure a yet larger and more intense stimulation, and so there will be a continual growth in sense reactions, and in ever richer mental conceptions.

To put the great principle into a simple concrete form, when the child takes hold of a ball, he feels not with this one grasp only; but also with the stored impressions of many previous contacts with a ball. Then when he looks at the ball, he sees the shape and color with a vision reinforced by a large number of stimulations from the past. Now the eye and hand working together with all these stored impressions, the result of past training, convey fully and forcibly to the child's mind the idea of a colored ball. If the other senses were also co-operating, the mental effect would be all the stronger. We shall now, by the co-operation of the senses, make use of this principle in musical training.

In music the ear is the leading sense; but it may be strongly reinforced by the eye, and to some extent by the muscular sense. We will take it for granted that the children have had the voice-developing exercises given to them in the nursery period, for which refer to page 3218. They are now ready to engage in other and more definite voice-tuning exercises.

TUNE.

The underlying principle in tune is the relation which all tones bear to their generating, or key tone. The basis of all harmony is the Tonic chord, consisting of 1, 3 and 5 of the scale. If the first tone be grasped by the mind it will, by a natural reaction, call out the fifth, and then the mediant third. We have here a beautiful example of the law of opposites and their connection.

The first thing, then, is to establish a key-tone in the minds of the children, and from that to develop the chord.

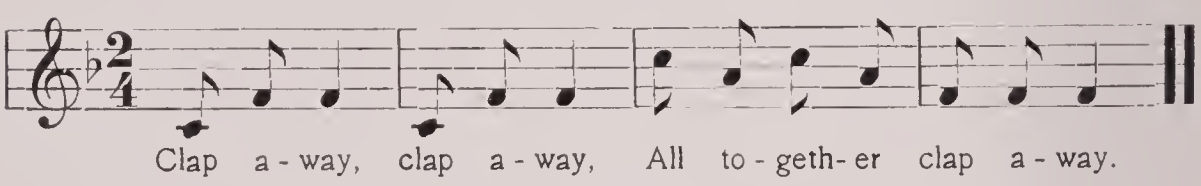
The Keytone.—To get a soft, but well sustained, tone at about the pitch of D below the first line of the staff, let the children gently hum like bees among the flowers, like the wind singing through the trees and along the telegraph wires, or like a fairy organ. Then they may softly sing it to the vowel oo, like fairy flutes. It is very important that the lips should be easily relaxed and that there should be no rigidity in the lower jaw. Let them have pleasant thoughts and smiling faces, and the easy action of the organs will come as a matter of course.

Again, the children may imitate a rich-toned bell, grasping an imaginary bell rope while they sing with quiet emphasis, "Bim, bom, bell." Continue with variations upon this exercise until the children sing well and tunefully together. It may sometimes be necessary to go over the exercise many times, day after day; but there must be sufficient variety of presentation to keep it from becoming monotonous. For instance,

the bell may sometimes toll slowly, and at other times with moderate speed or even at a lively rate, to suit sad or joyous occasions. Again, different degrees of force may be used to represent the bell ringing far away, close at hand, or in the medium distance. So, too, the humming of the bees may vary in intensity as they come nearer or wander farther away. By these and other devices the ear is being continually impressed with the tone, while at the same time the children are learning the fundamentals of expression in music. Give the rein to imagination, and there will be no lack of variety and interest.

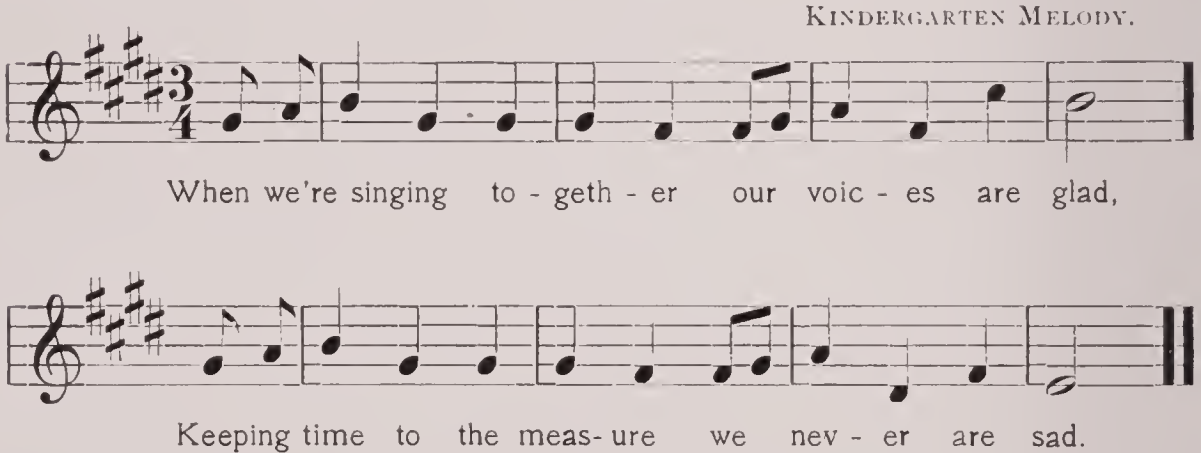
NEED OF RELAXATION.—Do not keep the child's mind too long upon the stretch. After each exercise relieve the tension by falling back upon something that is familiar. In one way a good relief may be secured by clapping the hands, or by tapping the feet, while singing this exercise:

A BUGLE CALL.



or this:

KINDERGARTEN MELODY.



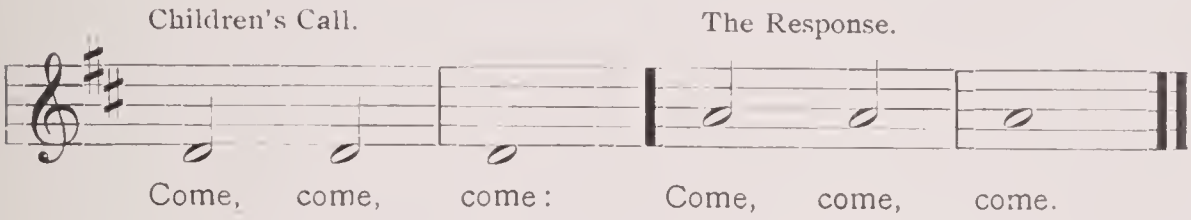
THE ANSWERING FIFTH.—When a key-tone has been firmly established in the minds of the children, they should learn its natural reaction—the fifth above. This can be done in the form of an ear exercise. Ask the children to listen and to tell you how many times the bell rings. Then sing the tone three times. After a moment's relaxation, let them listen again while you sing:

They will probably answer that the bell rang four times; but they will soon notice that the last tone was different from the others. Suggest that

there may be another church, and let them notice that when the first bell calls, the other gives a clear answer, as if in the distance.

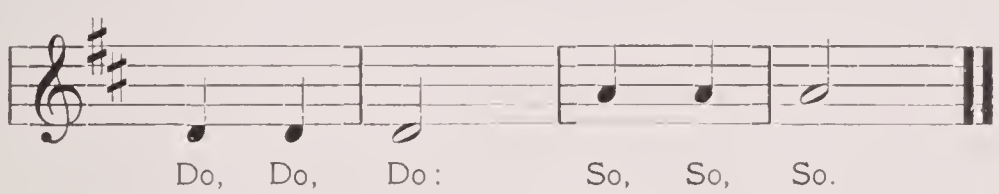
The hand-sign for the key-tone has already been given, namely, the firmly closed hand as if grasping the bell rope. The clear effect of the answering fifth may be suggested by the open outstretched hand with thumb upward, as if calling attention to the distant bell.

Here is a plan which will generally secure the active interest of the children. Let them represent bell ringers calling the people to their church, and when they have sounded out their invitation, you can give a soft clear answer on the fifth above, at the same time making the new hand-gesture, as if calling attention to the church in the distance, thus:

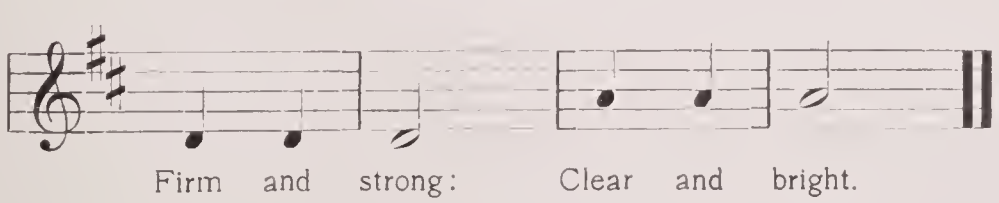


After a short interlude, the pitch can be changed, the children singing on E, and the answer being given on B. On another occasion, it might be repeated on F and C, or G and D[1]. After a few trials, the parts may be reversed so that the children sing the answering tone. Then divide the little ones into two parties and let one group of ringers sing the key-tone while the other group sings the answering fifth.

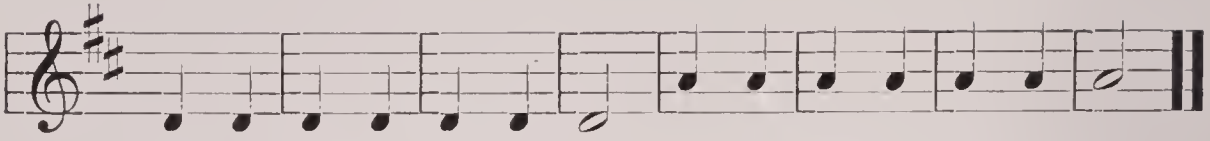
Naming the Tones.—We can make the tones more distinct in the child's mind by giving each a name. Let the first bell be named Do, and the answering bell, So. The children will now sing, while making the hand signs:



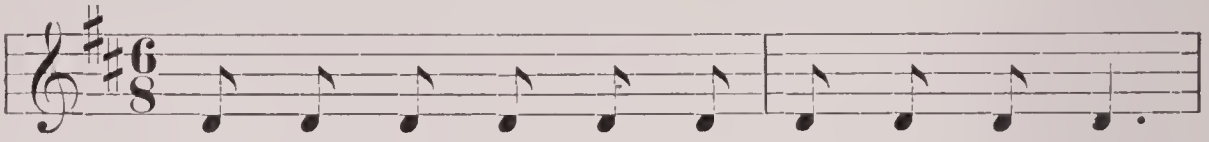
Tone Characteristics.—Little by little the children will learn to appreciate the different character of the tones. The less this is spoken about the better, unless it is the spontaneous expression of the child's own mind. But something of the tonal meaning may be suggested by singing a simple form of words, thus:

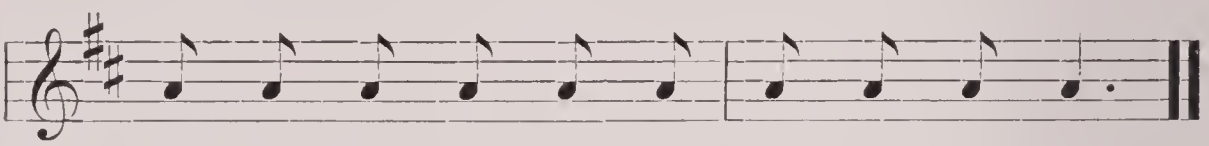


Or in a more extended way:



Again with a difference of rhythmic form:

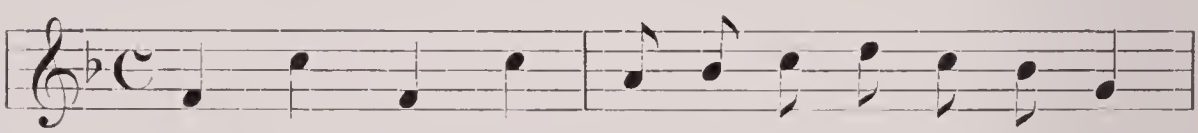


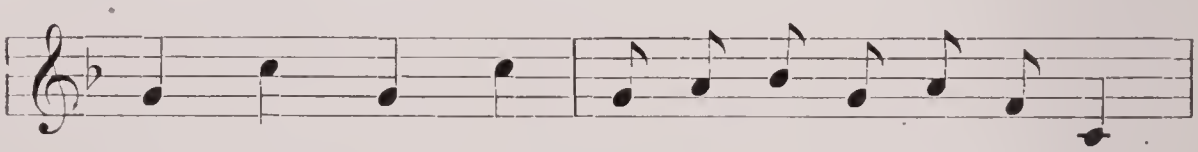


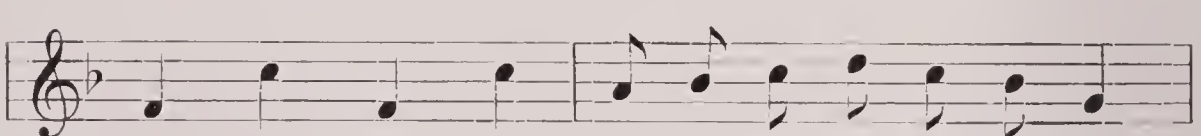
The rate of movement can be varied in these little song forms, taking them at first with slow distinctness, and then at a more and more lively rate. So the children are learning unconsciously to appreciate the rhythmic flow, and also to enunciate their words clearly.

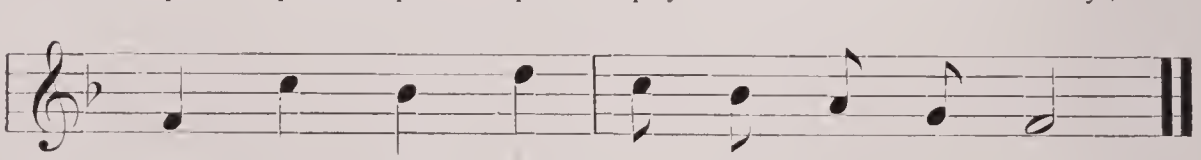
INTERLUDE.—The following melody will serve as a good relief after the foregoing strain of attention, and at the same time it will illustrate the ringing character of So.

CLAP, CLAP.



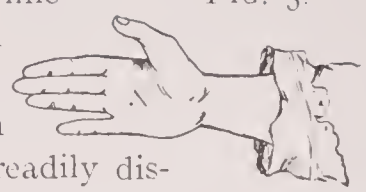






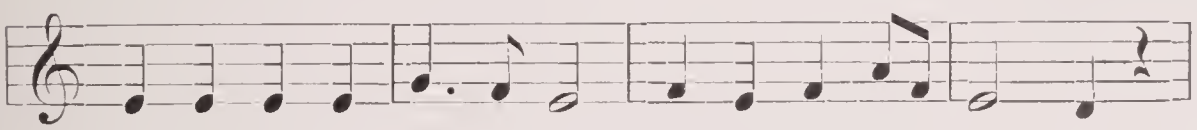
INTRODUCING THE THIRD.—Let the children listen while the two tones are sung or played upon the piano, and then tell which they hear. Do this in different keys; but be careful that each new key-tone is well impressed upon the ear before giving the answering fifth. When they can readily distinguish between Do and So, the third of the scale may be unexpectedly introduced. The new tone will probably puzzle them a little, and their first impressions will be negative rather than positive, for the tone lacks the solid strength of Do, and the clear ring of So; but they will soon begin to notice the calm, gentle sound of the new bell tone, which will also be suggested by its sign—the hand held out with the palm downward, as if in benediction. This hand posture will henceforth be associated with the calm third, which now receives the name Me. See Fig. 3.

FIG. 3.



ILLUSTRATIONS OF ME.—Let the tone characters be impressed upon the children's minds by well-chosen exercises. For instance, the calm, peaceful effect of Me may be felt in the following selections:—

Melody from MOZART'S TWELFTH MASS.

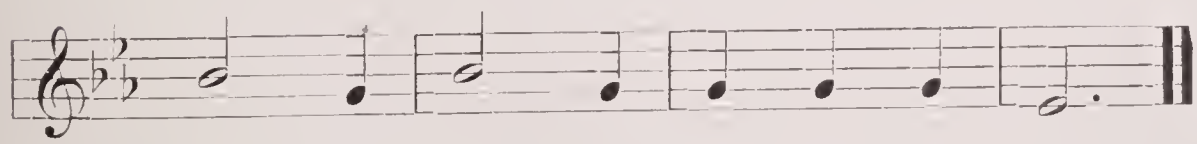


Through the si - lent hours of night Guard us when we're sleep - ing;

May we rest till morn - ing light, Safe be-neath Thy keep - ing.

Besides illustrating the calmness of Me, on the G line, the following may be sung as a round in two parts:

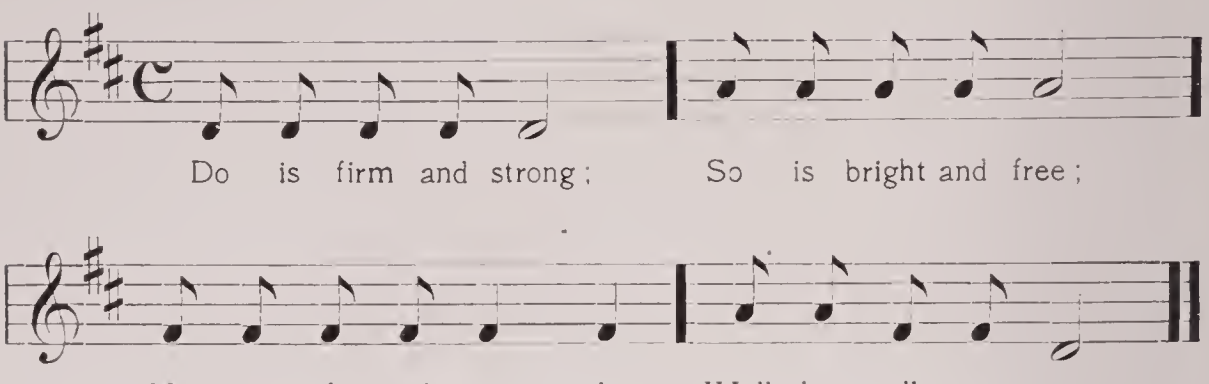
Far in the West fades the beau - ti - ful light,



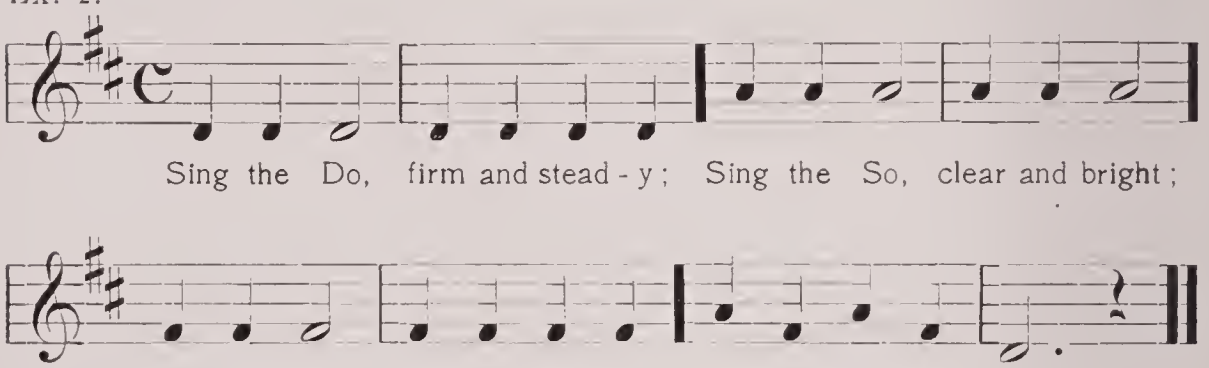
Gent - ly fall the shad - ows of night.

Making Songs.—Children like to "make up" songs, and the tone impressions which they have been gaining may be summed up in little song forms like the following:—

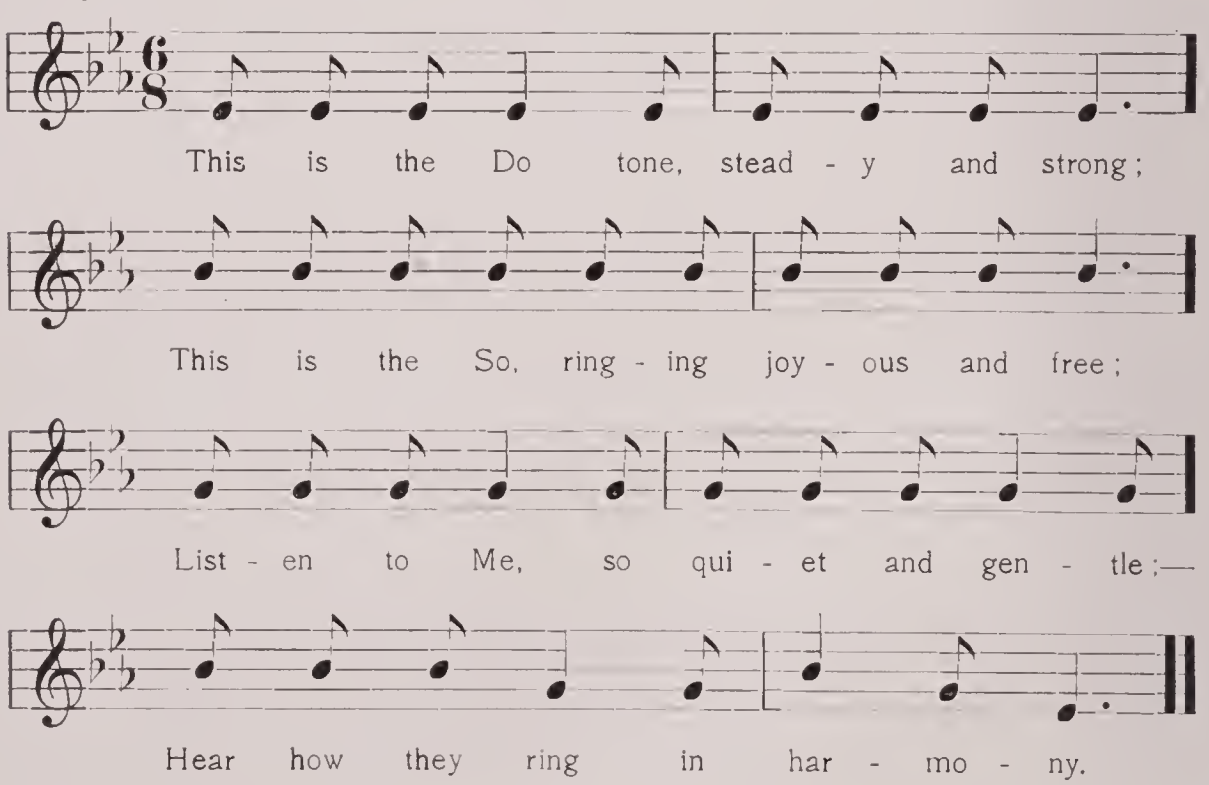
Ex. 1.



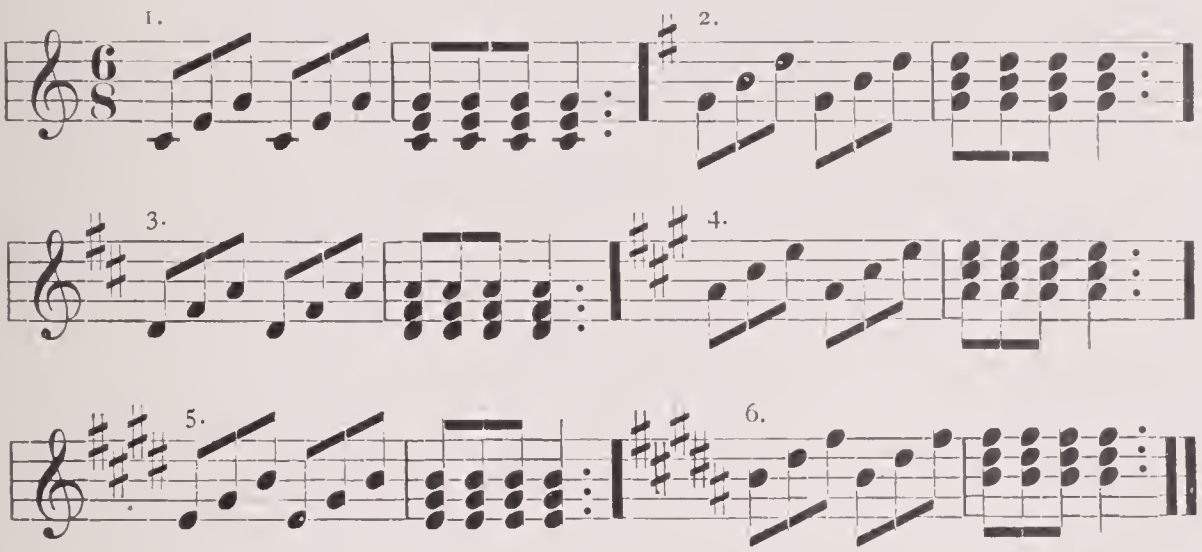
Ex. 2.



Ex. 3.



THE CHORD.—Although little children do not sing generally in parts, they like to listen to simple harmony. Let them hear Do and So sounded together on the piano or organ; then Do and Me; Me and So, and lastly Do, Me, So together. Then let them hear the following exercise played, allowing an interval after each key:—



Do this often, until the ear has become thoroughly accustomed to the chord combination. It will not be necessary to play it in all of the keys at one hearing. Nos. 1 and 2 could be played on one occasion; at another time 3 and 4, or 5 and 6. In this way they will get a clear and full impression of the major chord, which will give a solid foundation for later studies in harmony.

ROUND SINGING.—Exercises 1, 2 and 3 can be sung as rounds, but in the majority of cases it will be better not to attempt this in the kindergarten. Where it can be done, the children should be divided into separate groups, and each group in turn should sing through the whole exercise. When this is done with confidence the kindergartner may very softly follow in the order of the round, *i. e.*, when they reach the first double bar, she commences at the beginning. After awhile the children may follow her. When this is done correctly, they will soon be able to follow each other in three or four parts. Generally it will be necessary to have a leading voice with each group. A good exercise to gain steadiness of nerve, and one from which the children get plenty of fun, is the following: The kindergartner challenges them to sing through the little song while she does something to distract their attention, or to confuse them. The interruption should at first be very slight, but as they gain confidence the test may be made more severe. In this way they will soon gain the power of carrying their parts with steadiness and accuracy. For those who can sing rounds, there is no musical exercise more enjoyable: moreover, round-singing is a useful means to secure independent effort with harmonious combination.

RHYTHM.

It has already been seen that rhythm should go with the earliest sense-activity of the child. It formed a very important part of the nursery training, where it was the chief agent to promote a well-ordered activity of the muscular sense. There it was purely impulsive play. Recall, however, what was said on page 3213 about the more and more gentle movements of clapping the hands or tapping the feet, as the inward throbs were more clearly felt. If the nursery work has been thoroughly done, the children by this time will have developed an inner sense of rhythm, and can now go into a more intellectual perception of time movement. Of course this should be very gradual, and still carried forward in the form of play. Such rhythmic movements as clapping, marching, flying, rowing, etc., will be continued with appropriate songs.

But in addition to this, the children should now begin to observe the pulsations in tuneful selections played upon the piano, and also in lines of poetry. The Mother Goose and other rhymes in the nursery have laid the foundation for the work, but then it was an unconscious impulse. Now they begin to notice the wave-like flow of the music, and of the lines of poetry. Let the examples be very carefully selected, for the child's early perceptions will powerfully influence his taste throughout life. Therefore the models selected should be of the best.

These selections should be so chosen as to show the children, by comparison, the two forms of rhythmic waves. Let them listen to the two following selections:

Two pulse, primary form.

Twinkle, twinkle, little star;
How I wonder what you are,
Up above the world so high,
Like a diamond in the sky.

Three pulse, primary form.

Evening is falling asleep in the west,
Lulling the golden brown meadows to rest;
Twinkle like diamonds the stars in the skies,
Greeting the two little slumbering eyes.

They will at once notice a difference in the two movements. Do not attempt to analyze them yet, but let the children repeat the lines after you, to get the true swing of them. You can allude to the first as "movement by twos" and to the second as "movement by threes."

Then they may listen to another form of the two-pulse and three-pulse movements, thus:—

Two pulse, secondary form.

The shadows of the evening fall
Adown the darkening sky;
Upon the fragrance of the flowers
The dews of evening lie.

Another example of the same movement.

I'll hie me down to yonder bank,
A little rain drop said,
And try to cheer that lonely flower,
And cool its mossy bed;
Perhaps the breeze will chide me,
Because I am so small,
But surely I must do my best,
Since God has work for all.

Three pulse, secondary form.

I asked a sweet robin, one evening in May,
Who sang in the apple tree over the way,
What it was he was singing so sweetly about,
For I'd tried a long while, and I could not find out.
"Why, I'm sure," he replied, "you cannot guess wrong;
Don't you know I am singing a temperance song?"

Guard against letting the children fall into a sing-song way of repeating such selections as these. This can be avoided by getting them first to chant the words to a clear monotone until they have secured good enunciation and proper rhythmic emphasis, after which they can "tell the story" with pleasant speaking intonation.

By slow degrees their minds will learn to define these two movements. They will feel that the three-pulse movement has a more easy flow than the other; the two-pulse excites a straightforward marching impulse, while the three-pulse suggests a dancing or gliding movement. After some practice they will be able to tell at once whether the music or poetry which they hear is in "twos" or "threes."

Besides the exercises which they repeat for the vocal training, they should also listen while some of the choicest selections of literature are read to them. Some of these are within the kindergarten child's power of comprehension. Take, for instance, that choice morsel from Browning's Pied Piper:—

All the little boys and girls,
With rosy cheeks, and flaxen curls,
And sparkling eyes, and teeth like pearls,
Tripping and skipping, ran merrily after
The wonderful music with shouting and laughter.

They will notice how it begins in the two-pulse movement, but ripples off into the three-pulse in the last two lines.

Some of Tennyson's poems are well suited for models, *e. g.*—

What does little birdie say
In her nest at peep of day?
"Let me fly," says little birdie—
"Mother, let me fly away."

"Birdie, rest a little longer,
Till the little wings are stronger;"
So she rests a little longer,
Then she flies away.

What does little baby say
In her bed at peep of day?
Baby says, like little birdie,
"Let me rise and fly away."
"Baby, sleep a little longer,
Till the little limbs are stronger.
If she sleeps a little longer,
Baby, too, shall fly away."

As their sense grows more refined and discriminating they will be able to feel the exquisite rhythm in his celebrated lullaby:

Sweet and low, sweet and low,
Wind of the western sea,
Low, low, breathe and blow,
Wind of the western sea;
Over the rolling waters go,
Come from the dying moon and blow,
Blow him again to me,
While my little one, while my pretty one, sleeps.

Sleep and rest, sleep and rest,
Father will come to thee soon;
Rest, rest, on mother's breast,
Father will come to thee soon;
Father will come to his babe in the nest,
Silver sails all out of the west,
Under the silver moon;
Sleep, my little one, sleep, my pretty one, sleep.

Analysis of Rhythm.—The children may now begin to count the waves of movement in any given line—*e. g.:*

Twinkle, twinkle, little star—.

Now all the flowers have gone to re pose— —.

I'll hie me down to yon der bank.

Oh, mother, how pretty the moon looks to-night—.

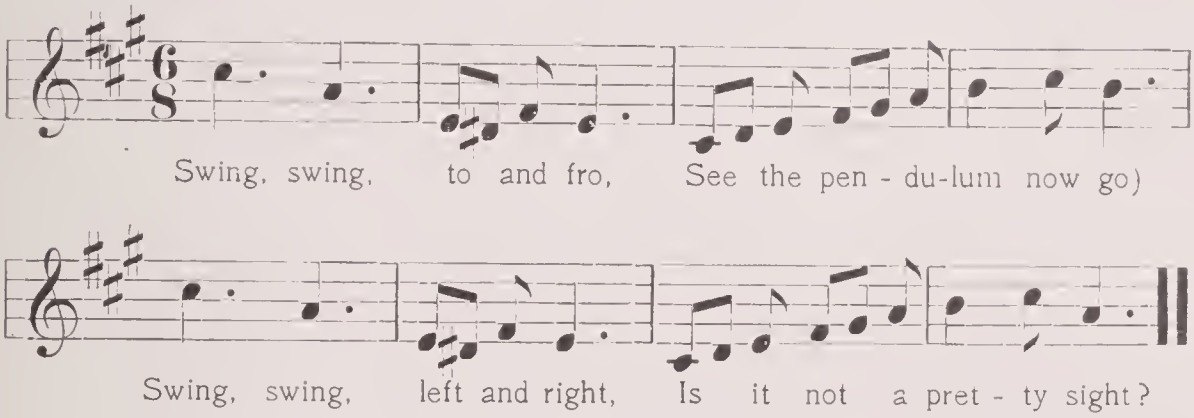
These wave-like impulses in music are called measures, and the children can find out how many measures there are in any of their favorite songs. Kindergartners will hardly need to be cautioned against forcing this work of mental analysis. We must be content patiently to follow the unfolding of the child's powers.

The next stage in analysis will be to detect the separate throbs or beats in each form of measure. In this individualizing process the children will be helped by the swinging of the pendulum, with which they have become familiar in their nursery training.

THE PENDULUM.—For a slow movement let the pendulum be about a yard in length, and while it swings, the children may count up to eight pulsations. Then shorten the pendulum to half a yard, and let them again count up to eight. Once more shorten the pendulum to nine inches, while the children time their counting to the more rapid swinging. The exercise may be varied by singing a familiar song to the movement of the pendulum. This will be quite interesting, and even exciting, if they sing it over more and more rapidly as the length is shortened time after time. Let one of the children swing the pendulum while the rest sing the following bright little song from Mrs. Louise Pollock's "Cheerful Echoes:"

EX. 6.

SWING, SWING.



They may also use the rote songs "Tick, tock" and "What does the Clock Say?"

NAMING THE PULSES.—To get a more definite conception of the time movement, the children may name the time units. A suitable time language has been invented by the French musicians, which besides being accurate and consistent throughout, is simple enough in its early stages for the little child to use without difficulty. The name for each pulse-swing is Taa. Now instead of counting numbers, let the children chant the name Taa to each pulse-swing. They may also clap their hands to the movement, marking the strong and the weak pulses.

INTRODUCTION OF COLOR.

The children will have had some unconscious tone and color training in the nursery play. Now the time has come for its systematic introduction to their attention. But in order that the teacher may do this intelligently, it is necessary that she should understand the meaning of color and its relation to tone.

Tones and colors have always been used as modes of expression. Each may be regarded as a form of language, fitted, however, to convey general ideas rather than definite thoughts. Both tone and color appeal more strongly to the feeling than to the intellect. They are especially useful where sentiment—*i. e.*, the blending of thought and feeling—is to be expressed. Observe that these forms of expression have no national limitations; they are universal, and of world-wide application.

Unquestionably, tone language preceded articulate speech, as it still does in the case of every little child. Probably, also, color language was more generally used before word language became so full and expressive. But even now these older and universal modes are used where our verbal forms of expression fail. Few people realize how much of the meaning of our speech is conveyed in the musical intonations which accompany the words. Notice also that the color habit has survived in the many color words of our everyday language. To take one common illustration, we all know the difference between a "blue" outlook and a "rosy" aspect of affairs. Naturally, color words take a more prominent place in poetry than in prose. The following selection from J. T. Trowbridge's "Midsummer" will illustrate the way in which color words supply a sensuous element to our word language:—

"Around this lovely valley rise
The *purple* hills of Paradise;
Oh, softly on yon banks of *haze*
Her *rosy* cheek the summer lays;
Becalmed, along the *azure* sky
The argosies of cloudland lie,
Whose shores, with many a *shining* rift,
Far off their *pearl-white* peaks uplift.

Relation of Color to Tone.—There is a widespread feeling of some possible connection between sound and color. Among different people will be found all degrees of sensitiveness to tone and color effects. It is not unusual to find persons so sensitive in this respect that certain sounds, or musical strains, or it may be the quality of a voice, will call up images of color in their minds. It is noteworthy that while the musician commonly makes use of color terms to describe his music, the artist in speaking of his pictures uses such terms as "tone," "loud," "soft," "subdued," etc.

So many persons are known to be sensitive to tone-color impressions that we might naturally expect to arrive at some definite conclusions from their testimony. But the tests which have been applied have called forth such different answers that no general principle could be deduced from them. Evidently personal idiosyncrasy was a disturbing factor.

And here a very pertinent question will arise in the mind of every thoughtful reader, viz:—Is the association of tone and color presented in this work simply another instance of individual fancy, or is it based upon a universal truth? This question, which has been asked many

times, deserves a careful and candid answer. If there is a general principle involved, the truth of it will appeal to the general consciousness, although, of course, all minds will not perceive it with equal force and clearness.

First, what can experimental science teach us of the relations between light and sound? It begins by showing us that the two things have a common origin; they are both the result of vibration, and are both propagated by undulating waves. When the air waves beat upon the ear as frequently as sixteen times in a second we become conscious of a low humming or buzzing sound, and at twice that rate of movement it becomes decidedly a musical tone. As the vibrations increase in rapidity the sound rises in pitch. When the vibrations reach a velocity of many thousands in a second, the shrill sounds pass upward beyond the limit of our auditory nerves. More rapid vibrations manifest themselves in other ways, until at the tremendous interval of over thirty-four octaves above the highest sounds, when the vibrations strike upon the eye four hundred and fifty millions of millions in a second, the nerves of vision are excited, and we perceive a deep red color. Passing upwards to over seven hundred millions of millions in a second, we see in turn all the colors of the spectrum. One point of difference is that while the ear takes in about eleven octaves of sound, the eye is limited to less than one octave of color. This only shows, however, that the eye has a more limited range of nerves than the ear. The ultra violet rays have been traced by their chemical action about ten octaves higher than the limit of vision, and the thermal rays extend about two octaves below the red, so that there is room for a wide range of colors had we the nerves to see them.

Then the tone, and color, waves have many attributes in common. Both are subject to reflection or echo, which is simply a rebound of the waves from any given surface. Both sound and light waves are subject to absorption. It is well known that dark surfaces will absorb the light, and that in like manner soft surfaces will muffle sound. Again, both can be refracted or bent out of their course when they enter a medium of greater or less density. As a simple illustration of this, a spoon placed in a bowl of water appears to be bent. In like manner, scientific tests show that the sound waves are bent out of their course under like conditions. And one other property which is common to light and sound is that of diffraction, or the bending around any obstacle which stands in their path. As might be expected, light and sound, having the same origin, and possessing the same properties, act and react sympathetically upon each other. This is shown by the way tone vibrations will call out a musical response from flames, while the effect of light and heat upon sound is manifested in the photophone.

These demonstrations in physical science are interesting, and so far as they go they show the underlying unity of the laws which govern both tone and color vibrations; but we must now look at the tone and color relations from a musical standpoint.

The most obvious thing about tone relations is the musical scale, and the most noticeable thing about color relations is the spectrum. Some groupings of tones are harmonious, while other groupings are dissonant; and the same thing is true of colors. Contiguous tones are always dissonant: neighboring colors are also conflicting, with the exception of green and yellow. This one exception is remarkable. Is it because we are so accustomed to seeing that combination in the flowering plants of spring? Alternate tones are always harmonious, giving us the sweet major thirds. or the less perfect minor thirds, with their tinge of mournfulness. It is correspondingly true that the alternate tones of the spectrum are harmonious, some being more agreeable to the eye than are others. The ear is pleased when we run lightly up and down the tones of the scale, and in like manner the melody of color in the spectrum is agreeable to the eye.

It will be instructive now to compare the tone-harmonies with the corresponding color-groupings; but before we can understand the sympathetic relation between them we must examine them separately.

And first let us consider the organic relation of tones in harmony. Any tone may be taken as a generator of other related tones. Musicians call this the root, or key-tone. This generating tone by reaction calls out a clear response in the over-fifth. Test this by striking the note C followed by the G above, or D followed by A, etc. The generating tone also calls out a responsive under-fifth, as from C to F below, or D to G below, etc. Here, in the key-tone, the over-fifth and the under-fifth, we have the foundation tones of the three great chords, which are known to musicians as the Tonic, Dominant, and Subdominant chords.

But although the over- and under-fifths spring out so readily at the call of the key-tone, when we strike together the C and G above, or the C and F below, the effect of the "bare fifths" is not satisfactory. There is a hardness and a sense of something wanting. The ear feels out after a mediant tone between them, to blend and soften their aggressive nature. Test this by striking C and G together a few times, and then C, E, G. Again strike F and C above, followed by F, A, C. The Dominant chord is built upon the fifth tone of the scale. Thus in key C, the G at the top of the Tonic chord calls out its over-fifth in D; and then between these bare fifths comes another blending third, making the chord of G, B, D. In these three chords are combined all the tones of the scale. To impress this evolution of the chords more thoroughly upon the mind, take another key-note, and from that center develop the Tonic, Subdominant, and Dominant.

Turning now to the organic relations of color, we find that each color calls forth its complementary color, which is analogous to the tone calling out its fifth. Read again what was said of this under the heading of Training by Contrasts on. When two of the complementary colors are placed side by side they stand out in vivid contrast, and the staring effect of these opposites reminds us of the bare fifths in tone harmony.

Add now an intermediate color, and it is like the sweet third stealing into the chord, softening and enriching it.

For a practical application, place red and green side by side, then red and blue, and notice the two forms of contrast. Although they are not discordant, the effect is not pleasing to the eye—especially with the red and blue. Place yellow between red and blue and violet between red and green, and we get two rich chord masses of color, corresponding to the Tonic and Subdominant chords.

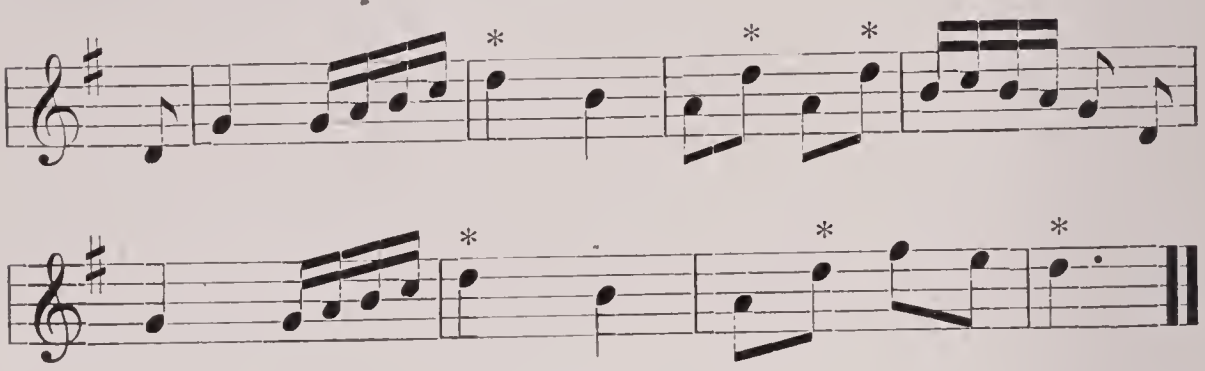
It is instructive to trace yet more closely the analogies between the tone and color combinations. Take a strand of red—not scarlet—yarn, and another of blue; twist them into a cord, and notice the rather trying effect upon the eyes. Then twist a red, yellow, and blue, together, and observe that the effect is much more pleasing. A larger amount of red and blue may be used with advantage, but a preponderance of yellow will give a weakened effect to the combination. So with the tone counterpart, we may double the root or fifth, which will give us additional strength and clearness: but doubled thirds in these major chords are likely to produce a cloying effect upon the ear, corresponding to that surfeit of the eye with too much yellow. For one other experiment, twist red and yellow together, and compare the result with another twist of yellow and blue. Notice that the former has more warmth and strength than the latter. Listen to C and E—major third—which is akin to the red and yellow, while E and G—a minor third—finds its counterpart in the yellow and blue.

We must now briefly consider the emotional nature of the separate tones of the scale, and of their allied colors.

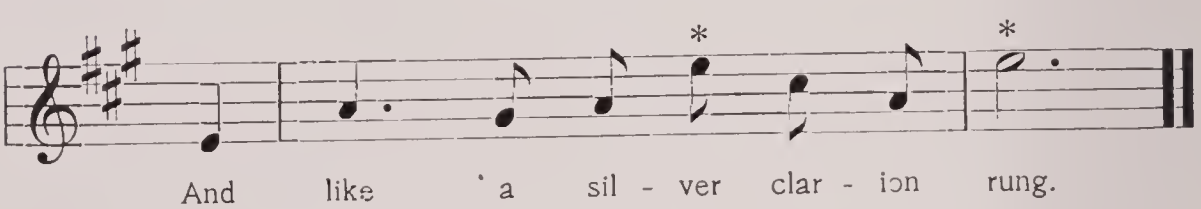
Effect of Red.—Let us start with red, which lies at the base of the spectrum. It gives us a sense of warmth. Probably we get this impression because red is the color of blood, fire, ripened fruits, etc. It is pre-eminently the color of vital stimulation, and we see that it produces this effect upon animals as well as upon ourselves. The best known instance is the effect which red color has upon an angry bull, but other animals are similarly affected. In symbolic language, red represents love, especially the father and mother love. Conversely, it represents hate; because love and hate are both vital passions.

Character of Do.—When we turn to the first tone of the scale, we find that it produces a firm restful effect. It is the foundation upon which the other tones rest. Hence it gives an idea of solid strength, and is naturally the tone of vital impression. Children quickly grasp this tone, which you will remember has the firmly closed hand for its sign. It plays a prominent part in such songs as "The Watch on the Rhine," "The Star Spangled Banner," and in all martial music. The strong, vital effect of both tone and color is unmistakable. Children, as a rule, choose first the red color, and as we have already seen, they feel the effect of the key-tone before any other.

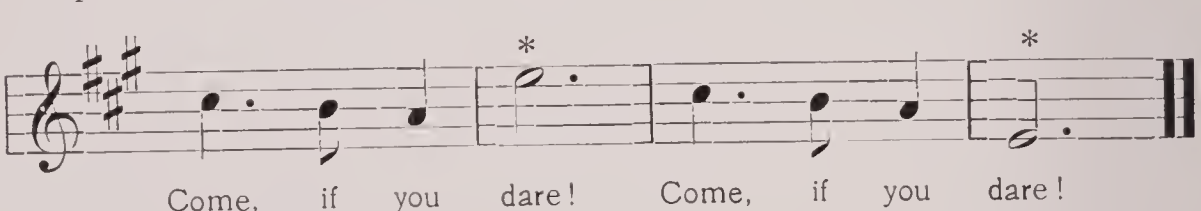
Character of So.—The first thing that strikes us about the fifth is its clear, ringing effect, suggesting the idea of distance. It is naturally fitted to express open joyous sentiment. See how exultant it is in the *Huntsman's Chorus*—



It is also quite effective in Handel's *Harmonious Blacksmith*, where the continual reiteration of the tone suggests the clear ring of the anvil. And the spirit of the tone comes out finely in the following fragment:—



In the lower octave the tone loses its brightness, but not its aggressive character. If anything, it seems to gain in bold, unconquerable energy. Compare these two phrases:—



Blue.—The color analogue of the ringing fifth of the scale is blue. We first notice its cool, clear effect. It suggests distance, probably because the atmosphere is saturated with this color, which makes the sky appear blue, and gives to distant objects a bluish tinge. If we look at a stained glass window, there is a striking contrast between the apparent nearness of the red and the distance of the blue. A similar impression is created by the tones. The key-tone, Do, is recognized as the center of centripetal force, while the fifth, So, is the tone of centrifugal force.

We have seen how the key-tone and its sympathetic red color act upon our vital impulses. The ringing fifth, and the cool, clear blue affect us differently; they seem more related to the intellectual side of our emotion, and are more exciting to the imagination. In religious symbolism

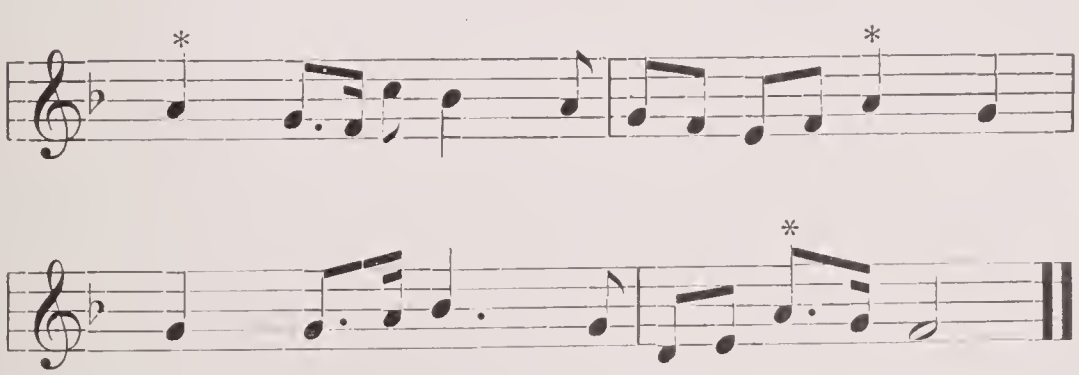
the color stands for wisdom and truth, the highest manifestations of intellect. Conversely, we sometimes describe a depressed state of the mind as "a fit of the blues."

YELLOW.—Midway between the warm red and the cool blue comes the yellow. Although somewhat negative in this respect, it has a positive character entirely different from that of the other two. In religious symbolism it signifies spiritual excellence. Pure white is the symbol of deity; but in the yellow the divine is manifesting itself in the material. When we ask ourselves how the golden yellow came to have this significance, we are carried back in imagination to the time when our early ancestors worshipped the sun as the greatest of the host of heaven. We can well imagine how from the hilltops they would watch for his appearance, and how, when the first shaft of golden light shot across the landscape, the choral hymn would fill the minds of the assembled people with religious fervor. Charles Wesley's hymn, although written ages later, might well express their state of mind:

"Hail the Sun of Righteousness!
Light and life to all he brings,
Risen with healing in his wings."

And the impression of that golden light was so deeply implanted in the heart of those old sun-worshippers that we still feel some faint echo of it whenever our eyes rest upon that color. If we would more fully realize its meaning we must watch from the hilltop, or across the sea for the rising or setting of our glorious sun.

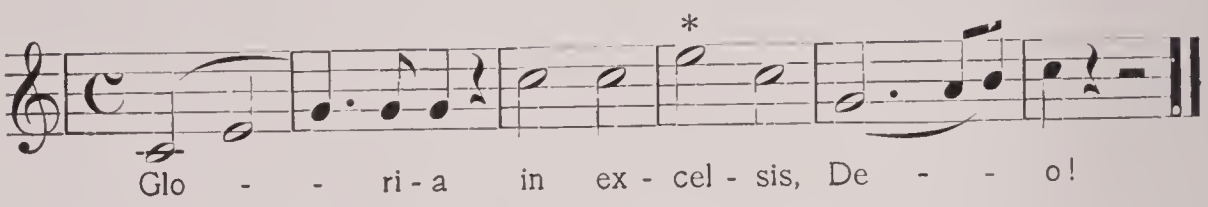
CHARACTER OF ME.—The calm peaceful effect of the third of the scale has already been shown.* It is the tone that speaks to the heart. Although lacking in vital stimulation and in vivid imagination, it calls forth spiritual emotion more than do the other two. Its soothing effect is felt in No. 9 of Mendelssohn's "Songs without Words:"



For another good example, see the beautiful aria "O Rest in the Lord," from Mendelssohn's "Elijah." But the tone is not always soothing, al-

* See p.

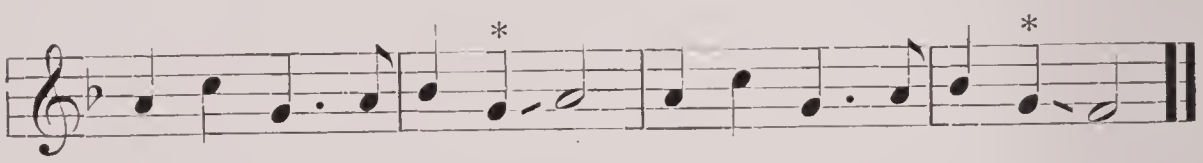
though it well interprets the calm moods of the soul; sometimes it rises into spiritual rapture, as in the "Gloria" from Mozart's "Twelfth Mass."



We have before studied the tone and color harmonies of the chord. Notice how each makes a threefold appeal to us through our vital, intellectual, and moral sensibilities.

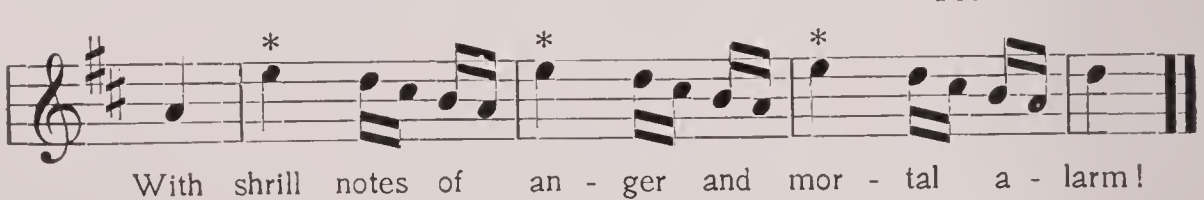
So far we have been dealing with the great pillar tones of the scale, which constitute the fundamental chord of harmony. We shall find that the other tones have a leaning, expectant nature, and that they all depend in one way or another upon these three tones.

Character of Ray.—Look for a moment at the second tone of the scale. Ray has a double tendency, leading gently upward to Me, or more confidently downward to Do. "Pleyel's Hymn" will illustrate this:



The character of this tone is undecided, but hopeful. It may be called the prayerful tone. At a low pitch, it is a quiet, trusting prayer; higher, it becomes more assertive, and still higher, it is an excited appeal, as in a cry of alarm, *e.g.*

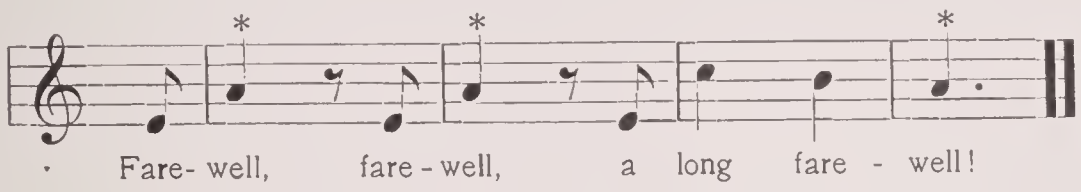
From Handel.



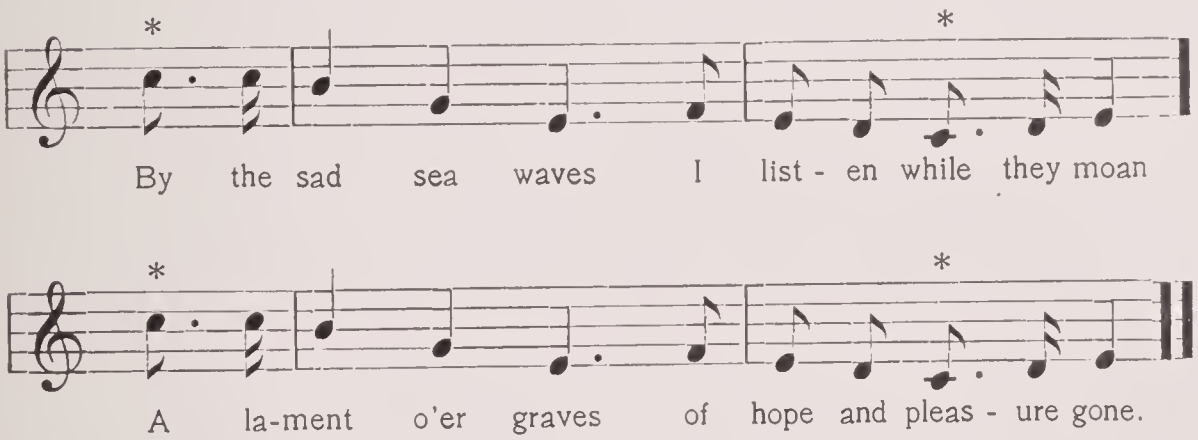
Orange.—We notice at once how the hues of orange fluctuate between red and yellow, reminding us of the double tendency and the undecided character of the Ray tone. In religious symbolism, orange signifies the soul seeking after God, and this is in close agreement with the prayerful nature of the tone. In social symbolism, the color signifies marriage, and seems to suggest a union which is both vital and spiritual. Like the tone, the color may be either subdued or energetic. Notice the quiet effect of the deepening orange of sunset as opposed to the kindling hues which precede the sunrise.

Violet.—Very different from the orange is the violet. Here we get the impression of tender sadness. Hence it has been appropriately used for semi-mourning, an easy transition from the sombre black to the brighter colors.

Character of La.—The sixth tone of the scale has a sad, drooping tendency. Unlike the hopeful ray, La is despondent. Perhaps this may be accounted for by the different circumstances of the two tones. Ray has a choice of gravitation toward Do or Me—the most restful tones of the scale, while La can only turn to So, which is the least restful of the pillar tones. La is the prevailing tone in minor music, where it impresses all the other tones with its sadness, *e.g.*—

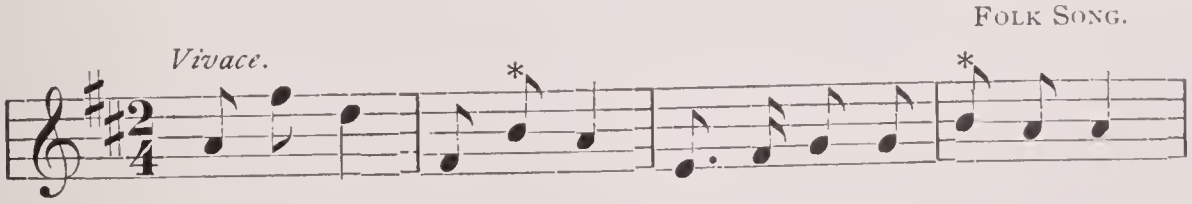


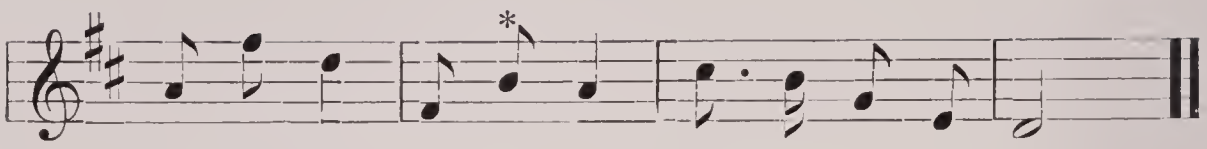
In the lower octave it gives a mournful undertone, as may be felt in the well-known song, "By the Sad Sea Waves."



If it seems that the sadness is due to the words rather than the music, try the experiment of putting cheerful words to the same music. For another experiment, keep the same words, but alter the melody by substituting So for La, and observe how the wailing character of the music is lost by the change. One peculiarity about the tone La is its variable nature. Taken with a lively swing of rhythm it becomes the embodiment of rollicking gayety. It is also useful to give a sprightly effect in leaping melodies, *e. g.*—

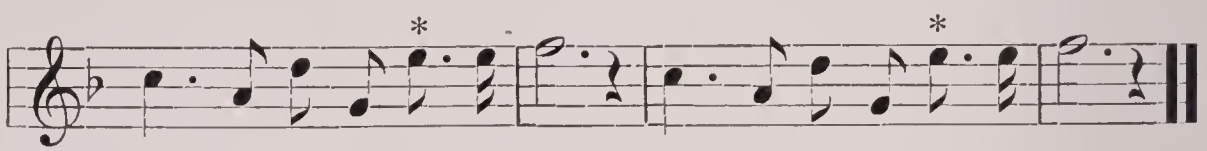
Folk Song.



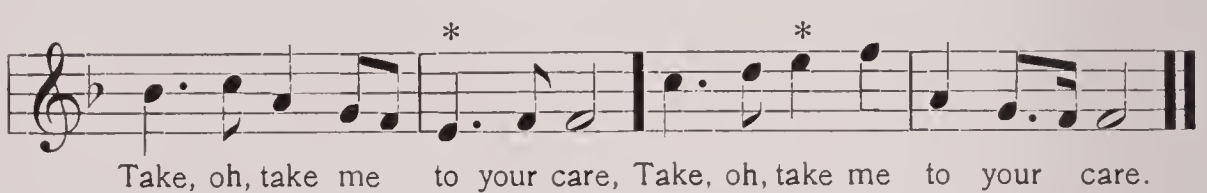


Character of Te.—The seventh, or leading tone of the scale, tends sharply upward to the Tonic. It is like a piercing cry, and expresses eager desire, *e. g.*—

From Händel's Jephthah.

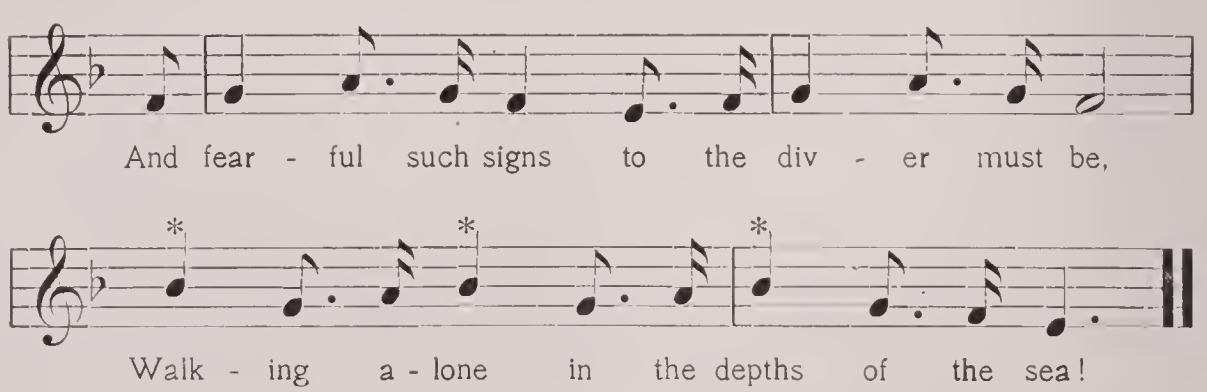


In the lower octave it gives an impression of suppressed eagerness. Both positions of the tone are found in "Angels Ever Bright and Fair."



As we do not see more than an interval of a sixth in the spectrum, the corresponding color to this tone does not appear. But in the violet we already get a hint of the coming red above, and in keeping with the eager reach of the tone Te towards the Tonic, the color should have a stronger infusion of red than we find in the violet. This would be a delicate crimson, brightening toward the octave red, both of which colors are invisible to us. For the want of a better color, we represent this tone by a tint of violet-red.

Character of Fa.—Exactly opposite to the sharp piercing seventh is the solemn, awe-inspiring fourth. This tone bears heavily downward, and finds rest in the peaceful Me. The solemn effect of the Fa is very impressive in Händel's "Dead March in Saul." Something of its awe-inspiring character is shown, too, in the following selection from Loder's "Song of the Diver:"—

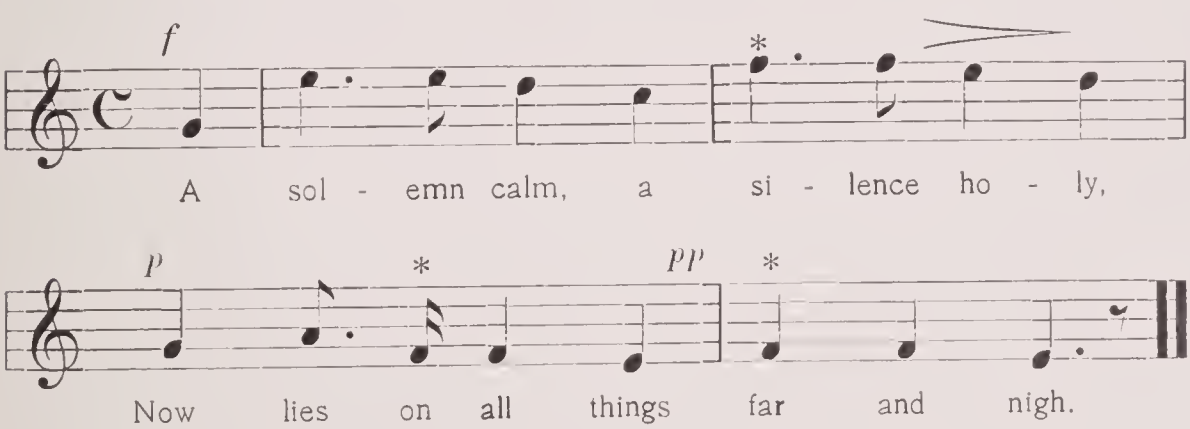


But the tone is not always gloomy. See how grandly inspiring it becomes in the Hallelujah Chorus of the "Messiah."

GREEN.—The allied color to Fa is green. Our first thought of green is apt to be bright and enlivening. We think of the verdure of the spring, and associate the color with hope. But it is also the color of despair. The green flag and turban of the Moslems betoken victory, while with the old Greeks the green flag meant defeat. The eyes of Minerva were green: conversely, there is the "green-eyed monster jealousy," and green when applied to the emotions generally has an unpleasant significance. It is interesting to notice that red is the color of health in the animal world, while green is the color of health in the vegetable world. Green reacts towards red in vegetable decay, as in the autumn foliage, and there is something of the opposite tendency in animal decay.

The symbolism of green, then, is quite conflicting. When we try patiently to learn Nature's meaning in this matter, we are impressed with the idea that green is the toning down color, and serves to correct the over-stimulation of too much brightness. We all know about how soothing a green shade is to aching eyes. The verdure of spring which has such bright associations, is a light yellowish green; but as the days grow brighter and warmer, the green turns to a deeper hue. Notice also that the trees which grow up amid the snow, in the northern latitudes, have a deep green foliage, which seems to correct the dazzling whiteness. Green is the color of shades. It tones down the excessive brilliancy of color. Think how much the flowers would lose of their effect were it not for the setting of green leaves.

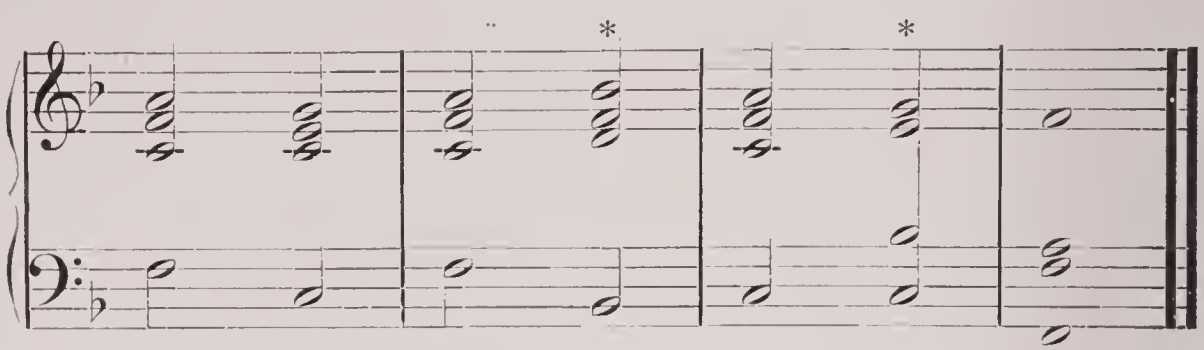
Here we find the color is in close sympathy with the fourth tone of the scale. This effect comes out beautifully in the opening passage of "Mendelssohn's Morning Hymn:"—



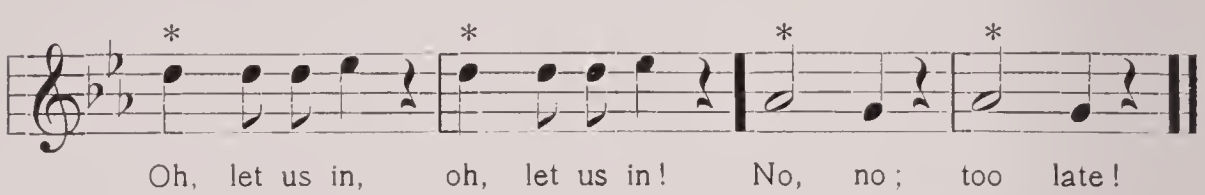
Observe the feeling of awe which is expressed in the upper Fa on the fifth line and the lower octave of the same tone in the first space. We already feel the hush of nature, which is so well expressed in the succeeding words:—

"The woods alone are bending lowly
To greet their Maker, passing by."

When the ear is tired of listening to the brighter harmonies, the chord of the fourth comes with solemn sweetness, as when we go out of the bright glare of the sunlight into the depth of a shady wood. And again, as the music is drawing to a close, it is beautiful to hear the tone passing like a shadow across the bright dominant chord, and so preparing us for the coming rest. Play the following illustration very slowly, so that the ear may have time to drink in the harmonies, and listen especially to the fourth and sixth chords.



The effect of tones, like colors, is intensified when they are contrasted with their opposites. This is especially the case with the fourth and seventh, which are like the opposite poles of the magnet. See how, in the following extract from "Too Late," each serves to emphasize the other:



We are now in a better position to judge whether this adaptation of color to tone is a matter of personal fancy, or whether it is based upon universal principles which appeal to the general consciousness. Science shows that the two things have similar origin and attributes, and that there is a sympathetic relation between them. History shows that tones and colors have always been used as forms of sensuous language. And from the psychological point of view, we see not only that each stirs our emotional activities, but also that the tone and color sensations are in general agreement, and mutually interpreting.

This subject has a direct bearing upon the training of the young. As tones and colors were the natural modes of expression in the childhood of the race, so they still appeal most powerfully to the little children of our time, and should be used to educate them at that period of life when feeling is more dominant than thought. The impressions now made will be deep and lasting.

In the child's instinctive love of color we have Nature's hint that by these color-tone symbols we may develop in their tender minds an appreciation of harmony and a love of the beautiful.

COLOR SYMBOLS.

So far the tone impressions have been received through the ear, aided by the muscular sense in making the appropriate hand-signs. It is now time to appeal to the eye also by means of color. By using the color symbols, the child's interest will be newly awakened, and the musical impressions will be more rich and full. The effect of the color will be gradual and cumulative.

THE COLORED BALLS.—An easy way to connect the tone and color idea is by means of the first gift. The colored balls are already familiar playthings, and the children will be interested to find that each ball has a tone or voice of its own.

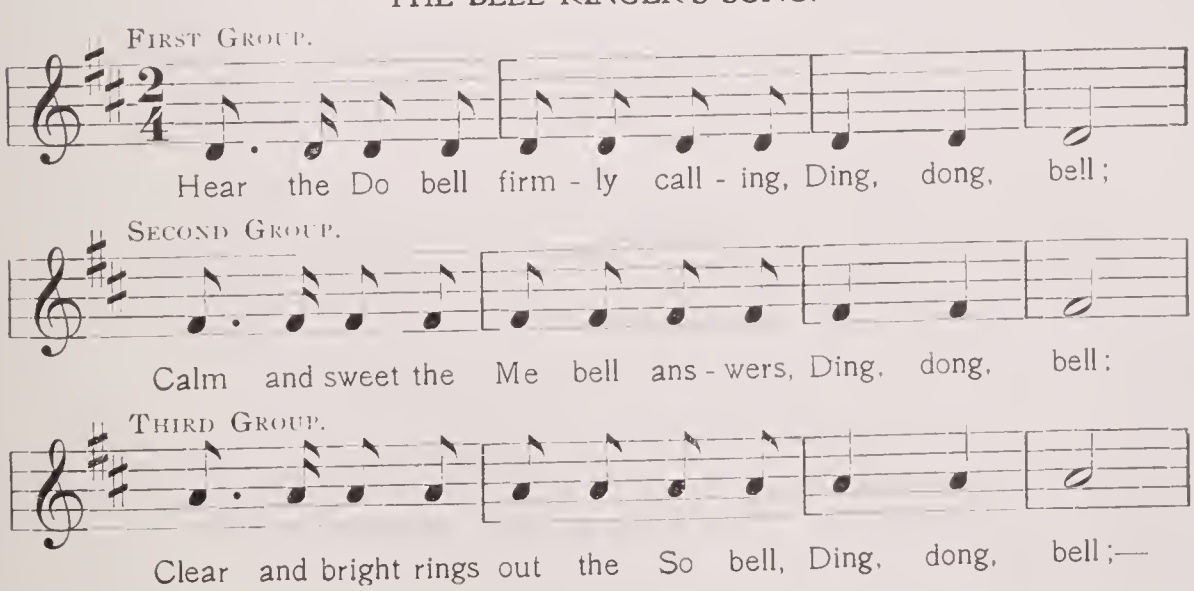
Let the red ball be suspended by a string to represent the Do bell. The children may take it in turn, and toll it with a steady musical tone of voice. Then all can toll in concert.

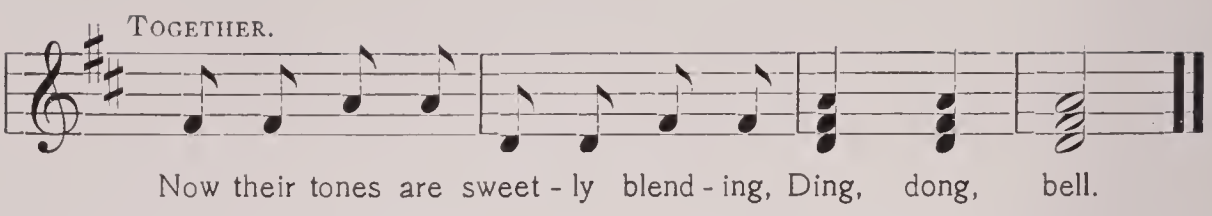
Next the blue ball may be suspended for the clear ringing So bell. When all in turn have tried this, one child may sing with the Do bell while another child in a distant part of the room answers with the So bell.

In like manner introduce the yellow ball for the Me tone. When all have tried to produce its calm sweet effect, and can sing either of the tones with something of their proper expression, three children, or three groups, may take their stations and call the people to church. The church of the Do bell ringers is where people go to be made brave and strong; the So ringers call them to the church which is to make their lives bright and joyous, while the Me bell calls them to a gentle loving service. Now they can sing the following song, which is an elaboration from the little melodies on page 3276.

Ex. 7.

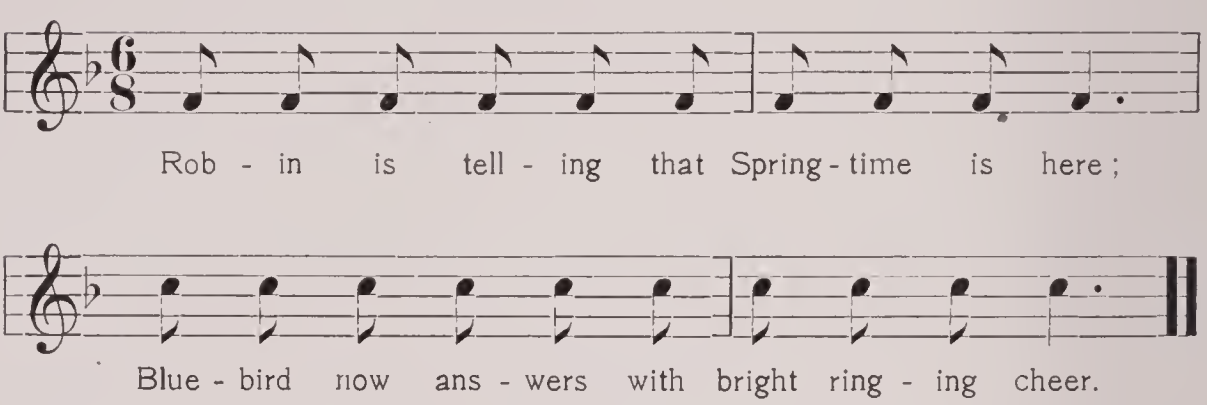
THE BELL RINGER'S SONG.





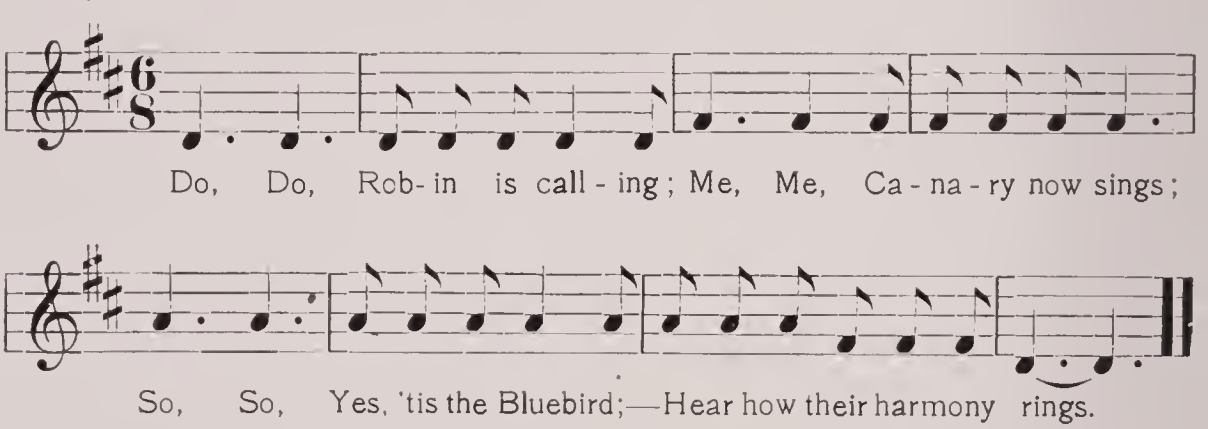
For another presentation the balls may be personified as singing birds, and other songs can be improvised, *e. g.*

Ex. 8.



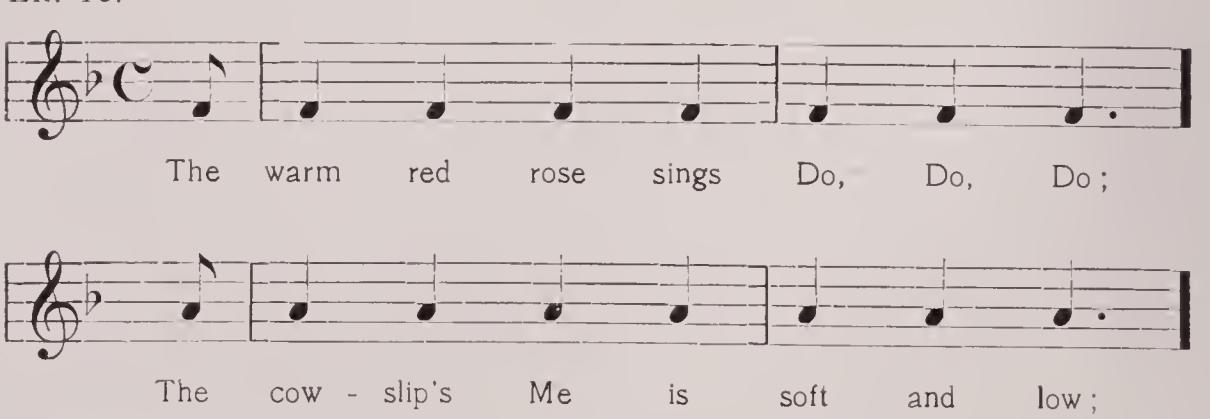
Here is another little bird song, introducing the yellow ball:

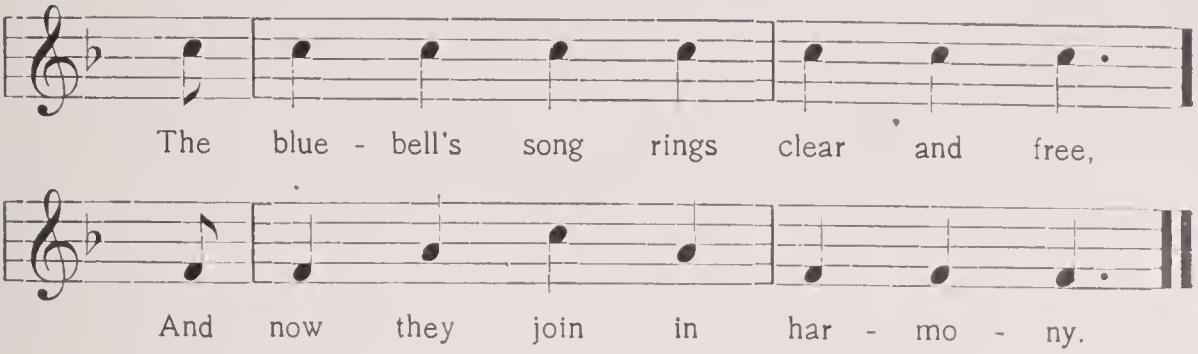
Ex. 9.



On another occasion the balls may be personified as flowers.

Ex. 10.

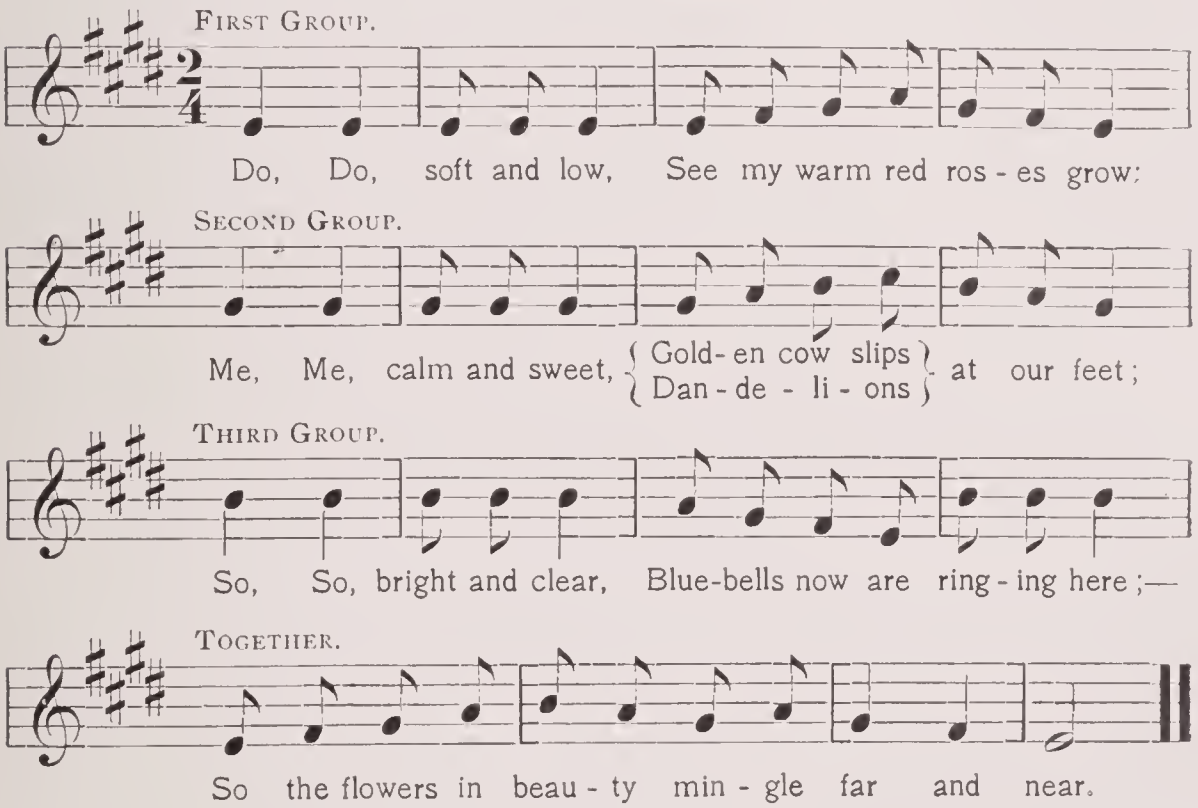




In the following flower song some of the children holding red balls advance to the center of the ring singing their part, followed by those who hold the yellow and blue balls. Then all join hands and sing together the last line.

Ex. 11.

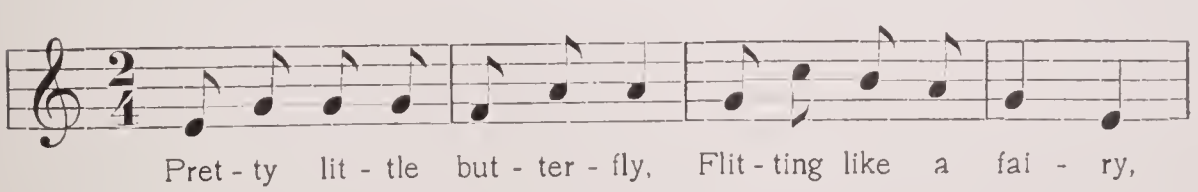
SONG OF THE FLOWERS.

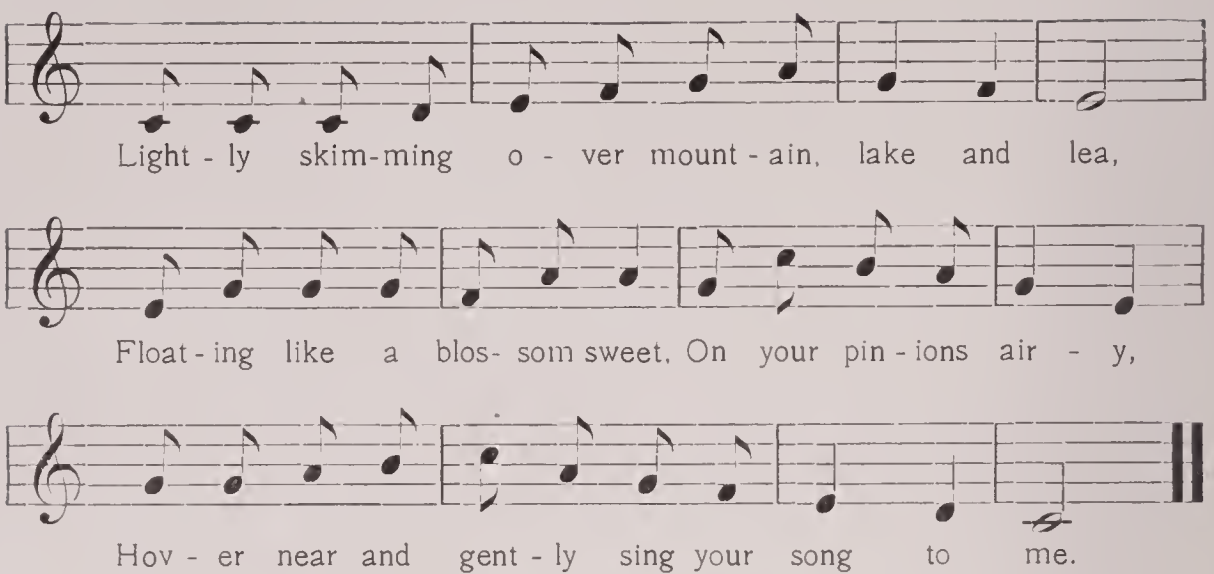


In another presentation the balls may be personified as butterflies. One of the children holding a ball can flit about while the rest sing the following melody:—

Ex. 12.

PRETTY LITTLE BUTTERFLY.



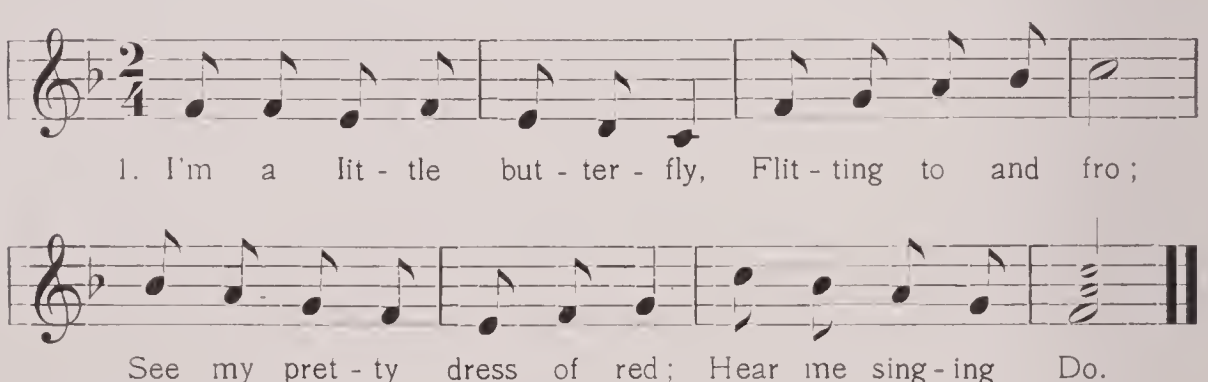


It will be all the better if different words can be improvised for the different colored butterflies.

In the following song each child who represents the butterfly sings the verse appropriate to his color, and when the three are flying together in the ring, the other children sing the fourth verse. The children enter into this play with more spirit if instead of the balls they have butterflies made of colored card. They have a very attractive appearance, and by a simple device they are made so as to cling to the children's hair or clothing.

Ex. 13.

SONG OF THE BUTTERFLIES.



2 I'm a gentle butterfly,
Happy, bright and free,
Fanning now my golden wings,
Softly singing Me.

3 I'm a happy butterfly,
Singing as I go;
As I shine with heaven's blue,
Clearly rings my So.

4.

ALL.—Here they mingle, pretty sight,
Do and Me and So;
Blending tones and colors bright,
And now away they go.

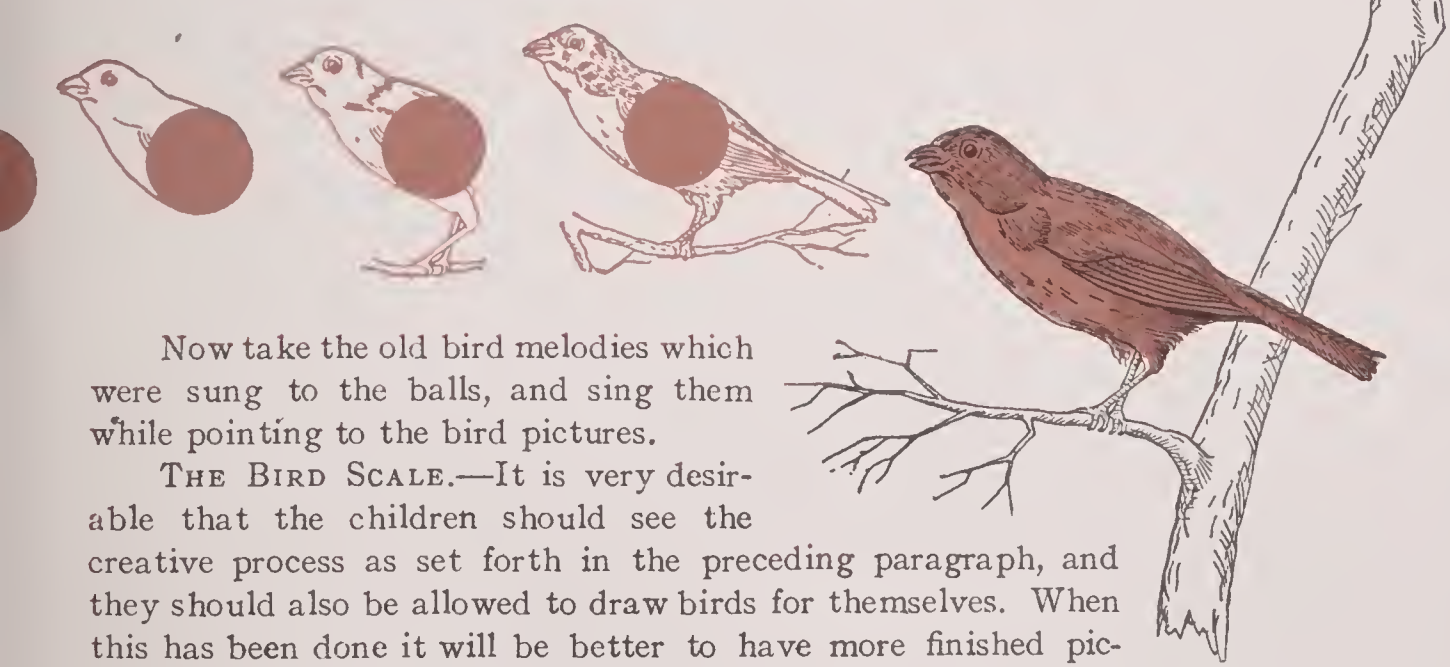
FIG. 4.

Ball Pictures.—In their musical play the children have used the ball for a bell. Following out the same idea, take the red chalk and draw on the blackboard a picture of the ball. This can then be modified into a bell form, which of course rings Do. Draw also a blue and a yellow bell, as in the accompanying figure.

When the bells have thus been pictured, let the children repeat some of their old exercises, especially the "Bell Ringers' Song," pointing to each bell as they sing its tone. They should then make the attempt to draw bells themselves, either with colored chalks or crayons.

Bird Pictures.—The children take a more lively interest in the development of a bird from the ball. First, draw the picture of the ball. The children accept the ball for a bird without question, but its picture on the blackboard strikes them as a poor representation. They will, however, readily take it for an egg, and watch for the hatching process. First comes out the head, then the feet, and then the tail. The relative pitch of the tones may be pictorially shown by placing the three birds upon the boughs of a tree as in the accompanying figure.

FIG. 5.



Now take the old bird melodies which were sung to the balls, and sing them while pointing to the bird pictures.

The Bird Scale.—It is very desirable that the children should see the creative process as set forth in the preceding paragraph, and they should also be allowed to draw birds for themselves. When this has been done it will be better to have more finished pictures in permanent form. Experience has shown that the most useful scale, for the children is the detachable bird scale. Each of the colored

birds is on a separate gray card, which is made to be suspended by hooks, on a stretched tape. The children put the birds in their proper places time after time until the structure of the scale is perfectly familiar to them. At present they have only to place red on the first hook; blue on the fifth, and yellow on the third.

FIG. 6.

The Butterfly Scale.—The interest will be newly awakened if the tones are represented as flying butterflies, and this will give a zest to the butterfly songs. The butterflies can be provided either to hang on the stretched tape, or to catch on to the clothes of the children.

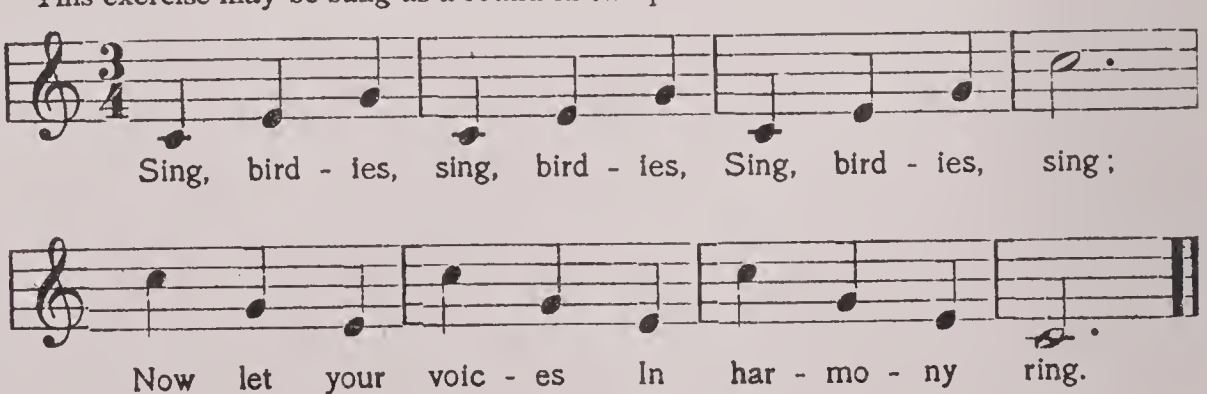
With each of these presentations see that the eye and ear are both exercised. Sometimes point to the picture and let the child sing the proper tones. At other times sing the tones and have the child point out the right color.

The Octave Do. — The children can now take the higher Do in addition to the three tones which they have been using. A red ball of brighter color can represent this tone, and if introduced as a bird it should manifest a lively disposition in keeping with its brighter song; use the same hand-sign as for the lower Do, but more uplifted. There will be no difficulty in getting the right pitch of the tone, but if it is taken too vigorously, there is danger of throat strain. See that the young voices leap to it lightly, like a bird alighting upon a tree, or a fairy tripping upstairs, or any other suggestion which will give a soft and easy spring to the voice.

The introduction of this tone affords a wider swing of melody, *e. g.*—

Ex. 27.

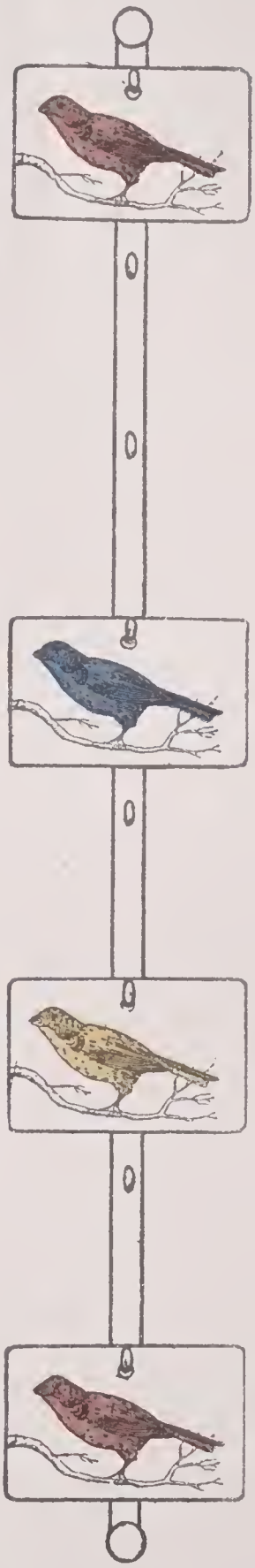
This exercise may be sung as a round in two parts.

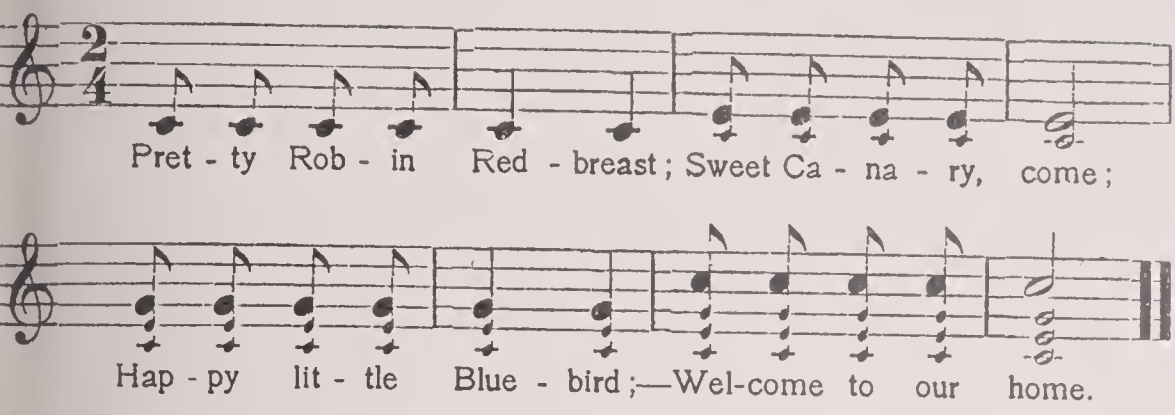


Ex. 28

WELCOME TO THE BIRDS.

FIG. 7

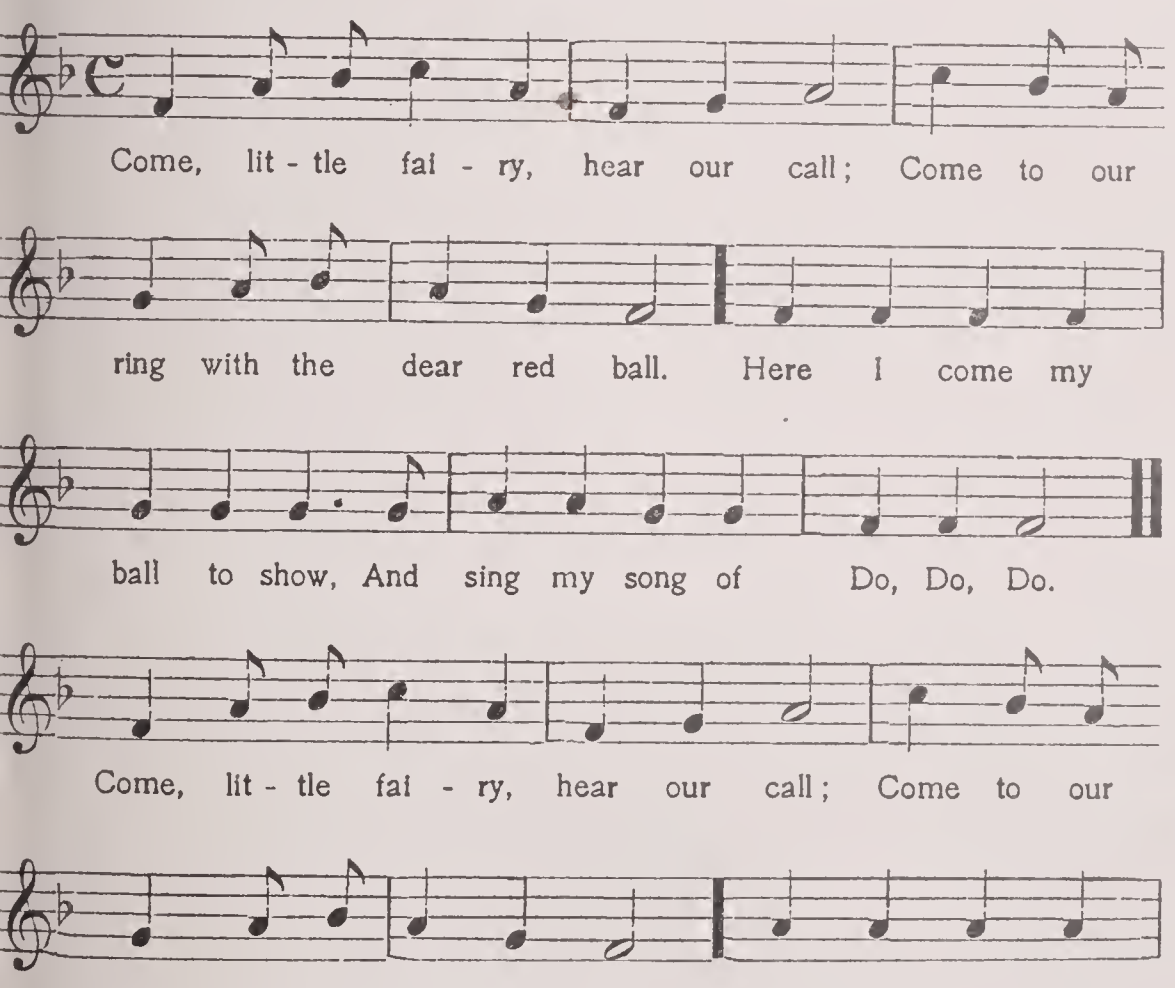


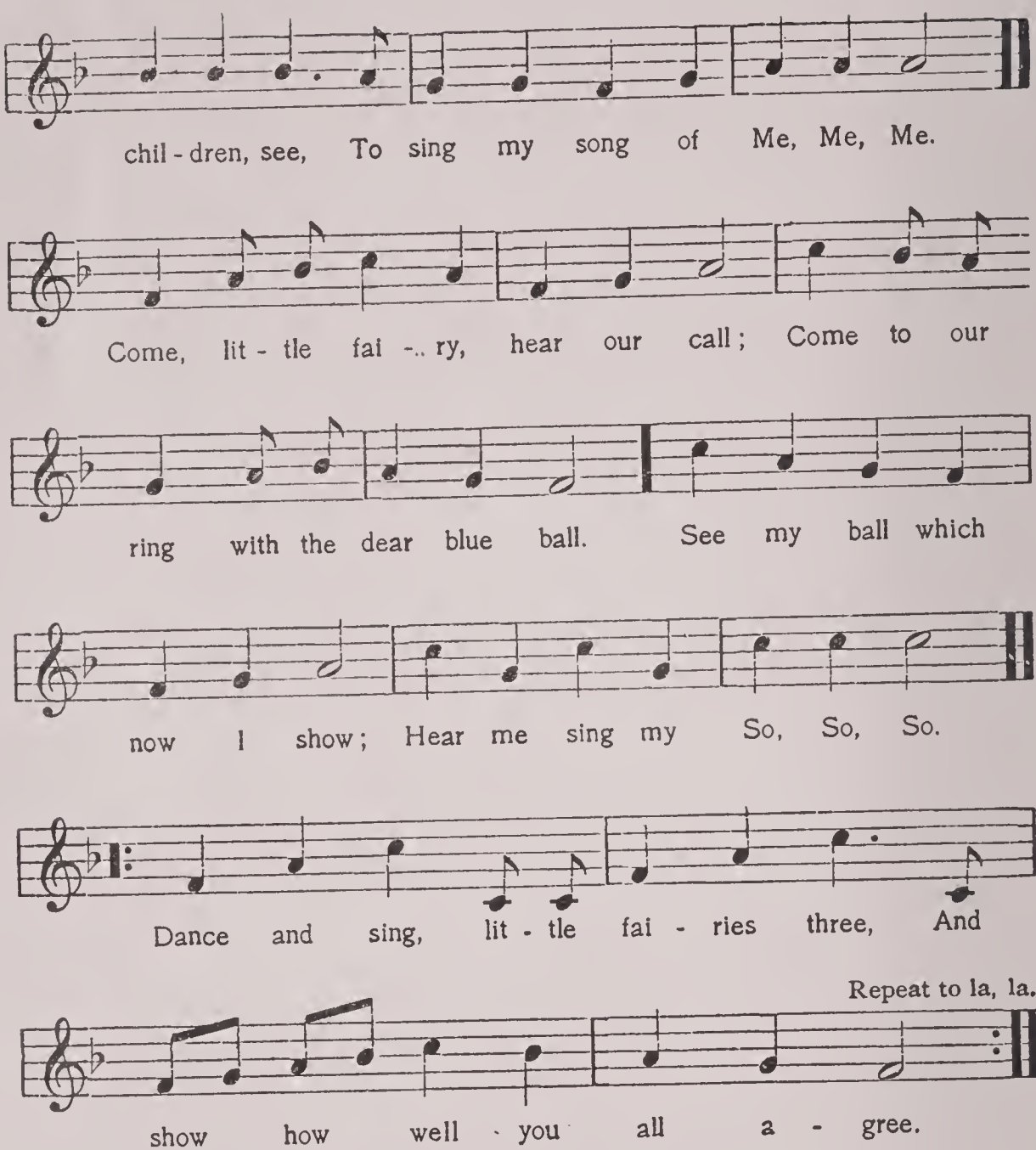


FAIRY GAMES.—Evidently there is no limit to the different play forms in which the tones may be presented, and as the children go on they will be able to take more extended flights of imagination. They are fond of pretending that they are fairies, and this idea may be used in their musical education. The following exercise will explain itself:

Ex. 29.

CALLING THE FAIRIES.





The same idea is worked out more elaborately in the rote song "The Flower Fairies."

PICTURED TIME FORMS.

Time, like tone, must now be taken from the tangible to the pictured form. Place one of the TAA sticks against the blackboard, and "take its picture," by drawing a chalk line parallel to it. Let this be done several times, until the connection between the stick and line is fixed in the child's mind.

Now draw a line of houses or measures, thus:—

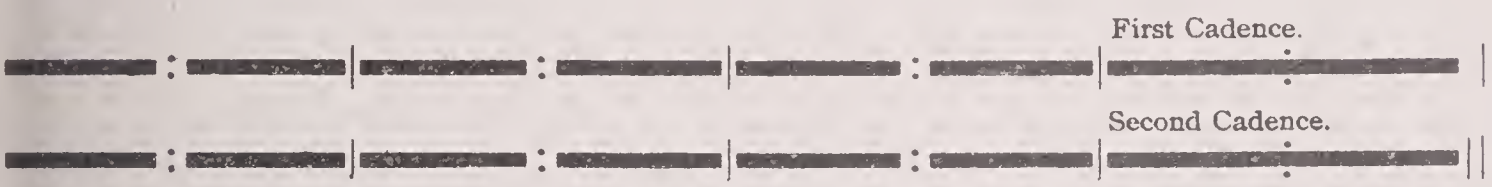
Ex. 30.

and let each child draw a picture of brother or sister TAA in one of the rooms. When they have completed the row, they should sing it two or three times to different rates of movement.

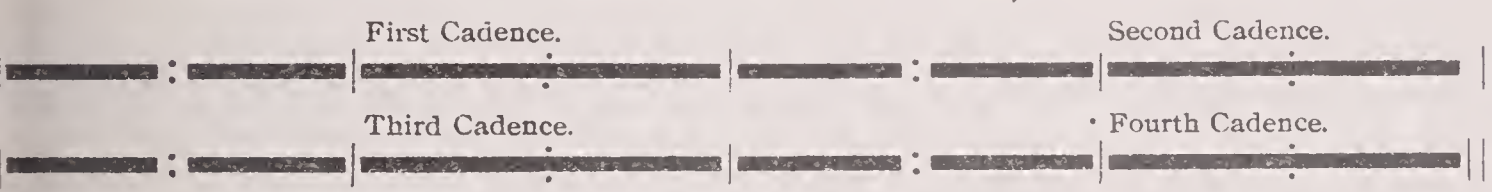
Do the same thing with a line of three-pulse measures:

Ex. 31.

BALANCE OF CADENCES.—The children are already familiar with the resting effect of a cadence. They may now be led on to observe the relation of one cadence to another. Draw two lines of four measures each, and let the children make a cadence at the end of each line, thus:



Let them make another cadence half way through each of the lines:



They will now see that the four cadences come at regular intervals, and exactly balance one another. But when they sing the exercise through they will find it rather tiresome. There is too much sameness.

"RUN-ON CADENCES."—The monotony pointed out in the preceding paragraph may be removed by altering one of the cadences. The best place for the change will be in the sixth measure, thus:

Ex. 32.

We have here a "run-on cadence," as when on a journey we run by a station without stopping. The children will like the change; besides giving a pleasing variety, it introduces an unexpected energy into the rhythm. Looked at as a mental problem, we see that the swing of the first section is repeated in the second, varied in the third, and in the fourth we are carried back to the original movement.

The rhythmic foundation is so vital to tune forms that we will summarize this matter before going on to the melodic exercises.

CHANGE OF RHYTHMIC FORM.—Do not hold too long to any one form of rhythm, or it may become a fixed habit, and so lead to one-sided development. For the present the choice is limited, but three simple

figures may be used, and later these will branch out into many others. It will be seen that each occupies eight measures:

Ex. 33.

Fig. I. Two-pulse form.

First Section.

Second Section.

Three-pulse form.

First Section.

Second Section.

Notice that in this figure both sections are alike, and the only way to secure variety is by making the tune form of one line different from that of the other.

Ex. 34.

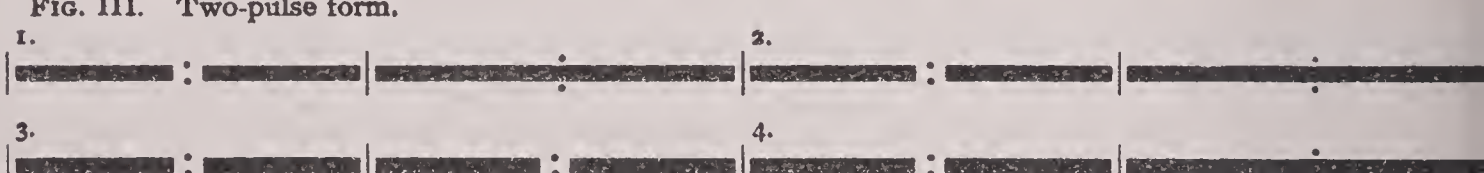
Fig. II. Two-pulse form.

Three-pulse form.

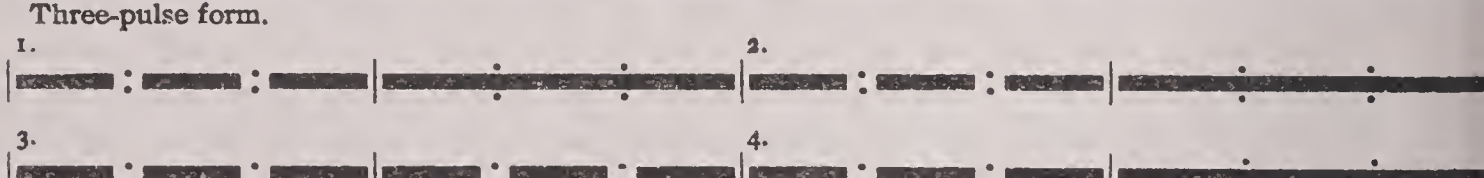
This figure differs from No. 1 by having a "run-on cadence" in the first section, so that we get variety in both time and tune.

Ex. 35.

Fig. III. Two-pulse form.



Three-pulse form.



The third figure contains four sections, and has more variety than either of the others. It has already been described on page 3305.

Each of the rhythmic figures may form the basis of an indefinite number of melodies.

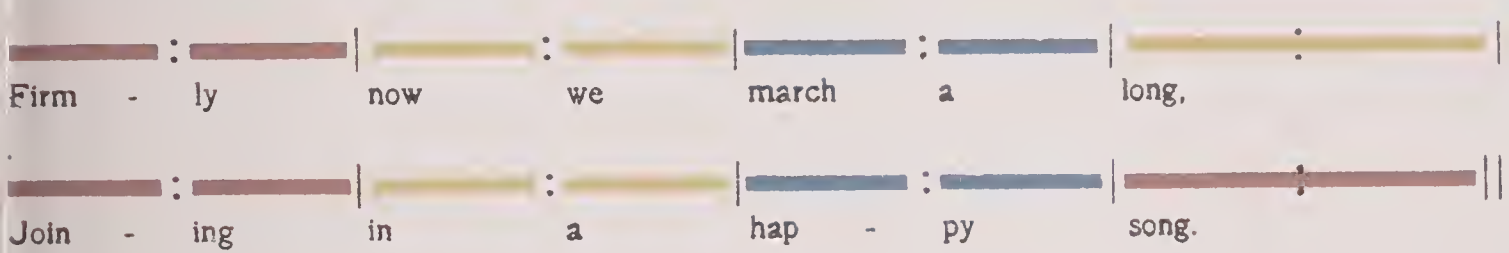
MELODIES.

So far we have had time and tune represented separately, but in melody we must have the two combined.

Making Tune Forms.—Take one of the familiar time forms and suggest that it would be pleasant to have a concert. For this purpose the little brothers and sisters must have on their music dresses. Let colored sticks be substituted for plain ones, or, where it is preferred, use colored strips of cardboard. The children will see at once that if TAA has on a red coat he is going to sing Do, whereas with a blue coat he would sing So, or clothed with yellow, he would sing Me.

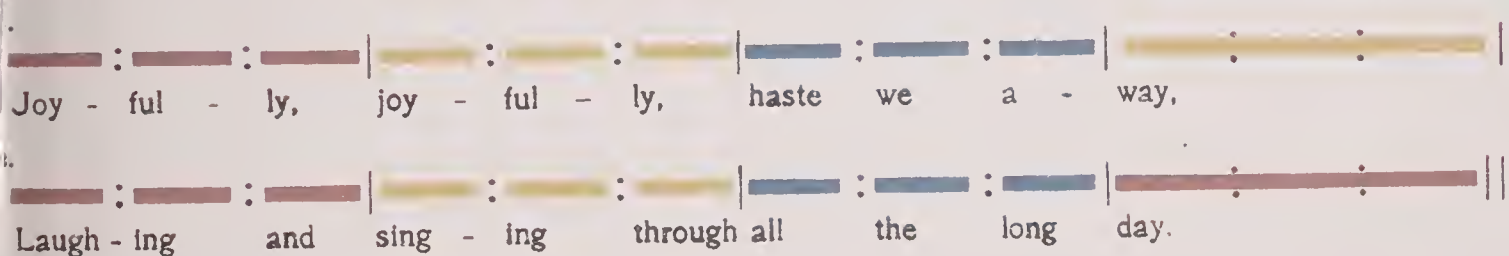
It will be better at first to let the children place out the tune forms from dictation. Continue this until they begin to realize how one line of melody answers to another. Here are a few melodic forms, which will serve as hints:

Ex. 36.



The same general idea expressed in three-pulse measures:

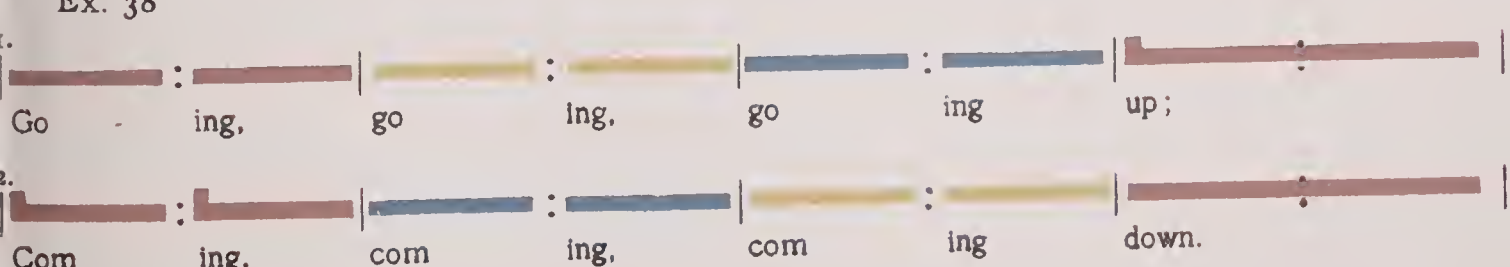
Ex. 37.



In the foregoing examples the rhythmic form of both lines is the same, and there is a general resemblance in the two lines of melody. Observe, however, that the second line ends more conclusively. The first, with its unfinished sense, is like a question to which the second phrase furnishes a conclusive answer.

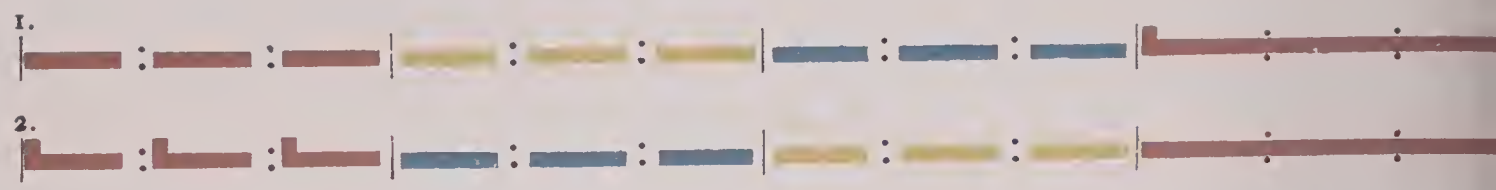
Sometimes a strong answer is secured by an opposite swing in the melody, as in the following:

Ex. 38



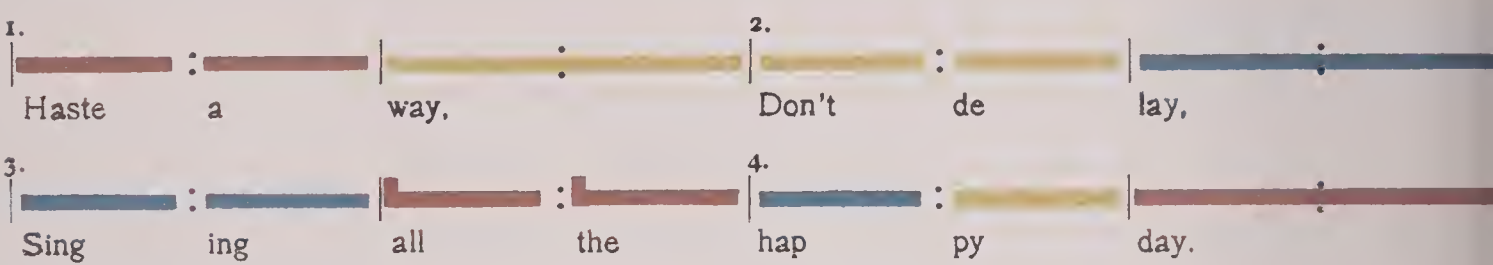
Or in the three-pulse form:

Ex. 39.



Besides repetition and opposition we can have similar movement or imitation between the different sections. In this way, it is possible to secure a cumulative effect by reinforcing an idea which has been set forth in a preceding passage. A strong instance of this is furnished in Handel's "Hallelujah Chorus," where the sopranos keep repeating in ascending phrases, "King of Kings and Lord of Lords," until the effect is almost overpowering. See a very simple instance of cumulative imitation in the following illustration, and notice how naturally it leads to opposition in the closing movement, so as to restore the balance in the melody.

Ex. 40.



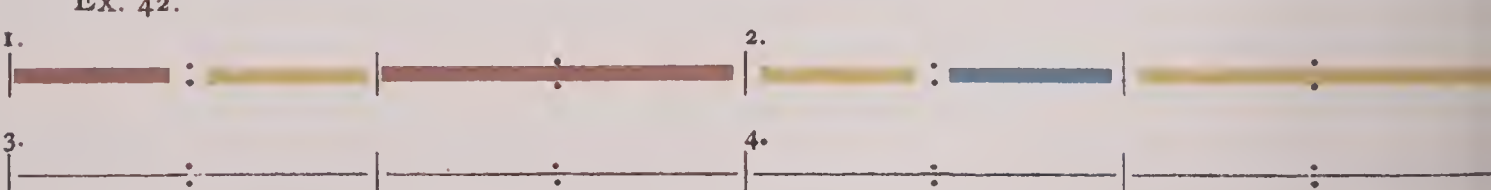
By degrees the dictation exercises should leave room for the child's independent choice, *e. g.*—

Ex. 41.

After singing this over two or three times, he will probably feel that the upward swing of melody in the first line calls for a downward swing at the close.

Let the children complete the following melody:

Ex. 42.



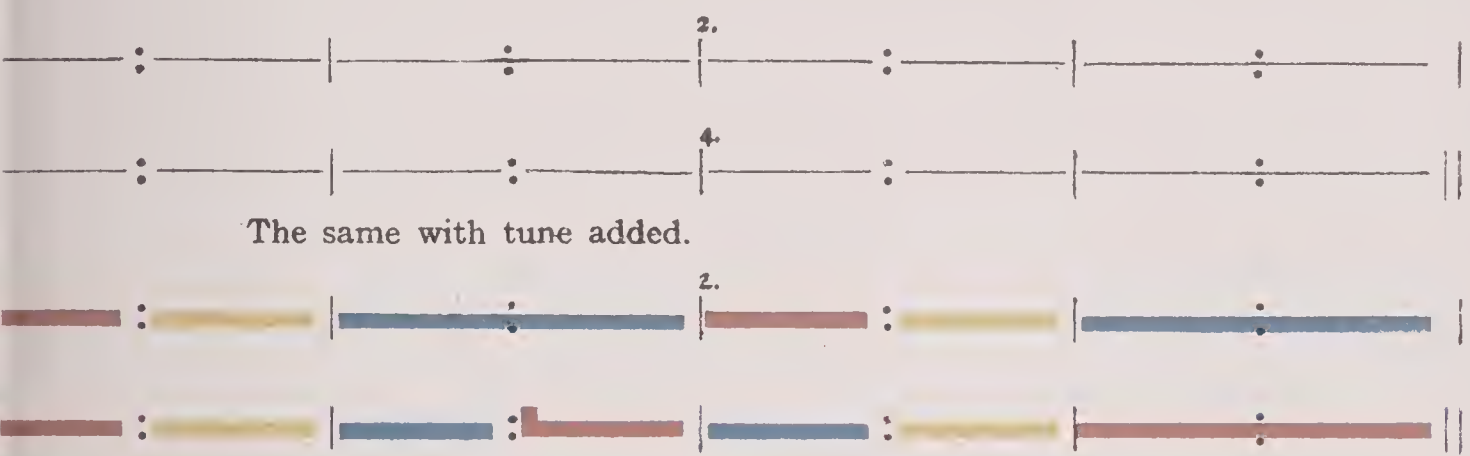
Here there will be opportunity for different forms of melody. When all have completed the tune, have a concert, in which each sings his own composition.

MELODY PICTURES.

Draw in faint lines on the blackboard one of the time forms as shown on p. 3306; then cover the lines with colored chalk, which is another way of putting on their music dress. Naturally the melodies will at first be very simple; but they should always be melodious—easy flowing—and each should be made into a little song by adding it to some appropriate form of words, *e. g.*—

The rhythmic form.

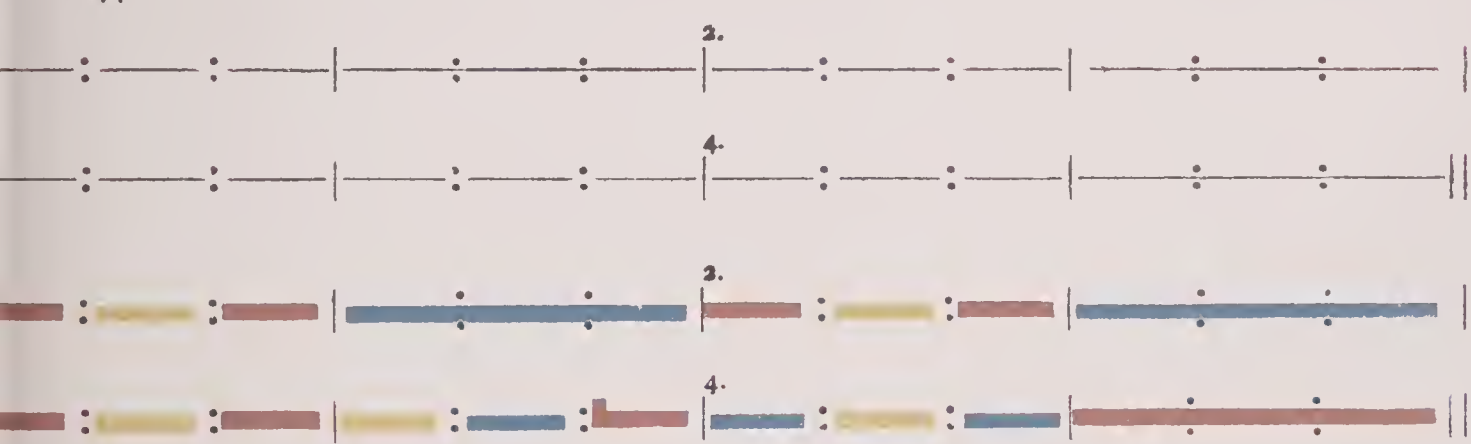
Ex. 43.



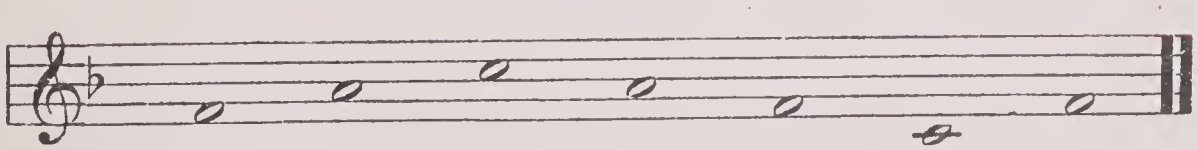
The same with tune added.

The following has the same general character, but notice the smoother flow of the three-pulse form:

Ex. 44.



The Lower Octave $So_{,}$.—Get the children to sing Do at the pitch of F or G. This is about the middle of their singing voice, from which they can sing upward to So, and downward to the lower $So_{,}$, thus:



They will soon notice the bold, strong effect of the lower $So_{,}$.

As Do has hitherto been the lowest tone, there will probably be a tendency at first to confuse $So_{,}$ with a low Do. This may be corrected by

emphasizing the real Do, and then comparing its firm restfulness with the bold restlessness of So_1. The children will get a clear idea of the tone characters by making the hand-signs while slowly singing this exercise:

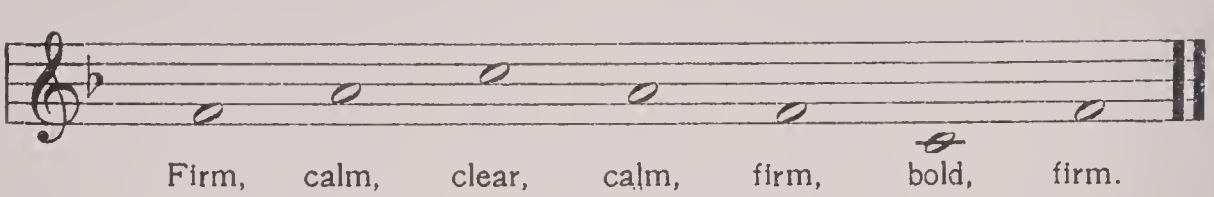
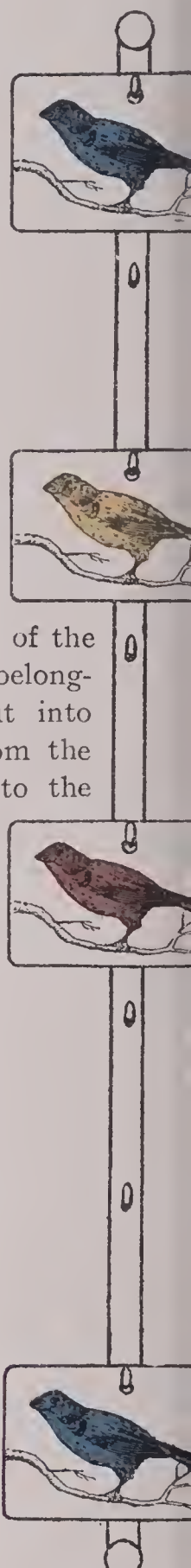


FIG 8.

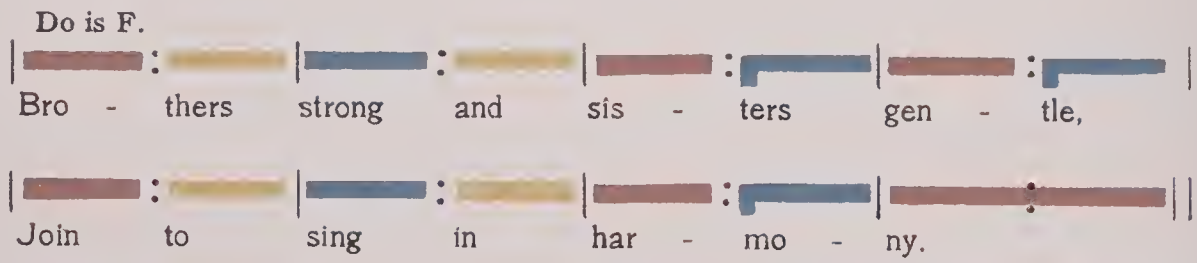


The birds should now be arranged with Do upon the fourth hook of the tape, and the others as shown in figure 8.

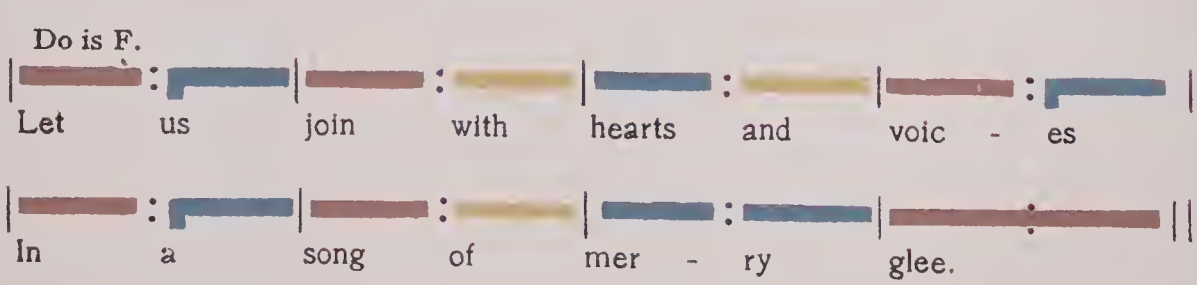
So-Bounded Melodies.—The tune exercises used hitherto have ranged from Do to Do^1 and may, therefore, be called Do-bounded. As the following exercises range from So to So_1 they may be called So-bounded melodies, and they will be found to have an entirely different character from those of the Do-bounded type. The latter have the firm restfulness which is characteristic of the Do, while the So-bounded melody has more of the restless energy belonging to its prevailing tone. The difference is not easy to put into words, but the children will soon learn to distinguish one from the other. Let them find out whether their familiar songs belong to the Do-bounded or to the So-bounded class.

The following examples will show the general characteristics of the So-bounded form of melody:

Ex. 45.

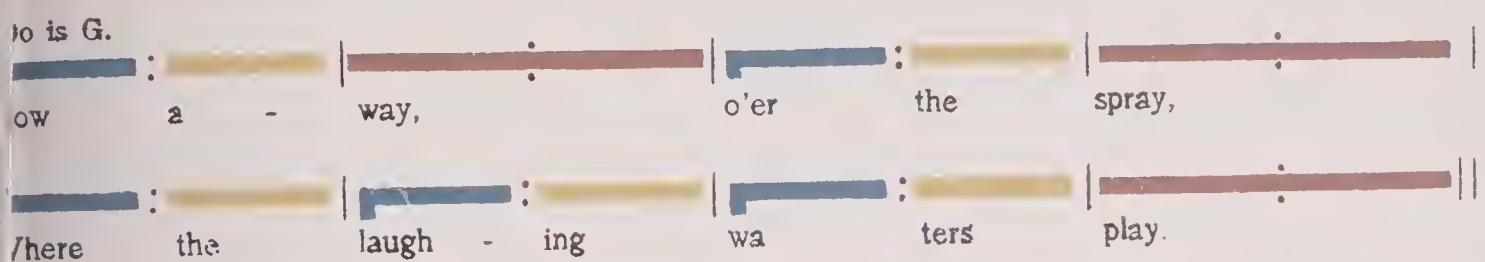


Ex. 46.



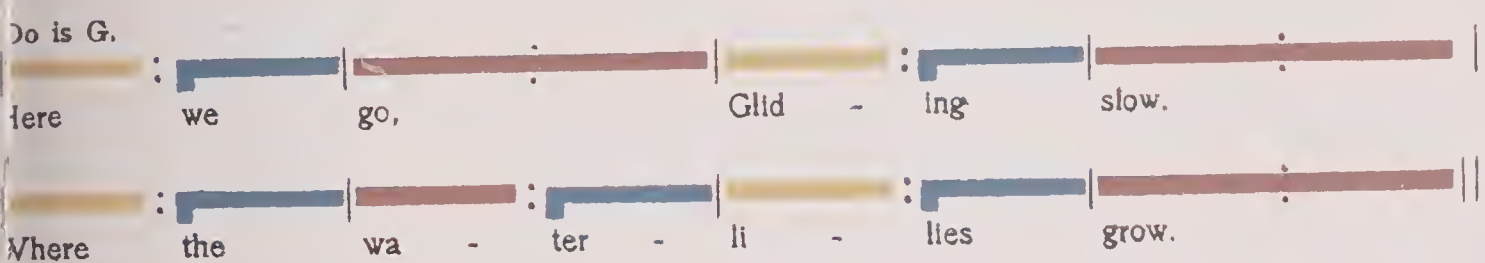
Notice in the following exercise the pretty effect of leaping from lower So_1 up to Me:

Ex. 47.



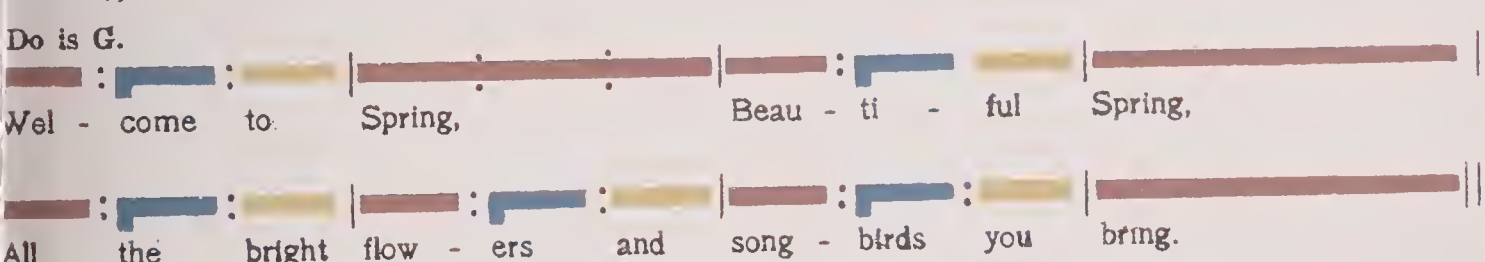
Compare this upward leap with the opposite leap downward:

Ex. 48.



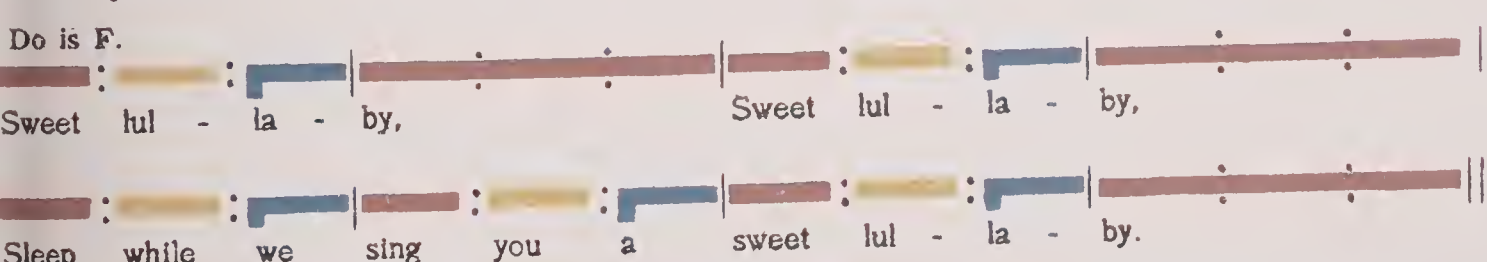
The following exercise should be sung at first slowly, and then more rapidly, to get the bounding effect of this form of melody:

Ex. 49.



The animated upward leap in the last exercise is in marked contrast with the downward leap in that which follows. As a lullaby it should be sung slowly and softly.

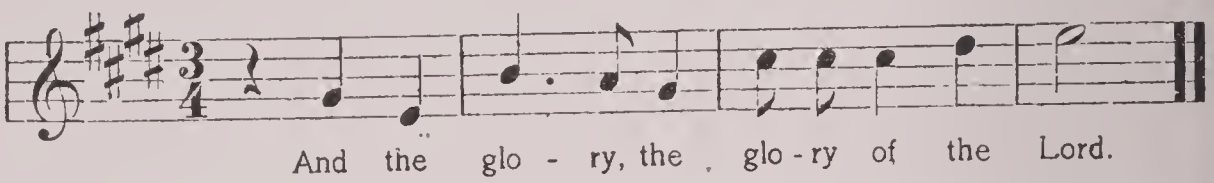
Ex. 50.



All of these tune forms will show how much there is of repetition or reiteration in melody. It will help the children in their constructive exercises if they get some idea of this principle.

THE THEME OR MOTIVE.—The opening phrase is very important, because it largely determines the character of the whole tune. The other

phrases respond to it in various ways, and this will be brought out more fully as we proceed; but the thing to notice now is that the opening phrase is often repeated and emphasized in the course of the tune. For a good example of this take that fine chorus from *The Messiah* "And the Glory of the Lord," and see what a tremendous effect is produced by the constant reiteration of the theme:

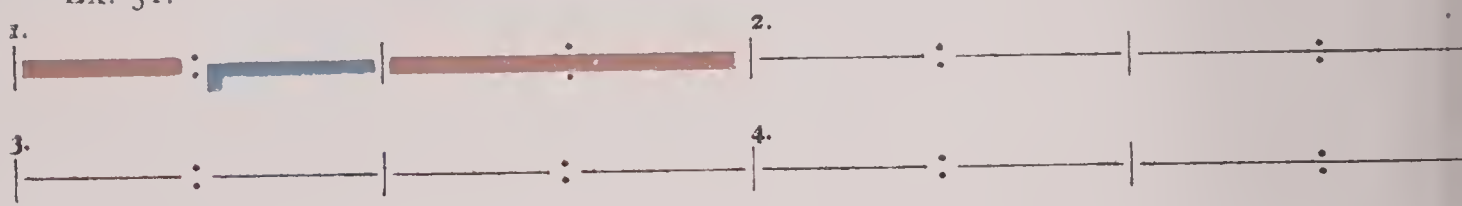


Many of the choruses of *The Messiah* and other oratorios illustrate the cumulative effect of this reiteration of the theme.

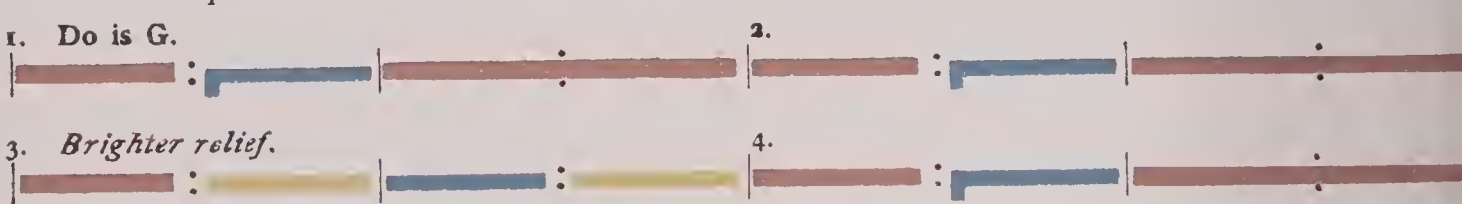
To see the same principle embodied in a simple form, turn to Ex. 47. Observe that the theme in the first two measures is repeated in the two measures which follow, and then, after an interlude, it comes out again in the seventh and eighth measures. Analyze also Exs. 48, 49 and 50, which all have the same plan.

Construction from Given Theme.—Let the children work out simple melodic forms from a given theme. For instance:

Ex. 51.



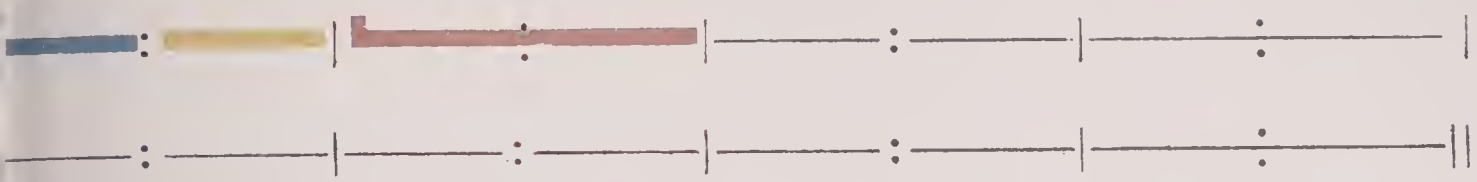
This is not a very interesting theme, but something may be done with it. They know that it has to be repeated in the second section, and again in the fourth. The only room for choice of treatment is in the variation or relief movement in the fifth and sixth measures. In this place there is opportunity for different interludes, which will be more or less appropriate. As the theme needs something brighter by way of relief, perhaps this would be the best phrase:



The same theme, taken at a brighter pitch, would need an opposite relief, *e. g.*—

Work out the following theme:

Ex. 52.

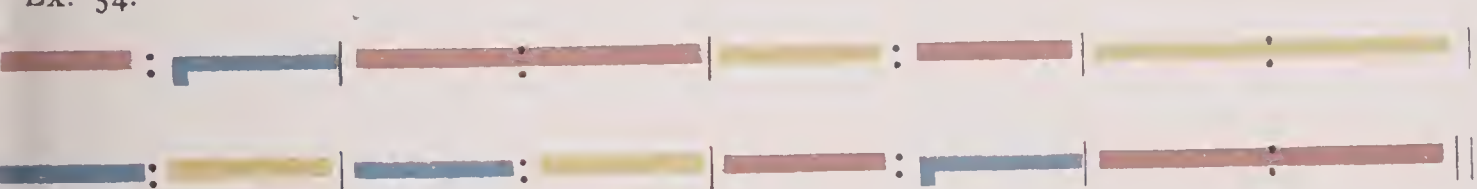


Also this:

Ex. 53.

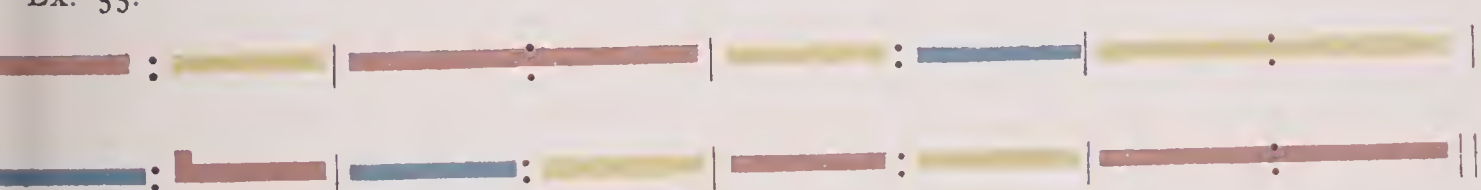
Imitation of Theme.—The theme is not always repeated exactly in its original form. Sometimes we are pleasantly reminded of it by other phrases which imitate it. This leaves more freedom of choice in the working out of the melody. Take, for instance, the theme which was carried out by repetition, and see how another form of melody may be produced by imitation: .

Ex. 54.



Here is the same idea worked out from another theme:

Ex. 55.



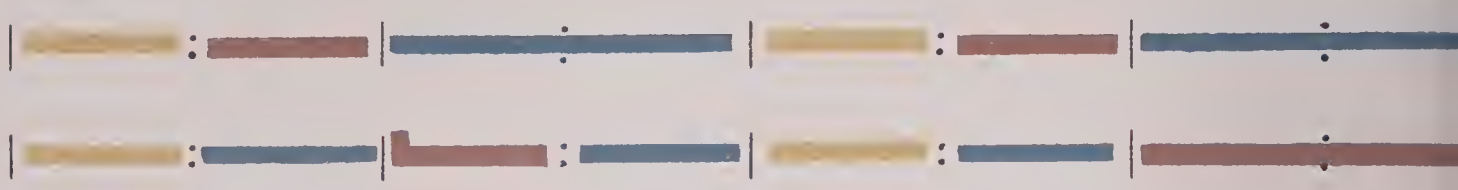
Observe the brightening effect as we imitate the theme higher in pitch. In these two instances we come back to a re-statement of the theme at the close, a thing which is often effective, but not always necessary.

If the theme is at a high pitch, the imitation will naturally be in descending phrases, *e. g.*—

Ex. 56.

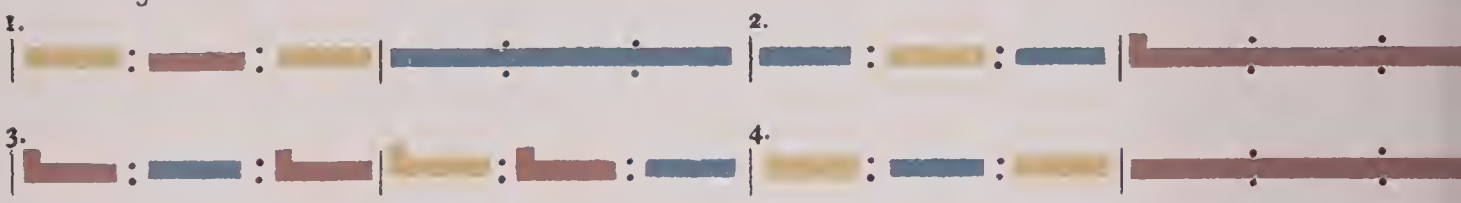
The following example will show repetition of theme in the second section, with opposition in the fourth section.

Ex. 57.



Here is a theme treated with imitation in the second section, and after a bright variation in the third, the theme is answered by opposition in the closing section:

Ex. 58.

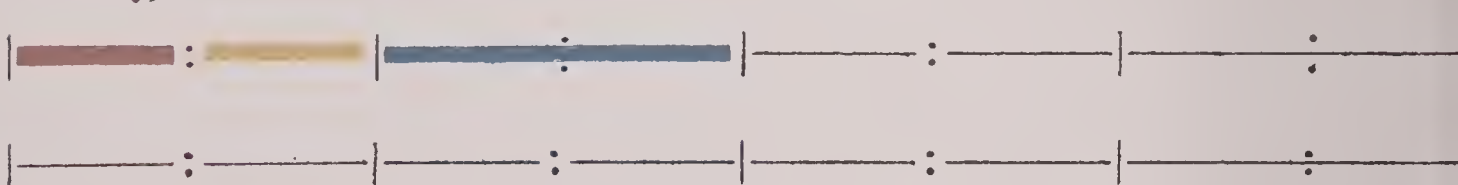


These illustrations show that there need be no lack of variety in the construction of melodies. Repetition, imitation, and contrast are all available; but it will be better at first to construct the melody by using them separately in turn. The pupils will soon feel them instinctively, and can then use them either separately or combined.

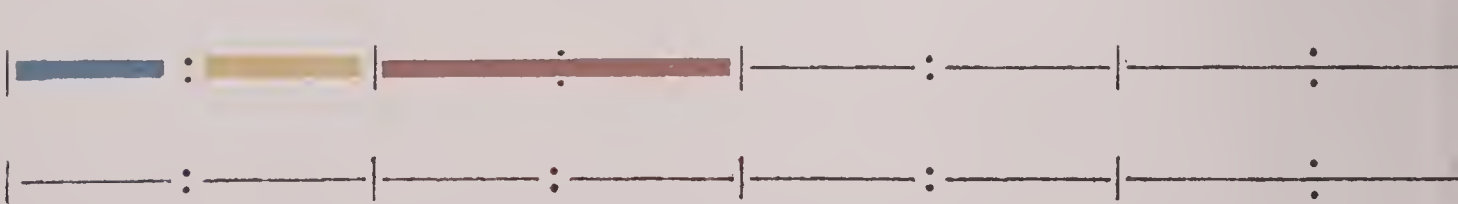
More Extended Tune Forms.—If we take eight sections instead of four there is room for more varied treatment. Most of these melodies will be too complex for the child's constructive work at present, but the following examples will show that a simple extension of the principles already used will make song forms of greater length, which are not essentially more difficult than the shorter ones which have been given.

By way of experiment, carry out this simple theme by repetition through eight measures:

Ex. 59.

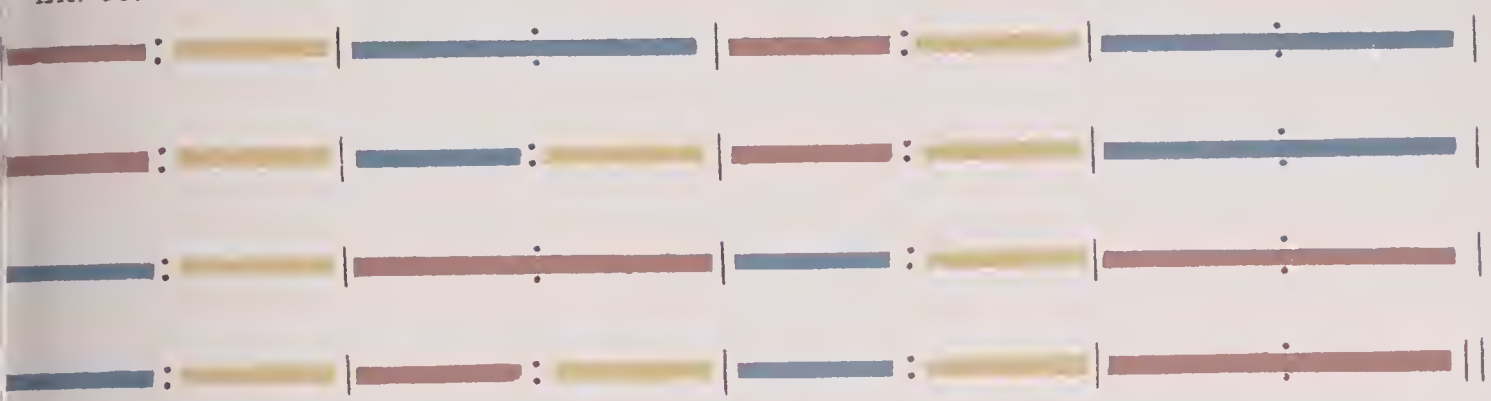


This will leave us at the close in an expectant attitude. The ringing So is like a question or an unsolved problem. In other words, the tune is not finished. Now take the contrasted theme, and see how it answers to the other:



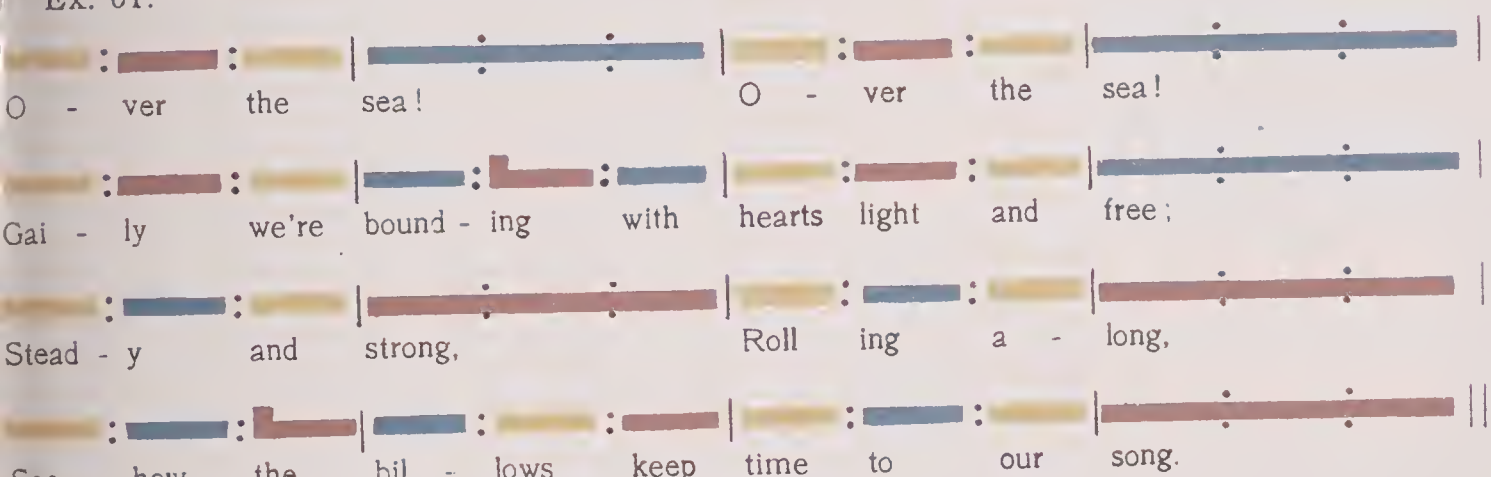
Put these two together and we get a complete tune form in sixteen measures:

Ex. 60.



See how the following more interesting theme may be worked out in the same way:

Ex. 61.



DIVIDED PULSES.

So far the time movement has been very simple, as we have used only whole-beat notes, with prolonged notes for the cadences. Much greater life and variety can be secured by dividing some of the pulses. This has already been done in the children's songs, but now it is to be made a matter of intelligent observation.

To begin with, let them sing *la la* to the swinging of the pendulum at eighteen inches. When you call for "ones" they will sing one *la* to each swing, and when "halves" are called for, they will sing *la la* to each swing. The more completely they feel the swing of the time the more thorough will be their appreciation of rhythmic proportion. With the little children it should be entirely a matter of vital pulsation. As they grow older they gradually learn to think and reason about the matter; but even then they will enjoy the suggestion of joyous activity. They may be led to notice that the "ones" go with a steady, walking movement, while the "halves" seem to go trotting along.

Let them go with the walking movement for eight swings, followed by the trotting movement, thus:

| Walk - ing, | walk - ing, | walk - ing, | walk - ing:

| Trotting, trotting, | trotting, trotting, | trotting, trotting, | trotting, trotting.

Then take the two forms alternately:

| Trotting, trotting, | walk - ing, | trotting, trotting, | walk - ing.

TAATAI.—The children know that the name of the whole pulse is TAA. They will learn to name the divided pulse TAATAI. Now when you call for "ones" they will sing TAA, and for "halves," TAATAI.

Draw on the blackboard four two-pulse measures, and ask the children to listen while you go along "Music street." You give divided pulses in the third measure, and they will say that you trotted by No. 3. Repeat, giving half-pulses in the first and third measures, etc.

They should then do the singing, following your dictation as to where they shall walk and where they shall trot. These exercises should be done with the pendulum, repeatedly altering the length of the swing.

Next take one of the two-inch sticks, or a piece of chalk, for TAA, and when the children's attention has been called to it, break it in halves. Now give to these halves the name TAATAI. Give each of the children a TAA and see if they can break it just in the middle for TAATAI. Continue this until they see clearly the relation between the whole and the two halves.

PICTURING TAATAI.—Again draw on the blackboard the now familiar form of four two-pulse measures, and ask the children how we can make a picture of TAATAI in the second room of No. 3. They will see that this can be done by dividing the TAA line, thus:

They will naturally think of TAATAI here as twin sisters living in the same room. Let them develop the time form so as to have twin sisters in the first, second and third houses, thus:

Or with twin brothers:

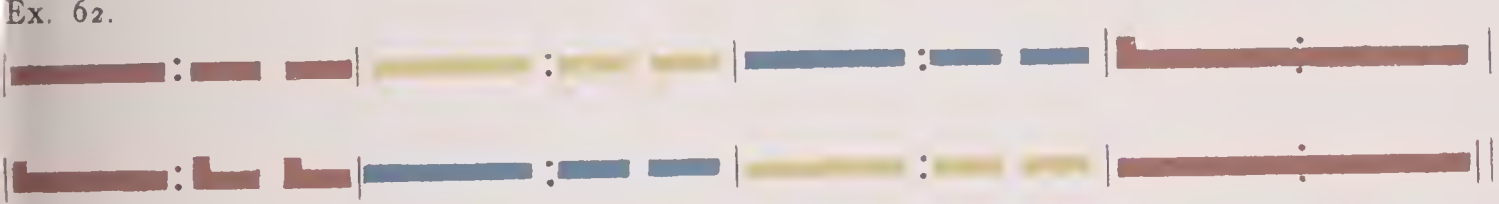
Again with twin brothers and sisters:

They should recite each of these to different rates of movement. Besides cultivating rhythmic expression, it is an excellent practice for giving definite action to the tip of the tongue.

Rhythmic Ear Exercises.—The children may now listen to the *laaing* of such simple rhythms as the following, and answer to the *la* by chanting the time names:

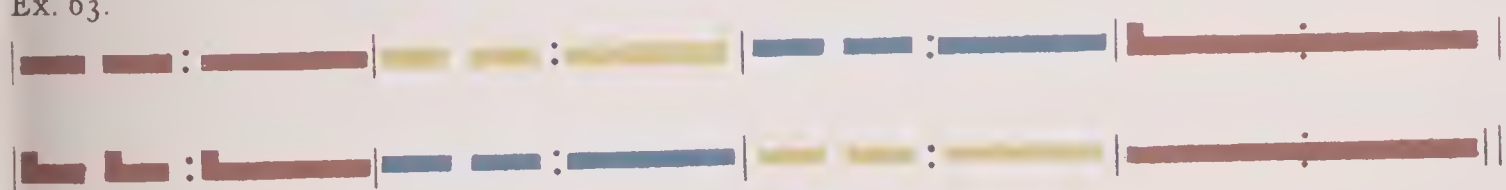
Melodies with Taatai.—When the children are quite familiar with TAATAI, it may be introduced in the melody pictures. At first these should be as simple as possible. Avoid change of tone within the measure wherever the new form of rhythm occurs, *e. g.*—

Ex. 62.



Or this:

Ex. 63.

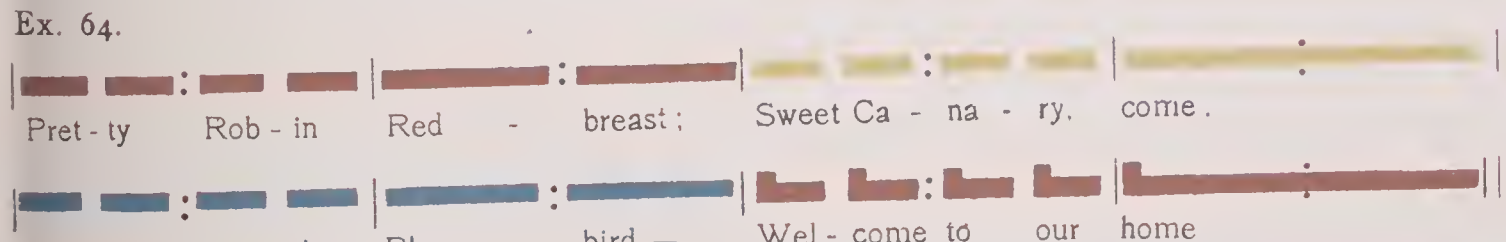


Sometimes it is interesting to picture out one of the melodies with which the children are already familiar. Take for instance:

WELCOME TO THE BIRDS.

May be sung as a round in four parts.

Ex. 64.

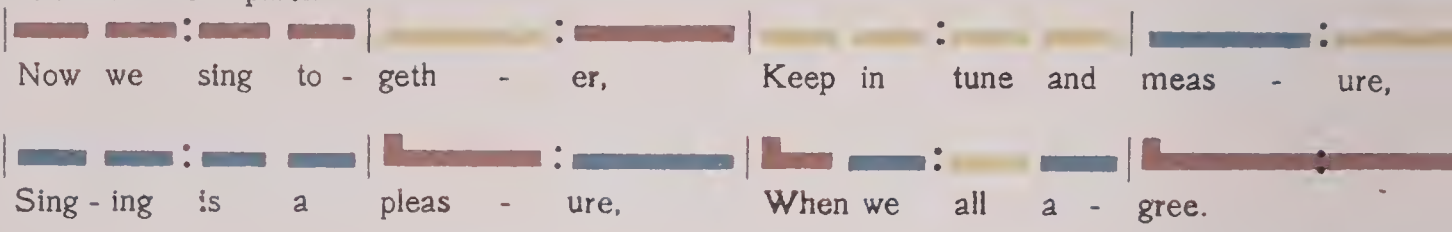


See what was said about round singing on page 3277. At first let the different groups of singers be completely separated from one another. None of the parts must sing loudly, but with quiet emphasis.

NOW WE SING TOGETHER.

Ex. 65.

Round in four parts.



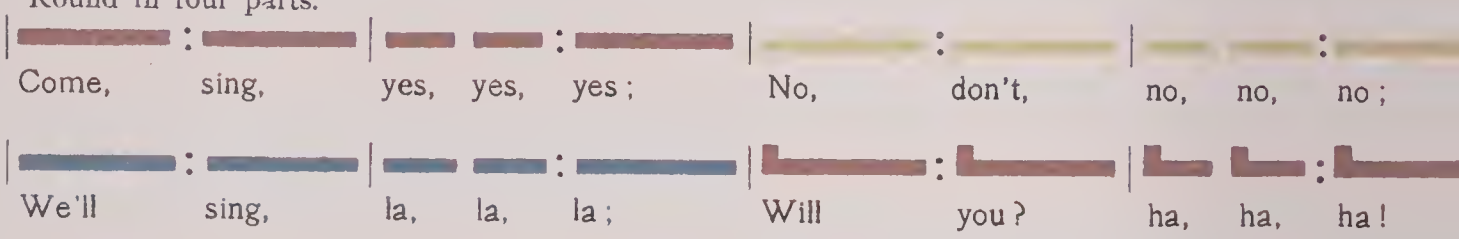
Here are other words which may be sung to the same music:

Ever do the right, boys,
Turning to the light, boys,
Keeping honor bright, boys,
As you journey on.

COME SING.

Ex. 66.

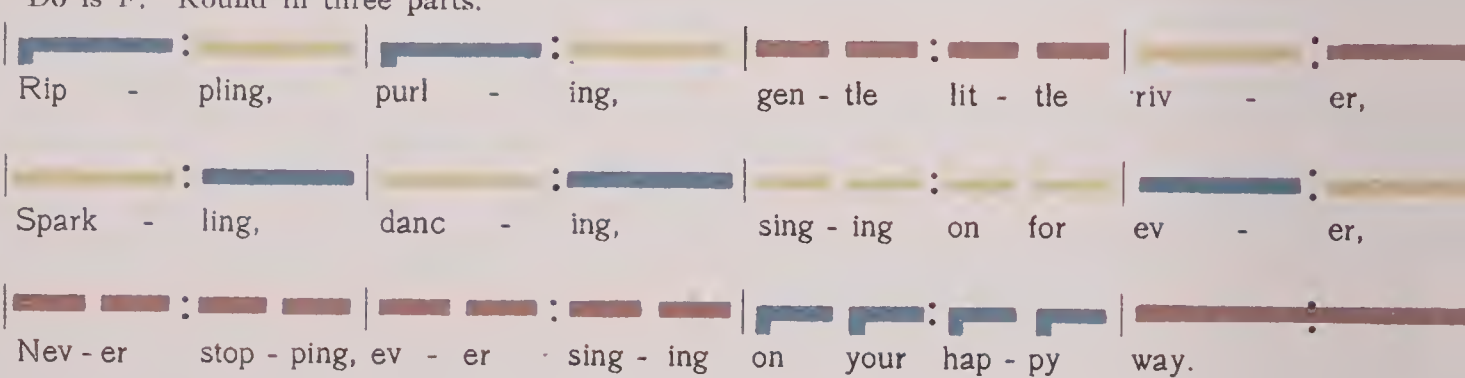
Round in four parts.



LITTLE RIVER.

Ex. 67.

Do is F. Round in three parts.



The next step in advance is to change the time within the measures which contain TAATAI, but not within the pulse. This calls for more mental alertness than when the same tone was continued through the measure. The mind has to carry on a double process, and must be prepared to change time relations together with tone relations as it moves from pulse to pulse. While the strain of this is felt, let the pulses move slowly.

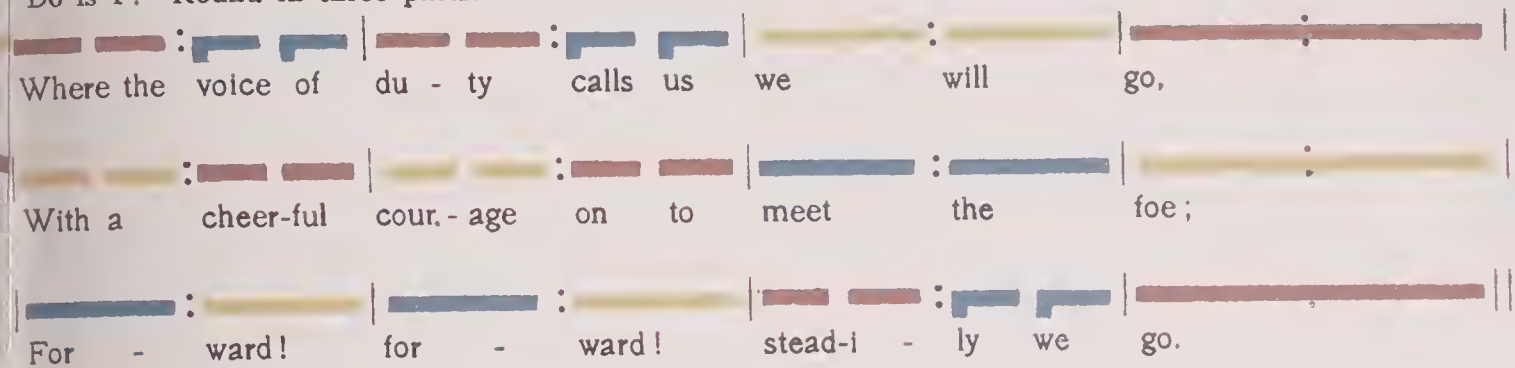
Ex. 68.

Do is C.

DUTY'S CALL.

Ex. 69.

Do is F. Round in three parts.



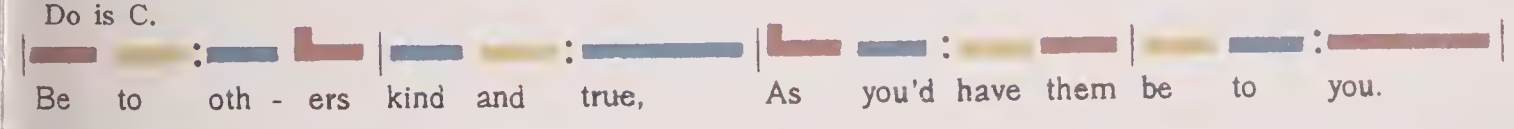
The exercise may now include change of tone within the pulse. Although this is more complex, it will not be too difficult for the children if it is taken very slowly at first, and gradually increased in speed. Notice that in the first exercises the changes of tone are taken in the easiest progression:

Ex. 70.

Do is D.

Ex. 71.

Do is C.



Ex. 72.

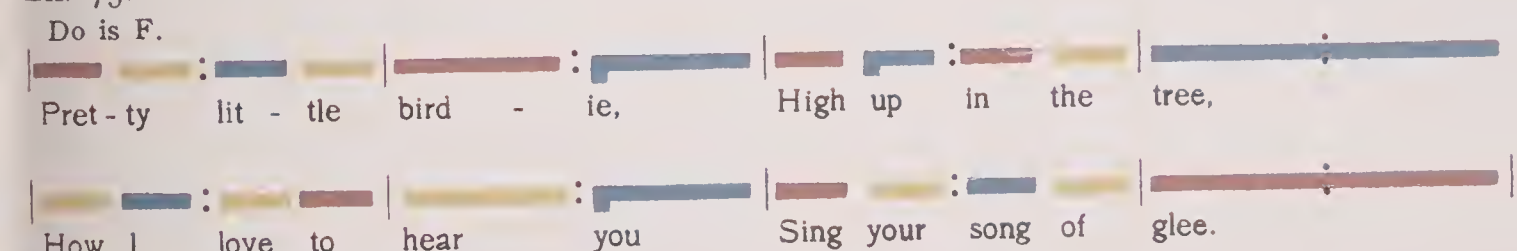
Do is G.

BUGLE CALL.

PRETTY LITTLE BIRDIE.

Ex. 73.

Do is F.



We have already seen the pretty effect of leaping from So_1 up to Me and in the opposite direction from Me down to So_1. This is even more effective with the divided pulses. Compare the following exercise with Ex. 47.

Ex. 74.

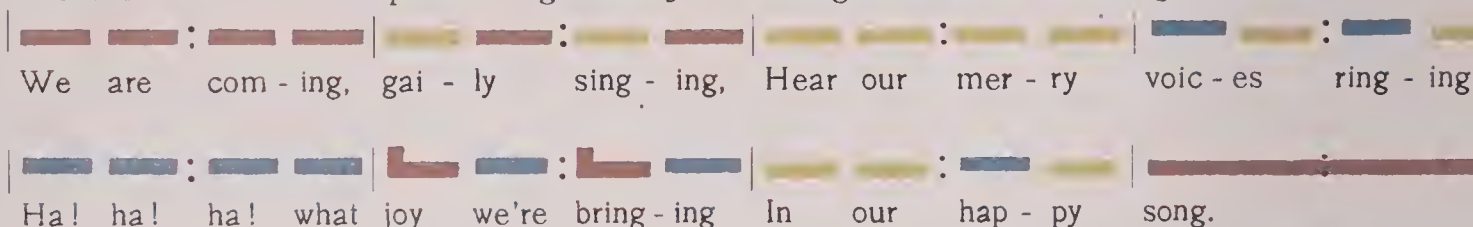
Do is G.

Notice how the melody gains in sprightliness in this more delicate form of rhythm. Now reproduce Exs. 43, 45, 46, 47 and 48 in this finer relation.

WE ARE COMING.

Ex. 75.

Do is D. Round in four parts. Sing first to 36 inch swing; then to 18 inch swing.



Quarter-Pulse Divisions.—By using subdivisions of the pulse we can infuse more life and beauty into our melodies. The subject is growing more complex, but need not be at all beyond the child's power of grasp. Always remember in these exercises that rhythm is a matter of vital, rather than mental, arithmetic. The problem is how to feel the pulsations—how to count them is a secondary matter.

See that the new thing is a natural development from something with which the child is already familiar. Apply the principle to the introduction of quarter-pulse divisions in rhythmic form. For instance:

Having drawn the familiar figure, swing the pendulum at thirty-six inches, and let the children sing through the time names. Now ask them to listen while you *la* it and find out if you make any mistake. At the third pulse sing four quarter-pulse tones, and they will at once laugh at the "mistake." After a moment's interlude, repeat the exercise, introducing the quarter-pulses in another place. The children will soon begin to analyze the new movement, which is like changing from a trot into a rapid run. Now show the new sign in the figure, thus:

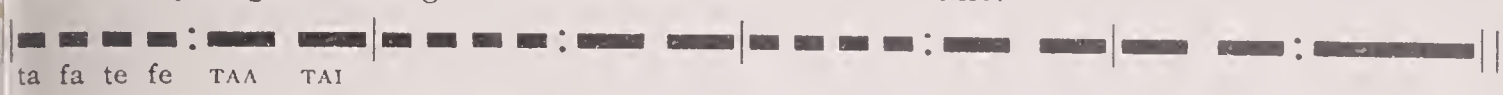
And let them *la* it through. Make a corresponding change in the first pulse, and have it gone over again, at first to the thirty-six-inch swing, then to a swing of twenty-four inches.

Tafatefe.—Instead of the twins we have now four baby brothers, living in the same room. They have a funny name, and we shall have to pronounce it very slowly at first—ta—fa—te—fe; then a little faster, ta–fa–te–fe, again a little faster, ta-fa-te-fe, and then we can sing it correctly, tafatefe.

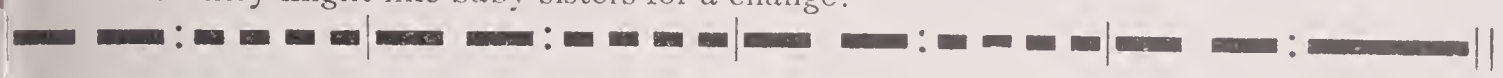
Now swing the pendulum, and call for "ones," "halves" or "quarters." Draw a simple form like this:

Ex. 76.

Let the children in turn elaborate the form by introducing TAATAI or tafatefe into some of the pulses, singing it through after each change. By degrees it might assume some such form as this:



Or they might like baby sisters for a change:

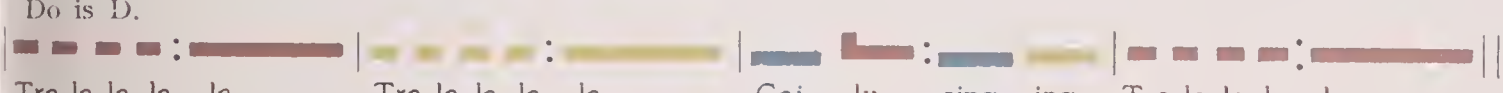


Apart from their musical value, these time names furnish good exercises in articulation. Gradually quicken the time movement, but stop at the first sign of confusion or strain. Tell the children to open their mouths so that the tip of the tongue may have plenty of room to jump about. Better than telling them will be to show them the way.

MELODIES WITH TAFATEFE.—When the children are so familiar with the new time division that it goes easily, it may be embodied in forms of melody. It will be better, however, for some time to take each as a time exercise before adding the tone colors. Here are a few samples:

Ex. 77.

Do is D.



Ex. 78.

Do is C.

Ex. 79.

Do is G.

Ex. 80.

Do is G.

Ex. 81.

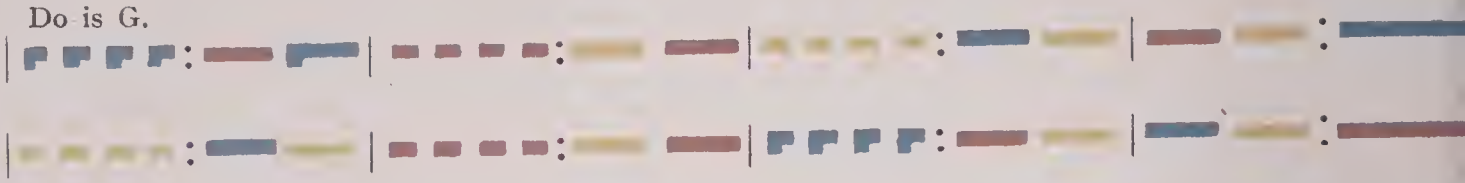
Do is C.

Ex. 82.

Do is C.

Ex. 83.

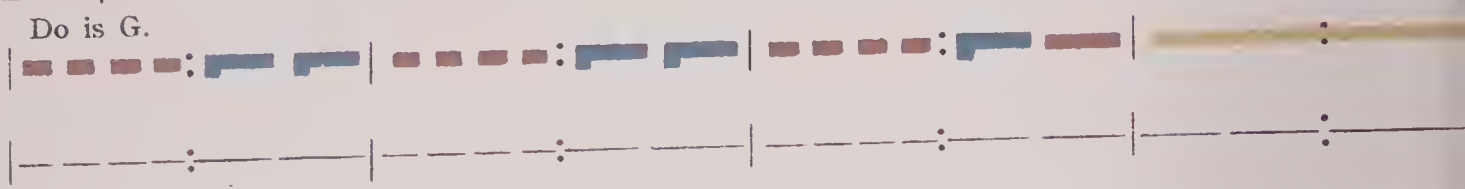
Do is G.



Carry out this melody to a satisfactory close.

Ex. 84.

Do is G.



Work out the following theme, introducing tafatefe into the relief movement:

Ex. 85.

1. Do is F.

Also this:

Ex. 86.

1. Do is C.

Musical Parquetry.—The colored-line notation is useful in more ways than one. First, it gives to the children a simple and self-evident picture of time and tune values. Then it enables them to place out forms of melody on their tables or on the blackboard. Further than this, by means of colored paper strips pasted on white or gray cards, the children can make permanent forms of parquetry in which are enshrined beautiful suggestions to the ear as well as to the eye. Every good tune invention made by the children should be preserved in this way.

THE STAFF NOTES.

At what period the child should begin to use the notes on the staff depends upon his intellectual and musical development. Some take to it earlier than do others, owing to peculiarly favorable circumstances. Let each case be decided upon its own merits. It will be a pretty safe rule to go no further than the child's interest can be fully sustained.

Before the introduction of color the staff notation was too severe an intellectual exercise for little children, because the notes all looked alike, and it required considerable mental effort to remember the character of each. Now the color clearly distinguishes the nature of the note, so that it is as easy to sing the tones from the colored round notes as from the colored lines.

There are two advantages in the use of the staff notes. First, it gives another presentation of the subject, which newly awakens the interest of the children; and, secondly, they are preparing for the musical notation with which they will have more to do in later life.

FIG. 10.
So-bounded

MAKING THE NOTE SCALE.—Before using the notes upon the staff, the children should practice placing the inch circles in the squares upon the table. The red circle is put into the square which represents number one; then the yellow circle is placed in number three; the blue in number five, and the bright red in number eight. From this form of the scale they can sing any of the Do-bounded melodies which they have had in the previous exercises.

FIG. 9.
Do-bounded

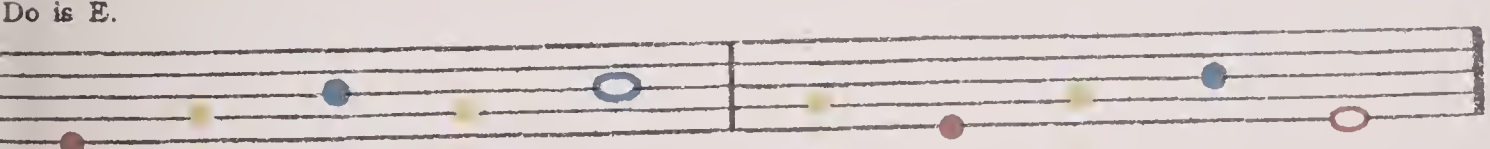
On another occasion they can place the red so that the yellow and blue can be in three and five above it, while the lower octave blue can be in number four below the red. From this form of the scale they can sing any of the So-bounded melodies on pp. 3310, 3311.

This will accustom them to the comparative pitch of the notes, corresponding to their positions in the Bird Scale. When this is well done they should be given one of the card scales on which to fasten the gummed circles in their proper order for the Do-bounded form, and another scale to be made in the So-bounded form. See figures 9 and 10. Let these be hung up against the wall within the children's reach, so that they can point out a tune from them at any time.

HOW TO INTRODUCE THE STAFF.—They will be more interested if this matter is presented in a playful way. The more spontaneity there is in it the better, and probably every teacher will teach best in her own way. As a suggestion, take the following presentation which has proved successful with children: The birds have been on a long journey, and now, being tired, they are looking for a place of rest. There are no trees around, but they see some telegraph wires stretched along the road. (Draw five parallel lines across the board.) Little Robin is first to alight, and he chooses the first or lowest of the wires. His friend, Canary, then perches on the second wire, and Bluebird on the third. Now the children sing the tones as the bird notes are pointed out. Put more birds on, so as to make a song form, *e. g.*—

Ex. 87.

Do is E.



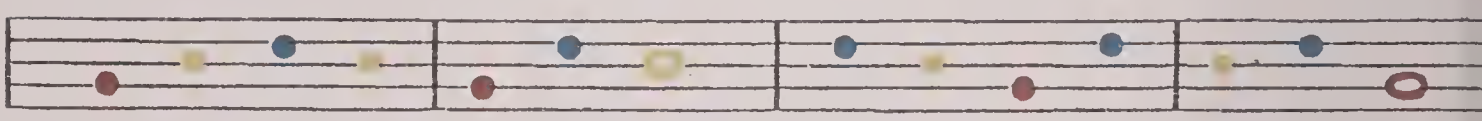
If the open notes at the cadences arouse the children's curiosity, just mention that when the bird is going to sing a longer tone he opens his mouth wide.

On another occasion, Robin takes some other position upon the telegraph wires. When he has taken his place, the other birds know

where they ought to go. Notice, for instance, in the next exercises that when Robin has taken possession of the second line, Canary and Bluebird take the third and fourth.

Ex. 88.

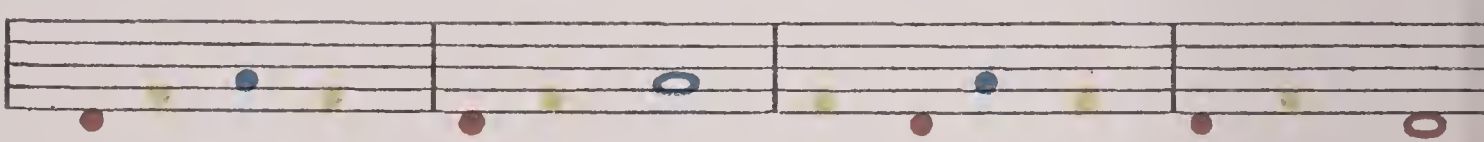
Do is G.



Sometimes Robin has a way of hanging under one of the wires. When he does this Canary and Bluebird follow his example:

Ex. 89.

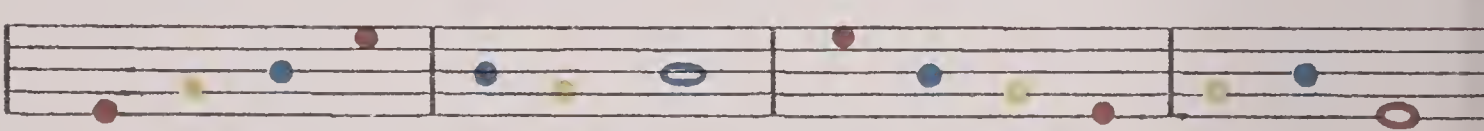
Do is D.



The children will quickly grasp these ideas if, when Do has been placed, they are allowed to put in Me or So. Show that when Do chooses a line, the higher Do hangs in a space, *c. g.*—

Ex. 90.

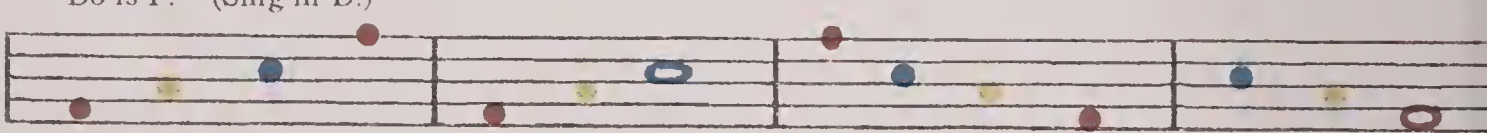
Do is E.



Conversely, if Do is in a space the upper Do^{1} will be found upon a line:

Ex. 91.

Do is F. (Sing in D.)



They will also see that if Do, Me and So are on the lines lower So$_{1}$ will come in a space:

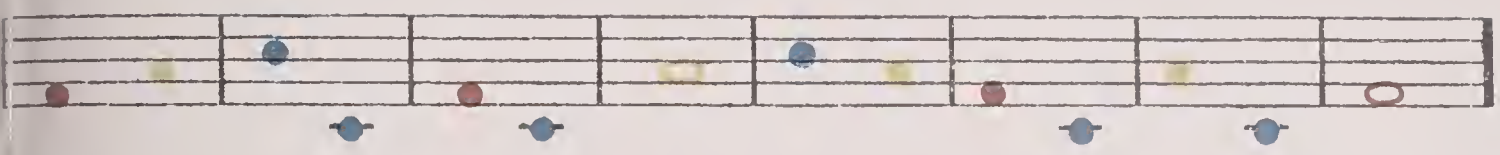
Ex. 92.

Do is G.

It follows that if Do, Me and So are in the spaces lower So$_{1}$ takes a line. In the next exercise another little line has to be added for So$_{1}$ to rest upon.

Ex. 93.

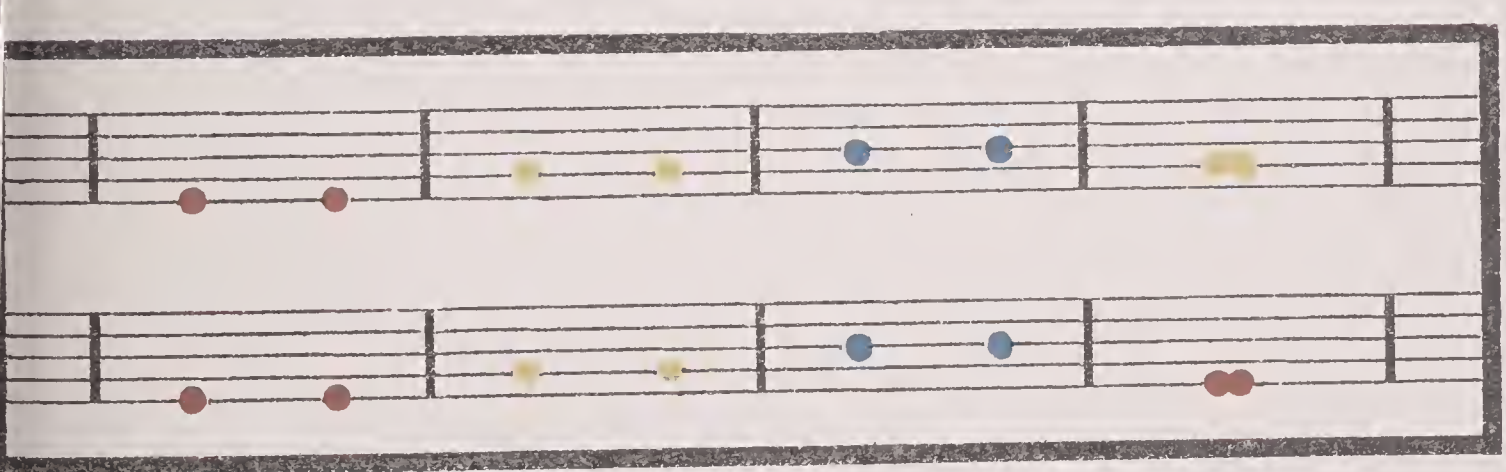
Do is F.



In this way the children become accustomed to seeing the notes constantly changing their positions, and yet there is no confusion, since the character of each is readily understood by its color. They see, too, that the changes are not a matter of caprice. The notes always arrange themselves in orderly sequence about the red keynote.

Scale Building on the Staff.—Each child should have a sheet of white or gray cardboard on which lines are ruled half an inch apart, and some half-inch card circles. Let him be told on which line or space to place the Do note, and then allow him to find for himself the proper places for the other notes. When he has done this, dictate any of the simple tune forms, *e. g.*—"Do is to be on the first line—the E line. Make eight measures, with two swings to each measure (sticks or slats may be used for the bars). First measure, two Do's; second measure, two Me's; third measure, two So's; fourth measure, two Me's, one overlapping the other, because they are going to sing together in the cadence. Now make the fifth measure like the first; the sixth measure like the second, and the seventh measure like the third. In the last measure let two Do's overlap for the second cadence." When the form has been placed let the children sing it:

Ex. 94.



The same tune form, or one somewhat similar, may then be placed in another key. Another form of exercise will be to let the child listen

while you sing or play the tones. When he has distinguished them he may place out the notes in their proper places. This exercise is more severe than the naming or singing of the tones by ear. When it is attempted let the exercise be simple, and repeat it as often as is necessary.

Staff Notation Time Symbols.—The color clearly expresses the tone character, but it does not show the time value of the notes, and it will require some ingenuity to introduce the time characters in such a way as to make them interesting to little children. As they already understand time values, it is only necessary to show how these can be expressed by the notes, and if this can be done in a playful way, it will secure their interest and attention. Suppose, for instance, that we are thinking of the notes as birds. Remind them that unless the little birdies are careful they may fall from their perches, so it will be well to give them a staff to which they may hold on. Then draw the stem of the note.

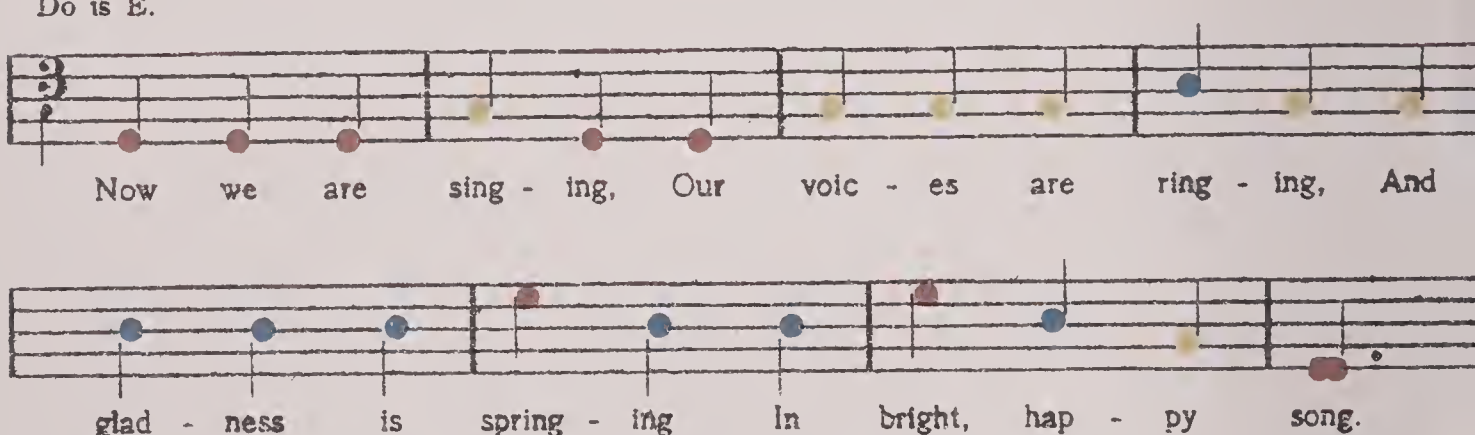
It will be good practice now to reproduce upon the staff some of the line melodies on pp. 3307, 3308 and 3311. The time names will be as useful for the round notes as for the lines. Notice that it is customary to denote how many pulses there are to the measure, by a figure placed at the beginning of the music.

Ex. 95.

Do is E.

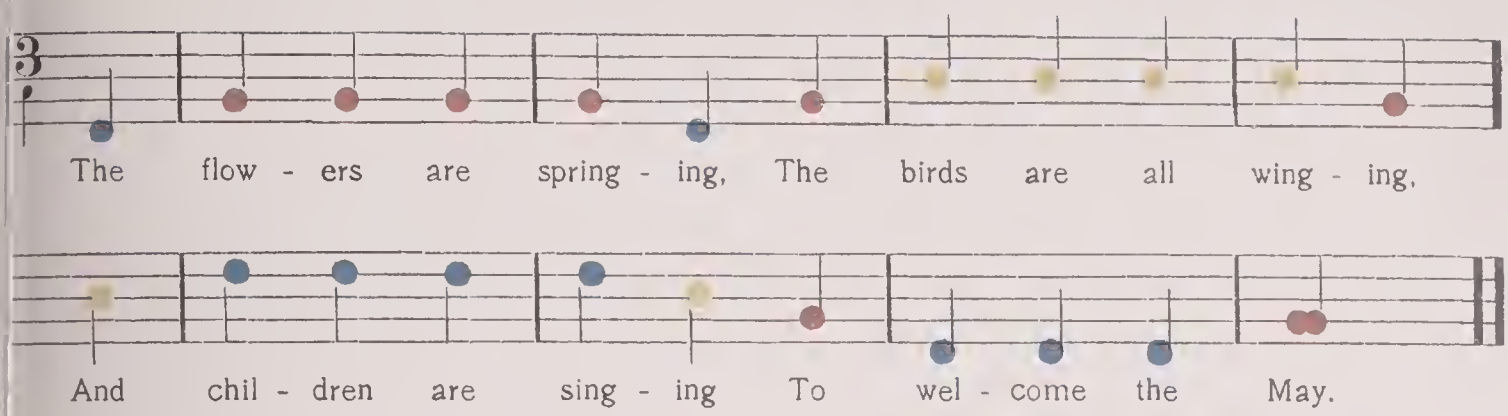
Ex. 96.

Do is E.



Notice how in Ex. 96 the quiet theme in the first two measures is supported by the brighter statement in the next two measures and then it is strongly reinforced in the third section, which leads to the downright assertion in the last two measures. Ex. 97 has the same emotional development, and both of them are in keeping with the spirit of the words.

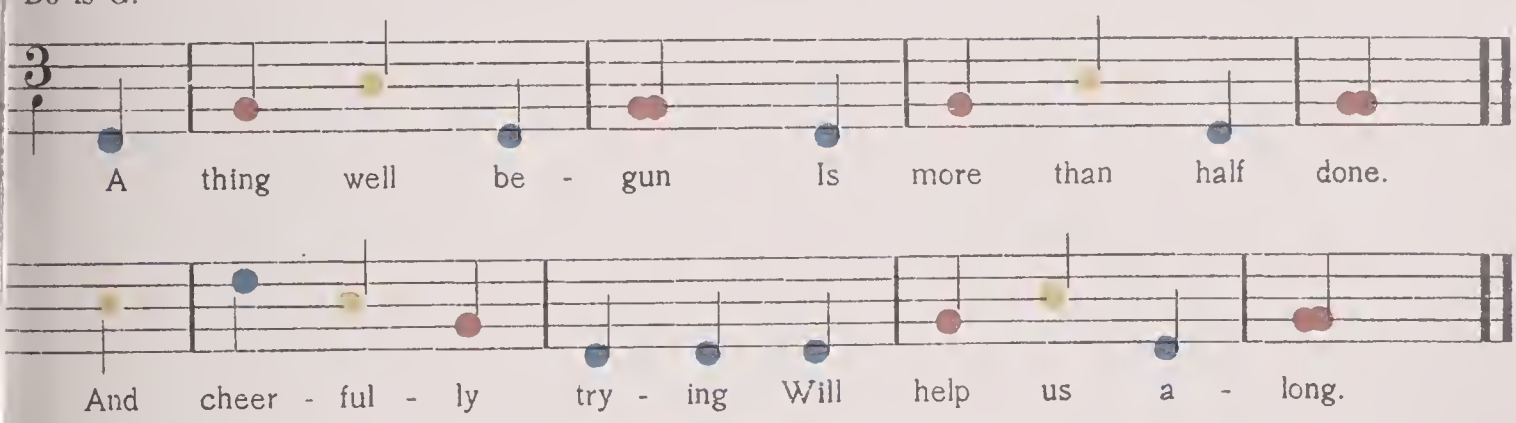
Do is G.



This melody, and the one which follows, begin upon the weak pulse, and so differ from all the previous exercises; but as the children have had plenty of this form of movement in their rote songs, they will find no difficulty in getting the swing of it.

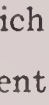
Ex. 98.

Do is G.



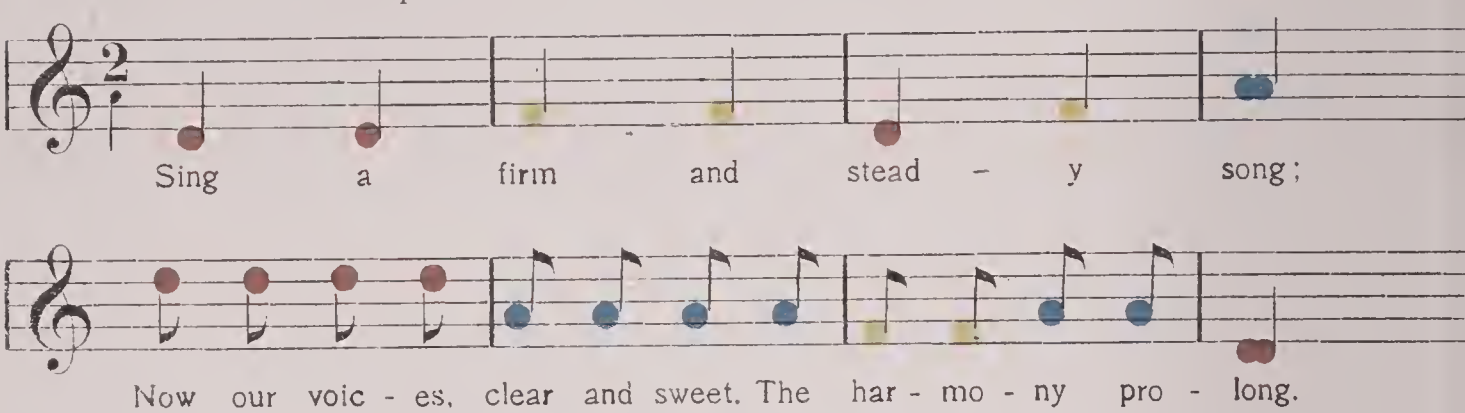
Symbolism has been of great assistance to us hitherto. It appeals to the playfulness and poetry of the child's nature, and should be used to give new interest to the subject in hand. But do not hold too tenaciously to any one figure. The children will always be ready to adopt any other figure which may seem desirable. The representations of bells, birds, and butterflies are only means to an end, and should be dropped when they are no longer useful.

The staff time notation will naturally be expressed in some figure of locomotion. For instance, draw the whole note 𝅝, and call attention to its helpless condition. It has no leg for walking, and so crawls along very slowly. The half notes 𝅗𝅥 𝅗𝅥 having each a leg, move along twice as fast as does the whole note, but they too are slow travellers. The solid quarter-notes ♩ ♩ ♩ ♩ walk along at a fair pace, while the eighth

notes  which have both a leg and a foot, move along with a brisk trotting movement. With two feet () they run more rapidly; indeed the more feet or toes they have the faster they run. This may be illustrated in such forms as these:

Ex. 99.

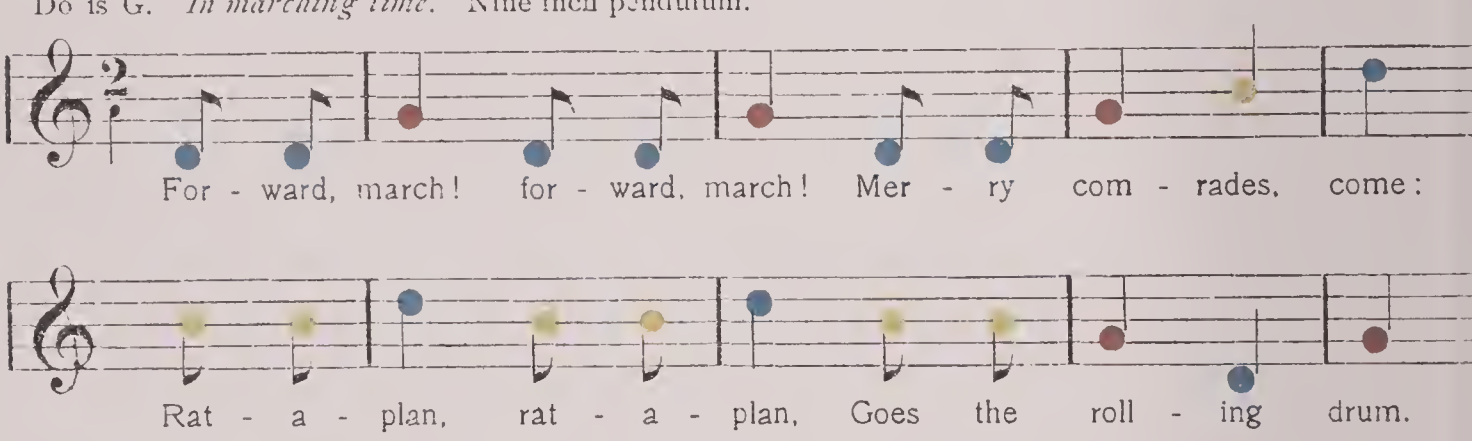
Do is D. Round in two parts.



FORWARD, MARCH.

Ex. 100.

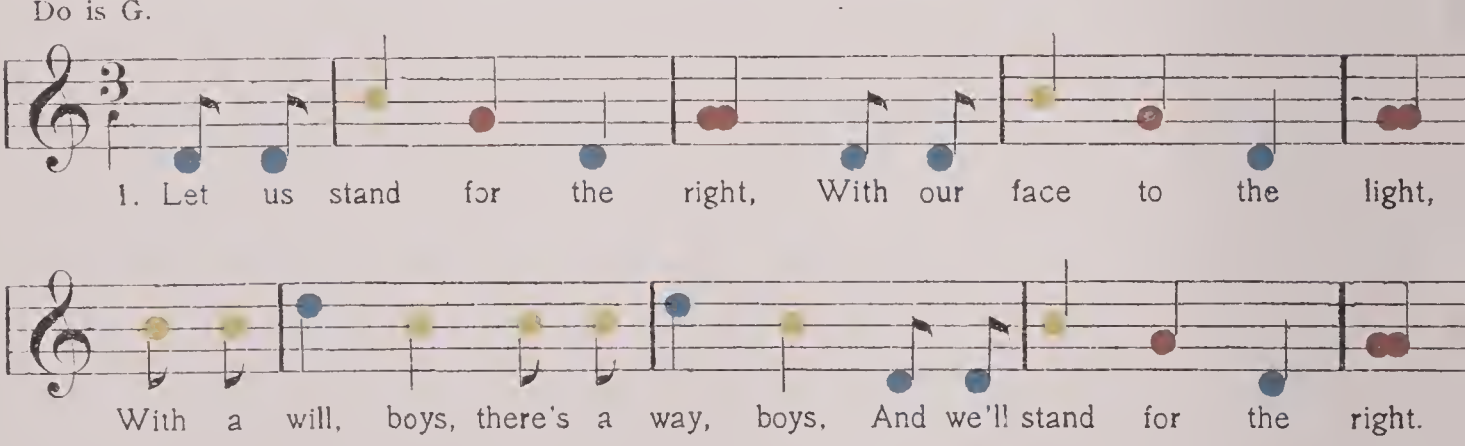
Do is G. *In marching time.* Nine inch pendulum.



STAND FOR THE RIGHT.

Ex. 101.

Do is G.



2 Let us ever be true,
Whate'er others may do;
With a will, boys, there's a way, boys,
And we'll ever be true.

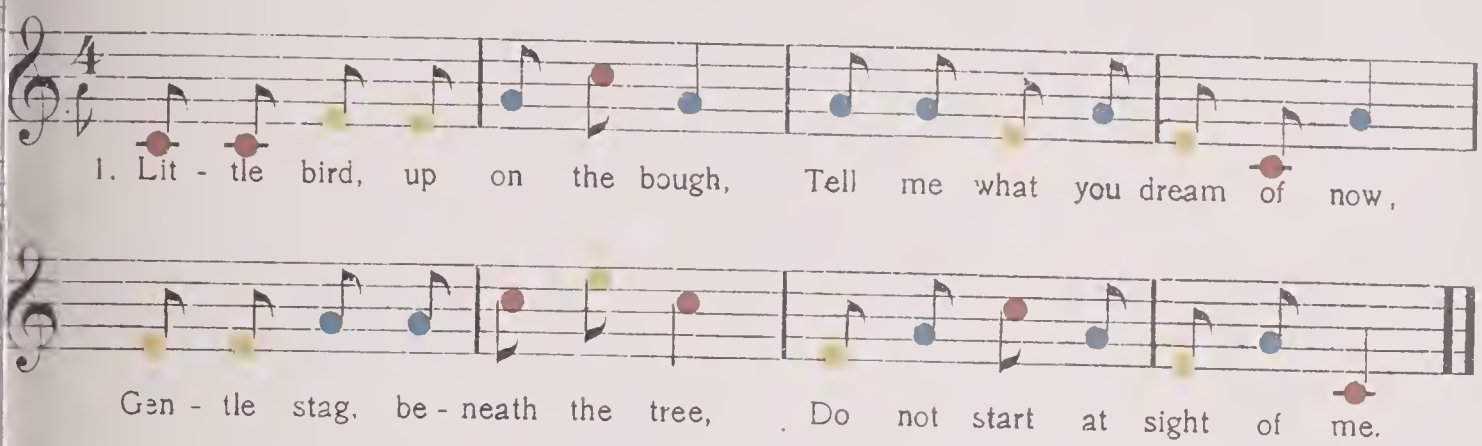
3 Let us always be kind,
Ever keep this in mind,
With a will, boys, there's a way, boys,
And we'll always be kind.

The next exercise introduces the octave Me', which is brighter than the Do'. Be sure that the chiidren do not attempt to sing this with a tone of full volume. There will be no danger of strain if their voices leap lightly to the words. Get them to realize the light spring in the action of bird and stag.

BIRD AND STAG.

Ex. 102.

Do is C.



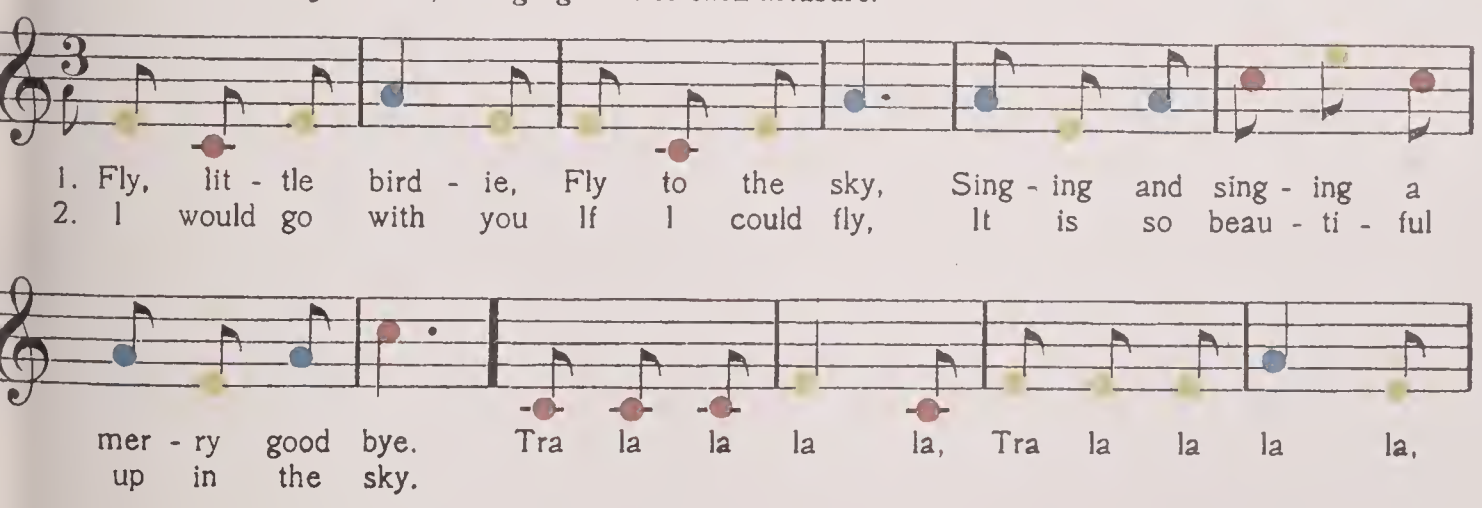
2 Sing, dear bird, and try to tell
Of the mate you love so well;
Pretty stag, lie still and hear
Birdie's song, so sweet and clear.

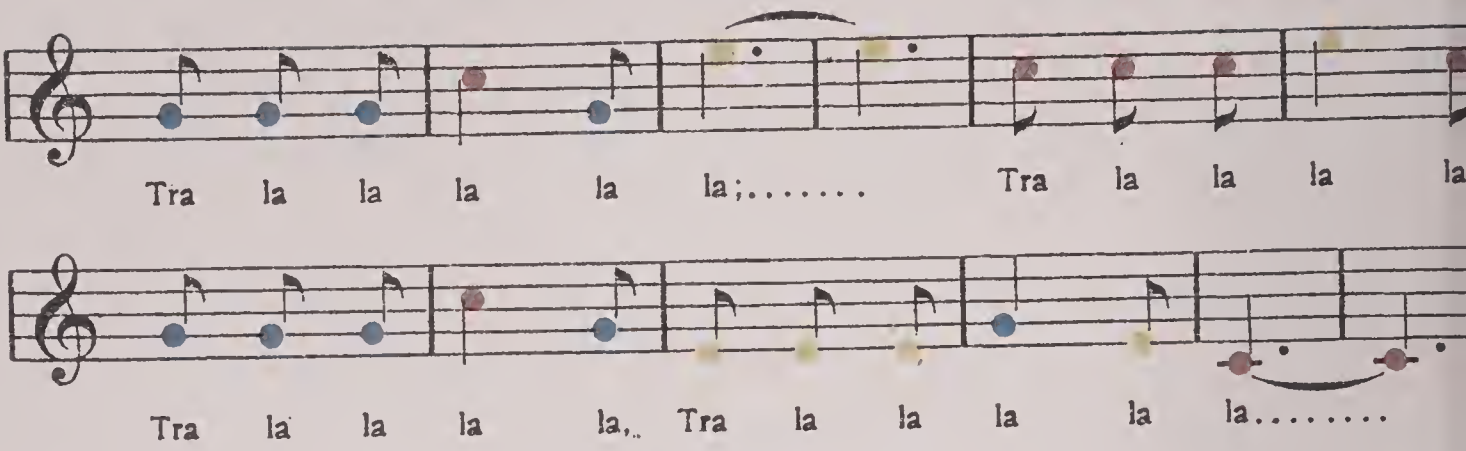
In the two following exercises we do not feel the throb of each pulse so distinctly as in previous three-pulse rhythms. To bring out the spirit of the music they must go pretty rapidly, and then they have a tendency to swing in groups of three. In these cases we let the pendulum swing once to each measure. Before singing the songs let the children chant "one-two-three" to each swing. When the movement takes this form we name three pulses of each measure "taataitee."

FLY, LITTLE BIRDIE.

Ex. 103.

Do is C. Pendulum 36 inches, swinging once to each measure.

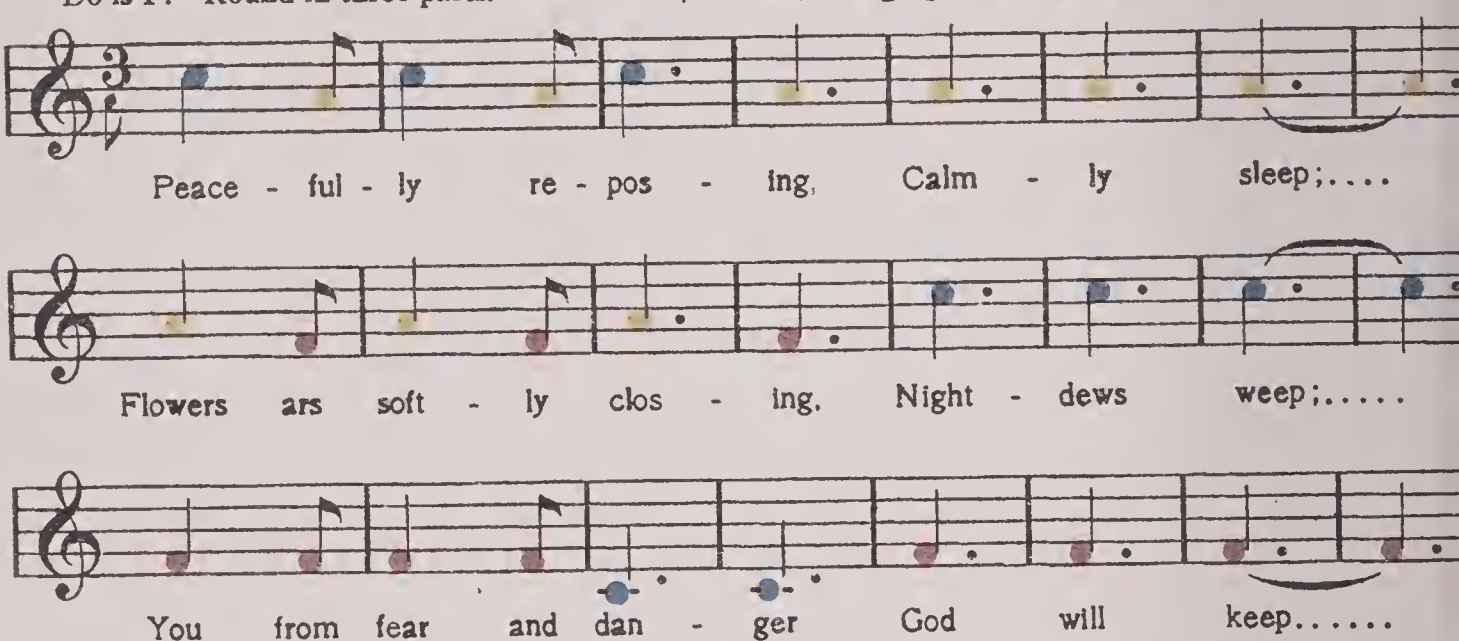




PEACEFULLY REPOSING.

Ex. 104.

Do is F. Round in three parts. Pendulum 42 inches, swinging once to each measure.



THE LEANING TONES.

The tones, one, three and five, which we have been using hitherto, may be considered as the pillar tones of the scale. Besides forming the great Tonic Chord they are the support upon which the other tones rest. The first thing that we notice about these other tones is their leaning nature. They leave the mind in a state of expectancy—a looking for something to follow. The character of the tones has already been shown,* and we have now to consider the best way of introducing them to the children.

INTRODUCTION OF RAY.—Let us begin with Ray, the second degree of the scale. Softly vocalize such a phrase as the following, without giving any names, and ask the children to listen for the new tone, 1, 3, 5, 3, 1, 2. They will detect the last as a new tone. After a little interlude of clapping, or tapping, sing another phrase: 1, 5, 3, 1, 2, 1. Again relieve the strain of attention by some familar exercise, and give other phrases, such as: 1, 3, 2, 5, 3, or 1, 3, 5, 2, 3, 1. Change the pitch of Do from time

*See page 3285 and following pages.

FIG 12.

to time, and well before giving well sometimes the voice, and at strument. In this making new the auditory sense.

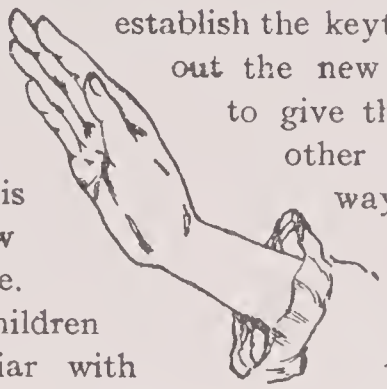


FIG. 11.

establish the keytone upon the ear out the new exercise. It is to give these ear tests with other times with an in- way we can keep impressions on

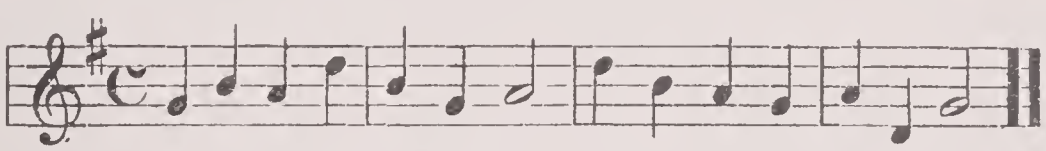
When the children somewhat familiar with hand-sign, the open palm upturned figure 11) and give its name—

have become the tone show its from the wrist (see Ray. Now let them sing little phrases dictated by the hand-signs, including the new tone.

Color Symbol for Ray.—After the exercises with the hand-signs introduce the orange ball, which the children will like to think of as an oriole. Get them to listen to its unsatisfied questioning tone, as if it sought some friend. Holding the Do and Me balls in one hand and the Ray in the other, sing d m d m–r. Then let Ray sing in turn to Me and to Do. They will notice the calm sweet effect of r m, and the restful assurance of r d. After singing in this way the children will have no difficulty in finding the proper place for Ray between Do and Me. Holding the balls in this position let the little ones sing to your pointing d r m, d r m; m r d, m r d. Or with the So added—d r m s d r m; s m r d m r d. They will soon notice the smoother flow of the melody, and how well the downward stepwise movement answers to the upward.

Let one child holding the orange ball enter the ring while the others join in singing:

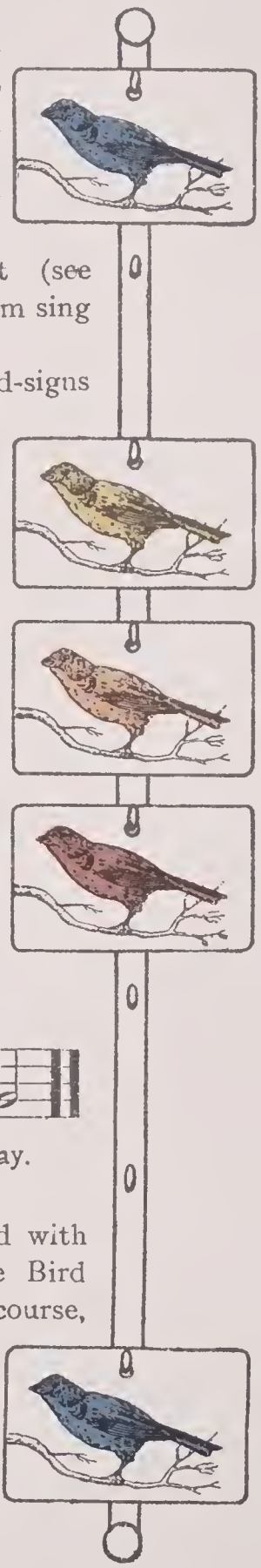
Ex. 105.



Welcome, welcome, gentle Ray, Join us in our song to-day.

When each child has attempted to draw a Ray bird with chalk or crayon let the card picture take its place on the Bird Scale. In the Do-bounded form of the scale, Ray will, of course, be hung on the second hook, as in figure 12; but in the So-bounded scale, Do being on the fourth hook, Ray will be placed on the fifth, as in figure 13. Call attention to the fact that while Ray clings to either Me or Do, it likes to call up to its friend So, or down to the lower So_1. Let each child point and sing some little form of melody in which Ray takes part.

FIG. 13.



The orange circle should now be added to the Do-bounded and So-bounded card scales which the children have made. The introduction of this tone will afford more scope for the children's inventive faculty. Each child may point upon his own card a tune exercise for the others to sing. Naturally at first there will be considerable sameness, because the imitative faculty will lead little children to copy what has been done by another; but they will soon begin to originate for themselves, and by degrees will learn to think the tune before they point it out. Lead them to observe how naturally Ray gravitates gently upward to Me or firmly downward to Do. Keep them to these two progressions at first.

TUNE FORMS WITH RAY.—Take any one of the familiar rhythmic forms, and let the children construct melodies with the simplest use of Ray, *e. g.*—

Ex. 106.

Do is D.

Ex. 107.

Do is F.

These exercises show what a smoothness Ray lends to the melody when used as a passing tone between Do and Me. The following tune form will illustrate how gracefully it swings under the Me:

Ex. 108.

Do is C. One swing to the measure.

Thus far Ray has always been followed by Do or Me, but a joyous effect can be secured by leaping from Ray to So; or, on the other hand, the leap from Ray down to So, gives a sense of boldness, *e. g.*—

Ex. 109.

Do is G.

The undecided, questioning attitude of Ray can be better appreciated in a Ray cadence. Notice how in the following exercise we are left at

the end of the first line waiting for something to follow. Then the same theme is repeated, but with a very decided answer at the close of the second line:

Ex. 110.

Do is D.

|d .r :m .r |d :s |d :m |r :— |

|d .r :m .r |d :s |m :r |d :— ||

WESTMINSTER CHIMES.

Ex. 111.

Do is F.

First Quarter. *Second Quarter.* *Third Quarter* *Fourth Quarter.*

|m r d $\widehat{s_1}$ |d r m $\widehat{d}$ |m d r $\widehat{s_1}$ |s_1 r m $\widehat{d}$ ||

Ex. 112.

Do is A. Upward cadence. Downward cadence.

|d :s_1 |d :s_1 |d :r |m :— |r :s_1 |r :s_1 |m :r |d :— ||

Ex. 113.

|m .r :d .r |m :s |d :m |r :— |

|m .r :d .r |m :s_1 |r :s_1 |d :— ||

THE MEDIUM ACCENT.

A considerable number of the exercises have been in the two-pulse measure, in which the children have personified the strong and the weak accents as brother and sister voices. In many of the tunes the pulses have been for the most part divided, thus:

Notice that in singing the time-forms we instinctively give a gentle accent on the first part of each second pulse, so that the order of accent is:

Strong, weak, medium, weak.

As the children have been unconsciously using the accent in most of their songs, they will readily recognize it when their attention is called to it.

FOUR-PULSE MEASURE.—Draw a picture of four two-pulse measures and let the children *la* it to the swing of the thirty-six inch pendulum, carefully observing every strong accent:

EX. 114.

It has a firm, dignified effect. Then shorten to nine inches, and let them sing it again. At this rapid rate the four strong pulses produce a clumsy effect, but if the second and fourth are softened down to the medium accent the line goes with a more graceful movement.

When the children have noticed the medium accent substitute a "half bar" for the bar where the medium accent occurs, *e. g.*—

EX. 115.

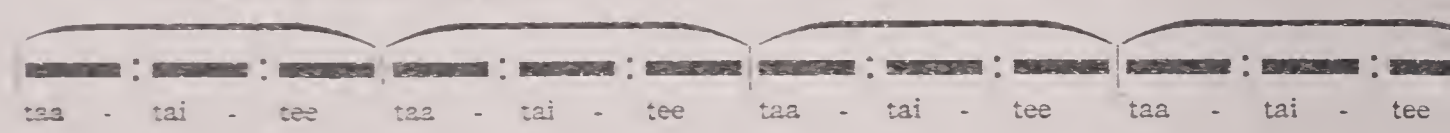
One little fellow described this as pulling down one of the walls, and making two little houses into one larger house.

In the staff notation the bar is used to indicate the strong accent, but there is no sign for either the weak or the medium accent. It is well, therefore, to use the line notation until the children are accustomed to the proper accentuation of the movement.

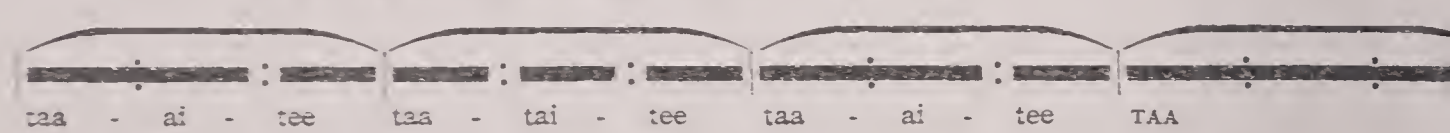
SIX-PULSE MEASURE.—This may be developed in the same general way. Draw four three-pulse measures, and sing, softening the second and fourth strong accents, and make the necessary change in the picture, thus:

EX. 116.

This movement generally swings along at a lively rate, and the pulses, instead of making separate throbs, flow in groups of three, thus:



The most usual combinations are:

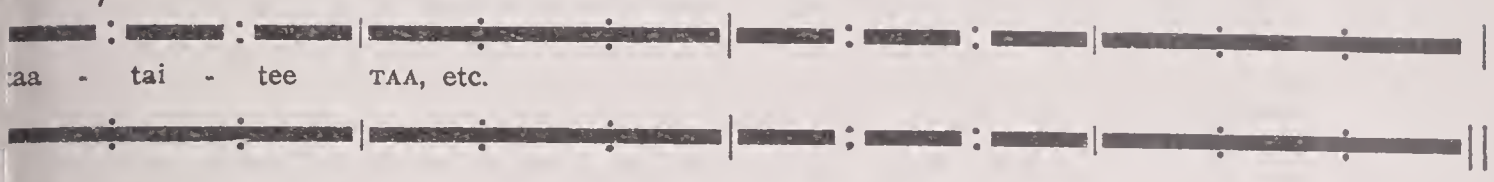


Observe that when one tone takes a complete swing, we give it the old name for the pulse. This movement is generally represented in the staff by six eighth-notes to the measure, and is called "six-eight" time.

The children have already had this kind of movement in "three-eight" time. These things need not be explained to them, but they should

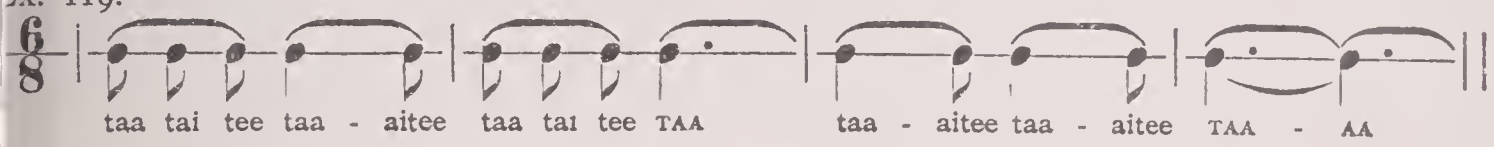
cultivate the habit of singing the following time forms to the swing of the pendulum at various rates of movement.

Ex. 117.

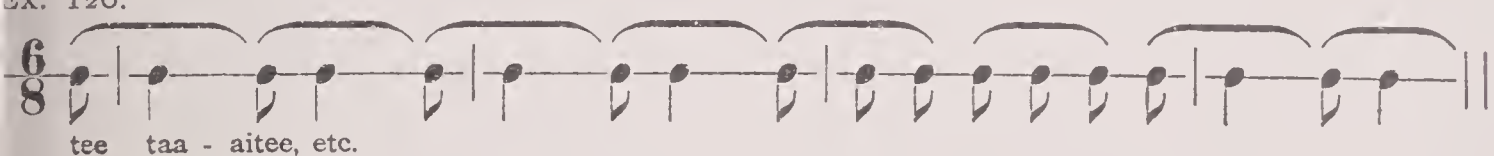


Ex. 118.

Ex. 119.

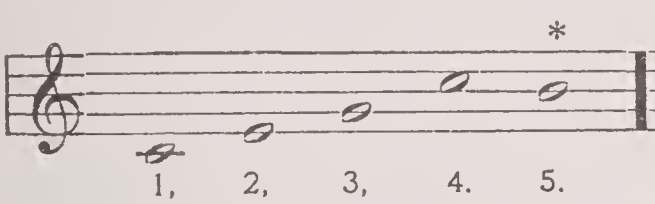


Ex. 120.

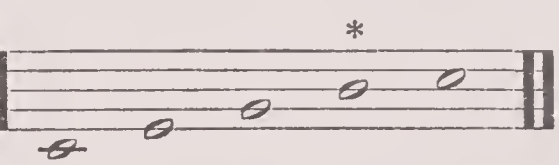


Introduction of Te.—The seventh tone of the scale can be readily distinguished by its sharp urgent cry. Let the children listen while you slowly sing or play the following exercises, and tell upon which number the new tone was heard.

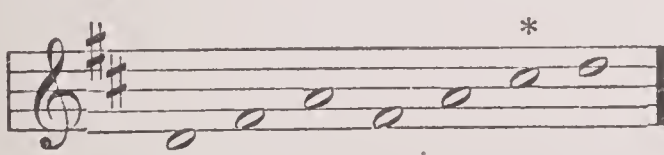
Ex. 121.



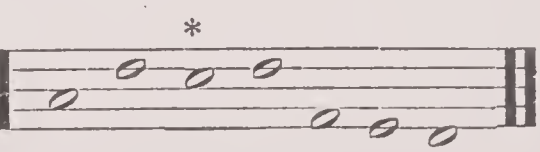
Ex. 122.



Ex. 123.

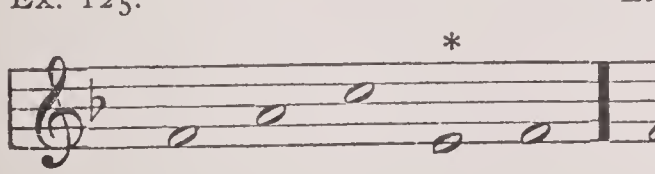


Ex. 124.

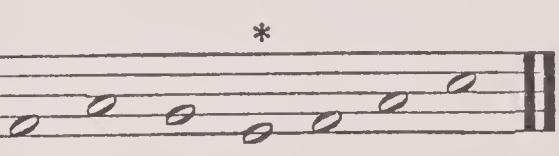


Let them also detect the tone in the So-bounded form of melody.

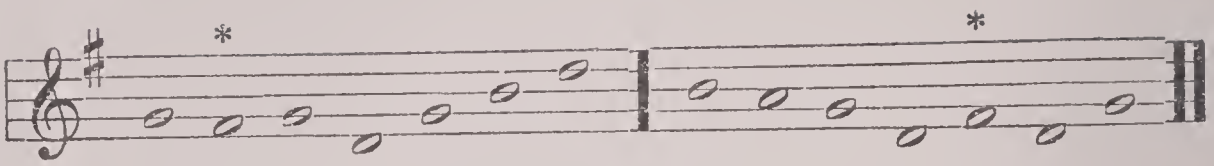
Ex. 125.



Ex. 126.



Ex. 127. Ex. 128.



They will notice that when the tone is sounded at a high pitch it is like a shrill cry, and well expresses an urgent appeal. When heard at a lower pitch it gives a feeling of suppressed longing.

To show how strongly this tone leads to the tone above it sing a phrase ending on the seventh, and let the children complete the sense by singing the final tone, *e. g.*—

Ex. 129. Ex. 130.

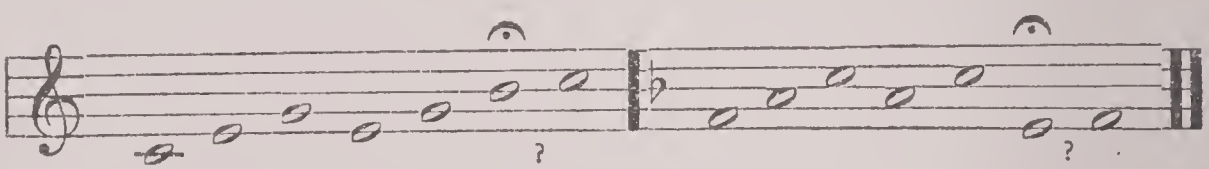


FIG. 14

The appropriate hand-sign for this tone is the closed fist with the forefinger pointing upward, as in figure 14. Then, while making the hand-sign, sing the name of the tone, Te.* Now let the children sing from the hand-signs, including the new Te sign. This will accustom them to the use of the tone in melody, and will give the ear time to become more familiar with it before the related color is introduced.

The Listening Faculty. — In the preceding paragraph the ear exercises were given continuously, so as to leave in the mind a clear idea as to the development of the tone. But in the act of listening, the ear quickly tires, and needs frequent intervals of rest. Our faculties rest more quickly by reaction than in any other way. When the eye is tired with looking at one color we secure immediate relief by looking at the opposite color; and, in like manner, when the ear has listened for a particular tone it is restful to hear entirely different tones. Notice how repeatedly the piano tuner rests his ear in this way. In practice, then, after each act of listening let the children have some form of relaxation.

Color Symbol for Te.—It has already been shown that the appropriate color for this tone is not found in the visible spectrum, as it lies beyond the violet rays. Add to the other balls one of a bright crimson

* The older form of the name is Se (si), but the present name Te is more singable.

color, and associate it with the Te tone. Let the children hold it in turn, and sing some such phrase as this:

FIG 15

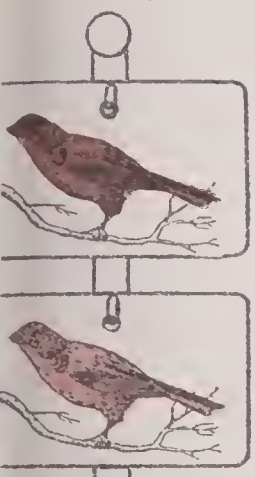
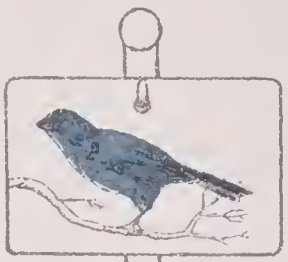
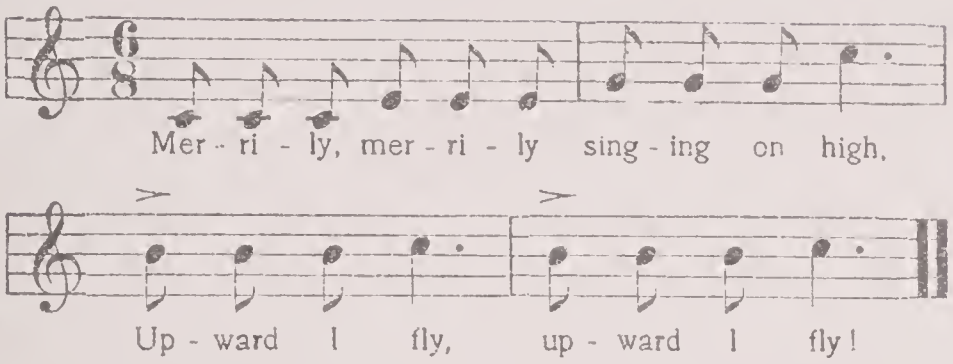


FIG. 16.

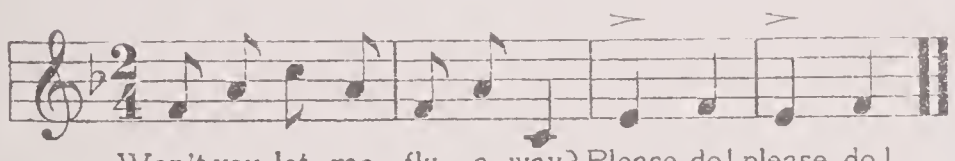


Ex. 131.



At the same time the crimson ball can move toward the red ball above. Or for the lower Te such a phrase as this will do

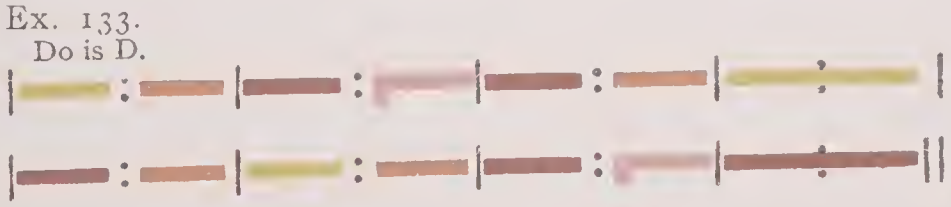
Ex. 132.



Show the picture of this bird on the card, and let the children hang it in its place on the Bird Scale, in both the Do-bounded and So-bounded forms, as in figures 15 and 16. With the addition of this tone more melodious runs can be secured, especially in the So-bounded scales where four of the tones are now in stepwise succession. When this has been well practised, let the children fasten the color on their card scales and improvise melodies from them.

They are then ready to make new tune forms, either from the colored lines or on the staff. The following examples will illustrate some of the characteristic habits of Ray and Te:

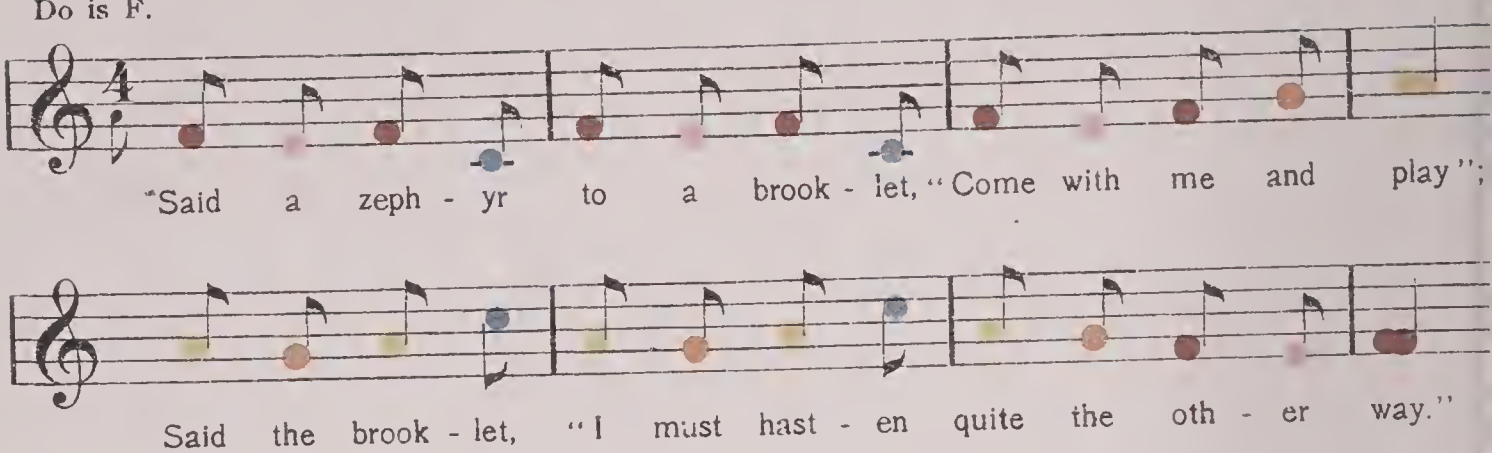
Ex. 133.
Do is D.



Ex. 134.
Do is E.

Ex. 135.

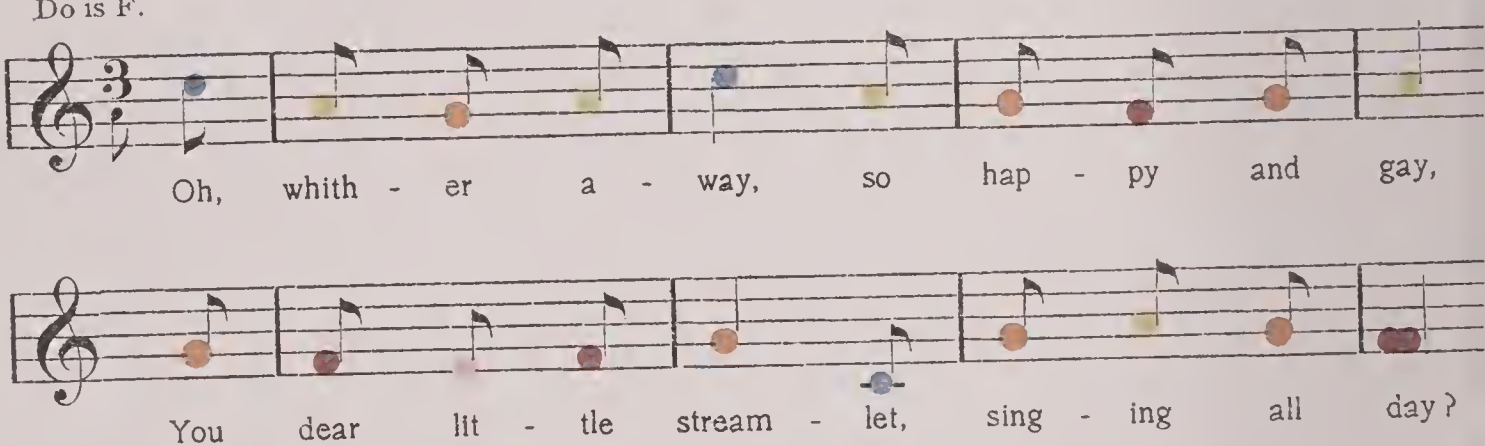
Do is F.



In the last exercise notice how smoothly the cadence in the second line answers to the first by the opposite run of melody. It is the same principle that the children used in their earlier exercises, but now it has a more graceful and flowing effect. In the following exercise the second and third phrases respond to the first by imitation, while the fourth takes an opposite course:

Ex. 136.

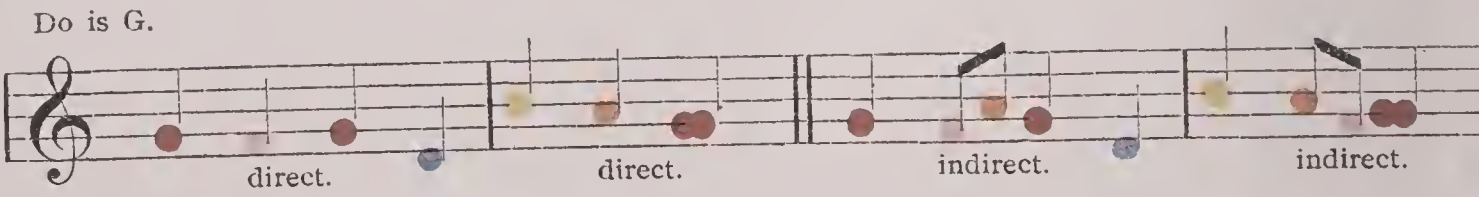
Do is F.



Indirect Resolution of Leading Tones.—We have seen how Ray gravitates upward to Me or downward to Do, while Te draws sharply toward Do, but now we have to notice that these tones do not always move directly to their center of gravity. A more graceful effect is often produced by an indirect approach to the resting tone. Observe the difference in the two following examples. In the first we have direct resolution of the leaning tones, while in the second the resolution is indirect.

Ex. 137.

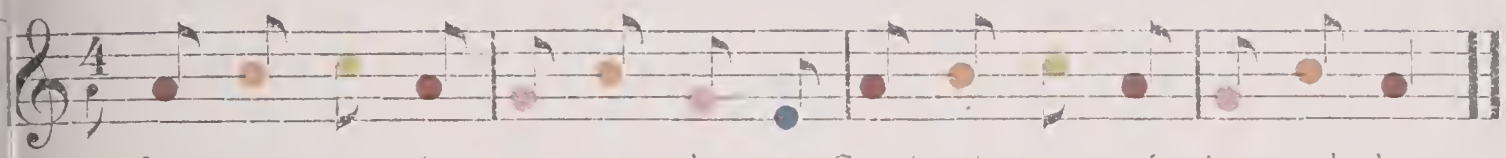
Do is G.



By means of these indirect approaches we can secure a more graceful flow, and more variety in the tune forms.

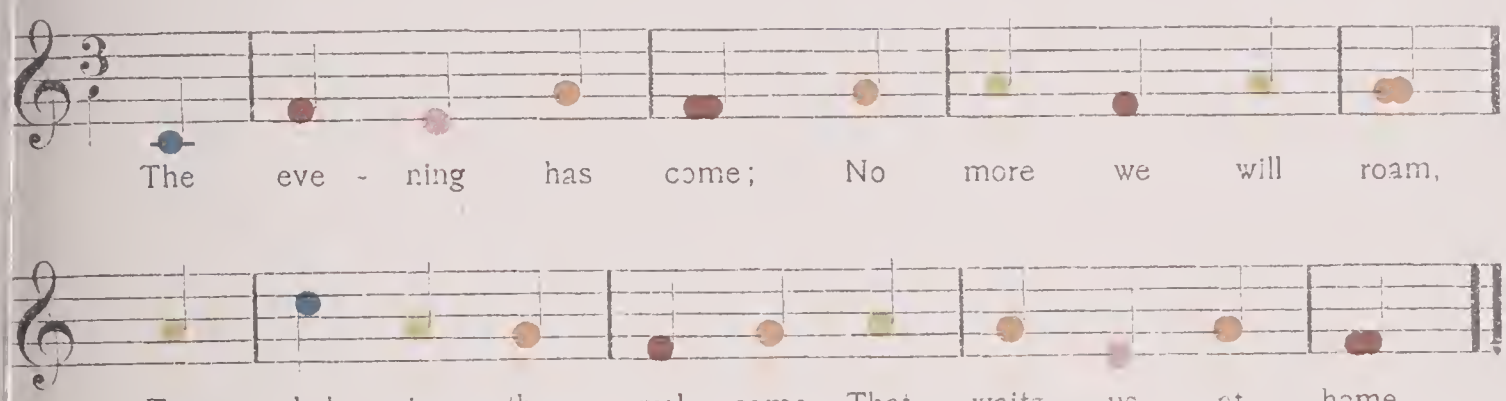
Ex. 138.

Do is A.



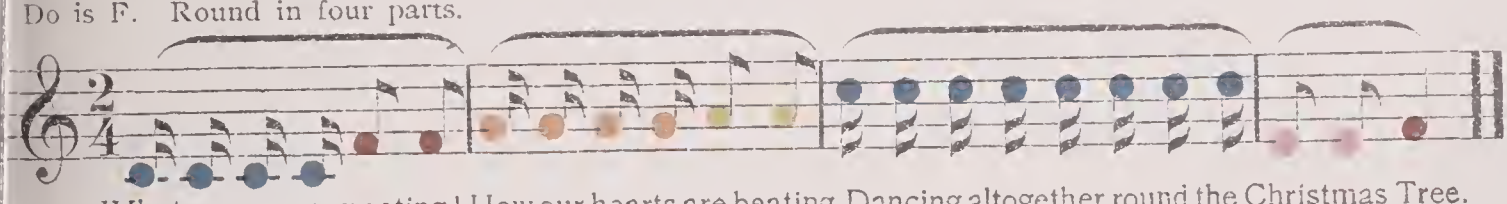
Ex. 139.

Do is F.



Ex. 140.

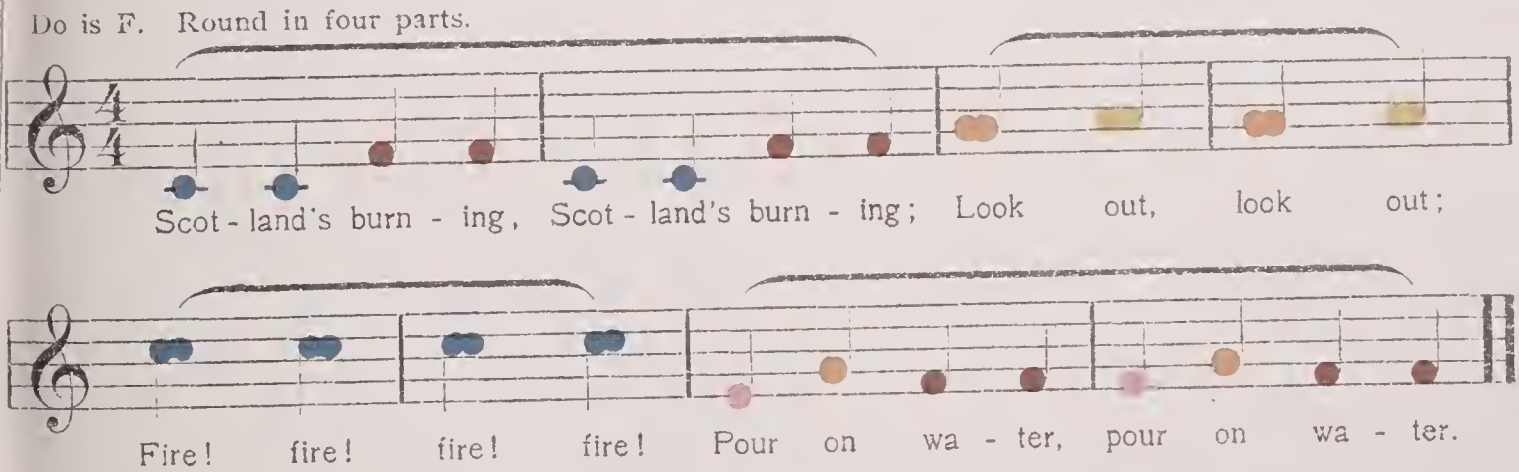
Do is F. Round in four parts.



SCOTLAND'S BURNING.

Ex. 141.

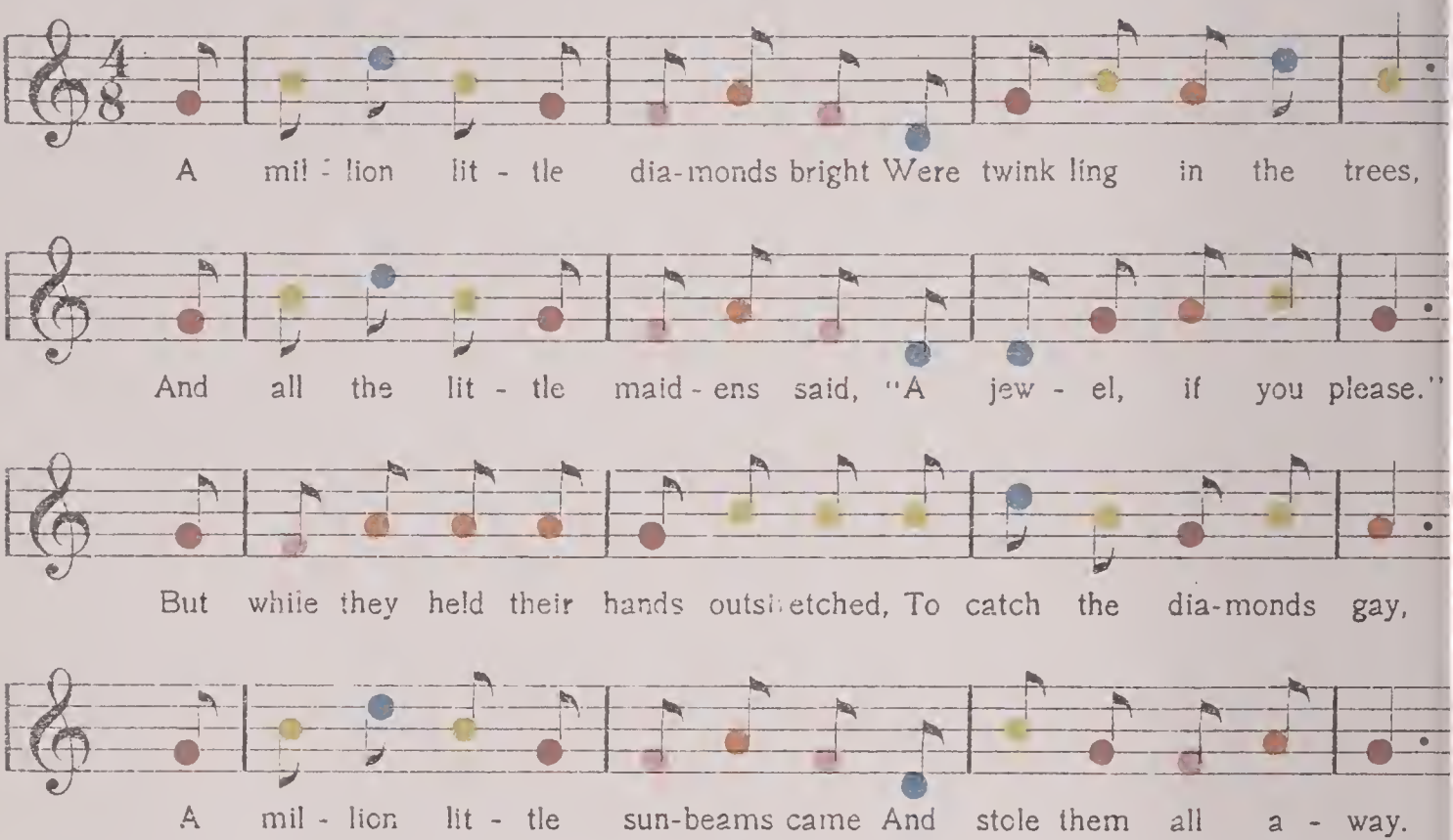
Do is F. Round in four parts.



A MILLION LITTLE DIAMONDS BRIGHT.

Ex. 142.

Do is G.

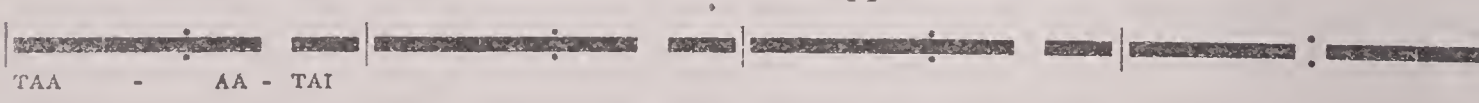


TAA-AATAI.—A form of rhythm which is commonly used is the continuation of a tone half way through the next pulse. This serves to break the monotony of too many plain beats where the divided pulses are not available.

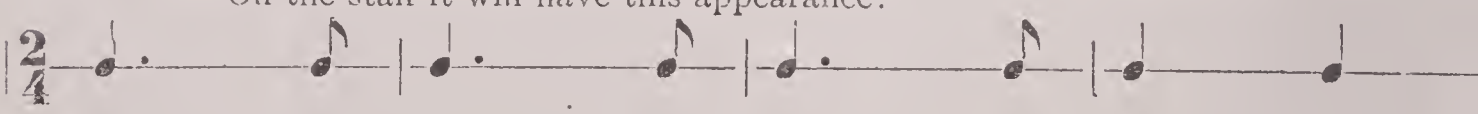
Draw the familiar form of four two-pulse measures:

Ask the children to listen for a mistake, and then "*la*" through the line, prolonging the first tone of the third measure half way through the second pulse.

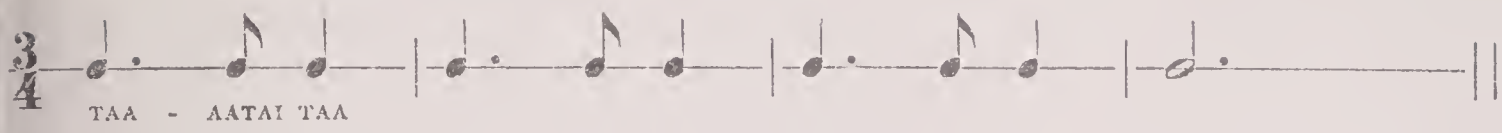
Repeat, with the new form in some other measure. When the children can imitate the form give its name "AATAI." Then introduce the sign and let the children sing it. Make new exercises by adding the "aatai" to measure after measure. At last it will appear thus:



On the staff it will have this appearance:

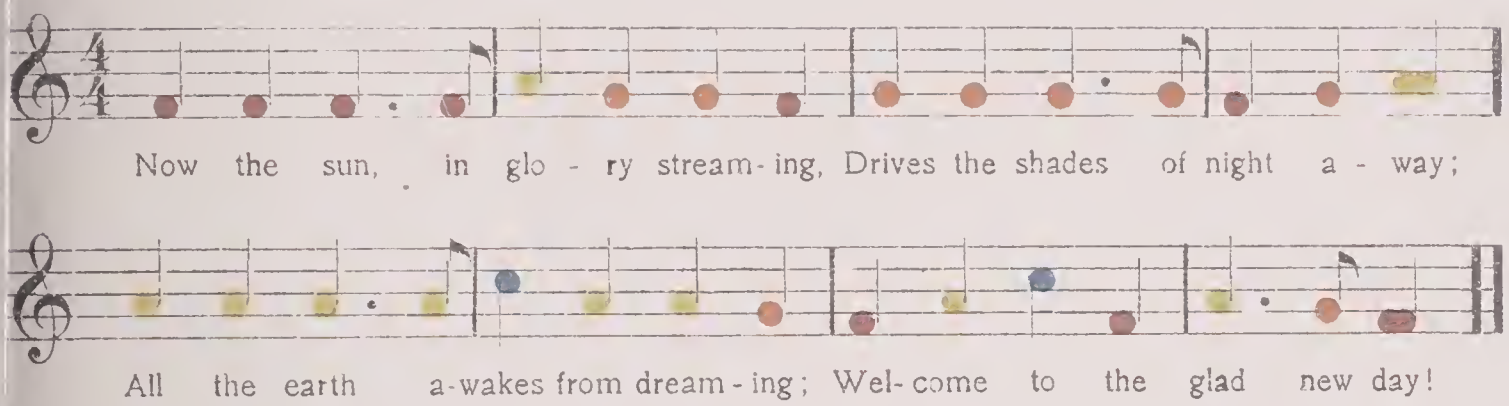


In the three-pulse measure this half-pulse continuation gives a rather pretty rocking effect, *e. g.*—

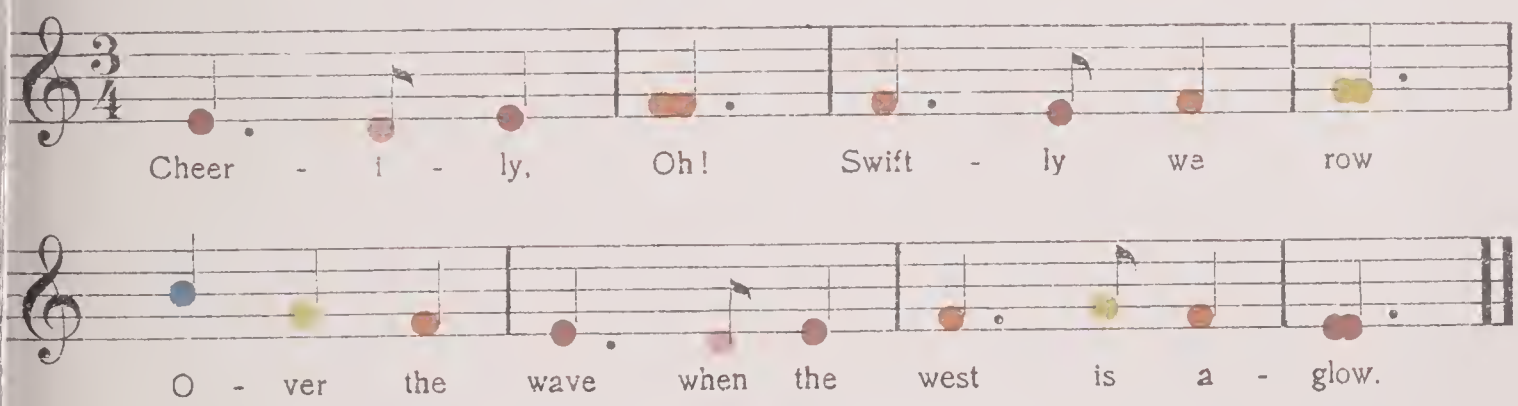


Notice the effect of TAA-AATAI in the following melodies:

Ex. 143.
Do is F.



Ex. 144
Do is E.

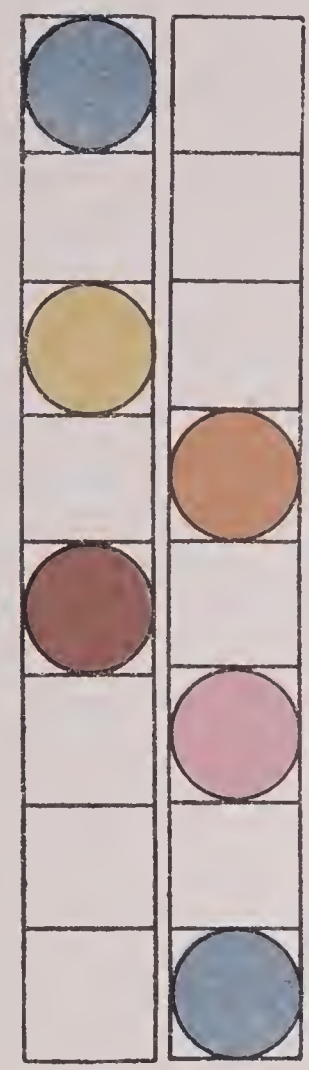


THE SO CHORD.

In all of their earlier exercises the children were learning the close sympathy between Do, Me and So, and they have so often heard them in combination that they are familiar with the chord structure. They have now to learn that there is the same organic relation between So, Te and Ray, which combined make the SO chord. With the thorough knowledge of the DO chord they will quickly grasp the meaning of its ally, the SO chord.

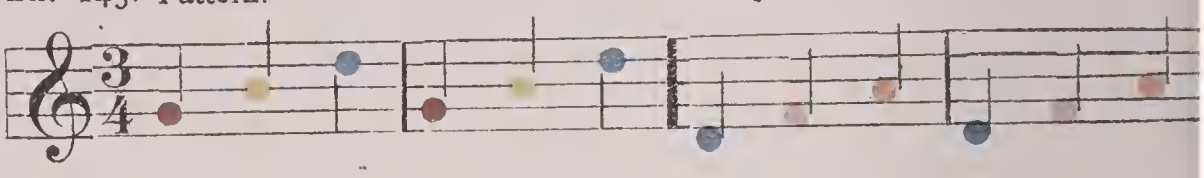
DO AND SO FORMS COMPARED.—Take two of the scale cards, each of which has a column of eight squares. On the first card place red, yellow and blue, on the fourth, sixth and eighth squares, to represent the DO chord. On the other card place blue, red-violet and orange on the first, third and

FIG. 17.

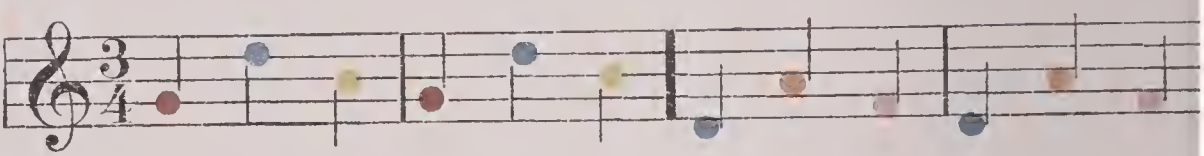


fifth squares to represent the SO chord. Place the two cards side by side, as in figure 17. Now, taking the sound of Do about the middle of the voice—say at G—point and sing such exercises as the following, using the DO card while the children point to and sing their responses from the SO card.

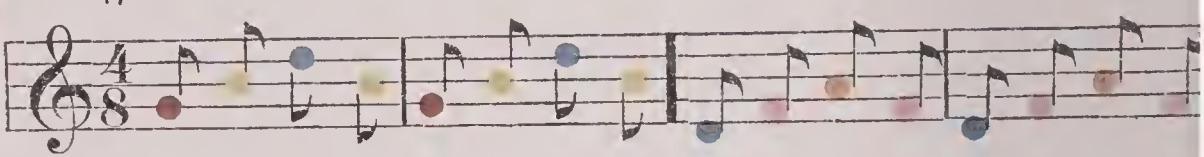
Ex. 145. Pattern. Response.



Ex. 146.



Ex. 147.



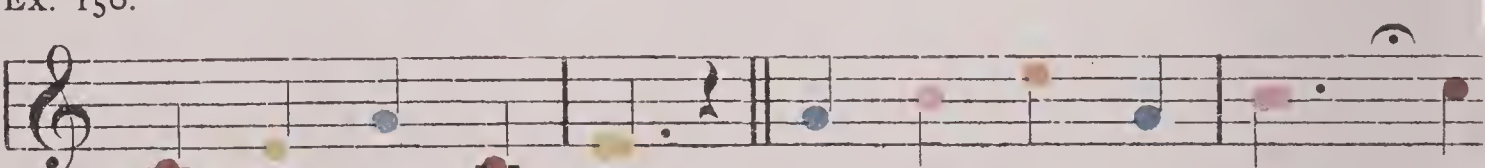
Ex. 148.

The children will see that any figure in the DO can be answered by a corresponding figure in SO, but the latter figure always seems unfinished. To give a sense of completeness we must finish on the Do tone.

Exercises 145 to 148 were in the So-bounded form of melody. To get the Do-bounded form, place the blue of the SO card opposite the blue of the DO card. Then take the sound of C for Do, and the children will respond to the pattern at a higher pitch. In this case they will naturally end on the higher Do^{1}.

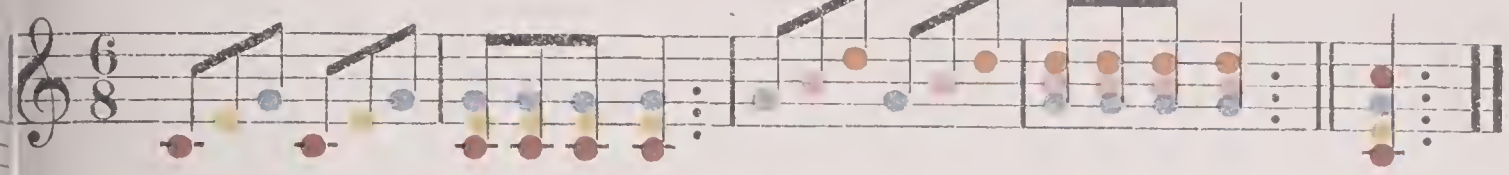
Ex. 149.

Ex. 150.



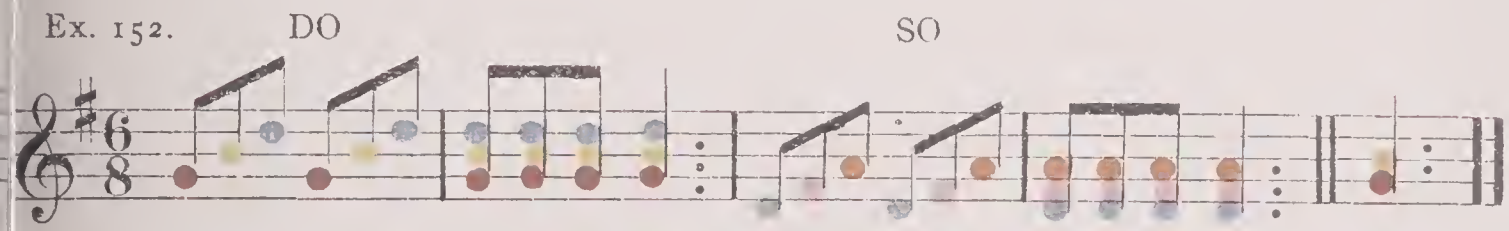
HARMONY EAR EXERCISES.—Let the children listen while the two chords are built up consecutively:

Ex. 151. DO SO



When the ear has been rested let them listen to this So-bounded form:

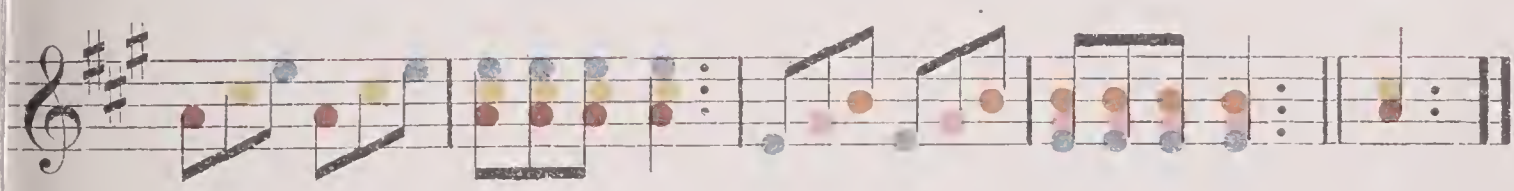
Ex. 152. DO SO



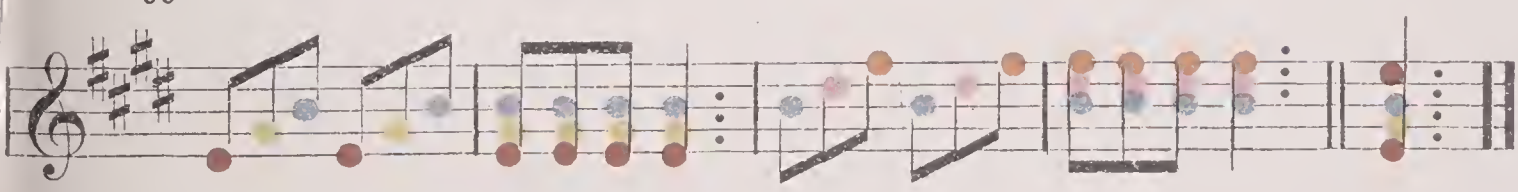
Play at different times in all of the keys. It is better at the close of each exercise to let the children hear the Tonic Chord struck, so as to fix in the mind the true relation between the two chords.

Ex. 153.

Ex. 154.



Ex. 155.

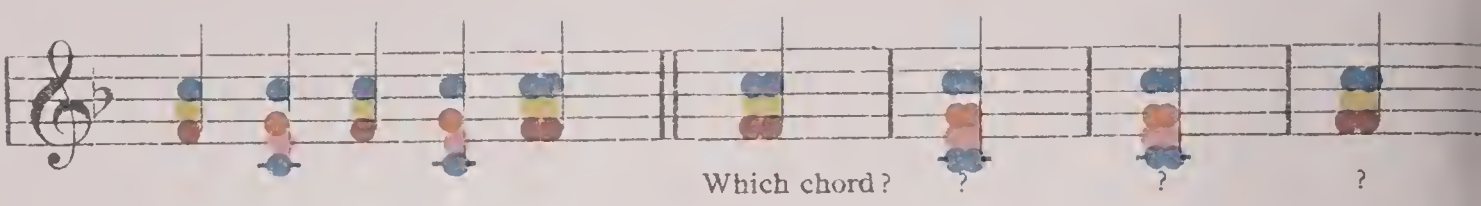


Ex. 156.

When the children have listened time after time to this chord building process they may hear the chord struck in any key, and name it at once.

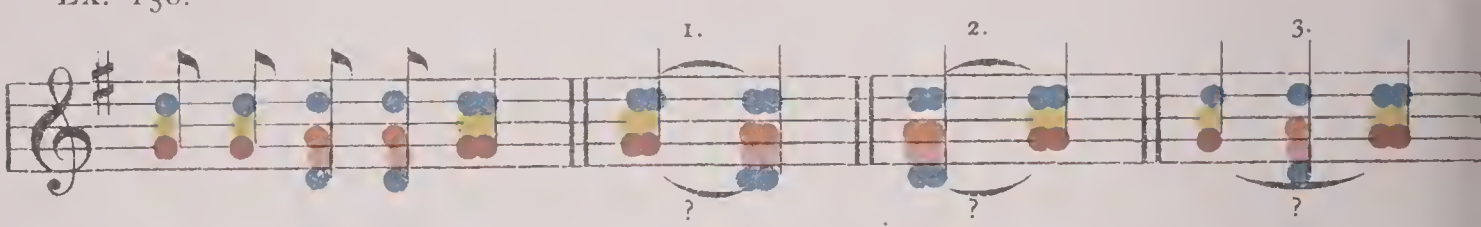
But before every test, the key should be established by striking a few preliminary chords, *e. g.*—

Ex. 157.



CONNECTED HARMONIES.—The children should now listen to the progression of chords. This can be made very simple at first, *e. g.*—

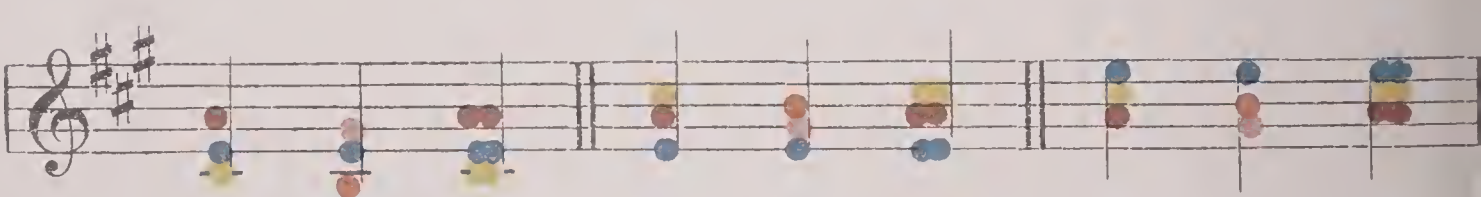
Ex. 158.



They will see that No. 1 is a cadence of unrest or expectancy. No. 2, on the contrary, is a cadence of rest or satisfaction. No. 3 is a combination of the other two, and gives a pleasant impression of rest-motion-rest. By this time the children will have noticed that the tone So is the connecting link between these two chords, being common to both.

Although the chords have been so far presented only in their normal position, with the root of the chord in the lowest part, they are often heard in inverted positions, and the children will enjoy listening to them in the following forms:—

Ex. 159.



Play these progressions in various keys.

THE FA CHORD.

We now come to the third and last of the great chords which, combined, give us the melodic scale, and also furnish the most important factors of harmony.

The root tone of the SO chord was found to be a fifth above the Tonic, whereas the root of the FA chord is a fifth below the Tonic. As So is the reacting tone above the Tonic, musicians generally speak of it as the Dominant, and of its chord as the Dominant chord. Fa reacts below

the Tonic, and is, therefore, known as the Subdominant; and the chord of FA is the Subdominant chord.

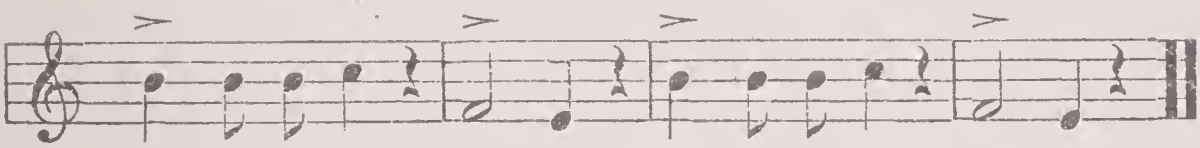
Before we study this third group as a chord we must learn something of the two new tones which enter into it.

INTRODUCING THE TONE FA.—Follow the same general plan as with the Te. The children should be so familiar with the five tones already in use that they will detect the new tone as a stranger. Ask them to listen for something new in the following exercise:—

d m s d' s m $\overset{*}{s}$ — || d m s d' s m $\overset{*}{f}$ — ||

They will notice the difference between the clarion-like ring at the end of the first phrase and the sombre ending of the second.

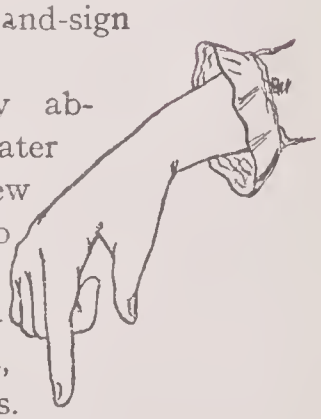
But the most marked contrast is between Te and the new tone. Sing to them this phrase:—



Oh, let us in! No, no. Oh, let us in! No, no.

The contrast will be all the more strongly felt if the children are allowed to sing the response themselves.

When they remember how the finger pointing upward suggested the gravitation of Te toward the tone above they will have no hesitation in choosing the finger pointing downward as the appropriate hand-sign for the new tone. See figure 18. FIG. 18.

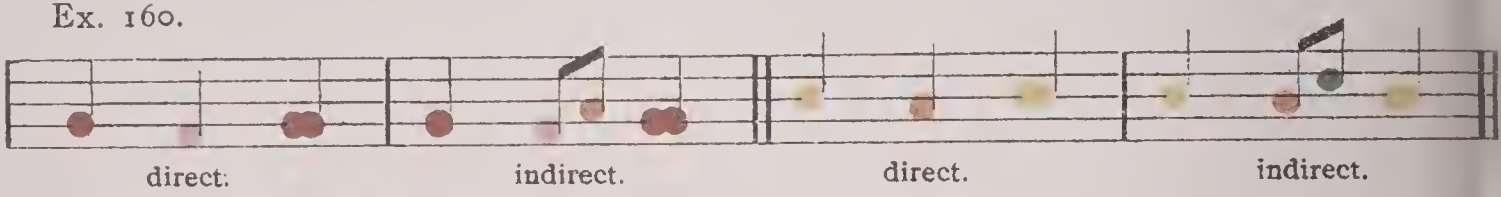


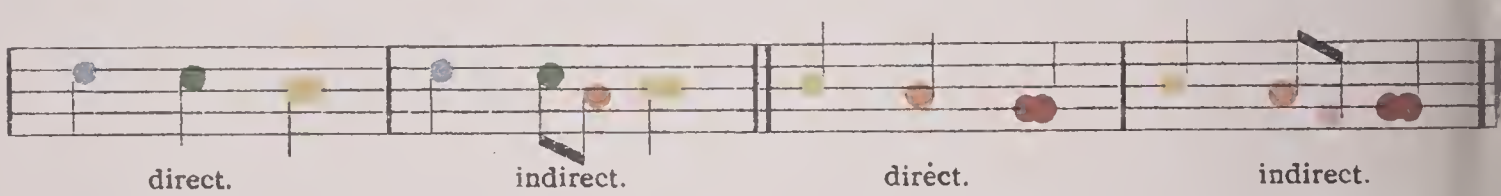
NAMING THE TONE. — Names without things are empty abstractions, but a name fitly applied gives to the thing much greater distinctness and force in the mind. Hence, in the study of new objects, naming is an important crisis. The aim should be to give the name at the instant when the child's attention is fixed upon the object; by doing this, not only will the name be remembered, but the child will always have the power, when hearing it, to call up a vivid conception of the thing for which it stands. Apply the principle to the present instance. Let the children sing from the hand-signs the names of the tones. When it comes to the new downward pointing sign, for which they have as yet no name, hold them for a moment in suspense, and then sing with quiet emphasis the name—"Fa." The solution of Fa upon Me may be shown to the children by giving the sign for Me with the left hand, to which the right forefinger points downward. Let them make the same sign, and sing the tones f m.

COLOR SYMBOL FOR FA.—Give a little tone exercise with the colored balls, and unexpectedly introduce the green ball. Under the figure of a bird, the children would probably think of the new-comer as a parrot. This bird shows a strong attraction for the canary. The new card will now find its place in the Bird Scale, both in the Do-bounded and So-bounded forms. The children can also add the green circle to their card scales. The addition of this tone and color gives more richness to the tune forms, and more room for carrying out the principles of imitation and contrast in melody.

To thoroughly accustom the children to the play of the leaning tones around their center of gravity, let one child point on the scale, while the others sing short phrases, first with the direct resolution, then with the indirect, *e. g.*—

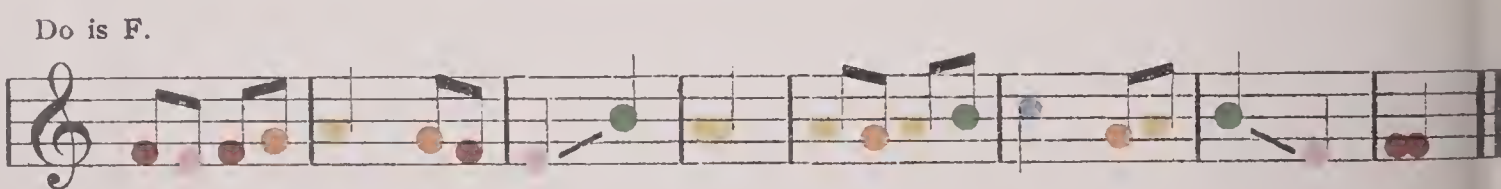
Ex. 160.





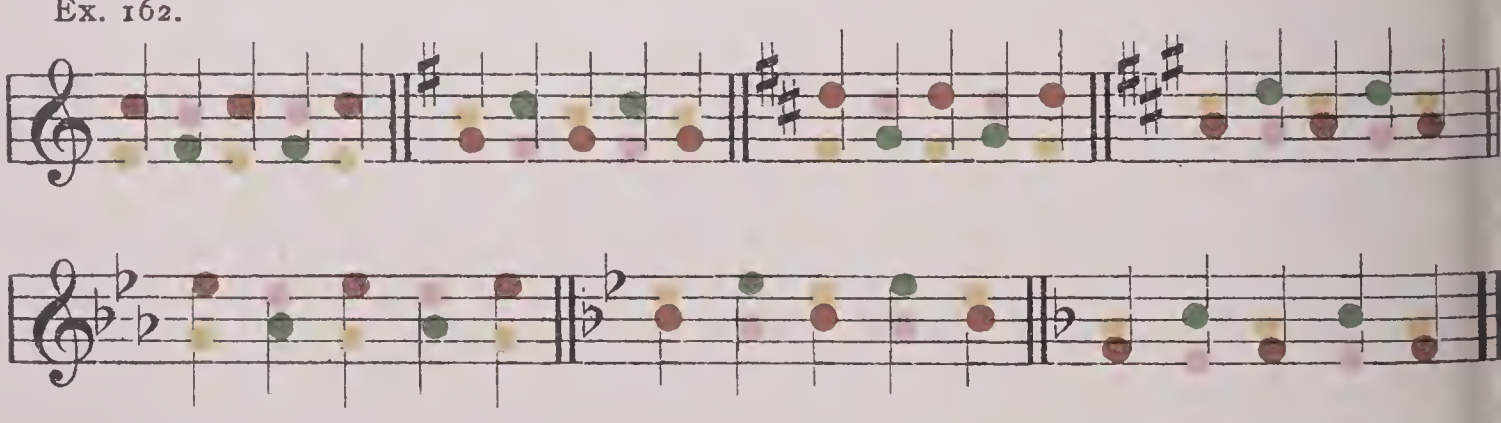
Te must find its rest in Do, and Fa must find its rest in Me, except when Te leaps to Fa, which then resolves upon Me; or, on the other hand, when Fa leaps toTe, which then resolves upon Do. This transferred resolution of Te and Fa is illustrated in the following tune form:

Ex. 161.



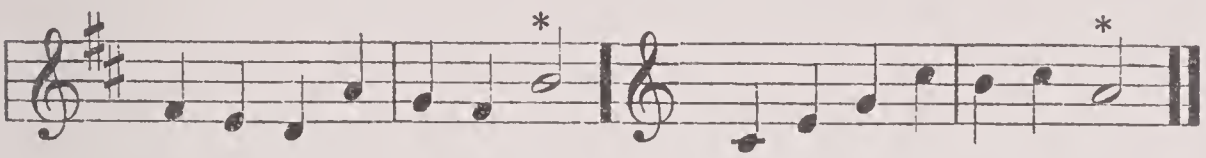
The children have been contrasting the upward resolution of Te with the downward resolution of Fa. Now let them hear both played simultaneously. Do this in various keys, *e. g.*—

Ex. 162.

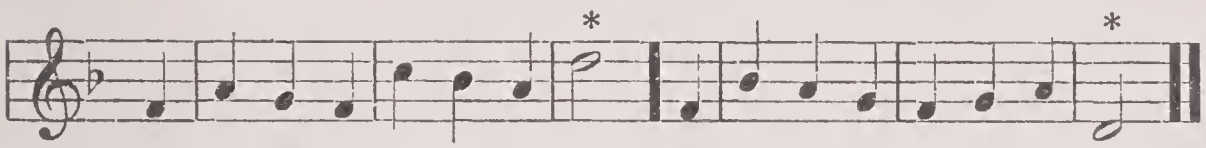


INTRODUCING THE TONE LA.—There is but one vacant space left in the scale and that is No. 6. If the children are quite familiar with all the other tones, so that they can always name them by sound, the new tone may be introduced unexpectedly; but remember that it is increasingly difficult to detect a new tone among so many. If there is danger of perplexity it will be better to ask them to listen for the tone at the end of a musical sentence, *e. g.*—

Ex. 163. Ex. 164.



Ex. 165. Ex. 166.



From such examples as the above they will be impressed with the sad wailing of the tone at a high pitch, and with its mournful despondency in the lower octave. To illustrate this, sing the opening strain of "By the Sad Sea Waves."

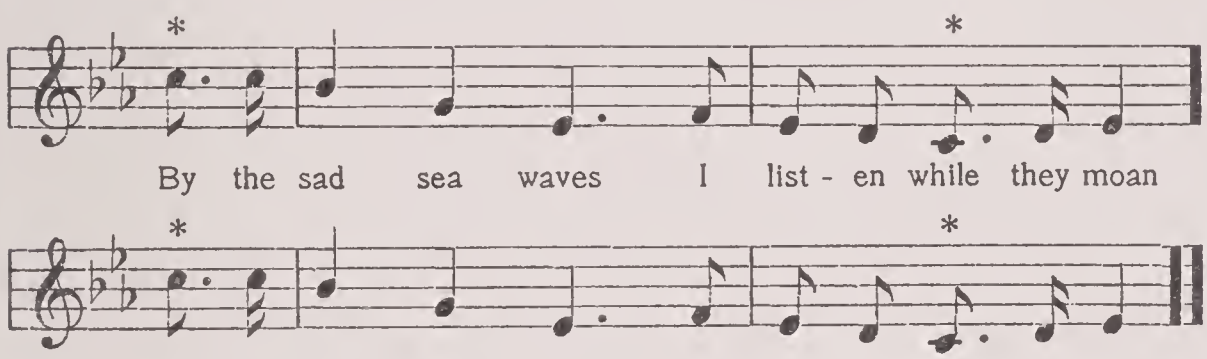


FIG. 19.

Lead them to see that this tone has a gentle dependence like Ray. But there is a contrast between the hopeful disposition of Ray and the despondent attitude of the new tone. This is well shown by the hand-signs. In Ray the hand is upturned, but for the sixth tone it hangs helplessly downward from the wrist. (See figure 19). When the children have grasped the significance of the sign sing the name—La.

COLOR SYMBOL FOR LA.—Violet is the color for La, and the ball can be introduced as a gentle dove. As a child comes holding the violet ball, the rest may sing:

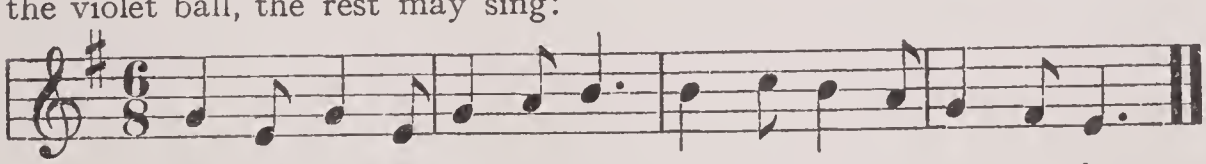
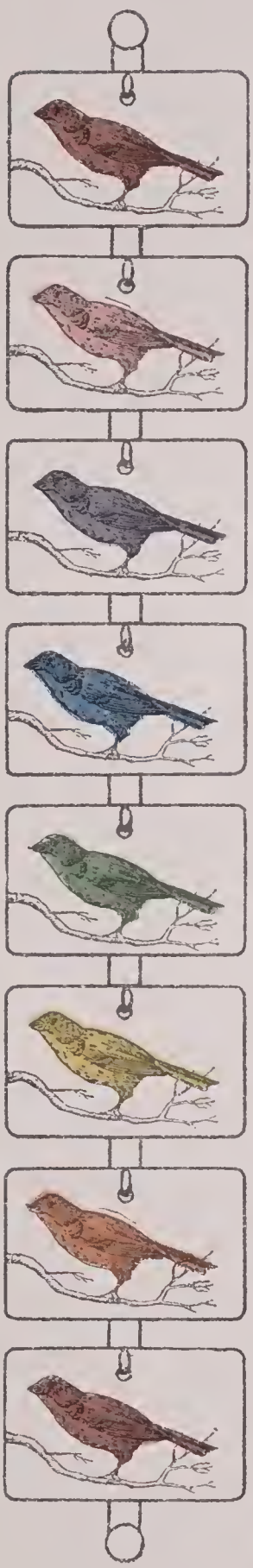


FIG. 20.



The last remaining bird-card can now be put into its place above So, and the scale is complete. Let the children build it up also in the So-bounded form. (See figures 20 and 21). They can then complete the two forms of the scale upon their gray cards.

Let them now make a tune form of the scale:

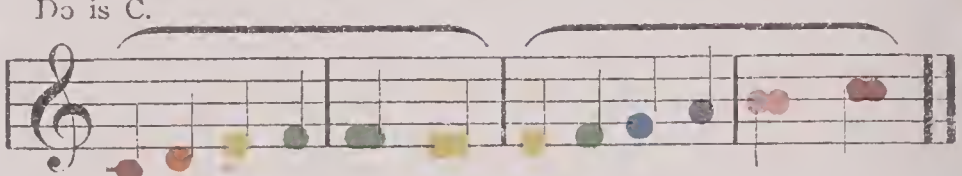
Ex. 167.

Do is C.

The following exercise, if sung as a round in two parts, will make a duet with the Te and Fa resolving upon Do' and Me, as in Ex. 188.

Ex. 168.

Do is C.



Here is a melody in which the opening theme is imitated more brightly in the second section, and after being carried out in a very bright and animated way in the third section, the original theme is restated in the fourth.

Ex. 169.

Do is D.

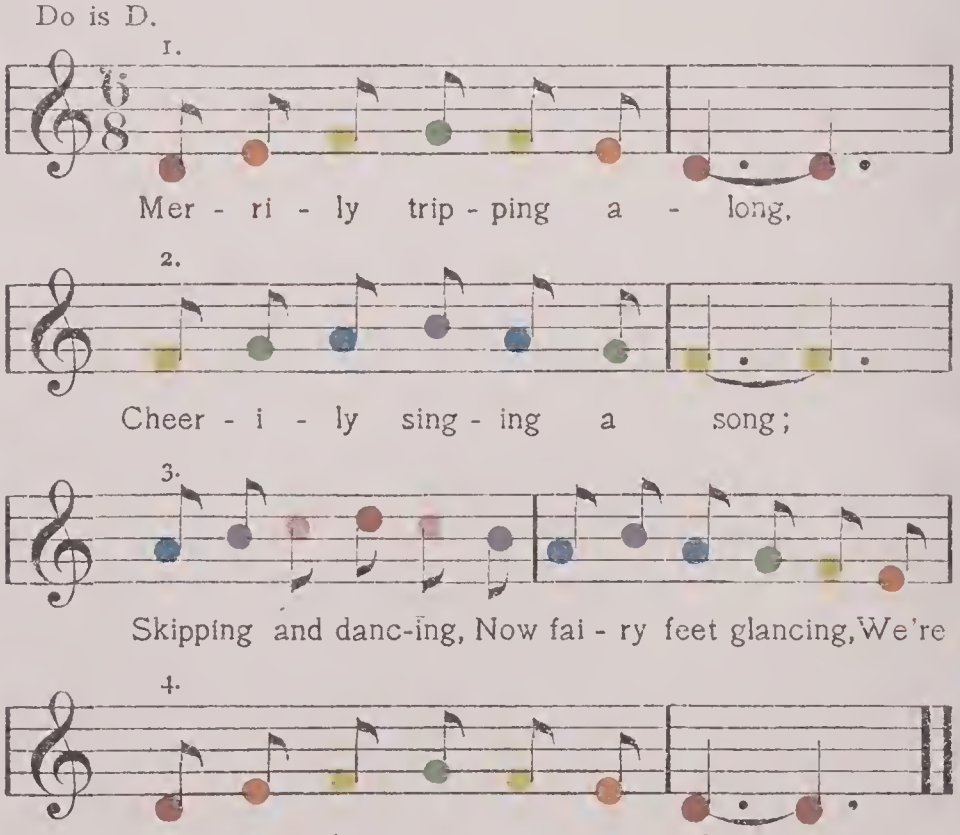
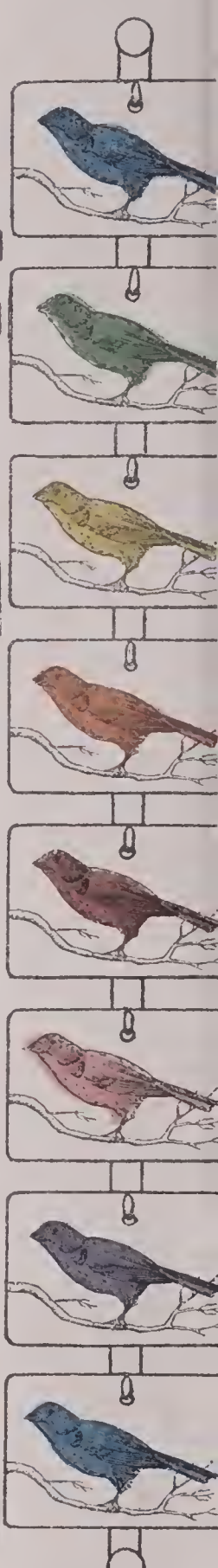


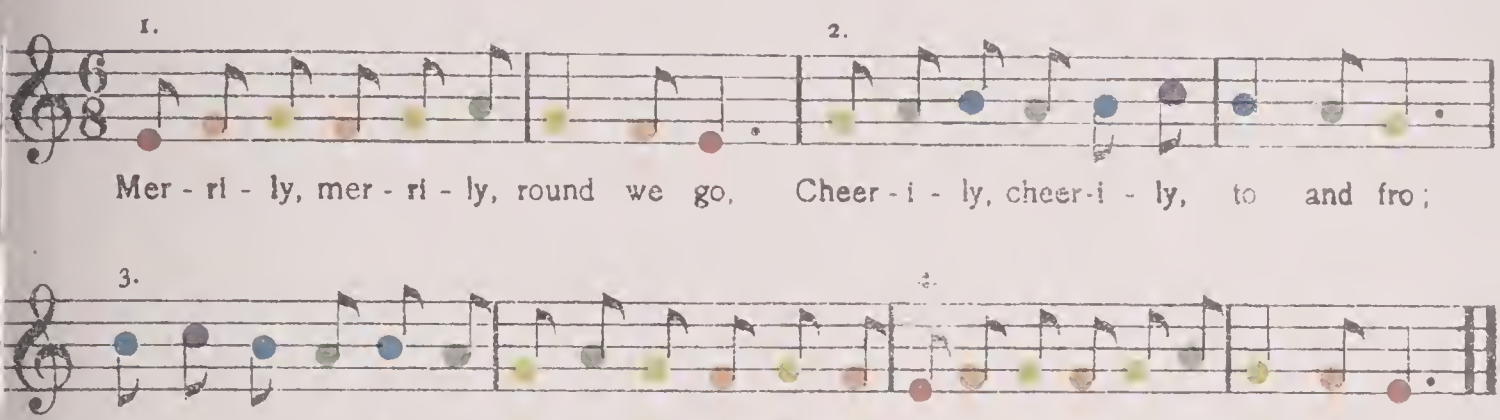
FIG. 21.



Compare the foregoing tune with the simpler treatment of the same idea in Exs. 96 and 97. Here is another melody upon the same plan. Notice in section three the imitative curves in dropping gracefully down to the theme in the fourth section.

Ex. 170.

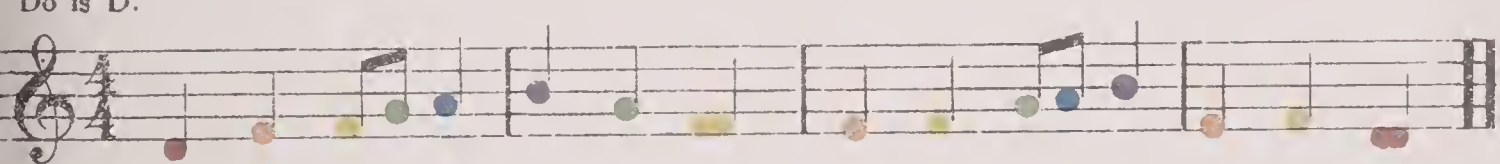
Do is E.



It will be noticed in the pointing exercises on the scale that, while La is essentially a leaning tone, it is not so favorably situated for a restful resolution as are the other leaning tones. It turns languidly toward So, but as we have seen that tone suggests movement rather than rest. Under these conditions, La has to seek rest elsewhere. The most usual way is to push upward through the energetic Te to find rest in Do' above. But beautiful effects are sometimes produced when La leaps to Fa or Ray and lets them find the needed resolution. See this illustrated in the following exercises:

Ex. 171.

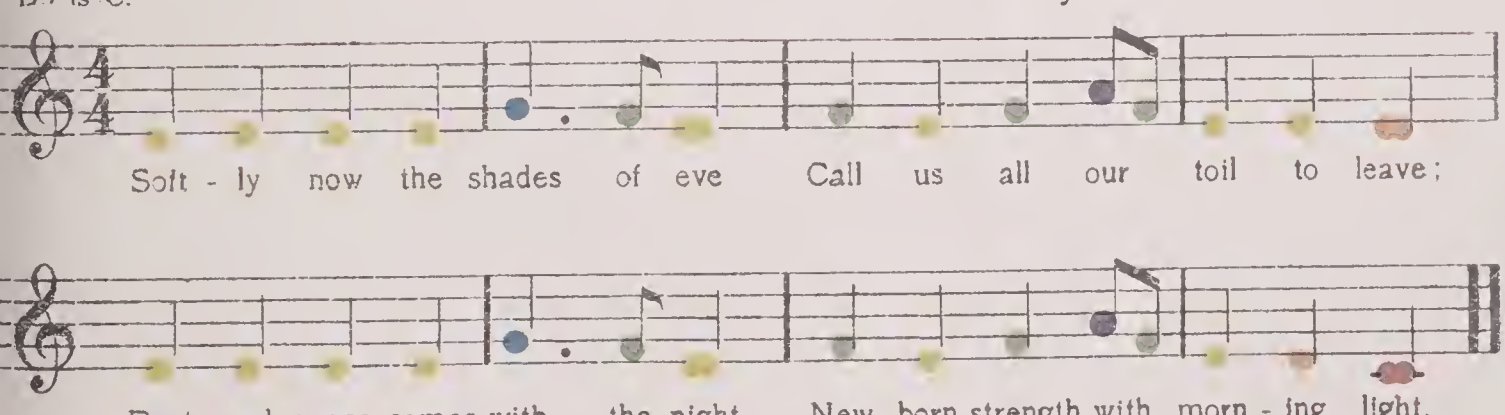
Do is D.



Ex. 172.

D. is C.

Melody from the TWELFTH MASS.

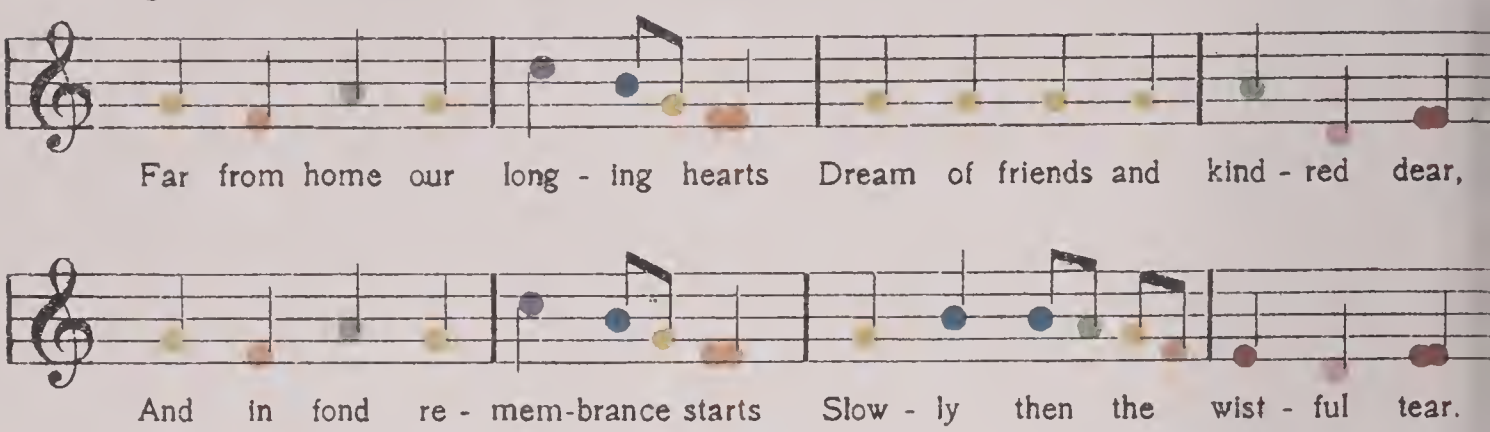


The following melody well illustrates the plaintiveness of La.

Ex. 173.

Do is E♭.

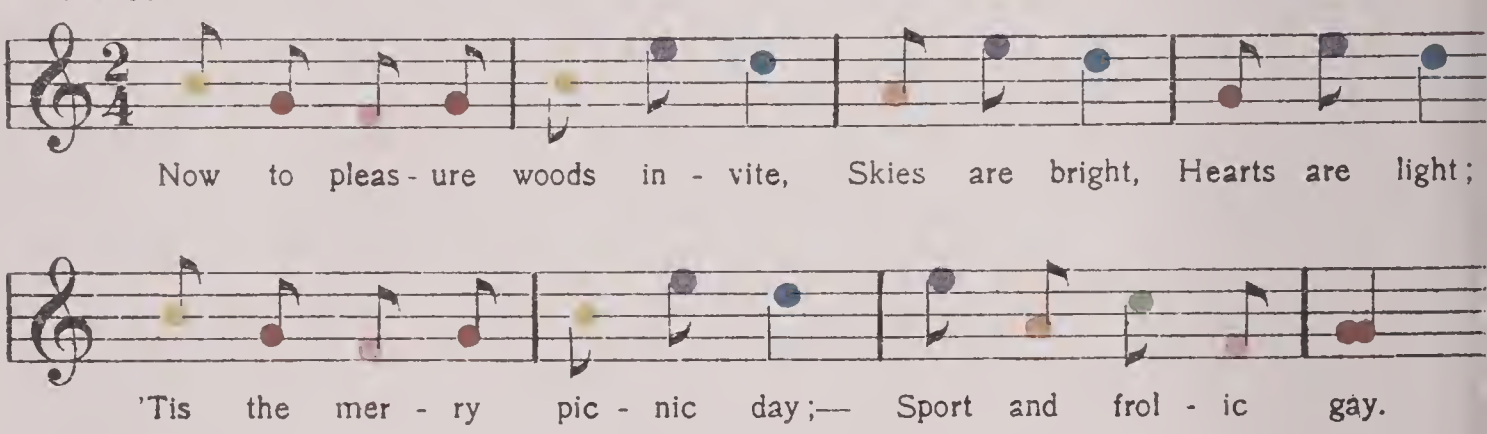
From WEBER.



But La is not always plaintive. Sometimes it is used in light, leaping movements, and then it is extremely gay, *e. g.*—

Ex. 174.

Do is G.

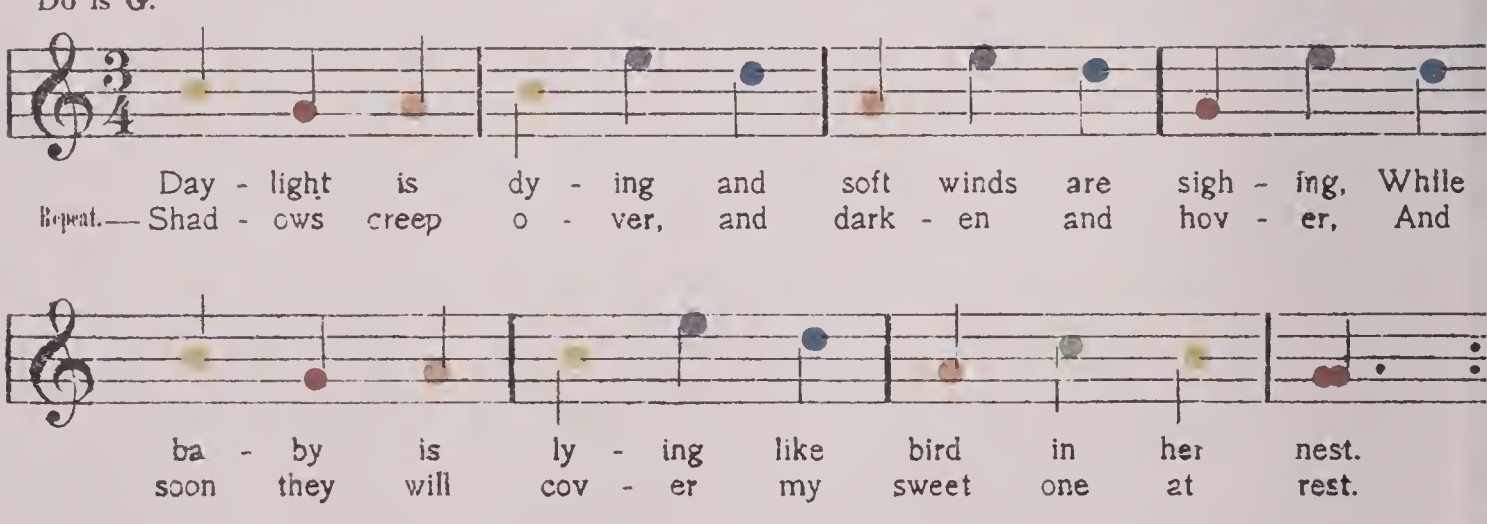


In the next melody the arrangement of tones is very similar, and yet see what a difference the change of measure makes. In the three-pulse form it is not so rollicking, but has a more graceful flow.

DAYLIGHT IS DYING.

Ex. 175.

Do is G.

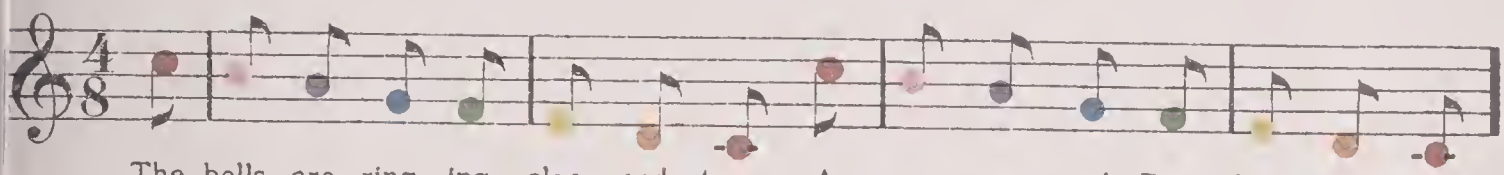


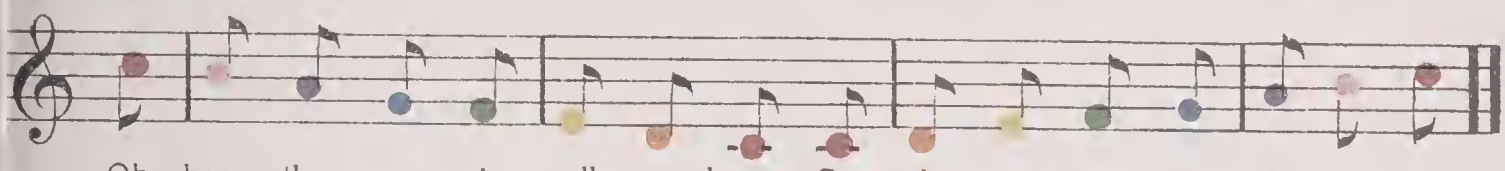
Melodic runs of the whole octave can now be introduced. See that they are done very lightly, so as not to strain the voices and make them coarse. There is less danger in running down than up. As the voices grow in easy action, the following song may be sung at a higher pitch, say, D and E.

Ex. 176.

THE BELLS ARE RINGING.

Do is C.

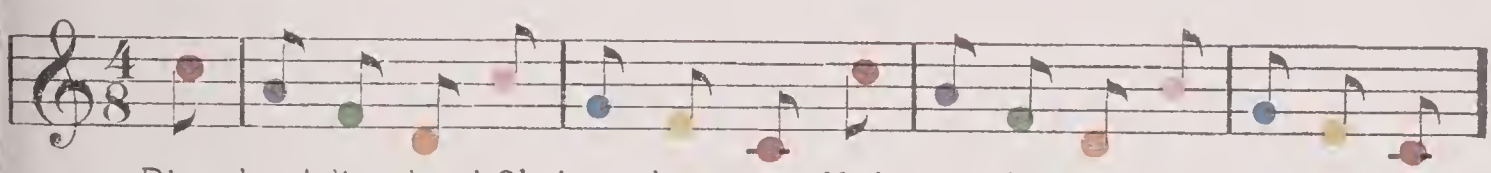




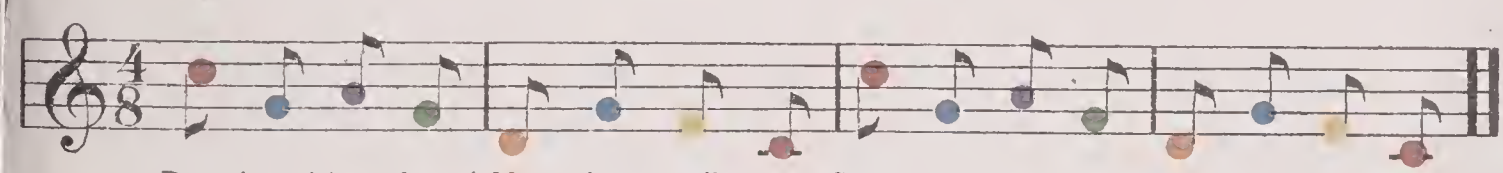
Ex. 177.

THE CHIMES.—1.

Do is C



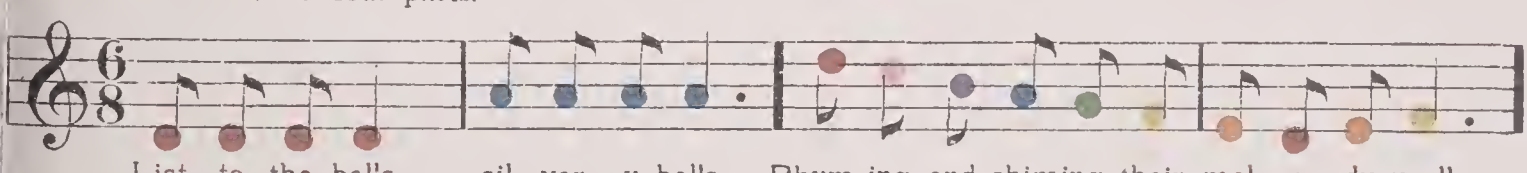
THE CHIMES.—2.

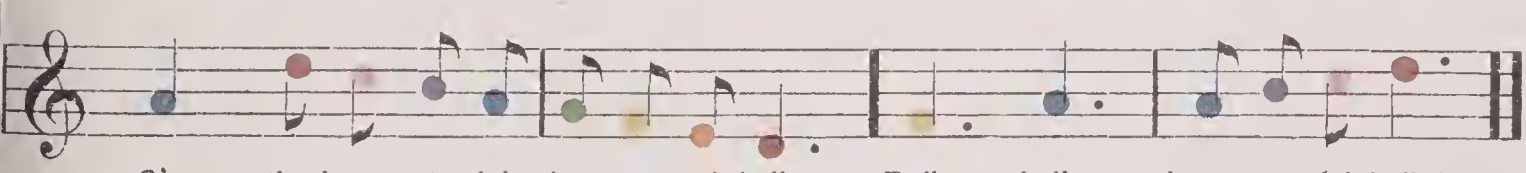


Ex. 178.

LIST TO THE BELLS.

Do is D. Round in four parts.





This will sound well as a song; but, of course, the effect is much better when four parts are blending in the round. If all can leave off together on the full chord the effect is richer. To do this all must watch for the

signal to stop. One part will finish at the second measure, another at the fourth, another at the sixth, and the remaining part will be at the end. Let all parts dwell upon their closing tone while the music gradually dies away.

BUILDING THE FA CHORD.—Now that the children have become familiar with the tones which constitute the third group, they should be led to recognize them as a chord. It will not be difficult to grasp the new combination, because the FA chord is constructed upon the same principles as are the DO and SO chords.

Play or sing the following exercise, at first slowly, then more rapidly:

Ex. 179.

First with Do at C; then with Do at D and E.

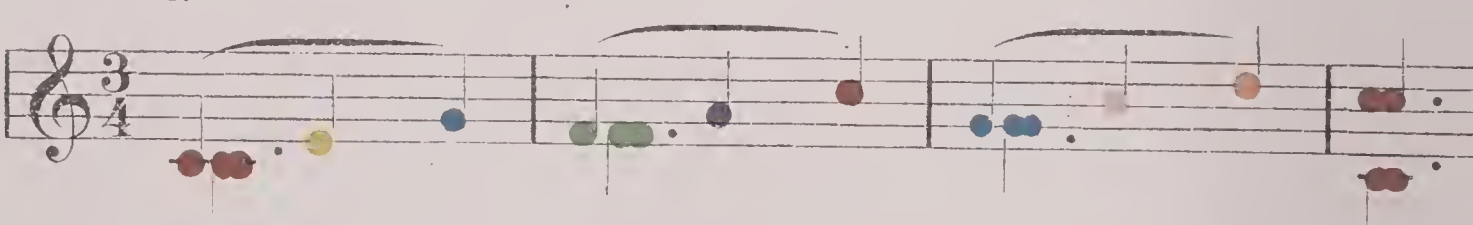
When they have listened two or three times to this succession let them la it through. Then point to the tones on the color scale while they sing the names. To vary the exercise let the children be divided into three groups, and have them sing one after the other.

Ex. 180.

FIRST GROUP.			SECOND GROUP.			THIRD GROUP.			TOGETHER.		
| d	m	s	| f	l	d'	| s	t	r'	| d'	—	—

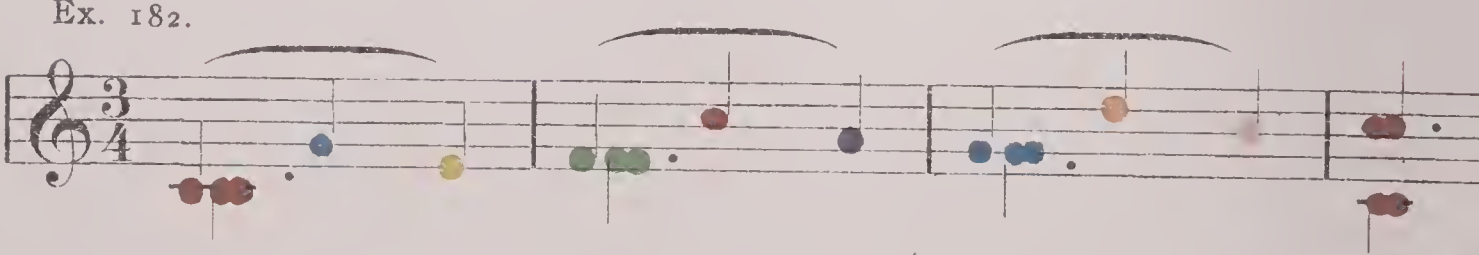
For another way of showing this chord relation select three children and let each hold the colored balls of one of the chords. Then the first will point and sing d m s; to which the second will respond with f l d'; and the third with s t r'. The rest of the children should look and listen, but when the exercise is repeated they may join in and hold steadily on to the root tone of each chord, thus:

Ex. 181.



The whole process may be repeated with other figures upon the chords, *e. g.*—

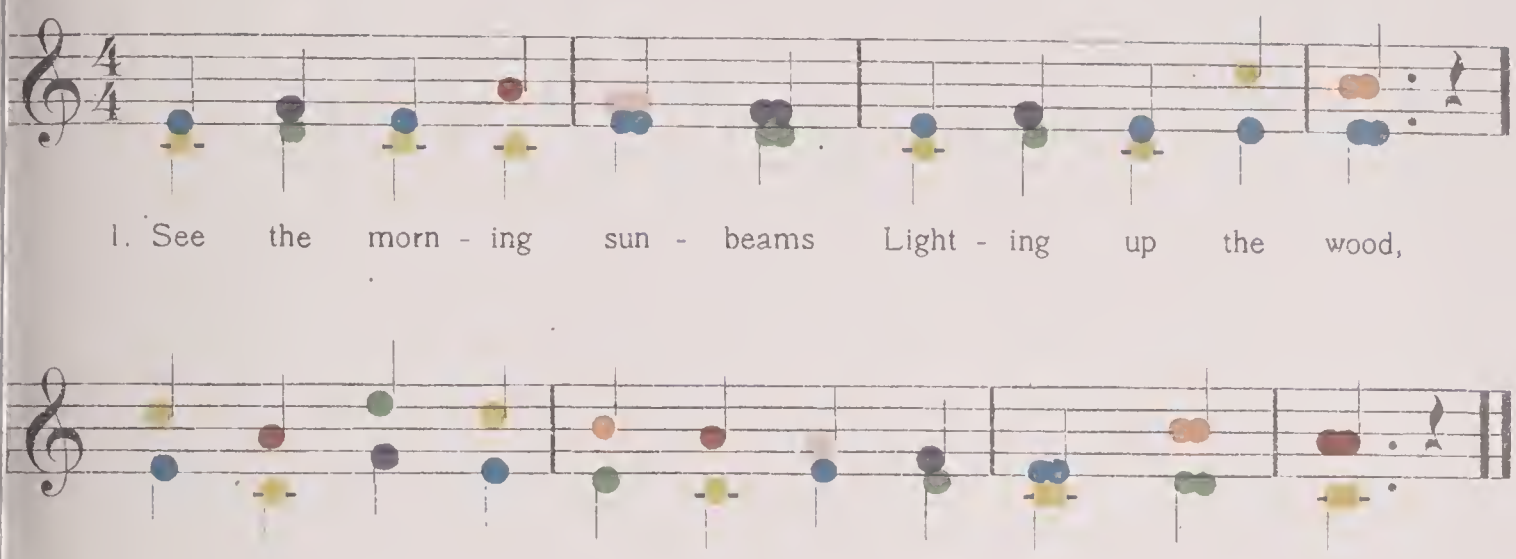
Ex. 182.



Ex. 183.

GOD IS EVER GOOD.

Do is Ab. D. B.



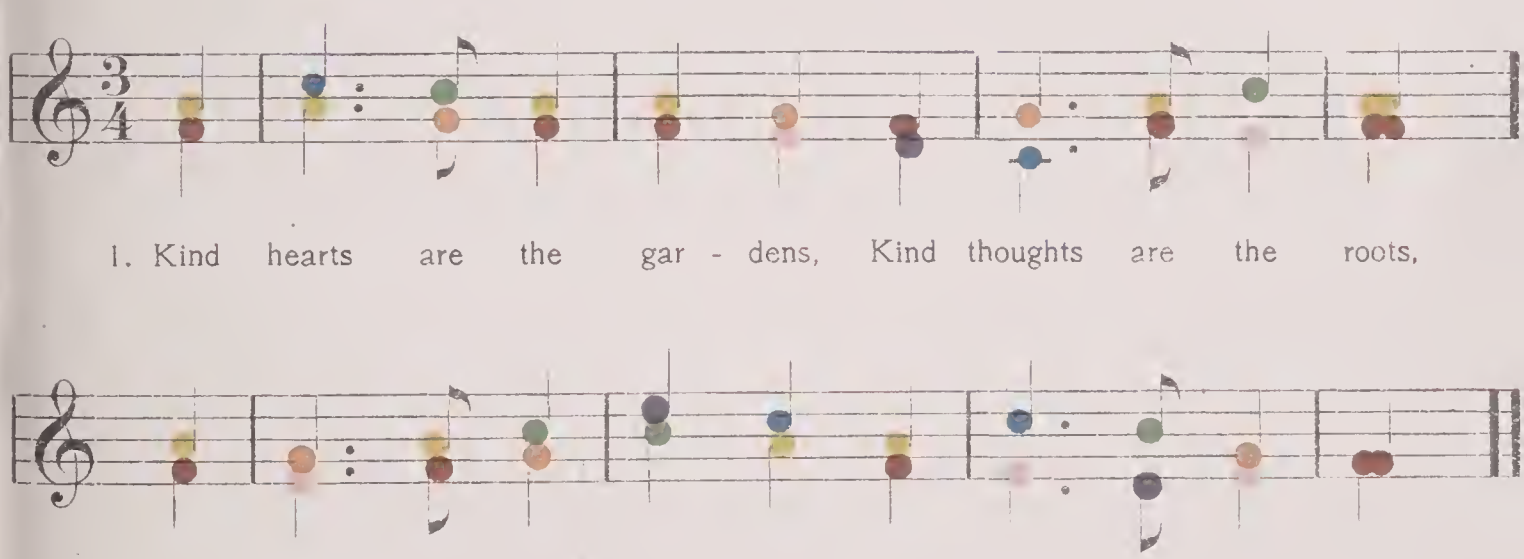
2 Hear the mountain streamlet
In the solitude,
With its ripple saying,
God is ever good.

3 In the leafy tree-tops,
Where no fears intrude.
Merry birds are singing,
God is ever good.

Ex. 184.

KIND HEARTS.

Do is F. D. B.



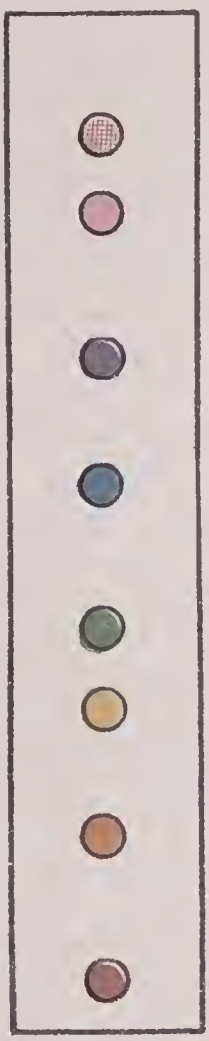
2 Love is the bright sunshine
That warms into life,
For only in darkness
Grow hatred and strife.

3 Take care of your garden,
And keep it from weeds,
Fill, fill it with sunshine,
Kind words and kind deeds.

KEY-RELATIONSHIP.

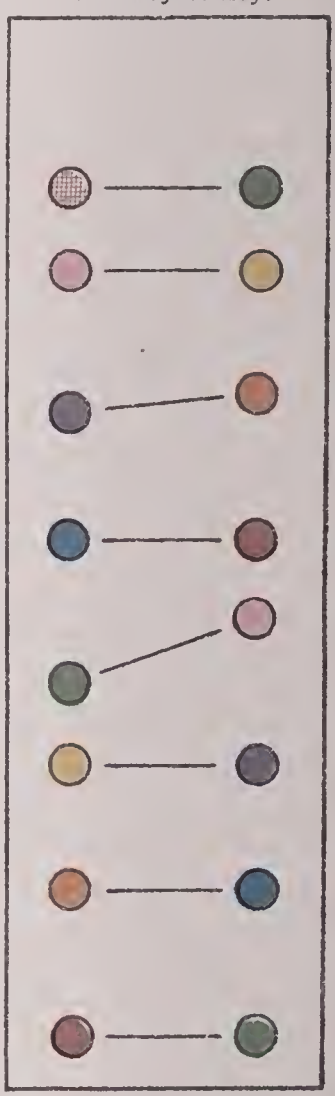
Sense of Key.—In music it is above all things necessary to feel the relationship of the tones one to another, and especially their subjection to the key-tone. Unless this is clearly felt the music falls into a chaotic condition. The listener may not know what is wrong, but he feels that something is out of place. In other words, he has lost the sense of key.

FIG. 22. Showing tone intervals in the scale.



Definition of Key.—The child has been preparing all along for a clearer mental perception of key-relationship. The development of the chords and the study of the leaning tones helped on toward the realization of the scale as a family of tones. He well knows the order in which they stand, and should now be led on to observe the intervals between them.

FIG. 23. Showing transition from key to key.



In looking at Figure 22 it will be seen at a glance that the intervals between the notes are not all alike. There is but a small step from Te to Do' and another small step from Fa to Me. Remind the children that Te and Fa are the two tones which lean strongly toward their rest in Do and Me. These two latter hold an important office in the scale, for they fix the key in the mind. Te reaching toward Do' calls attention to it, while Fa reaching toward Me keeps that tone prominently in view. Thus Te and Fa may be considered as the warders of the key, since they establish the two tones which are essential to a key. This strong assurance of key-relationship imparts a feeling of satisfaction to the listener.

But side by side with this satisfaction in holding to the key there is a desire for change, and a tendency to branch off into another key. Yet while Do and Me are kept before the mind this change is impossible. And to go one step further back, while Te and Fa are calling attention to Do and Me we cannot forget them, and so we must remain in the same key. It follows, then, that if we wish to pass into another key we must set aside either Te or Fa, which we have called the warders of the key.

TRANSITION TO THE DOMINANT KEY.

The most usual change, especially in short tune forms, is into the sharper or dominant key. In this process Fa passes out of the mind and another tone is substituted for it. By a natural reaction, the new tone is the very opposite of Fa. The latter tone turned decidedly downward to Me, while the new tone turns sharply upward to So. This at once reminds

us of Te reaching upward to Do', and we accept it as such. What was So now becomes Do in our minds, and all of the other tones arrange themselves around the new governor. This is shown in Figure 23. Notice that every tone in the original key has its counterpart in the new key on the right hand, except Fa, which has been superseded by another and sharper tone that serves to establish the new Tonic.

Observe the change which has taken place in the character of the tones. Although, with one exception, they are the same notes on the piano or in the voice, they now produce an entirely different effect. In the first place the restless outreaching So has become Do, the center of rest. Following out the family idea, So is now married and the head of his own family. Musicians call this passing into the "dominant key." The Do of the original key is now a Fa, which, by gravitating toward the new Me, becomes a determining factor in setting up the rival key. The undecided Ray has become the adventurous So. Calm Me has taken on the plaintiveness of La, while the despondent La of the old key now becomes the hopeful Ray, and Te becomes the peaceful Me.

But there is another factor in the transition from key to key, which lends a peculiar charm to it, and that is the blending of mental effects. For instance, the old So takes on the office and character of Do, and we feel the firm self-reliance which it gains, but we cannot forget all at once its former, bold ringing character. The new Me retains for a time much of the excitement of the old Te, and the new Fa puzzles us at first, because it is so bright and self-reliant. These blended effects are strongest just when we enter the new key. They soon begin to lose their force, and are scarcely to be distinguished after six or eight pulses; but by that time the composer's purpose is generally attained and he returns to the original key.

In the one exceptional case there can be no blending of the mental effects. Fa has no counterpart in the dominant key. There is instead a struggle for mastery between the old Fa and the new Te, and one or the other must be driven from the mind.

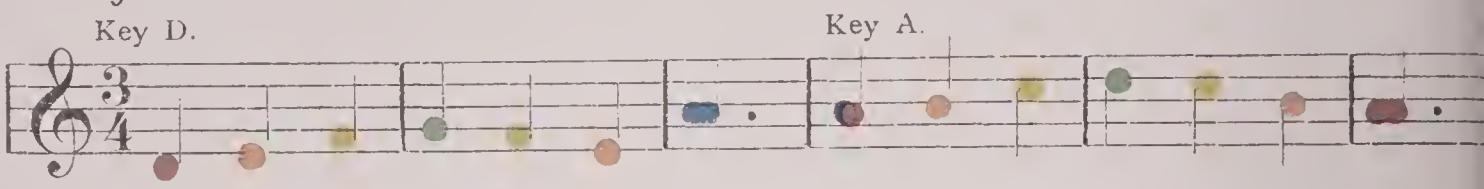
Bridge-Notes.—The student should now build up the scale in two related keys, as in figure 23, and sing from the teachers' pointing, passing backward and forward between the two keys. He may regard each of the horizontal lines as a bridge, and in passing over use both names to the tone, such as ^{s}**d**, ^{m}**l**, ^{r}**s**, etc. As they get used to this, let the first part of the bridgename be given in a rapid, elliptical manner, *e. g.*—^{s}**d**, ^{m}**l**, ^{r}**s**, etc.

Colored Bridge Notes.—Transition from key to key is confusing to the student when represented by the ordinary black notes, as there is nothing to indicate the change in the character of the tones, except an occasional sharp or flat; but by the use of the color symbols the thing is clearly pictured before the eye.

Suppose, for instance, we are passing over to the dominant key by a note which we enter as So, but which becomes in the mind Do of the new key. In this case the note would have both colors, the initial blue merging

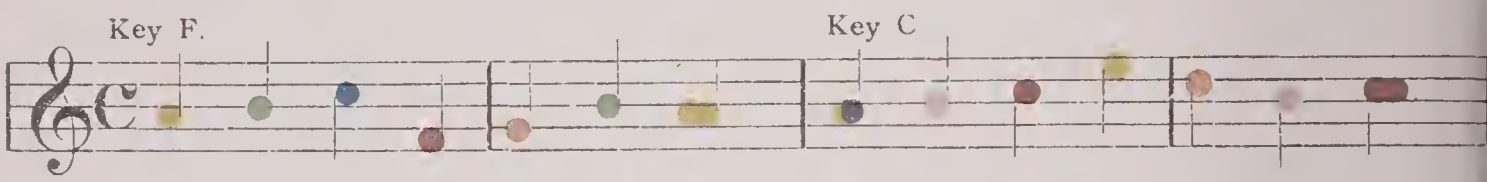
into red. Or if we passed over the bridge, ml it would be yellow merging into violet, etc. This will be shown in the following exercises:

Ex. 185.

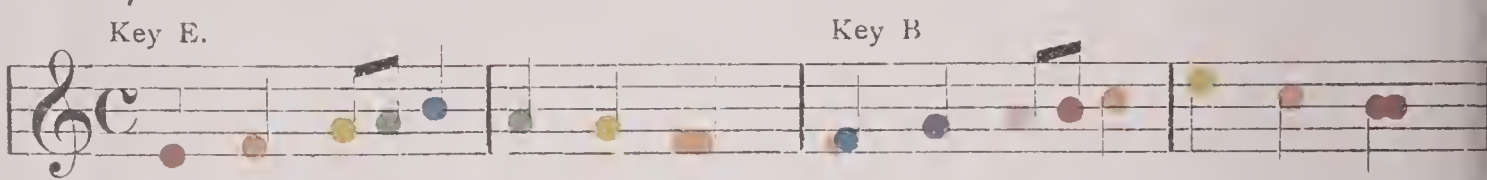


Observe that in this example the color notes clearly interpret the tone characters in each key, and a glance at the two sentences shows how closely the second imitates the first.

Ex. 186.



Ex. 187.

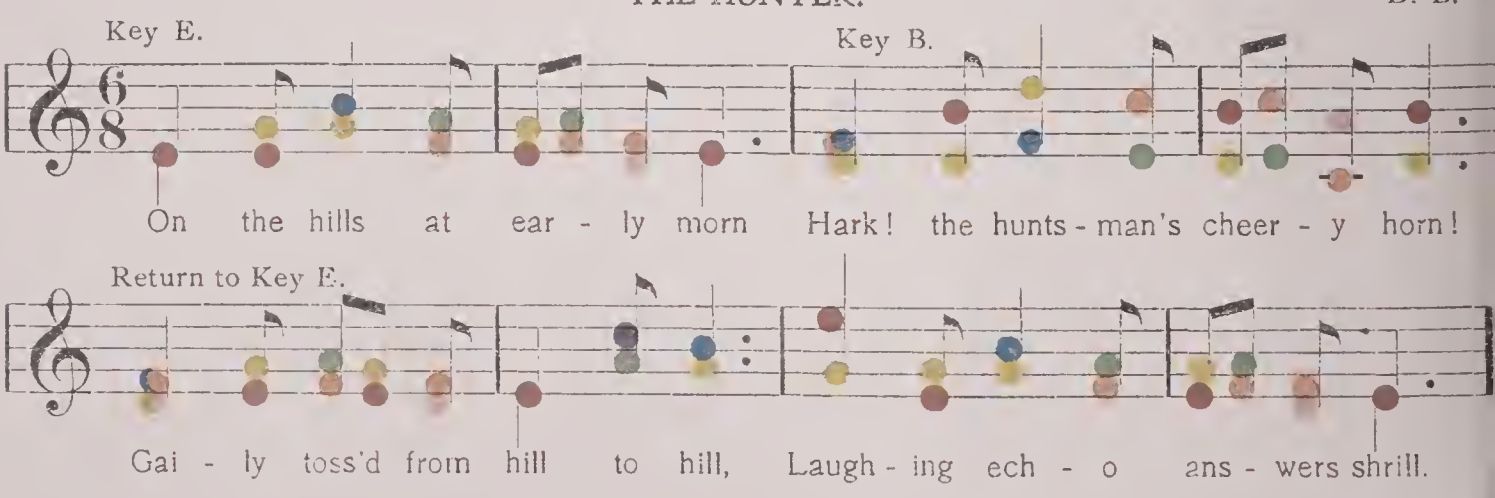


In the foregoing exercises the transitions were comparatively easy to sing, because the bridge-tone had already been sung at the close of the preceding sentence. In that which follows the tone has to be newly struck with more or less of a leap from the last tone. In every difficulty sing from the bridge-notes on the transitional diagram.

The next example will show how well transition to the dominant key expresses jubilant energy and resolution. But observe that there are other factors coöperating here. First, the rhythm has a bounding effect. Then we are passing from the Do-bounded to the So-bounded form of melody. And the third factor is that the melodic form of movement imitates the opening theme at a brighter pitch.

Ex. 188.

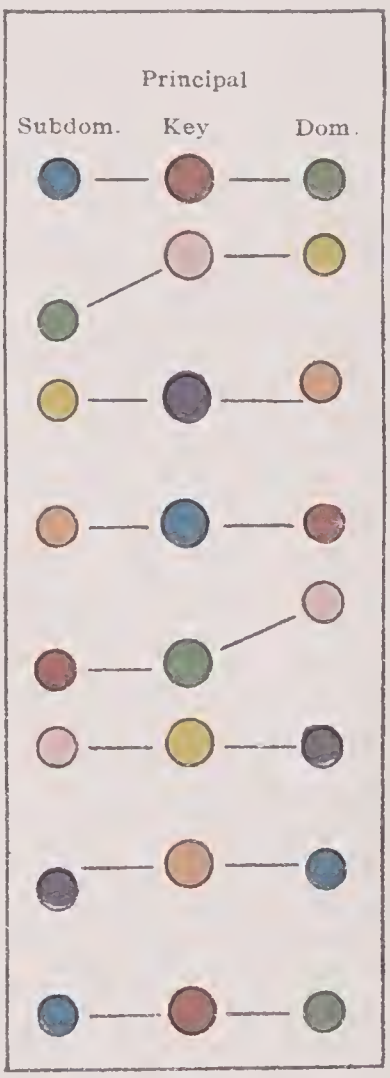
THE HUNTER. D. B.



TRANSITION TO SUBDOMINANT KEY.

In the preceding exercises the changes have all been into the dominant key, and these were secured by a reaction from the old Fa to a new Te. But sometimes it is the other warder, Te, which is set aside in favor of a new tone, which has an exactly opposite tendency. Instead of clinging upward, it leans down to the tone below, and so reminds us of Fa moving to Me. The mind accepts the suggestion, and a new key is formed, having for its Do the tone which was Fa. Hence it is called the subdominant key. (See figure 24).

FIG. 24.

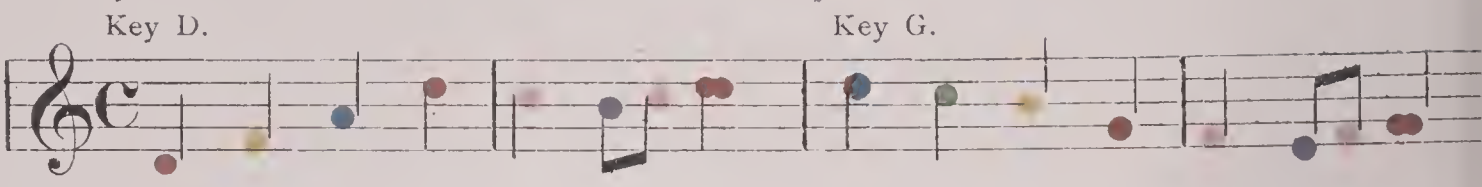


Now let the young students carefully observe the changes which take place in going from their original or "principal" key to the subdominant key. First they lose the sharp eager Te and get instead the new tone, which is like the old Fa, but more intensely serious. Then the old Fa now becomes the governing tone, Do, carrying some of its serious character over into the new relation. From a study of these three related keys they will learn that the transition to the Dominant has, on the whole, a cheerful, lively effect, while the transition to the subdominant is of a solemn character. Going to the right hand has the joyousness of a holiday, while going to the left is more suggestive of some sad occasion. Or if we carry out further the family idea, we may say that the one of which So is now the head is a happy, joyous family, while that which Fa governs is a serious family.

The student is familiar with the distinction between Do-bounded and So-bounded melodies, and he has already seen that both forms are employed in tunes which have transition of key. If the principal key belongs to the Do-bounded type a transition in either direction will take us into the So-bounded form. Conversely, if the principal key belongs to the So-bounded type, a transition either way will carry us into the Do-bounded form. These things will be more impressed upon the mind of the student if he makes a chart for himself. He can either use water-colors or the half-inch gummed circles. When half-inch discs are used the size of the chart should be about ten inches in length and four or five in width.

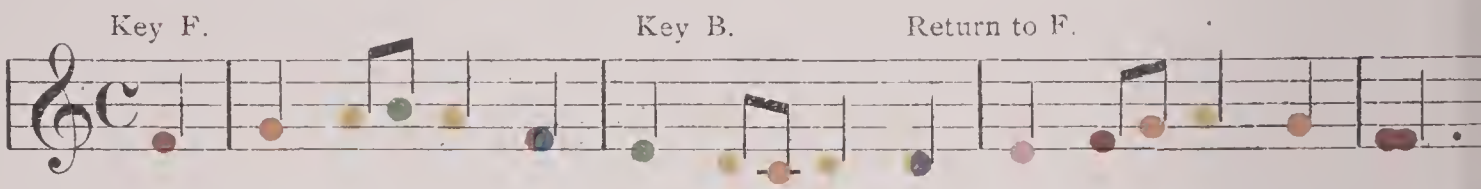
The exercises which follow will show the effect of transition to the subdominant key. In every case let the pupil trace the change of key upon the chart. He will soon be able to repeat from memory the changes which the tones undergo in transition, thus: Do in the sharp remove becomes Fa while Do in the flat remove becomes So, Ray in sharp remove becomes So; in the flat remove Ray becomes La, etc.

Ex. 189.



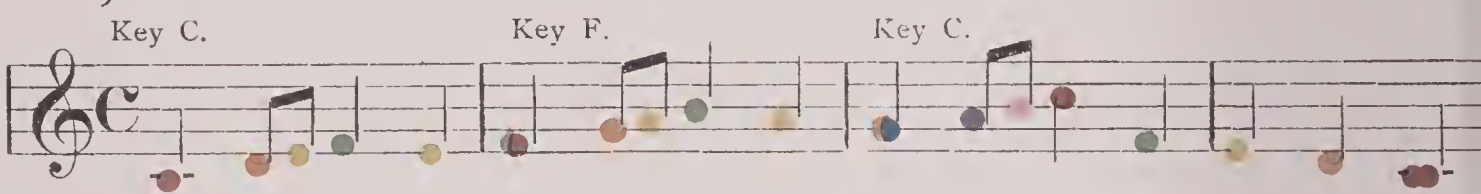
Notice the gloomy effect in the next exercise when we pass into the subdominant key with descending pitch, and the relief when we come out again into the principal key.

Ex. 190.



But when we go into the subdominant key with rising pitch it impresses us with a sense of awe, as the effect of the Fa is greatly intensified.

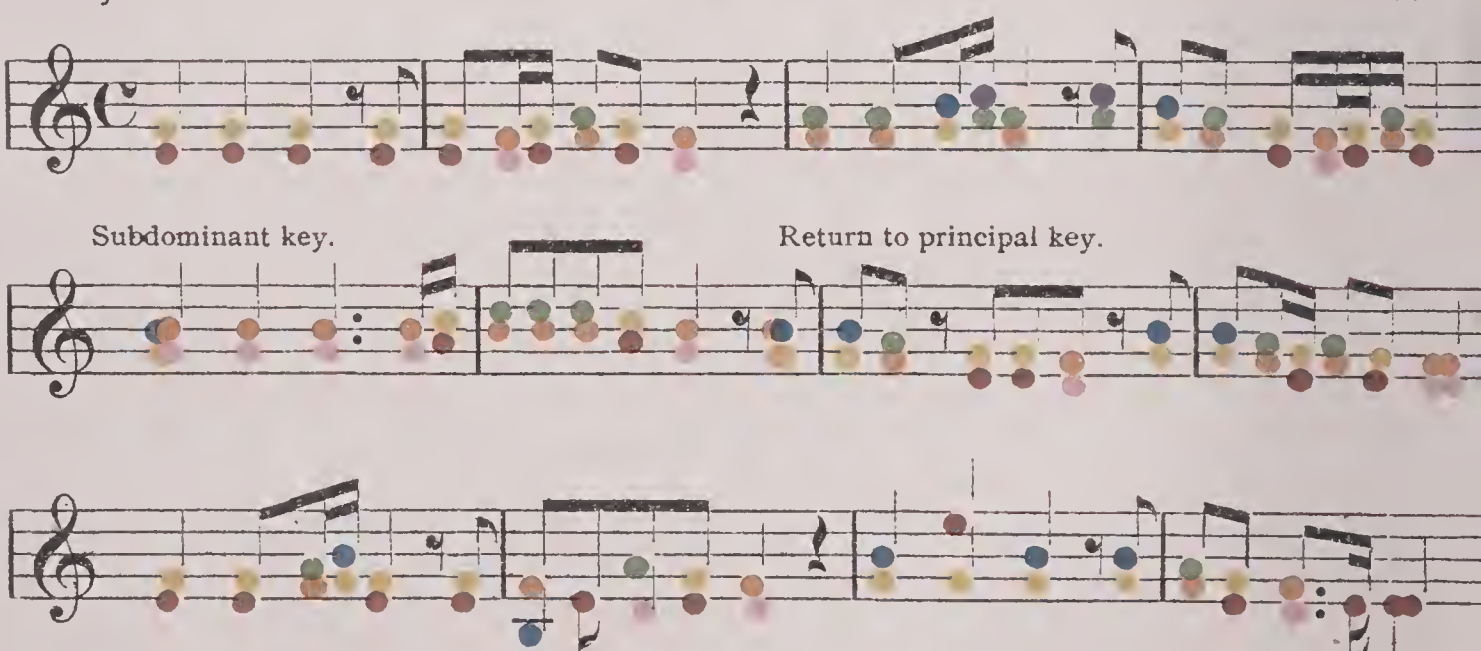
Ex. 191.



For a fine example, of the solemn grandeur which can be expressed by this transition, see Händel's "Dead March in Saul." The awe-inspiring effect of this march is greatly enhanced by the deep harmony and "the trappings of woe;" but the melody itself is very solemn.

Ex. 192.

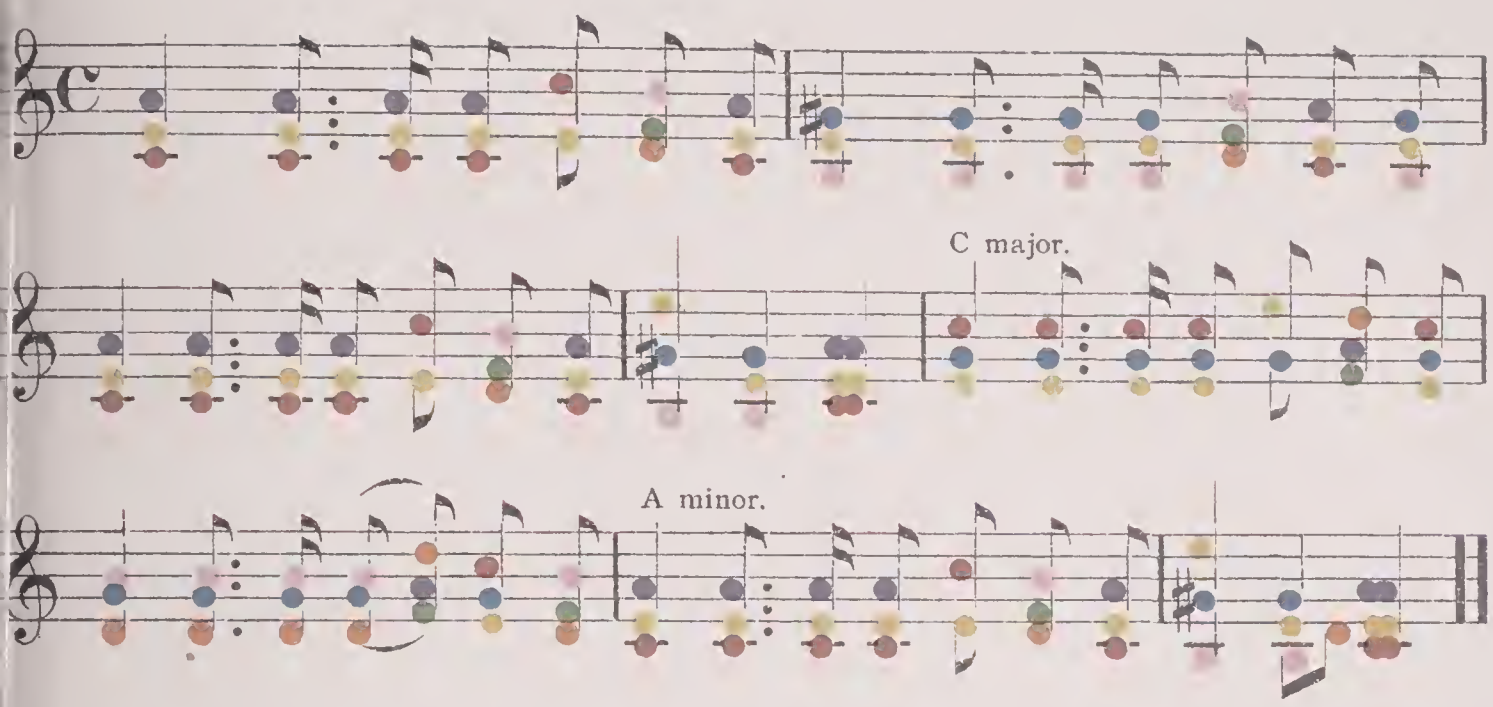
Key E. *Slow and solemn.* **DEAD MARCH IN SAUL.** HÄNDEL.



Notice how prominently the Fa of the subdominant key stands out, and how gently we slide back into the principal key, so as not to interfere with the solemn impression just made.

E. 193.
ey A minor.

RUSSIAN MELODY.

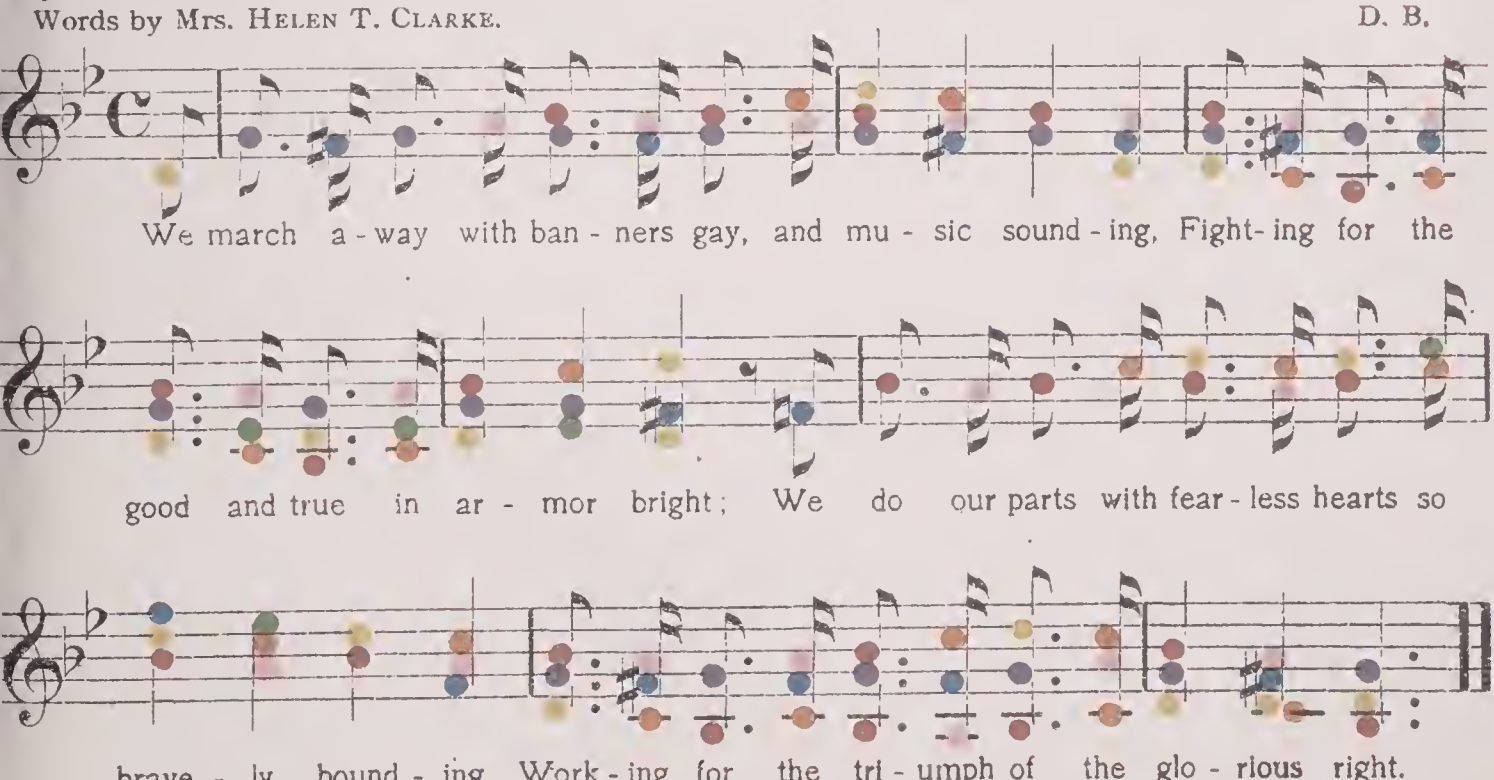


The modulation into the relative major is here very clearly defined. There is a stately solemnity about this tune which well fits it for a funeral march. By way of contrast, note the brisk energy in the following exercise. See what strong assurance is expressed when the minor theme is repeated in the relative major.

X. 194.
Key D minor. *In marching time.*

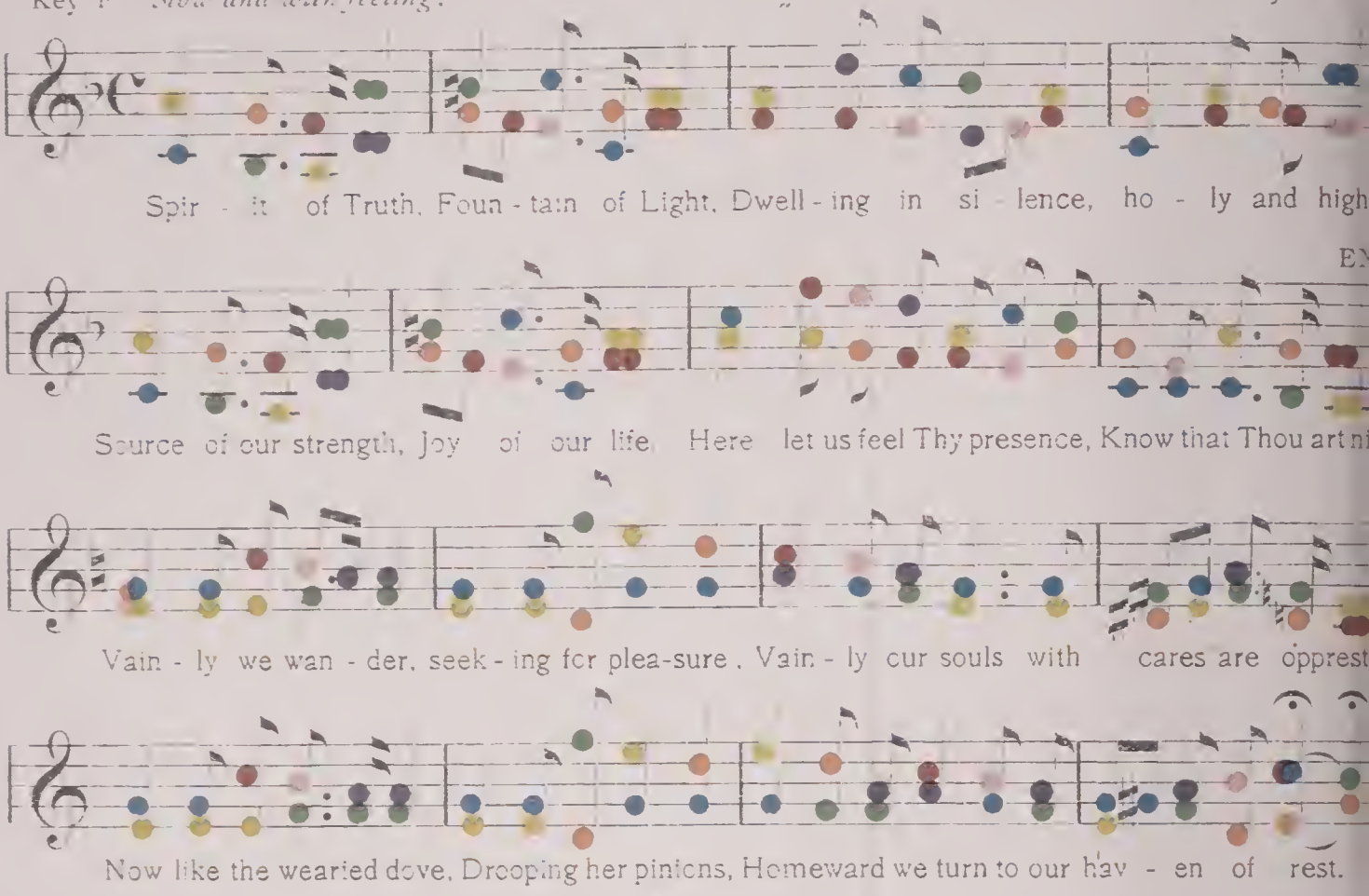
WE MARCH AWAY.

Words by Mrs. HELEN T. CLARKE. D. B.



Ex. 195.

Key F *Slow and with feeling.* MEDITATION. Words and Music by D. B



CHROMATIC TONES.

Besides the seven tones of the scale, which are named the diatonic tones, there are other intermediate tones which are sometimes used. These are called chromatic tones, because they give a peculiar coloring effect to the music.

Chromatic Tone Names.—Each sharp chromatic takes its name from the tone below, to which is added the vowel **e**. Thus the chromatic above **d** is **de**, that above **r** is **re**, etc. The flat chromatic takes its name from the tone above, to which is added the heavy vowel **a**, as in awe. So the chromatic below **t** is **ta**, that below **l** is **la**, etc. For the names and positions of all the chromatics, see figure 25.

True Intervals of the Scale.—If the scale be divided into fifty-three degrees then the interval from **d** to **r** will be nine of these divisions from **r** to **m** will be eight; from **m** to **f**, five; from **f** to **s**, nine; from **s** to **l**, eight; from **l** to **t**, nine; and from **t** to **d'**, five. Thus there are three greater steps of nine degrees; two lesser steps of eight degrees, and two little steps of five degrees. It will be a good plan to let the children draw a column of fifty-three lines one-eighth of an inch apart, and then to have them put each tone name in its proper place. Afterward they can fill in the chromatics, remembering that every sharp chromatic is five degrees below the tone to which it moves, while every flat chromatic is five degrees above the tone on which it resolves. See Fig. 25.

TRANSITIONS TO MORE DISTANT KEYS.

It is easy to pass from a key to its neighboring key on the right or left, because they have many kindred ties. With one exception in each case, every tone of the old key is found in the new, although under altered circumstances. But occasionally we have to pass over to a more distant key. This is a more difficult matter, because the ties are not so strong, and there is a greater sense of strangeness betwcen the old and the new.

TRANSITIONS OF TWO REMOVES.--Each remove necessitates the taking up of a new tone, so it follows that a transition of two removes involves the introduction of two strange tones. To make this point clear, let the pupils build up a new scale to the right, and another to the left, of their color chart, so as to have five columns,

As two removes to the right gives us a key raised one tone higher than the old key, this transition enables us to repeat a phrase in the identical terms of the old key, and yet with a bright assertion which well expresses growing confidence. Take, for instance, this line from Händel.

Ex. 196.

Do is G. A. (second sharp remove.)

| s :r :f | m.r :d.t$_1$:d | ^{1}s :r :f | m.r :d.t$_1$:d ||

His name is ex - cel - lent, His name is ex - cel - lent.

TRANSITION TO THE SECOND FLAT KEY.—The conditions of this are just the reverse of what we have been studying. Instead of being raised, the scale is lowered by one tone. When used to repeat a phrase, this transition expresses a growing depression and gloom, e. g.:

Ex. 197.

Do is F. E♭. (second flat remove.)

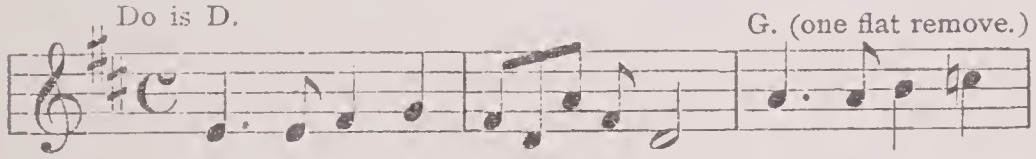
| m :f | s :m | d :-.t$_1$ | l$_1$:— | ^{m}m :f | s :m | d :-.t$_1$ | l$_1$:— ||

I shall nev-er see thee more, I shall nev-er see thee more.

See how prettily Händel uses this device in his *Acis and Galatea*, where the stream is murmuring the gentle love of the unfortunate swain.

Ex. 198.

Do is D. G. (one flat remove.)



A. (second sharp remove.)

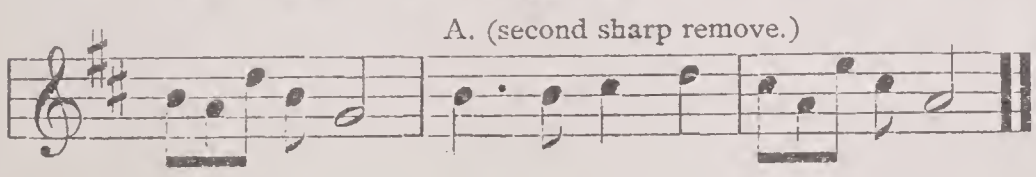
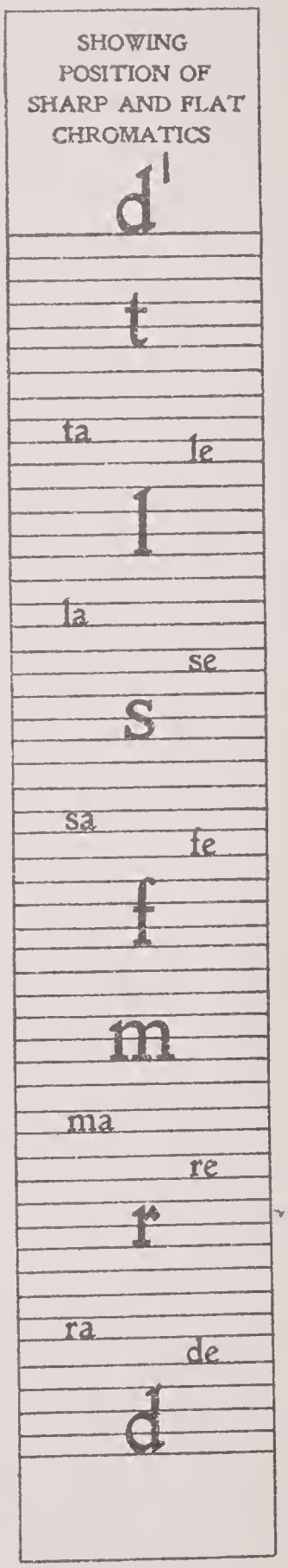
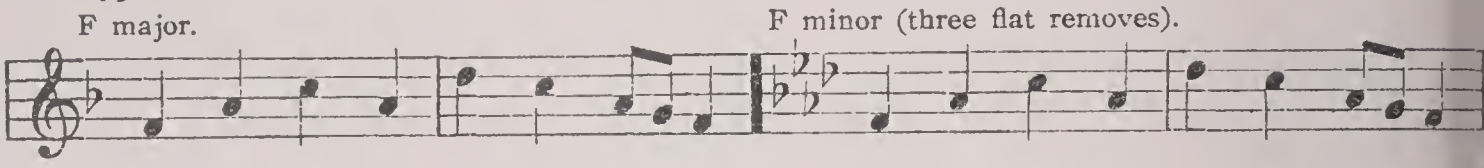


FIG. 25.



Transitions of Three Removes.—This transition is quite freely used in modern music, and it is therefore important to understand its nature. It is always associated with change of mode. If we pass three removes into the flatter keys it is from major to minor, whereas three removes into the sharper keys is from minor to major. The pupil should now add two fresh columns to his tone-color chart and study the new developments in key relationship. This transitional modulation is largely used for imitative purposes, but the imitation is very different from what we saw in the two-remove transition. In this case, the theme undergoes a strange transformation. To get a clear comprehension of this, let the pupils point on the chart, and sing such phrases as the following:

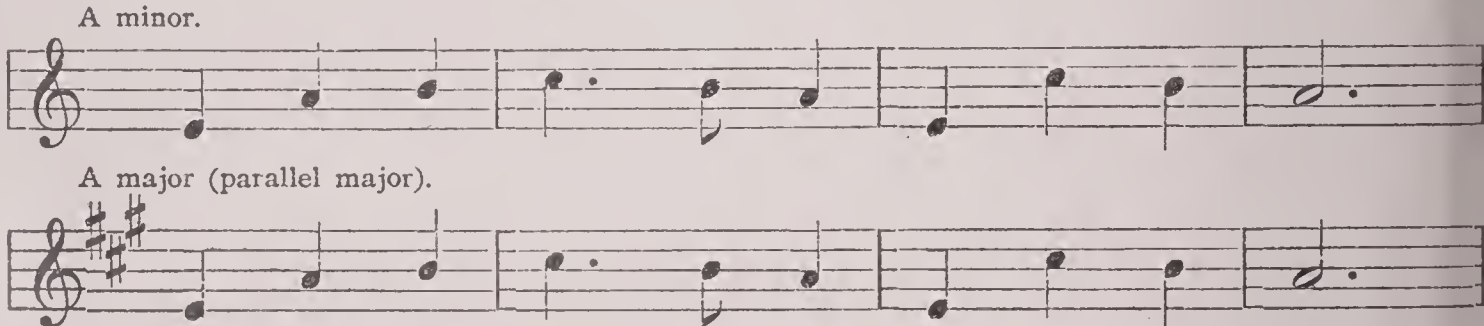
Ex. 199.



Effect of Parallel Minor.—Modulation from major to its relative minor suggests a feeling of gentle sadness which is often pleasant and soothing. But modulation to the parallel minor more fitly expresses that which is weird and mournful.

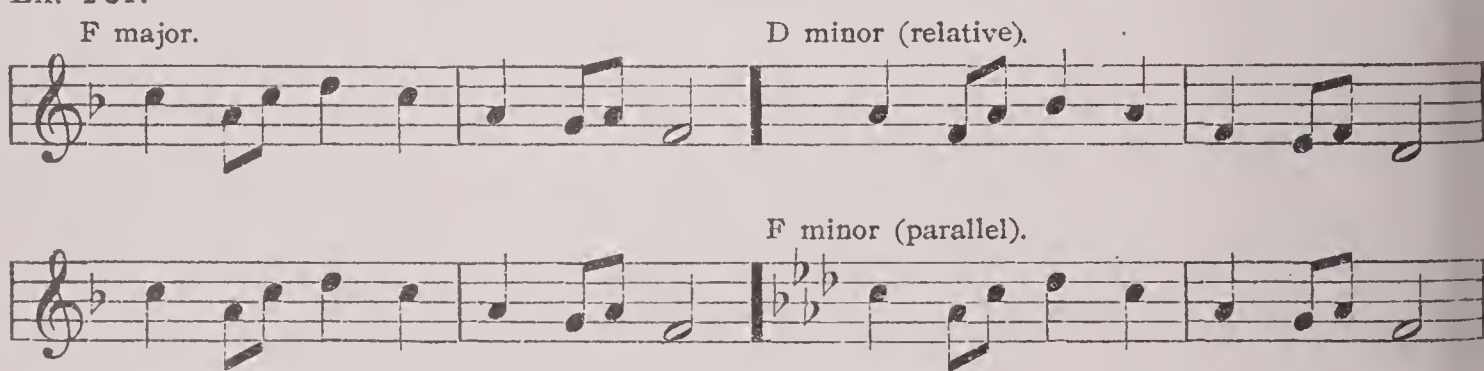
On the other hand, a change from the minor to the parallel major has an element of bright excitement, resolution, or joyful surprise.

Ex. 200.



Compare the two modulations in the following theme:

Ex. 201.

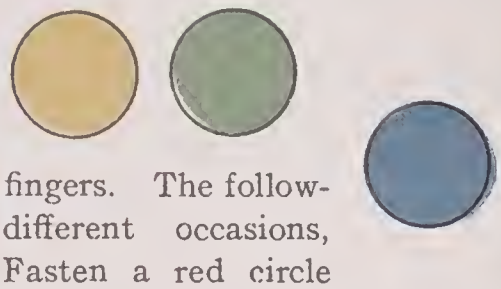


Now that the young student has been led through the simple stages of song, and has passed over the threshold of classical music, he may be left to follow his studies by the aid of the regular text books, and especially by listening intelligently to good music.

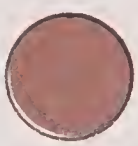
APPENDIX A.

COLOR MUSIC IN RELATION TO THE PIANO.

So far as the color music has developed the power of song, and the sense of harmony, it has indirectly helped the child to master the piano. But can we get any direct help from the color idea? Let us see what are the difficulties which the child has to over come.



First, the control of the separate fingers. The following plan has been successfully tried on different occasions, and with children of different ages. Fasten a red circle upon the thumb-nail of the right hand, and the child knows that Little Red Cap ought to sing Do. Then upon the nails of the other fingers fasten, successively, orange, yellow, green and blue. Now let the child, place the fingers one at a time on the edge of the table, somewhat after the fashion of the old game "Two little dicky birds sat upon a hill," but in this case it can be made into a little song form.



The next step is to fasten five circles on the table, to correspond with those on the fingers, and in such position that the child's fingers naturally cover them. (See the figure). Each finger then will go to its own color while the child sings the tone.

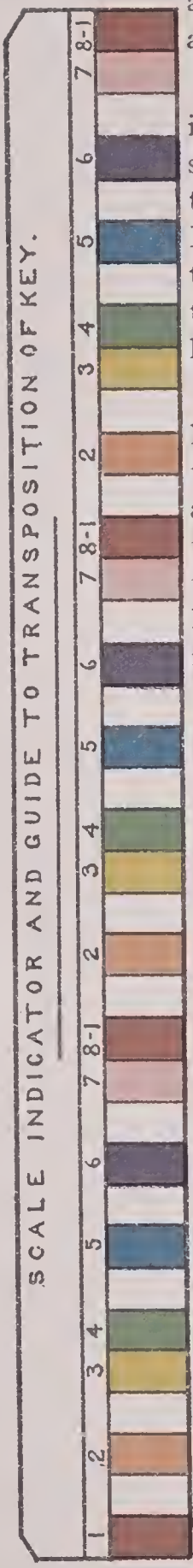
Let him strike four times on each of the colored circles, while he sings **d d d d, r r r r, m m m m, f f f f, s s s s**, and then in the reverse order. Next, he may repeat the process, striking only twice on each color, and then again striking only once on each color, thus: **d r m f s — s f m r d —**.

By degrees he may skip by easy stages, thus: **d m d m d m d m s m s m s m s m; d m s m d m s m; d s m s d s m s; d m d m r f r f m s m s; s m s m f r f r m d m d.**

The second difficulty with which the child meets is the keyboard of the piano. The long row of white and black keys bewilders him, since the keys all look so much alike and there is not enough change of appearance to distinguish one from another.

He needs to select those keys that belong to the scale in which he is playing, to the exclusion of the rest. In this he may be greatly assisted by placing the color circles on the keys which are to be played. Fasten the red circle on C, the orange on D, the yellow on E, the green on F, and blue on G. The child may repeat the table exercises which were given above. They will now have new interest for him, because his fingers will call out music responsive to his thought.

On another occasion, place the red circle on G, and the others on A, B, C and D, respectively. As the child gets a freer use of the fingers, so that he does not have to focus his attention upon them, the red circle may be placed upon D. Then orange will come upon E, yellow upon F♯, green upon G, and blue upon A. In this way he will learn the use of the black keys.



Scale Indicator.—When this point of playing the whole scale has been reached, the Scale Indicator will be a guide to the child. It will answer the same purpose as fastening colors to the keys, with the additional advantage that it can be shifted so as to suit any key.

The Scale Indicator will stand up behind the black keys. If it is so placed that the red coincides with C, the other colors will stand back of D, E, F, G, A and B, which gives us the key of C. If the red is placed on G, the other colors will coincide with A, B, C, D, E, and F♯, which gives us the key of G. And so in every case, all that is necessary is to place the red color back of the keynote, and the other colors will show at a glance which of the white or black keys must be struck for that particular scale.

In this way, the child is saved from mental perplexity while learning to finger the different scales. Beginners are generally set to play in the scale of C, because this is all on the white keys, and therefore easier to understand. Yet pianists admit that it is the hardest of keys to play. Some of the leading teachers claim that the scale of D♭ is the best for beginners; but although the key may be better adapted for the fingers, it is hard for a child to remember whether the notes come on white or black keys. The difficulty is removed by placing the Scale Indicator so that the red coincides with D♭. The child then sees at once what notes to strike without having to calculate intevals. He is thus able to give his whole attention to the proper manner of fingering. When his fingers have become accustomed to contact with the keys, so that he has acquired the habit of playing the different scales correctly and easily, he will soon understand the meaning of intervals, transposition, etc.

The Scale Indicator is useful also to picture out the chords in the different keys. Let the child pick out the tonic chord (red, yellow and blue) in every key. He may also find the tones of the subdominant and dominant chords, and play them in all the different keys.

After a while he will be ready to play little cadences like those on page 3344.

It is also an interesting and profitable exercise to play familiar tunes in the different keys, as it gives the player a facility in passing from key to key.

It may be fairly claimed, then, that the color music helps the young piano student indirectly, by quickening the musical intelligence and deepening the musical feeling; and directly, by helping him to control his fingers, as well as to understand the relation of the keys upon the keyboard.

APPENDIX B.

LEAVING THE COLOR SYMBOLS.

In closing it is necessary to give a few hints how to pass from the color notes to the ordinary black notes without losing the pupil's interest.

This should be done very gradually, and by such easy degrees that the child does not feel the loss of anything, but is stimulated by new demands upon his attention. The color may be taken away from simple exercises while it is still being used to illustrate more advanced studies. But never remove the color signs until the children have thoroughly grasped the musical principle which has been represented by the color.

The following plan has been tried on different occasions with marked success even with children of six and seven years of age:

"Children, I want to tell you a story about our little color birds. One day they went for a long flight, and as they were coming back they felt very tired. They looked around for some trees, but could not find any. Presently they saw some wires stretched along by the roadside. [*Draw five lines across the blackboard.*] Robin was the first to catch sight of them and he settled down upon the lowest of the five wires. [*Draw the red note.*] Then Canary flew on to the second wire. [*Draw the yellow note.*] While Bluebird took his place on the third wire. [*Draw the blue note.*] They were so tired that they placed their heads under their wings, and were soon fast asleep.

"Before they went to sleep they noticed how cold it was getting, and the sky was full of gray clouds. Soon after they fell asleep some feathery flakes began to fall about them [*illustrate*]; but of course they knew nothing about this.

"If you will shut your eyes for a little while, as the birds did, I will show you what took place in the night. [*Put white notes in place of the colored ones.*] Now wake up and look at the birds. You see they all look alike now. I wonder who is sharp enough to find out which is Robin?—which Canary?—and which is Bluebird?" On another occasion change the key and add other notes, gradually increasing in complexity.

For another presentation personify the color notes as little brownies out for a holiday. Show how they got into mischief, and while playing leap-frog, tumbled into an ink well. While the children's eyes are closed, ink over the color circles, or cover them with the black circles.

Another way of leaving the color by degrees is to draw the staff with colored lines for the d, m and s. In a little while it will only be necessary to show the line or space of Do.

Yet another way to impress upon the mind the place of the Do is to place it in red color by the key signature at the beginning.

When the color symbols are no longer used we have to depend upon the sharps and flats to show the character of the notes. It is therefore necessary that the pupil should be quite familiar with the key signatures.

THE HYGIENIC VALUE OF MUSICAL STUDY.

By LOUIS C. ELSON.

The hygienic value of music seems to have been more thoroughly comprehended by the ancients than by the modern world. The Scriptures give some indications of this in the effect of David's music upon Saul, an application of the Art to curative purposes which was duplicated in later times by the courtiers of Charles IX. of France seeking Orlando di Lasso as a tonal physician for the half-crazed monarch, and the banishing of the melancholy of Philip II. of Spain by the singing of Farinelli. Pythagoras, in ancient Greece, made the playing of the lyre obligatory among his disciples, causing them to fortify themselves for the trials and labors of the day by music in the early morning, and purifying their souls and composing their thoughts by the same means, just before retiring at night. Pythagoras himself is said to have brought a frenzied young man to reason by means of music, and he wrote many songs as antidotes for extreme excitement or unbridled passions.

Clinias, a Pythagorean, always resorted to music whenever he became unduly excited. Plato believed that the songs of a nation were a good measure of its morality and general habits, but he believed that only vocal music could show this, and held ("Legum II") that "the employment of instruments alone, without the voice, is barbarism and charlatanry."

The vocal teachers in ancient Rome and Greece certainly combined a good degree of gymnastics with their musical curriculum and held the art itself to be a species of hygiene. Nero's singing teacher caused him to lie on his back for a stated time each day and breathe deeply with weights of lead upon his stomach, in order to strengthen the diaphragm. Food for the singers was most carefully regulated, and spices and pickles were forbidden, while onions, garlic, leguminous vegetables, and eels were recommended. Cubebs and Gum Tragacanth were freely used, while cold drinks and all excesses in food were avoided.

In the middle ages, and in fact until very recent times, music was held to be a cure for tetanus and rigor. The cure of the bite of the tarantula (the poisonous spider of the tropics) by means of music is not a myth, as some writers suppose, but there are many authenticated cases of the patients dancing to rapid melodies until utterly exhausted, then being put to bed, and awakening fully restored. In such cases music became merely the substitute for a strong sudorific.

It is a well-known fact that stuttering yields to the rhythmic influence of music, and while singing not a trace of the malady is present in the patient. In like manner St. Vitus' Dance is much ameliorated and

may be cured by the practice of music. Naturally in the case of the stutterer it is vocal music that is beneficial, but in the last-named illness instrumental music is sometimes almost equally beneficial. It is possible that singing, used judiciously in the early stages of the disease, would prove a remedy for consumption. The present writer has personally observed a case where the subject had suffered with hemorrhages from his lungs (he had lost a twin-brother by consumption) yet was restored to health by vocal exercise. In another instance a bad case of ulceration of the tonsils yielded to the same treatment.

Summing up the above it will readily be seen that vocal music has a direct hygienic effect upon the singer. There probably does not exist another system of gymnastics as simple and as far-reaching as the practice of singing; every part of the torso and head is vibrating more or less during the act of vocalism; the lungs are being imperceptibly strengthened; the diaphragm is becoming more powerful, and the intercostal muscles are gaining steadily.

Turning to the instrumental side of the subject we find more varied phenomena and more diverse results. There is little doubt that the digital and metacarpal muscles undergo a change during a prolonged period of piano practice (as do the vocal chords in the throat of the singer), but Sundelin and Carl Engel maintain that piano, violin, and cabinet organ sometimes excite the nerves of the performer rather than soothe them, while the slow breathing necessary to the oboe-player is not so healthful as the free respiration of the singer.

This, however, if not a fanciful, is at least a one-sided view of instrumental music, for the effect upon the brain itself has not yet been studied nearly as much as it should have been by scientific investigators. It is by no means fully demonstrated yet as to how music acts upon the mind, but it may be understood that the sympathetic nerves (which act in an involuntary manner) are often disturbed by the cerebral nerve-centres; while music physically, by its regularity of rhythm and its constancy of vibration, soothes the cerebral nerve-centres, and the calming effect is extended to the sympathetic nerves as well.

It is not too much to predict that music may yet be admitted into Materia Medica as fully as Castor oil or arnica. In insomnia, neurasthenia, melancholia, nostalgia, etc., it would play a very important role. But it is not only to be regarded as a cure for certain diseases, it must be accounted a divine stimulant in health. It is not within the province of this article to study the esthetic effect of a beautiful composition upon the mind; that must be good, as all beauty is beneficial; but the purely rhythmic elements of the art must appeal to the human structure by their symmetrical pulsations, in a good and health-producing manner.

In acoustics we learn that every resonant object will respond to its vibration number; a globe or a window pane will vibrate if you but

sound its tone upon any musical instrument. This sympathy of vibrations for their kindred is called *synchronism*. May not the human body, pulsating machine that it is, synchronize with many of the vibrations of a musical composition?

In studying the hygienic effect of music it may be well to acquaint oneself with the relation of the art to its natural foundations. Painting is built upon Nature, fairly and squarely; so is sculpture; but music wanders considerably from the paths of natural law. This instead of making the art weaker, really strengthens it, for it is an artificial product upon a natural foundation; it is altered as man alters, changed to the changed nerves, existence, and aspirations, of each generation. The natural foundations spoken of above are

1st. The steady vibration of tone, which distinguishes it from the unsteady vibrations of noise. The brain may not count these regular vibrations, which sometimes ascend to 3000 per second or over, but it perceives them, and is pleased with them.

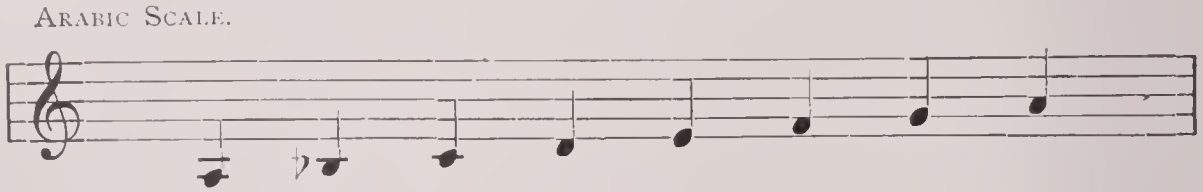
2nd. The symmetry of different sets of vibrations which unite in a chord. This comes to us directly from Nature, for whenever any tone is sounded a chord (called "the chord of nature," or the "harmonics") builds itself upon it and causes its quality to be pleasant or otherwise.

3rd. The pulsations of rhythm; perceived and enjoyed not only by man, but by elephants, mice, spiders, etc., etc.

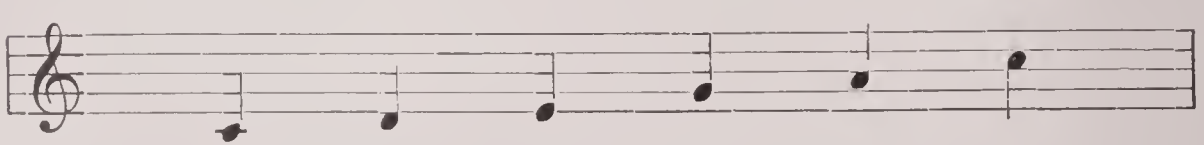
Surely with such a natural derivation the art of music must be closely associated with our natural well-being.

The artificial part is wonderful enough also. The scale was the veritable Tower of Babel, and caused the separation of the nations of the earth as thoroughly as any changes of language could. The Chinese have five notes to their scale, without any subdivisions; the Hindoos divide into more than twenty-four intervals to the octave. Here are a few of the results, so far as they can be expressed in our notation, which will show that music is not bounded by our system only.

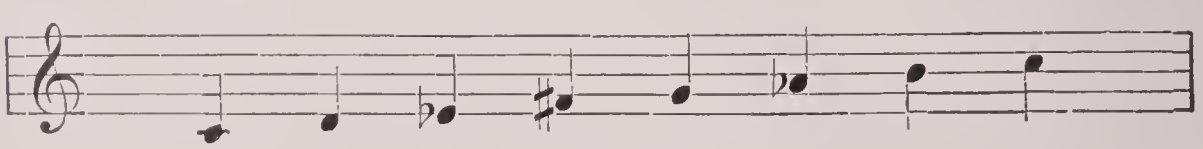
Arabic Scale.



Chinese Scale.

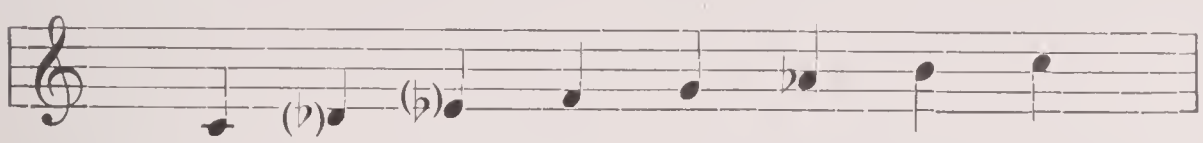


Hungarian Scale.



Byzantine Scale.

Turkish Scale.



Referring again to the list of natural foundations of music, we find the chord given us by Nature; yet not the simplest progression in chords is indicated by any physical law. The entire system of harmony is the invention of man. Therefore each man can find in music his meat or his poison. Individualism never had such scope in any art as it finds in music.

In concluding this essay it may be permitted to give a word of warning as to the physical dangers to health that beset the practice of music; in vocal work they are almost "nil," yet the utmost danger might attach to forcing a voice or using undue exertion in the practice of singing. If, however, "Festina lente" (make haste slowly) be made the motto, there need not be the slightest fear.

In piano-practice the danger is the too constant use of one set of muscles to the exclusion of others. The person who practises six hours a day and takes no other exercise may some day find himself unable to lift his hand to the keyboard; "Pianist's cramp" or partial paralysis may set in. A few minutes of arm exercise, the swinging of a very light pair of Indian clubs for a brief period, each day, would have prevented this. A little rowing, a daily walk with the good old English habit of swinging the arms during the "constitutional," would have the same effect.

The musician in the more advanced branches must take care of his eyesight. There is no more abnormal use of the eye possible than the reading of scores. A frequent repose of the eyes, with a visit to the oculist at the very first danger-signal, ought to be impressed upon the orchestral reader.

But with these precautions taken, the musician (providing that the world does not give him a course of "genius-starvation") has a splendid chance of longevity, and can enjoy his art serene in the knowledge that while it is delighting him it is spreading a beneficent influence all around.

THE ESTHETIC VALUE OF A MUSICAL EDUCATION.

By HUGH A. CLARKE.

To arrive at a proper estimation of the esthetic value of a musical education, it is necessary to institute a close comparison between the art of music and the other members of the group of "Fine Arts." The comparison is difficult, owing to the fact that, of the other arts, painting, sculpture, and architecture make their appeal through the eye; while poetry and literature in general, appeal chiefly to the understanding, although the ear also has a share in determining the excellency of literature. But music makes its appeal first to the sense of hearing, and through this to the understanding. To awaken a pleasurable sensation is the primary object of all art. The representative arts—painting and sculpture—attain this object, first, in proportion to their truthfulness to nature; second, and what is of more importance—as they represent the thought of the artist. In fact, strict fidelity to nature is not absolutely essential to either painter or sculptor, provided its lack is not owing to deficiency of technical skill, but to well-considered design. By departing from nature the artist may idealize nature, and the deepest pleasure that art can give is this glimpse into an ideal world, not contrary to, but complementary to the real world, never attained, yet always possible.

As an art, music has less of the "mortal mixture of earth's mould" than any other. The "palaces of music" are reared from invisible, intangible stuff. Sound and time are its materials, both of which are but subjective sensations. There is some sort of objective reality in the picture and the statue that conforms to the impression they produce, but who can conceive of a conformity between vibrations of air and sound? Is sound a picture or reproduction of these vibrations in any way resembling the reproduction of the picture or statue on the retina? It is this ethereal nature, possessed by music alone, that makes it in certain respects the queen of all arts, at the same time the most human and the most divine, mingling with ready sympathy in all the affairs of life, to solace or comfort, or to add new joy. It is a welcome guest at the fireside, yet able to rise through ever widening realms of grandeur and power, until it passes from earth, as when the rapt seer who saw heaven opened, heard the song of the "multitude that no man can number" and "harpers harping on their harps." That was the apotheosis of music.

But the question may be asked, what value has art in education? The answer depends largely on what is understood by the word education. If, as too many think, utility, in its most practical sense, is the object of

education, then art of all forms may be dispensed with; but this is taking a very low view of the meaning of education. The practical is of great importance, indeed essential to the existence of the social order; but it is far from being the most important element in life, even in the estimation of those who call themselves "practical." No man lives or can live without some ideals. His standards may be low, but he must have standards of life. Carlyle says "Even the man whose sole object in life is to dress well has some vague idea that his duty, in all the wonderful and manifold actions and counteractions that make up the cosmos, is—the wearing of the most superfine clothes that cash or credit may procure him." The imperative necessity for an ideal, even in the lowest class of the human kind, is evidenced in the proverb that tells us there is "honor among thieves." For even the thief has his standard of conduct.

It is not putting it too strongly to say that the ideal world is more real to us than the actual. Have not men in all ages "daffed the world aside," and "scorned delights and lived laborious days," that they might, unhampered, pursue some ideal that beckoned them onward and upward, buoying them with hopes of attachment that none knew better than themselves were forever elusive—for who has ever possessed his ideal? A St. Paul "counts not himself to have attained." A Newton likens himself to a "child gathering pebbles on the seashore." Poets, painters, musicians, have all mourned that their accomplishment fell so far short of their aspiration. Art gives pleasure; but if it stops here it falls far short of its chiefest duty and privilege, which is, to reveal, as fully as the revelation may be made, the ideal, the infinite, that stretches like a shoreless ocean, above, beneath, and on every side of the actual. No representative art can fully reveal this infinity; art is tied down by too many limitations. Right here lies the superiority of the art of music; it is not limited as the work of the painter or sculptor is limited, by the aspects of outer nature, but speaks its mystic language direct from soul to soul, yet in terms so comprehensive that to each one of a thousand hearers it may convey a different message.

But music, like the other arts, has its limitations, which are very hard and practical. Our range of sounds is small, at most a poor hundred —and the number of their combinations is very small, yet for the building of what wondrous "sound palaces" have these poor elements proved themselves sufficient.

Psychologists have made many and strange attempts to account for the existence of the esthetic sense; their chief effort seems to be to reduce it to a mere question of physical pleasure or pain, until they can prove that the will and the intellect are nothing but secretions of the brain cells, and man nothing but a cunningly designed machine. We will prefer to believe that this esthetic sense is one of the attributes of that immaterial part that is the real man, of which this wonderful body is but the servant

and vesture. Any neglect to cultivate any part of this immaterial essence, is sure to result in an atrophy of that part, and the atrophied part must of necessity react on the rest, just as an atrophied limb will mar the muscular adjustment of the rest of the body. Therefore care should be taken to educate this esthetic sense, which is much more than a capability of receiving pleasure from beauty—it is the capability of receiving or of conceiving the ideal. If this view of the esthetic sense is right, it may help to explain why it is that art may make use of the ugly, or the evil, and so transform them by this idealizing power, as to destroy their repulsiveness, not by making us love them, but by giving us a glimpse of the profound truth that ugliness and evil are necessary parts of the great "plan of the universe," and by moving us to sympathy with those who suffer from them.

The share that music has in this training of the esthetic sense can hardly be over-estimated; dealing, as it does, directly with the fundamental emotions, it finds readier access to the hearts of the many, than do any of its sister arts. Knowledge is a pre-requisite to the perfect enjoyment of a painting or a statue, but a symphony of Mozart or Beethoven will often give a keener enjoyment to the unprofessional hearer who is endowed with the musical faculty, than to the professional musician who is (as too many are) lacking in this particular. Wherever this musical faculty exists the power of discriminating between good and bad music increases with wonderful rapidity, with increased opportunity of hearing the good. It is only necessary to refer, in proof of this, to the change that has been wrought in the public taste during the last twenty or thirty years by such organizations as the Thomas Orchestra of Chicago and the Boston Orchestra. The success of these organizations in educating the esthetic sense of the multitude is very marked. And there are other agencies at work in this field, reaching down to the primary school and the kindergarten, sedulously inculcating the principles of the art, and training the esthetic sense to recognize what is best in it. It is not well to depreciate in the least degree any of the other arts. The training they give to the esthetic sense is beyond all valuation. Especially is this true of letters. Wholesome literature is the best safeguard against the aberrations that are too apt to mark the course of those whose training has been exclusively in the arts that make large demands on the emotions. But the directness of the appeal that music makes, and the prompt response with which it meets, make it, of all the arts, the swiftest vehicle for influence, while the beauty and exactness of its "forms," so closely analogous to architectural forms as to make Madame de Staël say that "architecture was frozen music," furnish one of the keenest pleasures to the esthetic sense.

If the considerations here set forth carry any weight, they prove the claim of music to a foremost place among the arts as a means for training the esthetic sense.

WHAT IS PIANO TECHNIQUE.

By JAMES HUNEKER.

What is piano technique? What the salient material for mastering that mystery of music—its technics? The dictionaries help us by pointing out the meanings of the term, for it has more than one. We learn that it may relate to a consideration of the artistic details in a performance; or, perhaps it is intended to call our attention to the purely mechanical part of piano playing. It is a word about which hovers something of the awe hitherto associated with things not supposed to be terrestial. And it must be confessed that the professors of the art of piano playing rather enjoy the esoteric atmosphere that envelops the teaching of music. To the beginner the first steps in the jungle are terrifying. To those who have studied for five years the heights still seem unattainable. And to the artist who suns himself in the blaze of a public success the word technique falls just as glibly from his mouth as it did when he was a young student grinding slowly away in the mills of depressing five-finger exercises.

Is there then more than one kind of technique? Does the word signify all or nothing? Paganini, the world's greatest executant on the violin, once told an ardent pupil: "All you need to master the instrument is technique, *technique*, TECHNIQUE!" This aphorism is a commonplace of the schools. It has since been credited to Franz Liszt, whose youthful ideal was to become the Paganini of the keyboard. It may be variously interpreted. It may mean that after the fingers have become the obedient slaves of the mind, the mind itself must be schooled to interpret in a superlative manner the music of the masters; and after this point has been passed there are transcendental mountains of virtuosity to be scaled by the few undaunted ones—by the Liszts, Tausigs, Rubensteins, Joseffys, Rosenthals, Paderewskis and Pachmanns. So you see there is no such thing as one unvarying technique, any more than there is one comprehensive method of playing the piano. As there are no two persons alike, no two pairs of hands precisely similar, so are there no two pianists who play the same, or have even reached eminence by the one road. Hard work is necessary for all; yet no two players work alike.

And having cleared the ground of some confusion, let us examine in detail the bugbear of young folk—piano technique. It is generally agreed by leading masters in the contemporary world of piano teaching that old methods erred in giving the student too much to do. Either his fingers were treated as harshly as are recruits by a Prussian drill master, or else his mind was stuffed with too much music. In both cases progress was hampered, and became a halting thing. A wilderness of dry studies were put before him, and if he were industrious he would play with agility

everything that was written. But the music was lacking. Thus rose the phrase, "mechanical playing." This type of student usually plays like a machine, like a mechanical piano. The opposite type, lacking the application, neglects his exercises, allows his muscles to become flabby, and his performances are characterized by faulty technique, even though they are musically pleasing. But music is made to be played, and it cannot be played without muscular as well as mental training.

Let us examine the human hand. Any anatomical chart will tell you, if you so desire, the names of the various bones, muscles, tendons, and nerves that go to the making of this natural miracle. Being always at hand, we seldom examine our hands. We know that the fingers are independent of each other in a more or less degree; we know that the bones in the back of the hand are joined by a most ingenious and exquisite mechanism to the wrist, and that this flail-like member controls the hand by means of the forearm and upper arm. After the shoulder is reached the control is lodged elsewhere, but all is dependent on the central office—the brain. It is the fingers, wrist and arm that most concern us just now. They are the prime factors in piano playing. They represent compositely one-half of that technique so earnestly sought for. It is evident then that their control, in part and in whole, is the first step in the acquisition of muscular technique.

The beginning is usually made with the fingers. They are the ten voices that must sing—ten individual voices, ready to obey the slightest current from the brain. Advanced teachers, recognizing the purely muscular part of these beginners, place the student's fingers on a table. The hand is first flattened, the fingers separated widely as possible. Then each one is lifted, the others remaining outstretched. After finger consciousness is established—*i. e.*, the realization on the part of the student that his fifth finger is not his thumb, that his fourth, or ring finger—the weakest and most refractory of them all—is to be elevated alone, then the teacher allows the hand to be arched in the conventional manner of pianists. The wrist rests on the table, the hand is allowed to fall naturally without a trace of stiffness, the fingers curved slightly in, their tips touching the table. The thumb, or first finger, as it is now universally known, should stand away from the hand, also slightly curved, and ready to be passed under the fingers at a moment's warning. This thumb is really the strategic point of the ivory battle field. Its mastery means smooth scale playing. It may be asked at this juncture if silent pianos cannot be profitably used by beginners. Decidedly yes. They not only concentrate the attention of the beginner upon the correct up and down strokes of the fingers, but, by a tell-tale system of clicks, they register the correct or incorrect touch. Being toneless, the pupil is not tempted to experiment uselessly or to attack music far beyond his powers. I leave to the earnest teacher consideration of this particular problem.

The hand is now arched—the word will serve; though it is, of course, not an arch—so as to allow each finger to fall upon a key. Transfer the hand to the piano or dumb keyboard and let the up and down stroke of each finger proceed. This stroke consists in lifting to the full height the curved finger, like a hammer, then dropping it *consciously* upon the key and pressing the key down to the bottom. After the single finger exercises are mastered, commence the slow trill, which is the alternate lifting and depression of any pair of fingers, beginning with the first and second. And this slow trill, this two-finger exercise, is the foundation exercise in piano study. Dr. William Mason, the veteran artist-teacher, declares that Liszt used it before playing in public, and upon its simple foundations Dr. Mason, himself, has elaborated a very complete and remarkable system of rhythmic technics. The left hand must be invariably subjected to the same treatment as the right. After the fingers begin to gain independence and flexibility, the thumbs should be treated to a severe course of gymnastics. The thumb, by reason of its position, has to make an oblique stroke, and this, with its passage under the hand, gives the key to all scale playing. The scale consists of seven notes, therefore the thumb must serve as a bridge over—strictly speaking, under—which safely passes the other four. Take the C major scale for example—a most difficult scale to play, despite the fact of its employing only the white keys. If the first finger or thumb falls on C, the second naturally touches D, the third E. Now comes into play the peculiar office of the thumb. From the moment D is struck, the C is relinquished and the thumb curved under is ready to fall upon F the instant E is passed. Thence to G, A, B and C is easy. Therefore all good teachers emphasize the special cultivation of the thumb or first finger.

Supposing that your fingers are fairly limber and obey your will, when any particular key is to be struck, the next thing to attack is a series of carefully graded five-finger exercises. They may be found in a half thousand methods. All are good, though only one set need be overcome. Take up Czerny, or if Czerny seems old-fashioned, go to Plaidy or Zwintselier. In them are the materials of piano technique. What are these materials? Practically speaking, the mechanical side of piano playing consists in accurately striking the keys and *measuring* the keyboard. Both eye and ear, and what is called muscular memory—*i. e.*, the fingers unconsciously and correctly executing after many repetitions any scale or figure—are brought into play. This measurement is an important thing. After you can play one scale correctly you may attack two or three or four. But remember that to insure accuracy *slow practice* is absolutely necessary. A child—to employ a very familiar and striking illustration—must creep before it walks, walk before it runs. The slower the preliminary practice the greater the speed. On first examination of a page of piano music a confusing blur of notes strikes the eye. There are long chain-like runs of black dots, then notes going ladder-wise up the staff, then solid groups,

bunched together. On this side of the art, the symbols of music, I have nothing to say. The teacher will make clear all the crooked ways of note-values, time, rhythms, legato and staccato touches, and of the proper delivery of the music. I am chiefly concerned in the endeavor to prove to you that the actual amount of the material which makes up piano technique is not appalling. It really consists of a few well-defined forms which we call figures.

First of all, after the mastery of the slow trill and the passage of the thumb, comes the diatonic scale. Twenty-four of these must be fingered and memorized. These comprise twelve major and minor scales. Their respective normal fingering may be found in Plaidy or in any sound instruction book. Know the scales and you have the *open sesame* to music. The chromatic scales, in which every note of the octave plane is utilized, serves as an excellent practice for the thumb. But the main thing is the study of the diatonic scales. Following these is the arpeggio in all keys, so-called because of its harp-like effect. It must be practised in all its positions and inversions. Here again the thumb plays the chief role, for in the grand arpeggio—*i. e.*, the chord positions in several octaves—it must serve as a keystone, striking once in each octave. There are many varieties of chords—dominant seventh; diminished seventh, and chords in extended or dispersed positions. But they all are based upon the scale, and the fingering of one practically means the fingering of all; the variations are of slight importance. After scales, arpeggios and chords begins the study of double notes—double thirds, double sixths and octaves. Thus far the fingers have been the dominant factor. Now the wrist asserts its supremacy. In octave and chord playing the wrist rules. Later it is time to study the movement of the forearm and upper arm with all the fascinating problems of muscular devitalization. To play the scales in double thirds and sixths is a difficult feat; yet it must be attempted. Octave scales follow, and soon we are knocking at the portals of the piano virtuoso.

The wrist must be treated in the same manner as the fingers. It hangs loosely when not used, and without stiffening it lets the hand be suspended over the keyboard. Elevate the hand and let the wrist act as a sort of a flail or lever throwing the hand upon the keys, the thumb and fifth finger an octave apart. This up-and-down movement, executed with absolute freedom and varying degrees of speed, must be repeated many times with both hands, separately and together. After the up-and-down stroke has been mastered, then attempt the lateral skips—jump from one key to another. This sidewise movement is the most difficult thing in octave playing. You will have observed then, baldly stated, that piano technique, mechanically considered, consists in the accurate execution of scales, chords, arpeggios, double notes and octaves. There is a year's preliminary work before the scales are learned. To the conscien-

tious teacher must be left the details of finger gymnastics, touches—legato, staccato, tremolo and portamento and all the absolute necessities.

And now we have reached the consideration of another technique. It is the technique of the esthetic, the well-sounding, the beautiful. It is music-making in a word. It is the object for which all the muscular drill, all the fatiguing technical exercises have been undergone. Music is now the goal of the student. His hand, wrist and forearm, the mechanical apparatus, are under his powers of volition. He can will at pleasure an up-stroke, a down-stroke, scales, chords, arpeggios, runs in double notes and complex octave passages. He has passed beyond easy places, and is looking longingly at Chopin and Schumann. But the fruit is not yet ripe. The technique of musical expression must be mastered. All these notes, these figures and technical forms must be made to say something, to express something. The muscular memory must now become subservient to the musical. To *educe* the talent of the student, Bach—whose music is the reverse of dry or forbidding—should be given him for his daily musical bread. The little symphonies, and two and three part inventions will not only teach him how to think musically, but they will impart to the fingers an individuality, a fluidity that can be secured by no other means. If the hand is flexible, let some of the Heller studies be taken up; but if the fingers need strenuous drill, do not hesitate to attack the Czerny School of the Staccato and Legato or his Velocity studies. Then follow the mellowing and graceful Cramer etudes—Von Bülow's edition—true tonic for technic-weary fingers; and from Cramer to Clementi is but a step. With Tausig's edition of these world-famous studies, the veritable *Vade Mecum* of the pianist we may attack Beethoven, for the technics of the Beethoven Sonatas are rooted in Clementi. And after Beethoven all things are possible—Schumann, Chopin, Liszt and Tausig.

The old days of torture, when the curriculum of the piano student included *all* piano studies, are happily vanished. Condensation, is now the watchword. A careful grounding in technics prepares the hand for studies in style, for Heller, Cramer, Clementi and Chopin. And even of these a judicious selection is made. No more years of dull, senseless, soulless mechanical finger exercises. The student must think, must be alert, must make music, not mere muscular movements. And thus economy in study is but the reflection of a better, purer taste in piano music itself. Shallow, noisy, display pieces built in silly operatic themes no longer obtain. Bach, Haydn, Mozart, Beethoven, Mendlessohn, Schubert, Schumann, Chopin, Heller, Henselt, Liszt, Tschaikowsky, Tausig, Moszkowski, Grieg and others have written music eminently adapted to the keyboard, music which requires not only fingers but brains and emotions. And do not forget that Bach is truly the father of modern piano technique. Study his music without haste, without rest; study his Symphonies, his Inventions, and when you have reached the Well-Tempered Clavichord begin its study with a purified, humble heart, for in it is contained all musical wisdom.

HOW TO GAIN CONTROL OF THE PIANO.

By MRS. JOHN VANCE CHENEY.

Ringing with truth is the statement of Emerson that "Our painful labors are unnecessary; there is a better way." In no place and at no time is the accuracy of the statement to be more perfectly realized than it is in piano practice. Investigation and experiment with hundreds of pupils has led the writer to the conviction (1) that the long, tedious road toward the attainment of benefit and delight from the study of music is unnecessary; (2) that it greatly retards mental and spiritual growth through music; (3) that music is natural to man, to be "let out" of the soul and mind by conscious, co-ordinate working of mind and muscle, and (4) that music never can be driven into soul and mind through the fingers.

A certain degree of muscular dexterity can be acquired by mechanical practice and severe labor, but at an enormous waste of nerve force, and *music* is never reached in this way. Musical feeling sometimes survives the slow, deadening process of "five-finger" practice at the piano; it rarely, if ever, survives a complete clavier course. Drudgery in the pursuit of music, gift of the heavenly muse, is to be deprecated. The way of music is one of the ways of beauty; and it is only by following some way of beauty that we can come to it. To find that "our painful labors are unnecessary" is the first step toward control of the instrument. The second step is to gain control of ourselves, mentally as well as physically.

To gain control of self for the purposes of piano playing, one must begin at the source, which is mind: "Mental control of bodily function comes through taking thought thereto." It is to the *mind* that one must go to find the quality of tone, the power to grasp the symbols (the notes and keys), and the power to relax and contract the muscles at will. This clearly comprehended, it remains consciously to pass the mind down the muscles of the arm, hand and fingers, with the *intention* of relaxing and contracting them at will, and with the *expectation* of response. The law of expectancy plays an important part.

Here is the whole secret of piano control in a nutshell. Mental gymnastic is the training for the hand, vastly more important than actual keyboard practice. It cannot be otherwise, for it is the cause for which the physical movements are the effect. Upon a clear comprehension of what is to be accomplished by mental gymnastic should follow finger, hand and arm gymnastic, either at the keyboard or away from it. Equally good results seem to come from practice at the keyboard and practice away from it.

The time required for this technical work (which must never be mechanical, but always consciously mental) need not exceed twenty minutes daily.

Among the requisites of piano playing are nobility, purity and strength of tone, freedom, lightness, elasticity, rapidity and elegance of fingering. All these qualities reside in the mind, to be brought out only by conscious and intelligent effort in the mind.

As an illustration for daily practice, let us select the quality of nobility. The student wishing to express nobility should form a mental concept of the quality of nobility; then, by dwelling upon it to the exclusion of all other thoughts, realize that a thought can be expressed just as it is pictured to the mind (if the thought-impression is sufficiently strong); then, with relaxed arm, hand and fingers, produce the tone, and thus discover the suitable gymnastic —finger, hand and arm motion—to convey the concept. The thought and impulse of nobility having found expression, the rich, deep tone should be exactly repeated several times, until it is impressed upon the mind. When it is proved to be something attainable and attained, it will remain at command, as so much technique. It will remain, and will always be available; for it is a creation, it is technique become flesh and blood—one's very self. With it in possession, the player never "gets out of practice" of this amount of technique. A few moments of concentration will call it up; and, being present, it is ever ready for use.

What is possible with one of the qualities of technique is possible with all. If nobility of tone can be developed in the manner described, so can lightness, power, dexterity and velocity, and all other forms of technique.

In a technique acquired by intelligent thought and a sympathetic appreciation of music as a soul language, we find one of the great sources of profit and delight. The new education in music has come with the beautiful evolution of the new day, and it has brought with it a revised estimate of the value of music as an educational factor. Necessarily, it lays bare the weak points in the old education, and presents reasons for the disastrous effects of it on the nervous constitution of the devoted student. The reason pianists lose control of the keyboard, "get out of practice," require so much drill as to make them rather slaves to their art than masters of it—the reason for all this is that technique, instead of being a part of the artist, is no more than a mechanical means to an end, when, in reality, it is an expression of the end, is of the essence of it, is the very self of the artist.

To sum up the question of piano control: the quality and quantity of tone are in the mind, to be drawn from it at will. All degrees of velocity are the result of definite thought, expressed at once in the rapid succession of notes; velocity should not be a slow growth, but rather an instantaneous response to quick thinking. All forms of technique, complex as well as simple —double-thirds, sixths and octaves—are alike subject to the mind for expression. Difficult passages in compositions yield readily under the method indicated, and finished technique becomes a habit of thought, and so a permanent possession.

After what has been said, some hints concerning the application of these theories may be helpful. Let us say that a little girl of five years comes for

a lesson. She has no knowledge of the keyboard, of the notes or of the way to place her fingers on the keys. What shall be done first? We have said "to gain control of self for purposes of piano-playing one must begin with the mind;" the mind must be interested. What will interest it? What does the child wish to do? What would she do first, without an instructor? She would play, would make tones, make them herself and listen to them. The first step for her, then, is with tones. She should make tones, make them in her own way, as she would if she were alone; this, for the reason (it cannot be too often repeated) that tone expression is one kind of self-expression, and the function of music is the expression of the soul, not an accomplishment to be put on, and adjusted according to somebody's method. When the tone has come and been listened to attentively, it should be pointed out to the little student that music is stored away in her organism to be let out, or expressed, and that, like the simple tone, all the tones, all the music is there. From the start we are working away from "self-consciousness" by drawing the mind from self and fixing it on the thing to be done. We are also establishing the habit of concentration upon some one of the essentials of musical expression, and not upon the non-essentials of hand and finger position. By listening attentively to the tone we are establishing the habit of discrimination; the pupil must think the kind of tone she would like to hear. She may be helped to this concept by hearing a delightful tone hummed, or by suggesting the tone of a silver bell as one to be desired from the instrument.

Now is the time to make the arm and hand perfectly supple, in order that the tone idea may have no obstacles to encounter on its way to the keyboard. The tone is to drop from the mind to the keyboard. The hand and arm must drop. Notice that word *drop;* it is the letting go, it is the first physical gymnastic resulting from a mental gymnastic, the dropping of a tone from the mind to the keyboard. This at once interests the child; she is creating something. It is unnecessary to point out the advantage of this method of procedure over that where the hand be placed on the keyboard in a certain position, from which each finger is to be lifted and put down numberless times with no idea back of it, nothing but the instructor's dictum. Pains need not be taken to say, "Drop on one finger;" the little one's dainty instincts will suggest this. She probably will not *drop* at all at first, but will rather stick the little finger into the air and *put* it on a key; which is directly opposed to the muscular condition desired. When the drop comes, as it will with a few attempts, it should be emphasized that a beautiful tone has come out over the relaxed hand and arm, and that it is the expression of a beautiful tone made first in thought; further, that it was a very sweet feeling that caused the mellow tone, and that beautiful mellow tones can only result from sweet feeling—(At this point reflex action of tone upon the mind takes place, and harmonious expression is making for harmonious thinking.) —The difference in the quality of tone produced by the medium of relaxed muscles and by muscles under tension is at once distinguished by the child.

The question arises, "If the relaxation of arm and hand does not come easily, what shall be done to induce it?" Froebel says, "If you would have a child understand a deed, let him do a similar deed." This means that a child is to be given something to imitate. Here the responsibility of the teacher is emphasized, and a great law of expression presents itself—the law that the teacher can only express what he or she is, that grace of motion must be the result of grace of spirit.

We will assume that we have an instructor with true and thorough preparation of mind and body; in which case a desirable impression and expression by the child is assured. As a rule, if the teacher have a correct concept of the result desired, not only will the relaxed muscular condition and the consequent deep, round tone become the fixed possession of the child in the first lesson, but the average child of five years will obtain a concept of legato or the perfect blending of one tone with another. This concept of legato expressed with a relaxed wrist and a gliding action of hand and arm will draw legato tones after it as surely as night follows day. A smooth legato is the *bête noir* of all piano students up to this time, and is the quality of piano control most sought for during years of unintelligent drudgery. It is not attained by "practicing," but as an inevitable result of a legato concept, and that in the first lesson.

Proceeding in like manner, we may expect, in a second lesson, from our little pupil of five years, when mentality has not been benumbed by an unintelligent environment, a smooth, legato, correctly fingered passage of at least an octave. To obtain crispness, strength of tone, freedom and flexibility, the concept of a vital spark must be sent over nerves and muscles, followed by finger, hand and arm gymnastic of springing, with the greatest possible elasticity and dexterity from the key, the finger emitting the tone as the trolley wire emits a spark under friction. These two touches, legato and staccato are the fundamental touches from which the innumerable shades of touch in piano control are derived. They are perceived and intelligently expressed by a child in two lessons. In six lessons the child should be able to read in treble and bass clefs and to play several little studies, both hands together. Notes and all symbols should be learned incidentally, as landmarks. Given the right environment, and in four years a child, taught in this way, should be a delightful and artistic pianist, with a repertory of classic and modern music memorized and at command.

The work of music teachers following the methods of "The New Education" is one of delightful growth. Appreciating that "the child creates himself by reproducing his environment within himself," the responsibility and opportunity of the teacher assume most important proportions, and suggest the infinite care and preparation that a teacher should give to the building of her character as well as to the study of her art.

AN INTRODUCTION TO DISSONANCE.

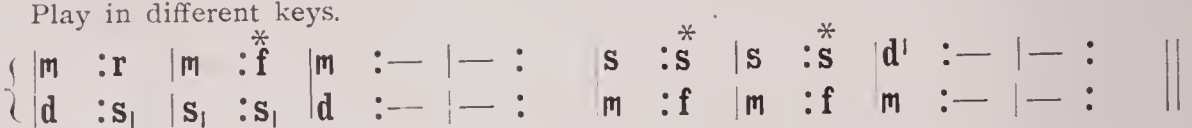
It is important first to get a thorough understanding of the various concords. But dissonance is so frequently employed in tune forms that the commonest examples should now be studied.

Dissonance of Fa against So.—This dissonance is more frequently used than any other. Let the pupils listen to the following combinations:

They will see that in both cases when Fa has struck against So it has to sink into harmony in the tone below, while So holds on its way.

In the next examples the pupils will see that while Fa goes to Me So may leap to Do.

Play in different keys.

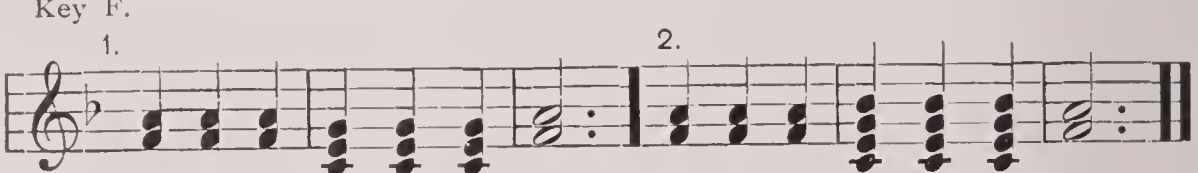


Play exercises in different keys and let them tell whenever the dissonance of Fa against So is struck, and whether it is in the primary or secondary degree.

Chord of the Dominant Seventh.—The chief use of the dissonant Fa is in the SO chord. It enriches that chord by adding another third above the Ray, and at the same time tones down the restless energy of the chord.

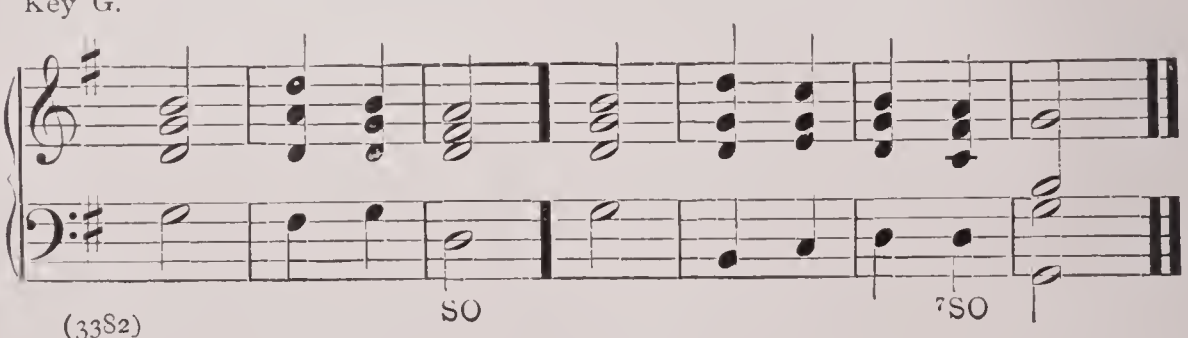
Notice the difference in the two following illustrations:

Key F.



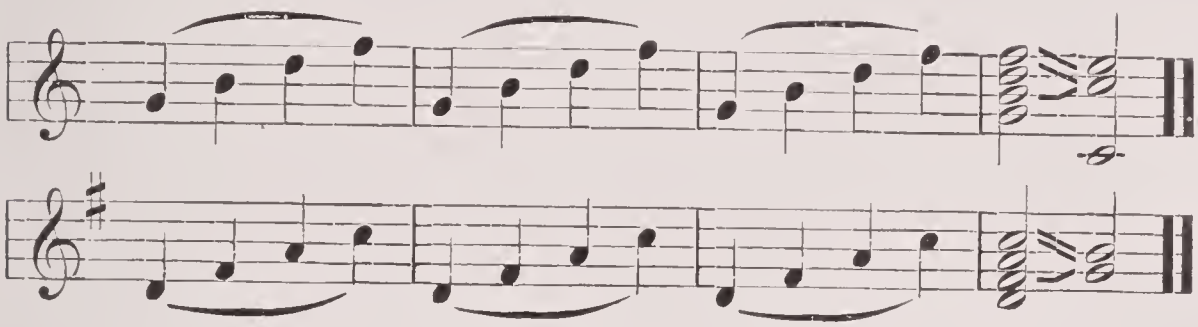
The characteristic position of the dominant seventh chord is just before the last DO chord of the music, where the Fa comes like a shadow across the bright SO chord, and prepares us for the peaceful close. See this in the closing cadence of the following chant:

Key G.



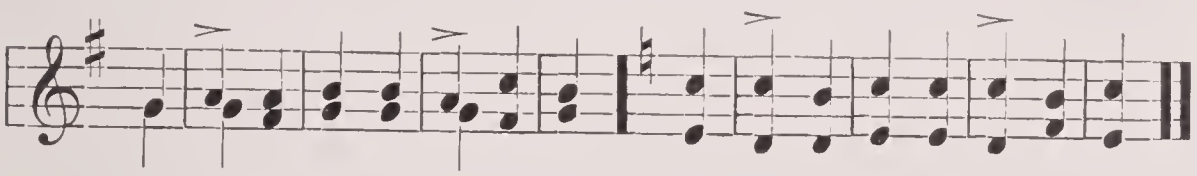
Call the pupil's attention to the difference between the SO chord in the third measure and the ^{7}SO chord in the sixth measure. This will be a good time also to show them that the final DO chord is generally heard without the energetic So, which leaves in the mind an impression of peace and rest.

As this chord plays so prominent a part in music, and is, indeed, the determining factor in key-relationship, the pupils should become thoroughly accustomed to it. Play the following exercises in all the different keys:



Dissonance of Do against Ray.—Next to the dissonance of Fa against So, that of Do against Ray is most commonly heard, *e. g.*—

Key G.



They will see that when the Do has struck against Ray it has to "resolve" upon Te, while Ray is free to hold on or pass to another tone. There are two things to notice about this dissonance of d against r, first, the Do must have been prepared in the preceding chord, and secondly, this dissonance nearly always occurs on the strong pulse.

It may be noted in passing that in all cases of dissonant fourths, the dissonance resolves upon the third of its own chord, which it has for a moment displaced; while the dissonant seventh resolves upon the third of the next chord. As a general thing the young student's mind should not be burdened with these details for the present; but he should listen frequently to the three forms of dissonance which have been noticed, and learn to detect them by ear.

AN INTRODUCTION TO MINOR MUSIC.

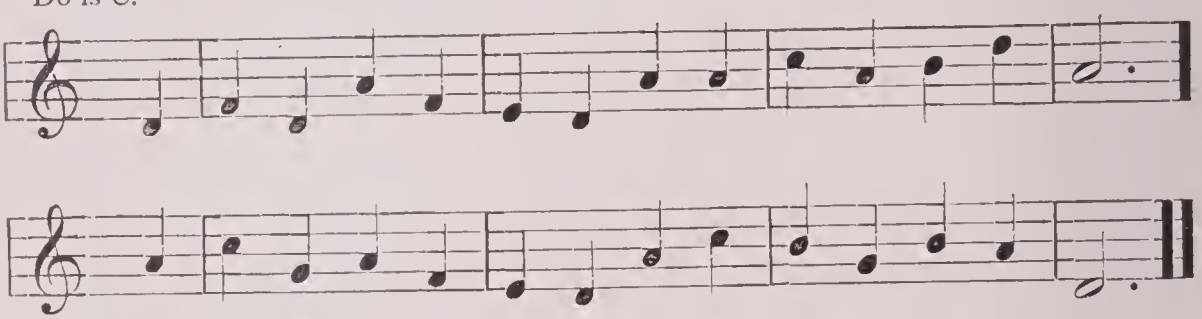
In all of our music up to this time Do has been the controlling factor, but we have now to study music in which Do takes a subordinate place.

The ancient Greeks formulated a number of modes of using the scale. One scale would be from Do to Do[1]; another from Ray to Ray[1]; a third from Me to Me[1], and in this manner every tone of the scale had its own mode in which it was the predominant tone. Some of these modes were more highly esteemed than others, as they were supposed to have greater moral influence. Curiously, our Do mode, which we now call the major mode, was quite late in coming into favor. The Greek philosphers considered it immoral!

One by one the old modes dropped out of use, until there are only two now in use, the Do mode (Major) and the La mode (Minor). Two of the other modes lasted on through the Middle Ages, and each of them is still occasionally heard. One was the So mode, which was much used in early church music. The famous melody which is sung to "Scots wha hae wi' Wallace Bled," is in this mode. The other was the Ray mode, which is something like our modern minor. The Ray mode is still heard in some traditional tunes. The old hymn tune, "Martyrs," is one of the best examples of this style of music:

Do is C.

MARTYRS.



The La mode is the only one which lives on side by side with the Do mode, because it is the only one which has been able to accommodate itself to the requirements of modern harmony. To do this it has had to undergo considerable modification, in which there is a pretty close imitation of the habits of the Do mode. From the Do mode we get all of the major music, and from the modified La mode comes our minor music.

There is a wonderful charm in minor music. It lacks the definite outline and the precision of major music, but for that very reason the imagination revels in its dreamy mystery. It seems a fitter expression for the infinite aspirations of the soul. Major music is, in a sense, bounded and local, while minor music is unbounded and universal. It precedes major in the elemental traditional music, and, on the other hand, it transcends it in the highest flights of musical genius.

But, since in musical art minor harmonies are formulated upon major models, it is very necessary to have a clear definition of major tonality in order that we may understand its "wavering image" in the minor.

The study of minor music may be made very interesting to the children, first, because they feel a natural attraction for what they like to call "shadow music," and, secondly, because they find in it a new application of the principles which they have firmly grasped in their previous musical studies.

It is one more instance of going from the known to the unknown. If they have a clear idea of the major form, they will trace a beautiful meaning in its minor reflection.

It may be presented to them in some such way as this:

Let them listen to this phrase | **d m s m d s_1 d** || and tell the names of the tones which they hear. Then let them listen to the same phrase followed by its relative minor, thus:—

Major, | **d m s m d s_1 d** || Minor, | **l_1 d m d l_1 m_1 l_1 —** ||

Let them hear this sung two or three times. They will notice that although these two phrases are very different, there is an evident relation between them. The second is imitating the first.

Let them hear another phrase followed by its minor relative, thus: Major, | **d m s f m r d** || Minor, | **l_1 d m r d t_1 l_1** ||. Again they will notice that the second phrase is imitating the first. Ask them which phrase seems the more substantial and which the more shadowy. They will quickly decide that the first is the substance, and the second its shadow.

Sing this phrase, | **d m d s_1 d m d —** || and ask around which tone the melody is grouping itself. When they have observed the centralizing effect of the Do, sing the relative minor phrase, | **l_1 d l_1 m_1 l_1 d l_1 —** || and they will learn that La is now the center of attraction. Explain that when Do is in command, the music is major, and when La is the governing tone, the music is minor.

Write down a phrase in the major with its reflected image in the minor, thus:

Major, **d r m f m r d**
Minor, **l_1 t_1 d r d t_1 l_1**

They will now be able to observe how the minor La follows the lead of major Do, while minor Te follows major Ray, etc.

Ex. 263.

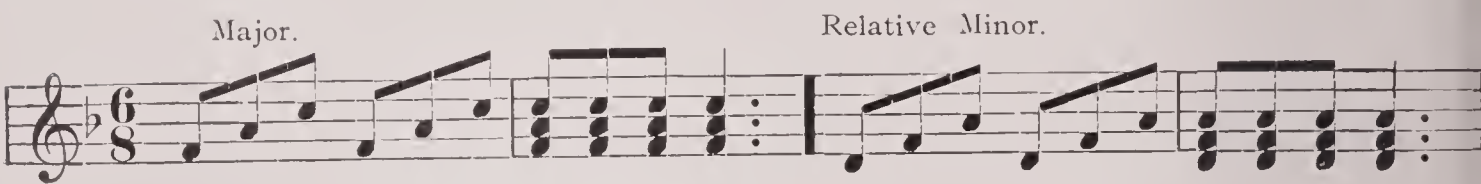
Sing a few short phrases by their tone names, and let the children answer with phrases in the relative minor, *e. g.*—

Major Pattern.								Minor Response.							
d	**m**	**r**	**d**	**m**	**r**	**d**	||	**l_1**	**d**	**t_1**	**l_1**	**d**	**t_1**	**l_1**	||
d	**r**	**m**	**f**	**m**	**r**	**d**	||	**l_1**	**t_1**	**d**	**r**	**d**	**t_1**	**l_1**	||
m	**r**	**d**	**s_1**	**d**	**s_1**	**d**	||	**d**	**t_1**	**l_1**	**m_1**	**l_1**	**m_1**	**l_1**	||
d	**s_1**	**d**	**s_1**	**m**	**r**	**d**	||	**l_1**	**m_1**	**l_1**	**m_1**	**d**	**t_1**	**l_1**	||
d	**m**	**s**	**f**	**m**	**r**	**d**	||	**l_1**	**d**	**m**	**r**	**d**	**t_1**	**l_1**	||

Changed Effect of Tones in the Minor.—Although the tones retain their individuality, they undergo certain modifications in their new minor relations. La keeps her old disposition, plaintive or rollicking, as the case may be, but she has acquired a self-reliance, which is necessary in the new circumstances. Me has more bright assertion than formerly, which also befits her position as the minor dominant. But the greatest change is in the dethroned Do. All his strong self-reliance is gone, and he has now a mournfulness and a gloom which reminds us somewhat of Fa, especially in the downward tendency of the tone.

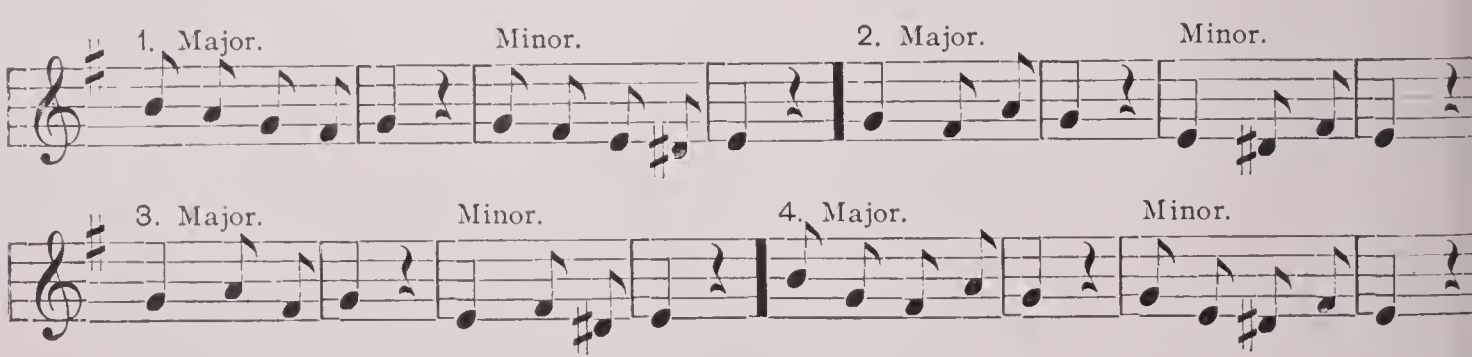
Minor Color Symbols.—The same colors will be used for the tones in the minor as for those in the major, but as the Do has undergone such an obscuration, it seems fitting to represent it by a more sombre shade of red.

Establishing the Minor Tonic.—In the earlier exercises we saw the importance of firmly fixing the Do chord in the pupil's mind as the foundation upon which all the major harmonies should be solidly built. It is now just as necessary to establish the LA chord as the basis of all minor harmonies. The most effective way to do this is to contrast it with the well-known DO chord, thus:



When they have listened to this several times, in different keys, the impression may be deepened by seeing the color harmonies, while listening to the chords.

The Minor Leading Tone, Se.—One of the most marked characteristics of the major scale is the way in which the seventh, Te. leads strongly toward the Do. As we have seen, that is one of the determining factors in establishing the scale in any given key. In like manner, we need a leading tone under the La to establish that as a minor tonic. The pupils will feel this instinctively, and it will be better to let them get into the way of singing the tone before their attention is called to its character. It may be done in this way: Sing to La such phrases as the following, to each of which they will la the minor response.



In giving the responses they are simply singing by ear and not thinking of the names of the notes. Continue with this practice until they give the minor seventh without any hesitation. Then write down any one of these major examples, thus:

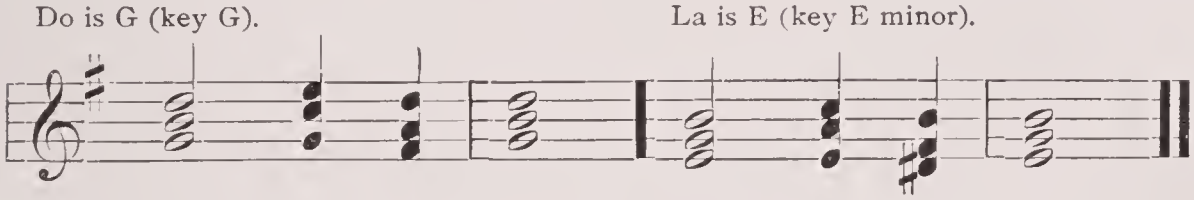
m r d t_1 d || and let them supply the minor part below; as soon as they observe that the minor part lies a third below the major they will probably put in **d t_1 l_1 s_1 l_1**. Now ask them to sing the part which they have written, and if they sing the correct sound for So, they will find that it does not give a good imitation of the major Te. Show how the new tone clings closely under La, and then give its name, Se. The exercise will then appear thus:

m r d t_1 d ||
\ \ \ \ \
d t_1 l_1 se_1 l_1 ||

Repeat the process with other examples until they clearly see the relation between the major and minor seventh.

The tone Se has now become an essential part of the minor scale, to the exclusion of So, which is comparatively rare in minor music. There is none of the joyous independence of So in the new tone, but a decided leaning toward La. In the ordinary staff notes it takes the place of So with a sharp before it. Let the children listen to a major cadence followed by its relative minor cadence.

Do is G (key G). La is E (key E minor).



The foregoing examples show the contrast between the major and minor modes, but as we study their use in musical composition we shall find that they are continually interchanging and supplementing each other.

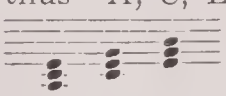
The modern ear has a strong craving for clear tonal relation, which has already been spoken of as sense of key. Hence in minor music, with its hazy outline, we feel the need of listening to the relative major to give a clearer definition to the minor reflection; and in answer to this need, we find all minor tunes modulating at some place into the major.

Emotional Character of Minor Music.—We know how Do impresses its firm, strong character upon major music. In like manner, minor music is subject to the dominating influence of La; and because this tone displays such opposite moods, minor music is more variable than major. It often goes into extremes of sadness or gayety, and while it is capable of expressing the most languishing tenderness, it sometimes bursts forth with wild energy.

HARMONY.

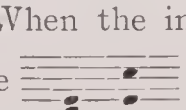
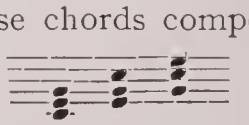
By HUGH A. CLARKE.

It is not a simple matter to write intelligibly on Harmony, without the use of technical terms that are understood only by the initiated. The aim of the author here is to convey to the young student some idea of what Harmony is, and of the order of its development.

Harmony may be defined as—first: the art of combining sounds of different pitch, and secondly: the art of making agreeable successions of these combinations. The combinations are founded on the physical laws of sound, as set forth in the science of acoustics. The successions of these combinations are founded on psychical laws, as yet but vaguely apprehended. All combinations are founded upon superimposed thirds—thus—A, C, E, G, B, D, F.—Take these letters in groups of three—thus:  and so on, and we get the fundamental combination, which is called the Common or Perfect Chord, or Triad. All the combinations that remain are simply additions to, or alterations of, this chord.

Since Art always anticipates Science, all the combinations were arrived at empirically, as the result of centuries of experiment. Simple and natural as these chord combinations appear to us, they were not so to the ancient musicians, whose theory of music was largely complicated by mathematical considerations, inherited from the Greek system, and by the dictum of the Pythagoreans that the fourth, fifth, and octave were the only consonant intervals.

All speculation as to when musicians first began to try different combinations are utterly futile, owing to the paucity of musical remains, and to the difficulty of deciphering the few that exist. Then again, the art seems to have advanced with great rapidity in one country while at a standstill everywhere else. It is strange that at a time when the barbarous combinations called *diaphony* were used a composition such as the canon *Sumer is icumen in* could have been written, and it is inconceivable that it is the only piece of music of this period (the close of the Twelfth Century) that was written with such skill. There must have been hundreds before and after it, which have been lost.

When the interval of the third and its inversion, the sixth, for example  were admitted among the Consonances the foundation of Harmony was laid. It will be easily seen that these chords composed of three letters may be arranged in three ways – thus:  In the

first group, counting from the lowest note, the intervals are 1, 3, 5; in the second, 1, 3, 6; and in the third, 1, 4, 6. The first and second groups were the only ones admitted until the time of Palestrina; the third was strictly forbidden. Music written on this basis is called the Classical Contrapuntal style, or strict style, a manner of writing, now obsolete, which reached its culminating point in the work of Palestrina. The advent of the modern Harmonic School of Music was not marked by a sudden, sharp breaking away from the old school. Like most changes its coming was gradual; new writers ventured on new experiments, generally with the effect of rousing the wrath of that large class which believes that all things should remain as it found them, or made them. As usual, the champions of progress, or of change, won the battle. New combinations were constantly added to the store of musical material, and new ways of treating these combinations are constantly appearing—some to be permanent additions to the resources of the art, others to achieve a short-lived popularity.

One of the first additions to the harmonic stock in trade was the third of the arrangements of the chord previously mentioned, viz:  —known to musicians as the six-four chord. Its use was tied down by very strict regulations, which have been constantly relaxed—or rather, new regulations have been made, until the free use of this arrangement has become one of the characteristics of modern music. But the most important additions were the chords consisting of four letters—called chords of the seventh, for the reason that the letters counted from the lowest up make the series—C E G B.

1 3 5 7

The correct use of one of these seventh chords forms one of the most important parts of the study of harmony. The difficulties connected with their use are, unfortunately, somewhat increased, owing to the lack of unanimity among theorists as to their origin. The older school of theorists treat them as independent chords, of which the lowest sound is the root; but there is a growing belief that they may all be referred to one root, or to two or three roots in the scale, of which these seventh chords are the overtones. This way of treating these chords possesses the great merit of simplicity, especially in the rules for the movements of these chords, technically called their "progressions." There will, however, always be room for discussion, because the acoustic theory will not account for all the combinations that may be used, and there is no scientific basis for the rules concerning the progression of chords; or if there is any, it must be sought in the domain of psychology—not in that of physics. It does not suffice that the musician should familiarize himself with all the combinations and all their possible successions, he must also learn the various expressions that each change in the arrangement of a group produces. It may seem a small matter which sound of a given group may be at the

top or at the bottom, yet it is of such importance to the effect, that some of the most beautiful passages in music are directly owing to this choice in arrangement, and would be completely spoiled if the arrangement was changed. This choice of chords and their arrangement is exactly analogous to the choice of words and phrases by the poet or skilled prose writer. The meaning of a sentence may be conveyed in a thousand ways, but there is one supremely excellent way, that is possible only to genius. So it is with the harmony of a musical phrase. In the mind of the real composer, melody and harmony coming into being together, each is the complement of the other. It is only the tyro or the feeble genius who has to struggle with both to bring them together. To reharmonize a theme of Mozart or Beethoven is to divorce a perfect union.

Even this degree of familiarity with the chord combinations and their progressions is not enough. The musician should recognize them instantly upon hearing them, and should have a mental "picture" of them so clear that he is never for a moment at a loss for the right one. He who would gain this supreme mastery of the material of music, will find that he has undertaken a task that will tax his powers as severely as would any other "study" with which he might wrestle.

The most wonderful thing about harmony is the simplicity and scantiness of the means employed—a chord of three, and a chord of four sounds —the powers of which are not by any means exhausted. Well may Browning, the poet *par excellence* for musicians, write:

"But here is the finger of God, a flash of the will that can,
Existent behind all law, that made them and, lo, they are;
And I know not if, save in this, such a gift be allowed to man,
That out of three sounds he frame, not a fourth sound, but a star."

There is yet other work for the student to do who would become an accomplished harmonist. It may sound paradoxical to say that the best way to harmonize a melody is to leave a great part of it unharmonized, treating these parts as ornamental notes. Notes treated in this way are called by various names—changing notes, passing notes, etc. They are not, by any means, to be understood as being unessential parts of the melody—indeed, they often constitute the chief beauty of the melody. So true is this that it has been said that dissonance is of more importance in music than is consonance. Many as are the ways in which these dissonant, unharmonized notes may be used, they may all be brought under a few simple rules, the very simplicity of which makes their application difficult—in fact, musical instinct alone can guide the composer in their use.

The change that came about in the art of music when composers began its construction on definite harmonic principles amounted to a revolution. To the old classicist, dissonance was a thing to be avoided, or, if used, to be used under the most severe limitations. To the modern composer dissonance is the most important means of expression, a means that of late has been forced into undue prominence by a school of harmon-

ists, to whom a common chord is so commonplace that they would, if possible, avoid it even as a final.

It is much to be regretted that the old school has fallen into undeserved neglect. It had a character of its own, differing entirely from that of the Harmonic School. The art of music should employ every means of expression, and hence cannot afford to ignore or neglect means that served for centuries as the vehicle for the thoughts of some of the greatest masters of the art. The difference between the two schools may be thus defined. In the old school we find a multiplicity of parts, or "voices," all of equal importance, and all, apparently, moving with absolute freedom. In the new school there is one voice of supreme importance, the whole duty of the remaining voices being to emphasize and enhance, in every possible way, the beauty of this master voice. The old school has been well compared to Greek architecture—severe, pure, passionless—fit for the temples of the Gods. The new school may be compared to that other architecture miscalled Gothic, which, from western Europe to farthest India, has raised edifices that have perpetuated in stone the hopes, fears and aspirations to which they owe their conception. In other words, the old music is calm repose, the new is passionate action. Would that we might have a little of the calm repose injected into some of our latter-day turbulencies!

It may be gathered from what we have written that the art of harmony may be acquired by careful study. This is true, but only to a limited degree. Memory and application are all that is required to master the subject, but—and this is a large "but"—genius is absolutely necessary to use it effectively. Just as the man of literary aspirations may familiarize himself with every synonym in the language, and yet be unable to write an essay or a poem, so the musician may have all the rules at his finger's ends, and yet be unable to compose even a simple song. Inspiration "cometh not with observation." Knowledge simply supplies the conditions for it, but without inspiration it can do but journeyman's work. The man who can invent a good melody has more of the stuff in him that goes to the making of a musician, than has the most accomplished harmonist, who is lacking in this gift of invention. Albrechtsberger knew a hundredfold more of harmony and counterpoint than did Schubert; yet Schubert is an "Immortal" and Albrechtsberger is known only because he was at one time Beethoven's teacher. But what a musician the world would have possessed had the genius of the one been united with the knowledge of the other!

It is hoped that this brief explanation will serve to give to the uninitiated some idea of what the word harmony means to the musician. The historical aspect has been very lightly touched upon, as technical knowledge, supplemented by plentiful musical illustration, is necessary to make it interesting and instructive.

THE ORCHESTRA.

By W. J. HENDERSON.

The modern orchestra should be regarded as a single instrument rather than a collection. Upon it are played symphonies, symphonic poems, suites, and other compositions, by a performer, who is called a conductor. But the orchestra is none the less a collection of instruments, and its present composition is the result of a long growth and of operation of the law of the survival of the fittest. In the inchoate state of the orchestra there were many varieties of violins, but only one survived. There were several kinds of *viol di braccia*, but only one lived to become the familiar viol of the orchestra of to-day. There were many sorts of wind instruments, but only a few of them are now manufactured. The supposed usefulness of the others was long ago disproved.

Before the year 1600 instruments were assembled in a haphazard manner, chiefly to make music at the banquets of the rich. There were no compositions for these collections of instruments and they played anything which came to hand. But from the experience thus gained, the musicians of the early part of the seventeenth century began to learn the nature and capacity of each instrument, and to find which were suitable to orchestral employment and which were not. Much was accomplished through the search of Claudio Monteverde (1568-1643) after dramatic effects in the orchestral portions of his operas. He is regarded as the real founder of the modern orchestra. He employed the modern soprano violin for the first time, though he did not give it the prominence it afterward attained, and he found the value of trumpets and trombones. He used ten tenor viols, which showed that he felt the need of strings in his assembly.

Monteverde also made some study of special instrumental effects. He began to find out what a body of strings could do, and what would be most suitable to a flute. Thus from Monteverde's labors came about the gradual establishment of the two contrasting bodies of string and brass instruments in the orchestra. From his experiments came finally the establishment of the string quartet, which is the foundation of the modern orchestra. In 1649 we find Cavalli imposing the principal support of the voices in his operas on two violins and a bass, making a tolerably good three-part harmony of strings. Ten years later Alessandro Scarlatti was using two violins, a viola and a bass, just as we do to-day.

With Scarlatti the modern orchestra began to take pretty definite shape. The string body was its foundation, though to be sure it was not always used in the modern style. The principal wind instrument was the oboe, while bassoons were employed to strengthen the bass part. Flutes were

occasionally used, while trumpets and kettle drums were introduced for certain purposes. The oboe was made to sing the pastoral passages, while the brass and the drums voiced military, or at least militant, ideas. With this kind of an orchestra the world of music went forward to the beginning of the eighteenth century, when the advent of Handel and Bach greatly influenced the development of the band. Bach's treatment of the orchestra was such that it revealed fully the value of each instrument as a solo singer, while Handel's developed the manner of writing for instruments in mass. Later composers thus gained a great amount of instruction from the works of these two men.

The time was now ripe for the birth of the symphony, and with Joseph Haydn (1732-1809) it came into existence. With it, of course, came the fully developed modern symphonic orchestra. Haydn employed oboes, bassoons, horns, trumpets, kettle drums, violins, violas, 'cellos, and basses. In his later works he introduced clarinets, of which the value had been thoroughly established by Wolfgang Amadeus Mozart (1756-1791). With these men the use of the wind instruments in pairs, which had been uncertainly practised by their forerunners, was systematized, and the distribution of the harmony among the string instruments was demonstrated. Following them came Ludwig Van Beethoven (1770-1827), who made further and important developments in the composition of orchestral music, and consequently in the use of the orchestra itself. He introduced into the symphonic orchestra the trombone, which had previously been used only in opera, and increased the number of horn parts to four. Since Beethoven's time the fundamental constitution of the orchestra has not been changed, though certain instruments have been added for special effects.

The orchestra of Beethoven consisted of two flutes, two oboes, two clarinets, two bassoons, two horns, two trumpets, tympani (kettle drums), first violins, second violins, violas, 'cellos, and basses. In his latest works we find four horns and three trombones. This orchestra divides itself into four departments—wood, brass, percussive instruments, and strings. The first, second and fourth are those which make the music. Each of these departments, except the percussive, is so constituted that it can produce a complete harmony, or, in other words, is capable of playing by itself without accompaniment. The wood choir, for example, has flutes, which are soprano instruments ranging to the highest regions of melody; oboes, which are also sopranos, but not of such high range; clarinets, which have a compass extending from the lowest register of the contralto voice well up into the soprano, and bassoons, which cover the whole range of tenor, baritone and bass.

The brass has trumpets, which are soprano instruments of much power and brilliancy of tone, horns, which extend from the bass up to the lower portion of the soprano register, and trombones which cover the regions of tenor, baritone and bass. Thus we see that either of these departments is capable of producing a full and complete harmony, and therefore of

performing without assistance from the other. At the same time the character of the tone produced by each is entirely different from that of the other, and this is a fact of which the composer takes much account in his use of them.

But we still have the strings. The violins cover the soprano and contralto registers, the violas, both contralto and tenor, the 'cellos the tenor, baritone, and bass, and the bass the lowest bass. Composers of to-day, however, still further enrich this assembly of instruments by adding others. The piccolo, a little flute of extremely high range, is used to extend the upward flight of the melody, and three flutes are used frequently instead of two to enrich the harmony. To the two oboes is added the English horn, the alto of the oboe family, and an instrument of beautiful individuality. Three clarinets are much used instead of two, and to them is added the bass clarinet, an instrument of organ-like sonority and power, invaluable either as a solo voice or a component part of the harmony. The contra-bassoon, which runs an octave lower than the ordinary bassoon, is often added to strengthen the bass. To the brass choir is given a third trumpet, while below the trombones is placed the deep-voiced and rich-toned tuba, a bass instrument of power and agility. The percussive department gathers in all instruments which can be utilized. To the kettle drums, the bass drum, the cymbals and the triangle are added big bells, sets of little bells, tambourines, gongs, castanets, and even the xylophone. Anything which can mark a rhythm and at the same time has a character, either national or individual, can be utilized in the percussive department.

The harp has found its way out of the opera, where it was used for national themes, such as the wandering minstrel or the Egyptian maiden, to the symphonic band, where it is now almost indispensable. The old string quartet, as it is called, though it is really a quintet, remains the same; but composers now make it sing in more parts. The first violins are frequently divided into two or four parts, the second again into two, the violas into two, and the 'cellos the same. Thus the strings voice a wonderfully full and rich harmony, and, like the wood and the brass, are capable of playing alone. For special purposes all this array of instruments is often still further increased. For example, in the third act of "Die Walküre," Wagner calls for two piccolos, two flutes, three oboes, one English horn, three clarinets, one bass clarinet, three bassoons, eight horns, four trumpets, one bass trumpet, four trombones, one contra-bass tuba, four kettle drums, harp and strings.

The reader must have seen that one of the first requirements of the orchestra is the establishment of a full and sonorous harmony. A quartet of human voices sings in four parts: soprano, contralto, tenor and bass, and the orchestra is primarily arranged so as to allow of its voices being thus treated. Each of the choirs is constituted thus. But owing to the greater compass of instruments it is possible to write in more than four

parts. So the harmony is enriched and the modern orchestral composition gains greatly in richness and brilliancy of color. If, however, the entire orchestra were constantly employed, the result would be monotony of character and power. So the composer, by using now the brass, now the wood and again the strings, gains a variety, which is far beyond the reach of the human voice. This, however, would still be insufficient. A simple rotation of the different departments would in the end become quite as monotonous as the constant use of the entire body, and it would lead to a very inflexible style of composition. The composer then makes use of the value of the solo voices of the instruments and of the mixture of their tone-tints. A single melodic thought is made interesting for a long time by simply passing it about from a flute to an oboe, from an oboe to a clarinet, and then to a bassoon, a horn or a violin. Again a flute and an oboe may sing it together, thus producing a different effect from that obtained by using either instrument alone. A flute and a clarinet together sound unlike an oboe and a clarinet, while a 'cello and a bassoon make still a different quality of tone. Again the brass choir as a whole may be combined with the wood as a whole, or either one of them with the strings. Here we get another series of effects. Again parts of one choir may play with parts of another. Horns and strings are beautiful together, and equally beautiful, but altogether different in tone, are horns and clarinets. A combination of trumpets with clarinets and bassoons will produce one effect, and the simultaneous use of flutes, oboes and 'cellos another. In short, there is no limitation but that of the composer's fancy and taste to the combinations which may be made in the modern orchestra, and all of them produce beautiful and eloquent effects.

The composer must bear in mind the nature and power of each instrument. He must so arrange his combinations that the principal melodic thought is not given to an instrument too weak to make it heard above a harmony allotted to more powerful voices. And he must not attempt to make an instrument speak a language which is foreign to it, unless he desires to produce a humorous effect. When Mendelssohn wished to burlesque the fairy trumpets in "Midsummer Night's Dream" he wrote a fanfare for oboes, instruments of a purely pastoral nature. A flute cannot speak defiance, and a trombone should not be chosen to sing a love song.

The tendency of the latest orchestral writers, however, is to give the wind instruments a wider variety of utterance than the older composers ever imagined would be possible, and it is not possible for us now to foresee at what point the limit will be reached. The instruments themselves have been very greatly improved in mechanism, and the skill of our modern players is great. Many things may be attempted now which in Beethoven's time would have exceeded the ability of the ordinary orchestral player. To read one of Richard Strauss's orchestral scores is to see that wonderful agility is now required of all the wind instruments.

THE ARTISTIC VALUE OF MUSICAL CULTURE.

By W. S. B. MATHEWS.

It was a fortunate suggestion of the late Matthew Arnold to define the much-used term Culture as a "knowledge of the best which has been said and done in the world," for this definition at once drew a distinction between knowing thought and merely knowing books; it gave place and value to history, as a narrative of the great things done in the world; and easily included among the things worth knowing all that great cult of the beautiful which we group under the name of Art. Previously to this, and in part as a Puritan heritage, the place of art was but imperfectly understood, and if any part of its masterworks was studied, it was as something individual to the scholar, and aside from the road to culture in general. Our education has been and still is in bondage to the utilitarian idea; the modern "practical man" wants to know how much better off a student is for knowing anything about art. Will he earn his living any more easily? If not, why waste time upon it? Fortunately this bare form of the question has now become obsolete; even the practical man sees that when a poor boy, educated at public expense, turns out to be an inventor, or a genius in art, the community receives from his work a stimulation and an uplift of more value than from whole lives of unthoughtful and unimaginative workers.

In the better circles it is now understood that the well-rounded individuality, the world-wide sympathy with doing and aspiration, and the esthetic satisfaction derivable from literature, religion and art give the individual a comfort and a joy in living which go far to compensate him for whatever may be arduous in the daily toil by which he earns his livelihood.

"Faith, love and worship," Ruskin has well said, are necessities to the soul; and Art is a province of human effort in which they come to a full and satisfying expression.

There is something curious in this faith in the beautiful and in this admiration and reverence for those who have so expressed the beautiful and the sublime as to bring it into the thought of mankind. Thousands who have never seen a canvas by Raphael or statue by Michael Angelo, a piece of coloring by Rubens, or even the truth-telling portraits of the old Dutch masters, know the great names of these artists, and not of these alone. Phidias, dead these two thousand years and more, is still a living tradition as one who felt and manifested the beautiful in human form. It is the same in the world of Music. Such names as those of Bach, Handel, Mozart, Beethoven, Schumann, Chopin, Liszt, Wagner, Brahms, stand out from the background of human history with a refulgence essentially finer than that of the greatest generals, statesmen and writers. And this is becoming more and more the case;

ROBERT SCHUMANN'S

RULES FOR YOUNG MUSICIANS

The most important thing is to cultivate the sense of hearing. Take pains early to distinguish tones and keys by the ear. The bell, the window-pane, the bird,— seek to find what tone each gives forth.

You must sedulously practise scales and other finger exercises. But there are many who imagine that all will be accomplished if they continue to spend many hours each day, till they grow old, in mere mechanical practice.

Be not frightened by the words, *theory*, *thorough bass*, *counterpoint*, etc.; they will meet you with friendliness if you so meet them.

Never dilly-dally over a piece of music, but attack it briskly; and never play it only half through.

Strive to play easy pieces well and beautifully; it is better than to render more difficult pieces only indifferently.

Always insist on having your instrument well tuned.

You must not only be able to play your little pieces with the fingers; you must be able to hum them over without a piano. Sharpen your imagination so that you may fix in your mind not only the melody of a composition, but also the harmony belonging to it.

Accustom yourself, even though you have but little voice, to sing at sight without the aid of an instrument. The sharpness of your hearing will continually improve by that means. But if you are the possessor of a rich voice, lose not a moment's time, but cultivate it, and consider it the fairest gift that heaven has lent to you.

When you are playing, never trouble yourself about who is listening.

Always play as if a master heard you.

Have you done your musical day's work, and do you feel exhausted? Then do not constrain yourself to labor further. Better to rest than to work without joy or freshness.

You should neither play poor compositions, nor even listen to them, if you are not obliged to.

Never try to acquire facility in what is called *bravura*. Try in a composition to bring out the impression which the composer had in his mind; more than this attempt not; more than this is caricature.

Consider it a monstrosity to alter, in any way, the music of a good composer. That is the greatest outrage you can do to art.

You must gradually make acquaintance with all of the more important works of all the important masters.

Be not led astray by the brilliant popularity of the so-called great *virtuosi*. Think more of the applause of artists, than of that of the multitude.

It is more injury than profit to you to play a great deal before company. Have regard for other people; but never play anything of which, in your inmost soul, you are ashamed.

Omit no opportunity, however, to play with others, in duos, trios, etc. It makes your playing fluent, spirited, and easy. Accompany a singer when you can.

If all would play first violin, we could get no orchestra together. Respect each musician, therefore, in his place.

Love your instrument, but do not have the vanity to think it the highest and only one. Consider that there are others quite as fine. Remember, too, that there are singers; that the highest manifestations in music are through chorus and orchestra combined.

Practise industriously the fugues of good masters, above all those of John Sebastian Bach. Make the *well-tempered clavichord* your daily bread. Then you will surely be a thorough musician.

For recreation from your musical studies, read the poets frequently. Walk also in the open air.

Behind the mountains there live people, too. Be modest; as yet you have discovered and thought nothing which others have not thought and discovered before you. And even if you have done so, regard it as a gift from above, which you must share with others.

Sing frequently in choruses, especially on the middle parts. This makes you *musical*.

What is it to be "musical"? You are not so, if, with eyes fastened anxiously upon the notes, you play a piece through painfully to the end. You are not so, if, when some one turns over two pages at once, you stop and cannot go on. But you are musical, if, in a new piece, you anticipate pretty nearly what is coming, and in an old piece, know it by heart; in a word, if you have music, not in your fingers only, but in your head and heart.

But how does one become musical? Dear child, the first requisites, a sharp ear, and a quick power of comprehension, come, as in all things, from above. But the talent may be improved and elevated. You will become musical, not by shutting yourself up all day like a hermit, practising mechanical studies; but through living, many-sided musical intercourse; and especially through constant familiarity with orchestra and chorus.

Listen attentively to all songs of the people; they are a mine of the most beautiful melodies, and open for you glimpses into the charaeter of different nations.

Refleet early on the tone and charaeter of different instruments; try to impress the peeuliar *coloring* of eaeh upon your ear.

Reverence the old, but meet the new also with a warm heart. Cherish no prejudice against names unknown to you.

Do not judge of a composition on a first hearing; what pleases you in the first moment is not always the best. Masters should be studied. Much will become clear to you for the first time in your old age.

If you can find out little melodies for yourself on the piano, it is all very well. But if they come of themselves, when you are not at the piano, then you have still greater reason to rejoiee, for then the inner sense of music is astir in you. The fingers must make what the head wills, not *vice versâ*.

Aequire an early knowledge of *directing;* watch good direetors elosely; and form a habit of directing *with* them, silently, and to yourself. This brings clearness to you.

Without enthusiasm nothing real comes of art.

Art is not for the end of getting riches. One only beeomes a greater and greater artist; the rest will come of itself.

Only when the form is entirely elear to you, will the spirit beeome elear.

GLOSSARY OF MUSICAL TERMS

ACCELERANDO, with gradually increasing velocity of movement.

Adagio, very slow and expressive; admitting of much grace and embellishment.

Adagio cantabile e sostenuto, a very slow movement, in a sustained or singing style.

Ad libitum, at will, or discretion of the performer.

Affettuoso, with tenderness and pathos.

Agitato, with agitation, anxiously.

Allegretto, somewhat cheerful, but not so quick as *allegro*.

Allegretto scherzando, moderately playful and vivaeious.

Allegro, quick, lively.

Agitato, quick, with anxiety, agitation.

Al segno, signifies that the performer must return to a similar character in the course of the movement.

Andante, a slow and distinct movement.

Andantino, a little slower than *andante*.

Anima, *animato*, *animoso*, with animation; in a spirited manner.

Appassionato, appassionamento, appassionatamente, with intensity and depth of feeling.

Appoggiatura, a note of embellishment, generally written in a small character.

Aria, an air of song.

Arpeggio, this word implies that the notes of a chord must be played in quick succession, in imitation of the harp.

Assai, very; as, *presto assai*, very quick.

Ben marcato, well marked. This expression indicates that the passage must be executed in a clear, distinct, and strongly accented manner.

Bravo, brava, bravi, an exclamation of approval. The first term is masculine, the second feminine, and the third plural.

Cadenza, a cadence at the termination of a song or other movement, introducing some fanciful and extemporaneous embellishment. In modern music the cadenza is generally written in small notes.

Cantabile, in a melodious, graceful, and singing style.

Canzonet, canzonetta, a short song.

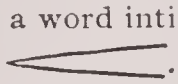
Capriccioso, a capriccio, in a fanciful, capricious style.

Coda, a few bars added at the close of a composition, beyond its natural termination.

Con, with.

Conservatoire, a public school of music.

Counterpoint, the art of composition.

Crescendo, a word intimating a gradual increase of loudness; sometimes expressed thus  .

Da capo, or *D. C.*, return to the beginning.

Da capo al fine, an expression placed at the end of a movement, signifying that the performer must return to the first part, and conclude where the word *fine* is placed.

Decrescendo, diminishing the intensity or force of the sound.

Delicatissimo, with extreme delicacy.

Diminuendo or *dim.*, this term implies that the quantity or intensity of tone must be gradually diminished.

Dolce, or *dol.*, implies a soft and sweet style of performance.

Dritta, right; as, *mano dritta*, the right hand.

Duet, a composition for two parts.

Entr' acte, music played between the acts of the drama.

Etude, a study.

Fine, the end.

Finale, the last piece of any act of an opera, or of a concert; or the last movement of a symphony or sonata.

Fioriture, embellishments in singing.

Forte, loud.

Fortissimo, very loud.

Fuga, a fugue; a musical subject treated in imitation of a dialogue, in which the different parts pursue each other alternately.

Fuoco, with fire, with intense animation.

Gamut, the scale of notes belonging to any key.

Gavotte, a lively dance in common time.

Giga, *gigue*, a jig, or lively species of dance.

Giocosamente, *giocoso*, humorously, with sportiveness.

Glee, a composition for three or more voices.

Glissando, in a gliding manner.

Grave, a very slow and solemn movement; also, a deep, low pitch in the scale of sound.

Grazia, *grazioso*, in a flowing and graceful style.

Gregorian music, sacred compositions introduced into the Catholic service by Pope Gregory.

Harmony, the grouping of notes so as to form chords, which succeed each other according to certain laws.

Il, the; as *il violino*, the violin.

—— *Canto*, the song.

—— *Piu*, the most.

Interlude, an intermediate strain or movement.

Intermezzo, intermediate, placed between two others.

Kapellmeister, a chapel master.

Langsam, slowly.

Larghetto, indicates a slow and measured movement, but less so than *largo*.

Larghissimo, extremely slow.

Largo, a very slow and solemn degree of movement.

Legatissimo, very smoothly connected.

Legato, a smooth, gliding manner of performance.

Legatura, or *legare*, a binding together.

Legerement, *leggiardo*, *leggieremente*, *leggierezza*, with lightness, gayety.

Leggiero, in a light manner.

Lentement, *lentemente*, *lento*, in slow time.

Madrigale, *madrigals*, elaborate compositions for voices in five or six parts, in the ancient style of imitation and fugue.

Maesta, *con*, *maestoso*, with majesty and grandeur.

Maggiore, the major key.

Marcato, in a marked and emphatic style.

Mesto, mournfully, sadly, pathetically.

Meter, measure.

Metronome, an ingenious instrument for indicating the exact time of a musical piece, by means of a pendulum, which may be shortened or lengthened at pleasure.

Mezzo, half; as, *mezzo voce*, in a subdued tone; *mezzo piano*, rather soft; *mezzo forte*, rather loud.

Molto, very, extremely.

—— *Adagio*, extremely slow.

—— *Allegro*, very quick.

Morceau, a short piece or musical composition of any kind.

Mordente, a grace formed by two or more notes preceding the principal note.

Mosso, movement; as, *piu mosso*, quicker movement; *meno mosso* slower movement.

Moto, con, with agitation. This word is sometimes added to the Italian word denoting the speed of the movement; as, *andante con moto*.

Non troppo allegro, non troppo presto, not too quick.

—— *molto*, not very much; as, *non molto allegro*, not very quick.

—— *tanto*, not too much; as, *allegro non tanto*, not too quick.

Obbligato, an indispensable part of a composition.

Oeuvre, opera or work. *Oeuvre premier*, the first work.

Offertorio, old name for a motet, or sacred composition for three, five, or more voices.

Opus, work.

Pianissimo, pp., extremely soft.

Piano, soft: the opposite of *forte*.

Piu, an adverb of augmentation; as,

—— *Allegro*, rather quick.

—— *Forte*, louder.

—— *Lento*, slower.

—— *Mosso*, with increased action.

—— *Presto*, quicker.

Poco, a little.

—— *Adagio*, a little slow.

—— *Animato*, a little more animated.

—— *A poco*, by degrees, gradually.

—— *Diminuendo*, softer and softer by degrees.

—— *Meno*, somewhat less.

—— *Presto*, rather quick.

Potpourri, a capriccio or fantasia on favorite airs.

Prelude, preludio, preludium, a short introductory performance.

Prestissimo, the superlative of *presto*; exceedingly quick.

Presto, extremely quick.

Primo, first, as, *primo tempo*, return to the original time.

Rallentando, implies a gradual diminution in the speed of the movement, and a corresponding decrease in the quantity of tone.

Recitative, a species of musical recitation first introduced in the year 1660, at Rome.

Refrain, an old term for the burden or chorus of a song.

Register, the compass of a voice or instrument.

Requiem, a musical service for the dead.

Rhythm, the regular pulsation of movement in the music: the term is sometimes used to express a particular form or figure of movement.

Ritardando, a gradual retarding or slackening of the time.

Rondo, a composition of several strains or members, at the end of each of which the first part or subject is repeated.

Round, a melody in which the voices follow each other in regular order.

Rubato, robbed, borrowed. The term *tempo rubato* is applied to a style of performance in which some notes are held longer than their legitimate

time, while others are curtailed of their proportionate duration, in order that, on the whole, the aggregate value of the bar may not be disturbed.

Sarabande, an antique slow dance tune.

Scherzando, *scherzo*, in a light, playful, and sportive manner.

Semplice, *semplicemente*, *semplicita*, *con*, with simplicity, artlessly.

Sempre, always; *sempre staccato*, always staccato.

Sequence, a succession of similar chords or intervals.

Shake, an embellishment consisting of the alternate reiteration of two notes comprehending an interval not greater than one whole tone nor less than a semitone.

Slur, a curved line drawn over two or more notes to indicate that they must be smoothly connected.

Smorzando, *smorzato*, diminishing the sound, dying away by degrees.

Soave, softly, sweetly.

Sonata, a composition consisting of several movements.

Sonoramente, *sonorite*, sonorously; with a full tone of vibrating quality.

Sostenuto, or *sost.*, sustained, continuous in regard to tone.

Sotto, under; as, *sotto voce*, in a soft or subdued manner; in an undertone.

Staccato, this term implies that the notes are to be played distinct, short, and detached from one another.

Stretto, a knot. This term is often met with in modern music toward the end of long movements, where it is used to indicate a considerable acceleration of the time. It is also used in fugue writing, to imply that the subject and answer begin much nearer to one another than at the commencement of the fugue.

Symphony, the introductory and concluding instrumental parts of a song; also, an instrumental composition, consisting of several movements, and designed for a full orchestra.

Syncopation, striking an accent before its regular time.

Tanto, not so much, not too much.

Te Deum, a hymn of thanksgiving.

Tempo, the degree of movement.

—— *Commodo*, in a convenient degree of quickness.

Temps, time.

Teneramente, *tenerezza*, *con tenero*, tenderly.

Thorough bass, the art of accompanying a figured bass on the piano or organ. The science of harmony or the art of harmonic composition.

Timoroso, with awe and timidity.

Tonic, the keynote is so called by theorists.

Tranquillo, *tranquillamente*, with tranquillity.

Transposition, changing a composition from the key in which it is written to another key.

Troppo, too much. This word is generally preceded by the negative *non;* as *adagio non troppo*, not too slow.

Tuning-fork, a steel instrument used for the purpose of tuning musical instruments or for pitching tunes.

Tutta, all; as, *con tutta forza*, with all possible force.

Una corda implies that a passage is to be played upon only one string.
Veloce or *con velocita*, is a rapid time.
Vibrate, *vibrato*, with a strong, vibrating quality of tone.
Villanella, *villanelle*, the name of an old rustic dance.
Vivace, *vivacemente*, quick and lively.
Voce, the voice.
Volante, in a light and rapid manner.
Volkslied, a national song.
Vox, voice.

ABBREVIATIONS

Accel.	Accellerando.
Ad lib.	Ad libitum.
Con esp.	Con espressione.
Cres.	Crescendo.
D. C.	Da Capo.
Decres.	Decrescendo.
Dim.	Diminuendo.
Dol.	Dolce.
D. S.	Dal Segno.
Espress.	Espressivo.
F.	Forte.
FF.	Fortissimo.
Fp.	Forte, and then piano; when applied to a single note, it marks a strong accent.
Leg.	Legato.
M. F.	Mezzo Forte.
M. P.	Mezzo Piano.
P.	Piano.
PP.	Pianissimo.
Rallen. *Rallo.*	Rallentando.
Recit.	Recitativo.
Ritard.	Ritardando.
Riten.	Ritenuto.
Scherz.	Scherzando.