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SEARS, ROEBUCK AND COMPANY, CHICAGO

The Reed Organ

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Hang This in the Back of Your Organ Where You Can Always Find It

# THE REED ORGAN

HOW TO GIVE IT THE PROPER CARE

## *Simple Complaints and Easy Remedies*

With Full Explanation of the Value of the  
Stops, and Directions for Their Proper Use

*In case you should have any trouble of any nature with your organ, refer to this book before writing to us. Remember that ALL organs of every make are made of materials which must obey natural laws, and any organ exposed to moisture or dirt may give cause for complaint.*

SEARS, ROEBUCK AND CO., CHICAGO

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# THE REED ORGAN

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**I**N point of mechanical construction the Reed Organ is of a very simple character, and so perfect is the material, workmanship and construction in the Beckwith, that if it receives fair treatment at the hands of the owner it will remain perfect in action and musical quality during the entire life of the guarantee and even longer. If, however, it is neglected, if it is allowed to absorb dampness and dust, or should it become the home of moths or mice, it will in time become unfit for use.

Should the organ become disabled on account of any of the above mentioned causes, it would be manifestly unfair to expect the manufacturer to make good any repairs made necessary through such mistreatment, under the provisions of his guarantee, and no manufacturer would agree to do so.

The Beckwith Organ represents skilled workmanship of the highest character, and the very best material that can be obtained is used in its making. The Beckwith Organ Company's factory is the best, finest equipped, and largest exclusive organ factory in the world, and while every possible precaution and care is taken, it will sometimes happen that some part of the organ may not act with the same promptness that it should. This is especially true when it is first unloaded from the car. A key may stick, a note may sound after the key has been pressed and released. It may produce an unpleasant, jarring sound, or it may not sound at all, or other seeming defect may manifest itself, which is not a defect in any sense of the word, but which if only understood could be readily adjusted. Any organ, no matter what the name or make, will show the same results under the same conditions, and should you buy an organ from us, or from anyone else, and have any complaint of any nature to make, first turn to the pages in this book, where you will find all possible complaints very carefully explained, as well as an easy and simple remedy.

Remember that all Reed Organs are made largely of wood. It is well to bear in mind the fact that moisture is one of the chief enemies of an organ, and that it is the tendency of all wood, and especially of well seasoned wood, to swell in damp weather, and to shrink in dry weather, when the moisture has entirely evaporated.

Practically all the trouble that can possibly come to an organ can be directly traced to dirt or dampness. These are natural conditions, against which the manufacturer is powerless, and the manufacturer's guarantee against defect is not a guarantee that the material in an organ will not obey ordinary natural laws. It would be unfair to expect the guarantee to mean that the metal parts would not rust when exposed to moisture, and that the thoroughly kiln dried wood from which it is made would not swell when exposed in the same way. No organ maker can prevent the metal parts of an organ from rusting when exposed to moisture, or the kiln dried wood from swelling under certain conditions, just as it will shrink in dry weather, and nothing on earth can prevent it. It is just as reasonable to expect water to run up hill as to expect that the wood and metal in an organ will not show the natural results of natural causes.

No doubt you have noticed that in damp weather the doors in your house will stick, the windows will stick, the drawers in the tables and bureaus will swell up to such an ex-

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tent that it is almost impossible to open them. Do you blame this to defect in material or workmanship? No. You realize that it results from the tendency of all matter to show the result of natural causes. From experience you know that when the atmosphere is free from moisture all these matters will adjust themselves, and by the natural process of evaporation the parts will return to their normal condition.

Through a mistaken idea, some have been led to believe that an organ, for some reason, will not respond to these natural conditions. It is an unfortunate fact that some irresponsible dealers or agents will state that these conditions will never arise in an organ that they offer for sale, but if the matter was only given some consideration, this claim, on the face of it, would show that it was absurd, and anyone, be he agent or manufacturer, who claims that his particular organ, or the one he offers for sale, will not show these natural results, is not to be trusted.

If moisture has such an effect on ordinary doors and windows, it must be expected that the same effect should show in the mechanism of an organ.

When moisture settles on metal it causes rust, and when it is absorbed by kiln dried wood it causes it to swell. If any part of your organ action swells it means that that part of the action will stick, and if it does stick it means that your organ has been exposed to moisture. The very nature of your complaint would prove it, and your complaint is no more than what is to be expected. It would be an injustice to the manufacturer and to us, to look for impossibilities in an organ, especially when exposed in this manner, and to expect anything else but natural results to arise from natural causes.

### DIRT AND DAMPNESS.

As already stated, practically all the trouble that can possibly arise can be directly traced to dirt or dampness.

Dirt in an organ will sometimes cause a reed to become silent, or it might cause it to give out an unpleasant jarring sound. This is more likely to occur when the shipment is first unpacked. During its transportation it is an easy matter for a small particle of dust or some other foreign substance to become lodged in a reed. This prevents the tongue from vibrating freely. Sometimes a key will stick or will remain down after you press it. Perhaps a tracker pin swells up, and the owner of the organ might jump to the conclusion that the manufacturer had slighted the organ in its making, or had not given sufficient care to its construction, when, in point of fact, the result is due entirely to natural causes and beyond any manufacturer's power to prevent. If you were to buy a reed organ for \$1,000.00 and expose it to exactly the same conditions you would

**READ THIS**

***It Was No Trouble at All to Remove the Complaint by Following Directions in the Book.***

Box 66, Loomis, Michigan.  
Sears, Roebuck and Co., Chicago, Ill.

Dear Sirs:—I received your letter and in accordance with your advice I followed directions in the Reed Organ Book you sent me and found out what the trouble was with my organ. I immediately and permanently removed the difficulty without any tools whatever and I want to write you to tell you how easily the trouble was removed and how much I thank you for your advice. I now know more than I ever did before about organs.

I have read the Reed Organ Book carefully and feel that I have perfect confidence in myself, not only to give my organ more intelligent care, but to correct any slight derangement caused by dirt and dampness which I have found by careful inquiry is common to all organs of all makes.

I again thank you for your kindness.

Yours truly,  
MILLIE POLMATIER.

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have exactly the same result. This is not an evidence of any defect in material or workmanship, but is due to dampness or dirt and nothing else.

A little assistance on the part of the owner of an organ, with the directions given in the following pages before him, will enable him to immediately and permanently overcome all the trouble, and he will never be compelled, with these complete directions in his possession, to depend on any organ repair man. Not only will he be able to keep his organ in first class condition and overcome any slight derangement, but he will have a much better idea of the workings of an organ and its mechanical parts than otherwise would be possible, and will, therefore be in a position to give it more intelligent care. We know that if these directions are carefully followed, if the inner workings of the Beckwith Organ are fully examined, you will be convinced of the high grade of workmanship used in its construction, because quality and workmanship are shown in every part of the instrument as well as in its outside appearance.

People have been led to believe that there is something mysterious about an organ. If your sewing machine does not work right, do you call in a repair man? No. You tighten up the parts, perhaps, here and there, and as a result it works as well as ever. Why do you do the work yourself? Merely because you know about the workings of a sewing machine, and you know that it would be a useless expense to call in a repair man when you can do it yourself. If this is true in a sewing machine, it is certainly true in an organ, especially when the work to be done is of such a trifling nature, and also when you know that you hold our guarantee, that you hold our personal pledge, that by so doing you cannot hurt the instrument in any way.

With this introduction, we ask you, even though you have no complaint to make at this time, that you carefully read every word of the following pages so as to obtain some idea of the small amount of work necessary to be done to overcome what might appear to be a serious complaint. Keep these directions always in the back of the organ. Place a tack inside of the organ and hang them near the reed hook, so that you will always know where they are. The chances are that you may never have occasion to refer to them, but if you do have any complaint of any nature to make, then save the valuable time necessary to write to us; don't be without the use of your organ all of this time, but immediately follow these directions, and if you cannot overcome the difficulty, it will then be time enough to write us, and we promise to take the matter up with you in our usual liberal spirit under the provisions of our guarantee.

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## THE CARE OF AN ORGAN

### COMMON ORGAN COMPLAINTS AND SIMPLE HOME REMEDIES.

Following we very carefully explain practically every complaint that can possibly arise regarding your organ. You must not forget that organs are constructed almost entirely of wood and therefore are bound to feel the effect of moisture and excessive dryness.

Before following instructions given here, be sure to read all about reed organs as shown on pages 1 to 3 inclusive. It will pay you.

### OUR GUARANTEE.

Remember, we guarantee if you will follow the directions that you cannot possibly hurt the organ. Do not be afraid to follow these suggestions, nor hesitate through a mistaken idea of the amount of work involved, because it requires very little effort on your part

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and absolutely no risk. It will not take you over ten or fifteen minutes' time to remove any one of the following complaints:

1. **SOMETIMES A NOTE WILL NOT SOUND.** This interferes greatly with the playing of the organ, but the remedy is simple. Some foreign substance, such as a little dirt, has lodged between the tongue of the reed and the reed block, which prevents it from vibrating, thus causing it to be silent.

#### **THE REMEDY.**

The reed should be removed, when it can be examined closely. If you will draw the reed as explained below, and strike the side of the reed block with the reed hook, being careful not to touch the tongue of the reed, you will dislodge the foreign substance, whatever it may be, and the reed will sound as it should. Sometimes, however, the vibrating of the reed in time causes it to crack. This happens with the best of reeds, and does not indicate inferiority of material. In that event the broken reed should be sent to us, together with another from the same set, one octave above or one octave below the one that is broken, by which we will tune the reed to be replaced in perfect harmony. If the reed is in the front set, take off the key slip, the strip of wood immediately in front of and below the keys, when it can easily be reached. If the reed is in the back set remove the back of the organ. Pull out all of the stops and this will expose the ends of the reeds. Inside the back of the organ you will find the reed hook, fastened securely. Use this hook for pulling out the reed, by placing the end of the hook in the slot found in the end of the reed block, using care not to put the point of the reed hook farther in than the little slot across the end of the reed. If you should call in a repair man to remove your complaint, he would do no more than what we have directed you to do (and our directions are simple enough to be followed by a child), but he would naturally be compelled to charge you for his time.

2. **SOMETIMES A REED MAKES AN UNPLEASANT JARRING SOUND,** which is in nearly every case caused by foreign substances in the reeds, which can be removed as stated in paragraph 1, or perhaps something rests on the sounding board which causes the rattle.

#### **THE REMEDY.**

Take off the back of the organ, and look at the sounding board. It will occur occasionally that the swell-rod becomes disconnected and rests on the sounding board, which would cause the trouble. If you find that the swell rod is not disconnected, then tighten up any and all screws that you may find which hold the sounding board down on the foundation board. If this does not overcome the difficulty, then remove the reed as explained in paragraph 1, and if there is nothing wrong with it, then see whether or not the reed fits tightly in the reed cell. Sometimes the wood of the reed cell shrinks a little, and this might possibly cause the rattle. Draw the reed as before explained, take beeswax or common laundry soap (beeswax preferred) rub it on the edges of the reed block and put it back. This will make the reed stick fast in the reed cell, and will stop the rattle.

3. **SOMETIMES A REED WILL SOUND CONTINUALLY** and still the key itself may be level with the balance of the keyboard. This is caused from dirt having lodged in the valve, thus preventing it from seating properly, which would allow the air to rush into the bellows and produce a sound by passing through the reed.

#### **THE REMEDY.**

Many times this can be overcome in a very simple way as follows: Pump the bellows to their fullest capacity, open all the stops and then strike the key affected, with at least one key on each side, a number of quick blows, striking them all together. By doing so you allow the air to forcibly rush in the bellows, and this almost invariably draws the dirt out of the valve. If this does not remove the trouble, then tip the organ forward as far as

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possible, first taking off the top of the organ, if any, pump the organ hard and strike the keys exactly as explained on page 4, at the same time take a hammer or any blunt instrument and strike under the organ up against the foundation board, directly under the affected reed several quick, successive blows, which will have a tendency to dislodge the dirt, and the suction at the same time will draw it out. If this does not overcome the trouble, then draw the affected reed (always the lower set in case there is more than one); now take a thin piece of wire, bend it at an angle at the end thus [\_\_\_\_\_], insert this wire along the sides of the slot and you can tell to which side the valve is displaced, and work your wire accordingly. With this method you are also close to the seat of operation and there is little danger, if you are careful, of throwing the valve off entirely. If you find that these directions do not overcome the complaint, then we suggest that you get at the valve itself, which you can do in a simple manner by referring to paragraph 14 in this book.

**4. SOMETIMES A KEY DROPS DOWN LOWER THAN THE OTHERS** and allows the reed to sing continually. This is either caused by the swelling of the tracker pin, thus preventing it from moving freely in its socket, or the key may have absorbed moisture and has swelled to such an extent that it binds on the guide pin, or else the key has received a severe blow, such as a book falling from the top of the organ on to it, which has caused the valve of the organ to jump down far enough to catch on the ends of the valve pins. This latter, however, is something that very rarely occurs.

#### THE REMEDY.

Please refer to Figure 1, in which the guide pin is shown by the letter "G." This pin goes into the lower part of the key, preventing it from moving sideways. If you will

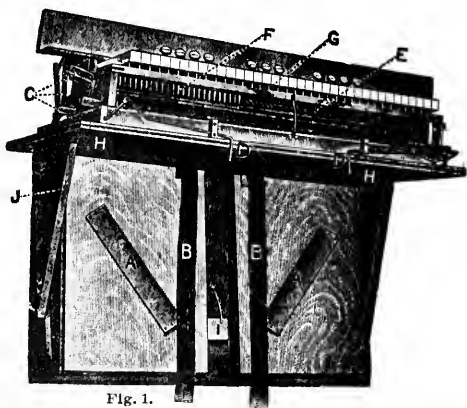


Fig. 1.

- AA—Feeder Valves.
- BB—Pedal Straps.
- C—Stop Connections.
- DD—Swell Rods.
- E—Coupler Wires.
- F—Tracker Pin.
- G—Guide Pins.
- HH—Foundation Board.
- I—Escape or Excess Pressure Valves.

grasp the front of the key firmly, working it sideways and up and down, this will serve to enlarge the opening and allow freedom of motion. If after you do this the key still stays down, the difficulty is in the tracker pin. The tracker pin is shown by the letter "F." If it is the tracker pin, have some one hold down the key that is affected, then go around to the back of the organ when you can easily locate this key, push this key upward from the back of the organ, then take some narrow flat instrument, put it on top of the tracker pin and push it up and down; if it comes up of its own accord after being forced down, this is evidence that it is free. When the tracker pin that is affected has a collar on it, you can apply the pressure on top of the collar, which is much easier than forcing up the key and getting the pressure from the end of the tracker pin.

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If this pin does not move freely in its socket, but stays down, you know that it has absorbed moisture and has swelled up. If you sandpaper it lightly, thus reducing its size, you will remove the trouble. If, however, it moves freely in its socket, and does not line up with the others, then you know that the trouble is in the valve. In that event refer to paragraph 3, and follow directions given for using the bent wire fully explained therein. If the trouble is in the valve, by proceeding as above you will remove the complaint; but as a matter of further information we desire you to learn just what a valve pin is, as it might be the cause of the trouble. Please refer to Figure 2. This shows the end of the valve (A) as well as the valve pin (B) which holds it in place. If this valve is pushed down far enough to pass the end of the valve pin which holds it in place, it would naturally permit the air to rush through it, as it would be held open. It is a very simple matter to adjust such a complaint if you will follow the suggestion as given in paragraph 3.

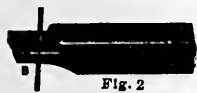


Fig. 2

**5. SOMETIMES NOTES MAY SOUND** when the organ is pumped and the keys are pressed without any stops being drawn. This would indicate that the mutes which control the various sets and which are in turn operated by the stops, do not fit tightly over the opening to the reed cells.

#### **THE REMEDY.**

First, ascertain which mute it is that is giving the trouble by pumping the organ, finger the keys, then after the key slip has been removed and the back let down press down each mute, one at a time, with your fingers; you will know when you find the one that is giving you the trouble because the sound should instantly cease when you press down the mutes. Ordinarily, the cause of the mute not coming down is that the wire that is connected to the end of the connecting stick, which in turn is fastened to the mute, has been bent and is not allowed sufficient motion for the mute to come down tight. If this is the trouble, you will know it immediately when you unhook this connecting stick from the wire. If after this has been done the mute comes down tight, just bend the wire toward the direction in which the mute is fixed; this will allow the mute free action and overcome the difficulty.

**6. SOMETIMES ALL THE KEYS OF YOUR ORGAN DROP DOWN;** that is to say, if they lay flat down and do not stay up into place when you lift them with your hand, then this arises from one of two reasons, one of which is a simple complaint, and the other is of a more serious nature.

#### **THE REMEDY.**

Examine the piece screwed on the back of the frame at the end of the keys, inside the organ, called the key binder, and if it is loose, by tightening the screws you can place it where it belongs and overcome the trouble at once. If the key binder is in place, then it is a serious matter and will need your immediate attention. This would indicate that the spring rail to which the valve springs are fastened has become unglued through the effect of excessive moisture. In order to be sure about this, pull out all of the stops, and pump the organ without placing your hands on the keys. Pump hard, and advise us whether or not the organ makes a sound. If it makes no sound you may rest assured that the trouble is in the key binder having become loose. If you find the key binder in place then be sure to make a thorough examination and report to us in detail, and await our further advices before taking any steps in the matter.

**7. SOMETIMES THERE IS A ROARING SOUND WHEN YOU PUMP.** If so, you may know at once that your organ has been exposed to undue moisture, as your trouble is caused by the wood in the bellows swelling up and tightening the feeder valves.

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## THE REMEDY.

The material in your organ is only obeying natural laws. The wood in the bellows has been exposed to undue moisture and has consequently swelled. When it swells it naturally must stretch the valve cloth, causing the valves to be tighter than the manufacturer had them when the organ left the factory. If you pump the bellows the rushing air passes these valves and if very tight will cause them to vibrate to such an extent as to give out a sound. The bellows in organs, as ordinarily placed in houses, are next to the floor, which frequently is damp and continues damp; at any rate it is seldom that the atmospheric conditions get so dry as to again thoroughly evaporate all the moisture that they have absorbed unless the room is kept well heated. If you will refer to Figure 1, page 5, and to the valves which are on the feeders, which are indicated by the letters "AA," this will aid you in overcoming the trouble. Remove the front panel of your organ, immediately over the pedals, and you will have easy access to these valves. You can pump the organ by hand; if the valves are too tight they will make a "wolfing" sound when you work the pedals (here also be sure that the little valve between the two feeders opens when you have pumped the organ hard so as to entirely exhaust the reservoir). If they do, place your finger under them and stretch them slightly. If these outside valves are not too tight, then the trouble is in the inner valve. You can see the inner valve if you lift up one of the outside valves indicated by the letter "A" in Figure 1, page 5, aforesaid. Reach in with your finger and slightly stretch the inner valve, and the trouble will be entirely and immediately overcome.

8. **SOMETIMES THE BELLOWS SEEMS TO LEAK.** This trouble may be caused by several different things. In the first place, ordinary wear and tear in an organ which receives the very best attention and care naturally will wear through little pin holes in time, which will cause the trouble.

## THE REMEDY.

You can ascertain if this is the cause of your complaint by taking off the back of your organ, running your hand around each end of the bellows, feeling for a little hole or tear in the cloth. By tipping up the bottom of the instrument you can examine the bottom of the bellows without any trouble. Should you find any hole in the cloth, write us, telling us how large a hole it is, and we will send you some special Rubber Bellows Cloth and Special Cement, which you can apply without any trouble whatever. It is just as easy to fix a little hole in the bellows as to place a postage stamp on a letter.

In case there is no hole in the bellows, examine the sounding board to see if there is a leak in it. Examine the escape valve on the front of the bellows, immediately between the two feeders, as indicated by the letter "I" in Figure 1, page 5. It may be that it does not close properly, and that the spring which should hold it in place is twisted. Examine this point closely. Perhaps this is the trouble. Also examine the Vox Humana mechanism by removing the back of the organ. See that the sheepskin valve is closed tight over the opening in the fan wheel when the Vox Humana stop is pushed in, and that when this stop is drawn, the lever so uncovers the opening to the fan wheel as to allow the air to rush in freely, causing only an even sound, such as an ordinary influx of air. Sometimes the pin that holds the loose end of this leather valve has been bent so that it does not cover and uncover the hole in the fan wheel properly. When closed it should lie down tight and when open the pin should pass quite up to the inner edge of the hole in the fan wheel, turning the leather valve up in a loop. Let someone pump the organ while you are at the back of it, and see if you hear any noise at this point. The only place that air can rush out of the organ so as to be perceptible is around the feeder valves when the organ is pumped. While the organ

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is being pumped, you no doubt will feel the air. Some people write us that they feel the air rushing out of the bellows when they pump it, thinking, therefore, that the organ leaks, when in point of fact the organ would not be working properly if you did not feel this exhaust. Remember that organs are built on the suction plan and not on the blast principle. When you pump the organ you are pumping out the air, therefore you should feel it. If these suggestions do not locate a leak, then you can determine whether or not there is a leak by closing all the stops except the Melodia stop, then pump the bellows to their fullest capacity, or until the escape valve opens; when the bellows are as full as you can get them then push down C, with the Melodia stop out, one octave above middle C, and with watch in hand see how many seconds the organ produces a sound, and report to us. Also push in all the stops, and again pumping the bellows to their fullest capacity, put your hand down flat, when the bellows are full, on the highest seven or eight keys on the right hand side of your organ, and advise us whether or not you hear a sound. This information is very important, and we should be glad to have you give it to us in detail, in case you do not overcome the trouble yourself.

**9. SOMETIMES AN ORGAN WILL PUMP HARD. This is a very simple complaint and can easily be remedied.**

**THE REMEDY.**

As the trouble is entirely due to the fact that the feeder or pedal valves are too tight, thus preventing an easy pumping of the bellows, you can readily remedy this as suggested in paragraph 7.

**10. SOMETIMES THE COUPLERS MAY NOT ACT JUST AS THEY SHOULD.** Sometimes when you pull out a coupler it might raise one or two keys above the rest, or when the coupler is not pulled out a key may appear to be locked, that is to say you cannot press it down. This is not at all serious and really is a very simple complaint that may happen to any organ. There is only one make of coupler action used in any organ—the Hammond Coupler. This is the coupler action used in the Beckwith. Therefore, any complaint which you may have with the coupler of the Beckwith is liable to happen in the coupler of any organ of any other make.

**THE REMEDY.**

You can locate the coupler action by removing the key slip, which is the strip of wood immediately in front of and below the keys. This will expose the entire coupler action to view, and will permit you to examine the wires. If you find that the wire which is supposed to rest on the collar of the tracker pin has by some means slipped under the collar, reach in from the back of the organ, lift the tracker pin affected as high as you can, forcing the wire forward and upward until it passes the collar. Then let the tracker pin fall to its natural position, and the wire will then rest in its proper place. If any of the front ends of the coupler wires on which the coupler buttons work have been turned, thus throwing the inside end of the wire upward, they can be replaced from the front by forcing up the key against which it should naturally strike, thus throwing the wire back into place.

**11. SOMETIMES WHEN THE PERFORMER STOPS PLAYING, A KNOCKING NOISE WILL BE HEARD IN THE ORGAN.** This is a very rare complaint but is readily removed.

**THE REMEDY.**

Open the back of the organ and you undoubtedly will find that one of the bellows springs on the outside of the bellows is tipped over and rubs against the side of the organ case or against the bellows brace. By moving it into a vertical position you will immediately overcome the trouble. This trouble is caused by the bellows spring being jarred

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or moved out of place, either being forced out of a vertical position toward the side of the case, or inward toward the bellows. If it rests or rubs against either the case or the bellows brace, then very naturally as the spring forces the bellows out to its normal position after the music ceases, and as this motion is very slow, it does not drag the end of the spring across the side of the case or across the brace, but jumps a fraction of an inch at a time, which produces the knocking sound.

**12. SOMETIMES THE CUSTOMER COMPLAINS THAT THE RIGHT KNEE SWELL IS USELESS AND DOES NOT WORK PROPERLY.** To one who is not familiar with organ construction and tries the organ for the first time, the difference apparent between the two knee swells is misunderstood and the customer assumes that there is something wrong with the right knee swell.

#### **THE REMEDY.**

In this case undoubtedly no remedy is needed except an explanation of the function or the use of the two knee swells. The left knee swell throws on the Grand Organ or opens all the stops, mechanical and otherwise, in the organ, excepting the Vox Humana and the Sub-Bass where the organ is fitted with the Sub-Bass stop. It requires considerable pressure to force the left knee swell open and to hold it in position because it opens up every mute in the instrument. The larger the action, that is to say, the more reeds and stops the action has, the greater the pressure required to operate the Grand Organ or left knee swell. With the right knee swell, however, the conditions are entirely different. The function of the right knee swell is only to open the Principal and Diapason Forte Stops or the lids over the swell boxes, and it requires but a few ounces of pressure to move it. If the Diapason and Principal Stops are open, and you then attempt to use the right knee swell, it will stay wherever you put it, simply because there is nothing for it to operate against, as by drawing out the Principal and Diapason Forte Stops you open the swells which it controls. To prove whether or not the right knee swell is working properly push in all the stops except the Melodia and Diapason, for instance, play a chord and then push the right knee swell over and let it come back again. It should swell out the tone, making it louder, and as the knee swell comes back into position, the tone should be subdued again. That is the function of the right knee swell. It might be well to take out the back of your organ and have someone operate first the Grand Organ or left knee swell and the right knee swell or Swell Organ, you watching how this operates on the action.

Very rarely a little moisture will settle in the block through which the swell rod (D) runs (Fig. 1, page 5.) If, when the swell rod is pushed to the right, this wire sticks, then moisture has settled in the guide block, swelling it and binding on the wire. It you will remove the key slip you will have access to this block, and with the use of an ordinary kitchen knife you can reach down and loosen the screws that hold it, thus giving the rod more room, and this will overcome any complaint of the sticking of the swell rod.

**13. SOMETIMES THE KEYS OF AN ORGAN TURN PINK OR BLUE.** This is a common complaint and is fully explained herewith, together with a simple means of removing the trouble.

#### **THE REMEDY.**

There are no organs made, except pipe organs, which are fitted with ivory keys. The keys are all composition and this is true of all organs of all makes, and in all organs, no matter what the name or make, the keys under certain conditions are liable to show a discoloration, either of a blue, red or pink shade. Sometimes, but very rarely, they become yellow also. This complaint is not one that is made of the Beckwith alone but is common

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to all reed organs of all makes where the keys come into indirect contact with the peculiar chemical properties of aniline dye.

At the present time practically all fabrics, silk as well as all other cloth, are colored with dyes that have aniline as their basis, and the peculiar chemical properties of the aniline are communicated to the keys of an organ in an indirect way. Sometimes the performer's hands are moist and the chemical properties are communicated from articles dyed with aniline dye as a basis through the medium of the perspiration on the hands, and are carried to the keys, not the color itself, but the chemical properties of the dye, which, when transferred to the organ keys, will in time produce one of the shades of color as stated. Another cause is carelessness on the part of the performer in not entirely rinsing the soap from the hands after washing. All soap contains a certain percentage of lye and this at times and under certain conditions will cause discoloration of the keys. Care used in keeping the hands and fingers both free from perspiration, as well as soap, should entirely remove any possibility of your organ keys changing color. If they do, then moisten a soft cloth with equal parts of water and alcohol (do not, however, use wood alcohol), and dip it into ordinary whiting, such as you use for cleaning silver, or powdered pumice stone, and rub the keys well, using care not to use so much alcohol as to let it run down between the keys. By proceeding thus you will entirely remove this discoloration which is caused by transferring the chemical properties of aniline dye to the keys through the action of perspiration or a soapy condition of the hands. If you do not succeed, then send to us. We sell the Universal Organ Key Cleaner at 10 cents a bottle. This is the same identical cleaner that all organ manufacturers recommend.

**14. SOMETIMES FOR SOME REASON IT IS NECESSARY TO TAKE OUT THE ACTION OF AN ORGAN.** This is the simplest way to get at the valve in case the valve is caught on the guide pin, or to get at the valves for any reason whatsoever.

#### **HOW TO REMOVE THE ACTION.**

First take off the top of the organ, if it has a top. Then take off the flat board on top of the base by removing the screws that hold it. Then take out the fall board and you will be right down to the action. Now remove the back of the organ and take off the key slip in front. At the back of the organ you will find some screws which go down through the sounding board into the foundation board which is indicated by the letters "HH" in the illustration (Fig. 1 on page 5). Remove all the screws going down through the sounding board, working from the back of the organ. Then go around to the front and you will find some screws which go up through the foundation board into the sounding board from beneath the keyboard. Take these out and the action is ready to be removed. Now refer again to Figure 1, page 5, and you will note the two knee swell wires indicated by the letters "DD." If you will take hold of the front of the action and lift it up so that these knee swell wires are raised above the foundation board, you can then slide the action right out and can then tip it up and look at the valves. This requires no mechanical knowledge. All that is necessary is that you know how to take out the screws. In putting the action back again you cannot make a mistake because it must be set properly before the screws will find the old screw holes, so you see there will be no risk on your part. In putting it back, be sure that the packing is placed between the sounding board rim and the foundation board, and that the screws are driven in as tight as they will go.

**15. SOMETIMES A SQUEALING NOISE IS HEARD WHEN THE PEDALS ARE PUMPED.** This is unavoidable at times, but is not any more serious than the squeaking of a buggy wheel that needs oiling. The pedal rollers need lubricating; that is all.

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## THE REMEDY.

If the noise sounds like a growl or what is called a "wolfing" or roaring sound, then the pedal rollers are not at fault but the trouble lies with the feeder valves, as explained in paragraph 7, but if the noise is like the squeaking of a hinge or buggy wheel that needs oiling, then the trouble is in the pedal rollers. Take off the lower panel immediately above the pedals and below the keyboard and the pedal rollers will be in plain view. Secure about two or three cents worth of plumbago at any drug store and mix it into a thick, stiff paste with a few drops of sewing machine oil. Force this paste into the opening in the pedal rollers, using a common kitchen knife for the purpose. This will form a perfect graphite lubrication and will coat the inside roller completely, which will prevent further trouble on this score. Do not use any other lubricant; oil, mutton tallow or lard alone are liable to cause the rollers to swell up, binding on the bearing and, therefore, they will work too hard.

## MOUSE PROOF ORGANS.

No matter how an organ is built, without the customer's co-operation the organ is not mouse proof. It is a mistaken idea to think that mice damage an organ by getting into the instrument around the pedals or from underneath the organ. The trouble caused by mice is the result of their getting into the action where they destroy the high grade leathers and felts in the action as well as cutting their way through the tracker pins. If mice get into the lower part of a Beckwith organ, they cannot get into the upper part of the action because they are prevented from so doing, owing to the foundation board which bars their further progress. If organ owners would only close their organs at night, mice could not enter the instrument so as to damage it, because they get into organs by climbing up on to the keys, and if the organ is open it is a simple matter for them to squeeze in under or over the fall board and then the damage is done. Keep your organ closed at night if mice are in your home and you will effectually prevent their damaging the action, the only part of the instrument where damage can be done.

**IT IS ABSOLUTELY IMPOSSIBLE FOR YOU TO DAMAGE THE ORGAN BY FOLLOWING DIRECTIONS,** and we hereby pledge ourselves that you will not do so. Do not write us until you have exhausted every means at your disposal, with these directions before you, for removing your complaint; then if you are not successful, take the matter up with us and we promise to write you fully and at once.

When writing us in regard to any trouble, be sure to give all the information you can, as that will save a great deal of correspondence and, therefore, much time. Your organ may give you a little trouble whether it is a Beckwith or some other well known make, but do not jump to the conclusion that the organ is of inferior quality, because all organs are subject to changes of atmosphere and temperature. All we ask is, if you have a complaint, that you follow these directions very carefully, and then if you do not overcome the trouble, write to us at once and in full.

It is well to repeat here that the complaints shown in this book are those which will show from time to time in all organs made, regardless of name or price asked. The remedies given are those which would be suggested to you by any organ factory or any organ expert. If you were to call in an experienced repair man, he would do no more than is shown in these pages.

It is well to remember that organ actions are made almost entirely of wood, and in the Beckwith Organs this wood is the finest quality of straight grained, thoroughly air seasoned and honestly kiln dried. It is also true that the drier wood is the more easily it is affected by moisture. A dry sponge will absorb moisture more quickly than a wet sponge. The action in a Pipe Organ costing ten thousand dollars or more, made with the highest degree of skill and the choicest material, will show the same conditions if exposed to moisture, for well seasoned wood will swell in wet weather and shrink in dry weather, and no power on earth will prevent it.

Keep your organ free from the operation of moisture and all extremes of temperature, and you should have no trouble with it at any time.

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FOLLOWING IS AN EXTRACT TAKEN FROM A CIRCULAR PUBLISHED BY THE NATIONAL PIANO MANUFACTURERS' ASSOCIATION OF AMERICA. THE ARGUMENTS ADVANCED BY THOSE MANUFACTURERS APPLY WITH EQUAL FORCE TO AN ORGAN, AND WE ASK YOU TO READ IT CAREFULLY:

"The warrant against defective material and workmanship is not a warrant against inherent qualities of the materials which must be used. No court and no real expert would think of holding a piano manufacturer responsible because thoroughly kiln dried wood swells in damp weather and shrinks again in a furnace heated house, or because the iron and steel parts rust. The watch manufacturer, when he warrants a watch, does not warrant that the case will not become scratched and grow dull in the pocket; or that there will be no necessity of the watch being cleaned and regulated. A carriage manufacturer who makes and warrants first class carriages does not make a wheel that will not get loose and shaky if it is allowed to stand still in a dry stable without use and washing, for it will inevitably obey the laws of nature, and good workmanship and good material cannot alter these well known facts.

"To warrant matter—materials—as being free from their destructive natural qualities would be to grossly misrepresent, and would be absurd on the face of it, because it would involve an impossibility; and only an ignorant or dishonest person would warrant that the metal parts shall not rust; that the wood of the case or action shall not shrink and swell with the varying conditions of dryness and humidity of the atmosphere; nor, in short, that it will not suffer one and all the effects of the passage of time, beginning from the very moment it leaves the manufacturer's hands. Common sense and all the laws of nature join in warranting that it will immediately begin so to suffer.

"It is an actual fact there are people who, because the purchase is to them an important event, claim that a manufacturer's warrant against defective materials means that the lumber has been seasoned in such a way that it cannot swell and shrink. These people are honest; they are reasonable in their intentions; they really think their claims are just. They know by experience that the best flannel in the world will begin to shrink at its first washing, and continue to shrink for all time, that no warrant could save it, and that its shrinking is one of the proofs that it is flannel and 'all wool,' but not having had experience in pianos they unthinkingly expect impossibilities of materials. They are, in a sense, unreasoning, though not meaning to be unreasonable. Now it is as impossible to prevent the rusting of steel and iron, the swelling of seasoned wood in damp weather as the shrinking of flannel in the ordinary process of washing and drying.

"There is one thing of which people rarely think when they assert that the musical instrument in their house has not been subjected to severe and sudden changes of temperature. The woman who owns the piano will say that the room where the piano stands is always kept at a uniformly comfortable temperature day and night. But if she were told that the room was dirty, never swept and never aired, she would be indignant. Her neighbors could testify that once in so many days—and frequently too—the windows of that room are thrown wide open, whether summer or winter, hot or cold, and that there is sweeping, dusting and airing going on for some time. The colder the weather is, in all probability the warmer the house from artificial heat just before the windows were opened. Here we have a sudden change that is brought about every few days in a well kept house. The delicate child will be hustled out of the room while the cold draft is there, but the delicate musical instrument is left to stand it, and very properly too, for it is not worth the same amount of care.

"The fact is, it has no right to be exalted in any one's mind to any such position in the cloudland of unreason as to lead to the expectation that it isn't going to show the natural effects of time, of wear, and what is sometimes called 'the inherent cussedness of matter.'

"Respectfully,

"The National Piano Manufacturers' Association of America."

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# The Refining Influence of Music

The study of ancient history shows that man has always been attracted by rhythmical or musical sound. The ancient Greeks, the Phoenicians, and before them the half civilized inhabitants of the world had their music, crude music it is true, but nevertheless harmonious sounds, that had an influence in shaping their destiny.

Today in the jungles of Africa, in the wilderness of Australia, in the glare of the tropical sun, wherever man is found there also will be found music in its primitive form. Music has always been a potent force in shaping the destinies of man. While it is true that "Music hath charms to soothe the savage breast," it is also just as true that in all wars, whether for a righteous or unrighteous cause, man has been stirred by music to desperate deeds. As man has developed in civilization, in his mode of living, in thought and in intellect, so music has also developed; and at the present time in the vast majority of homes, of all the forces in the home circle that serve to bind the members of the home circle together in closer bonds of interest and affection, music is the most forceful and potent.

Music uplifts the mind to higher things. With many a grown man and woman, one of the fondest recollections is the memory of the happy evenings at home, given up to the enjoyment of music of varied character. Many a youth about to take his first downward step has been turned back into the paths of rectitude by hearing some familiar tune closely associated with his childhood, with his mother and home.

The recollection of our childhood is everlasting, and as the years pass by the mind instinctively turns to the days of youth and the happy hours spent in the old home, and to those homes in which music has been a large factor in character building, the memory of the grown man and woman turns with unspeakable tenderness, and as we grow older we realize the power that music exerts over us for that which is good and ennobling.

Organ music has a certain grandeur that is lacking in other instrumental music. It was almost entirely the music of our forefathers, and the organ holds a place in the hearts of the people of the present day from which it would be hard to dislodge it. A good organ played with taste and good judgment produces music that stirs the emotions. Many organists of real talent, through a misunderstanding of the value of the stops on an organ, while playing the instrument very acceptably, nevertheless fail to secure the best combinations of reeds on the instrument and hence do not secure the most desirable quality of tone.

In the following pages will be found full descriptions of all the Beckwith Grand Orchestral Actions, showing the different sets of reeds in each action, the number of reeds in each set, the number and the names of the stops controlling these reeds, the value of the stops, as well as timely suggestions for using them so as to secure the best results, the best combinations of sound, the most satisfactory results in organ playing. A careful reading of these suggestions will prove instructive and valuable to you.

## **SUGGESTIONS FOR THE USE OF THE BECKWITH GRAND ORCHESTRAL ACTIONS A, B, C, D, E, F AND G.**

### **GRAND ORCHESTRAL ACTION A, 5 OCTAVES, 11 STOPS,**

Containing 122 extra quality double riveted, specially treated grand orchestral reeds, as follows:

<b>Bass Side.</b>		<b>Treble Side.</b>	
Diapason Reeds.....	24 notes	Melodia Reeds.....	37 notes
Principal Reeds.....	24 notes	Celeste Reeds.....	37 notes

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These reeds produce a delightful quality of tone and are controlled by the following stops:



For your complete information we list these stops with their tone quality and pitch, as follows:

- Bass Coupler A mechanical stop, coupling the octaves in the bass.
- Diapason Round, full and sonorous; 8-foot pitch.
- Dulciana Sweet and soothing. Soft stop of the Diapason.
- Principal Full, soft and clear; 4-foot pitch.
- Diapason Forte A mechanical stop that increases the volume of tone in the treble.
- Vox Humana A mechanical stop that produces a wavy, undulating effect.
- Principal Forte A mechanical stop that increases the volume of tone in the bass.
- Celeste Beautifully sympathetic and brilliant; 8-foot pitch.
- Cremona Soft and soothing. Soft stop of the Melodia.
- Melodia Sweet and full; 8-foot pitch.
- Treble Coupler A mechanical stop, coupling the octaves in the treble.

This action also includes two knee swells, the Grand Organ and the Swell Organ.

To guide you to a proper use of the stops in this beautiful action we make the following suggestions:

If you wish to play very soft music, draw the Dulciana and Cremona stops. These are the soft stops of the Diapason and Melodia set of reeds and work on the same set as the Melodia and Diapason stops, as explained in the foregoing list of stops. To build up the tone and make it still louder, draw the Diapason and Melodia stops. This permits the full value of these two sets of reeds to sing out in all their purity. For still louder work, as an accompaniment to voices, etc., draw the Principal and Celeste. This makes a very pleasing combination with much body of tone. To build the tone still further, draw the Treble Coupler and the Bass Coupler. Then you have a ponderous quality of tone, and to get the full power of the organ without using the knee swells, draw the Diapason Forte and Principal Forte stops. Then you have the same effect that you can secure by using both knee swells at once, even with all the other stops closed.

For solo work use the Dulciana and Celeste stops, together with the Vox Humana, but you must be sure not to play the accompaniment higher than the first F below middle C, because that is where one set of reeds ends and the other begins.

A louder effect can be secured with the Principal stop for an accompaniment and the Cremona and Celeste for the melody, either with or without the Vox Humana.

The use of the Vox Humana is a matter of personal taste and your own judgment will tell you when you can use it to best advantage. The right knee swell is used for increasing the tone. You can play the organ very softly and by pressing very slowly on the right knee swell you can swell out the tone just as in a great pipe organ.

### GRAND ORCHESTRAL ACTION B, 5 OCTAVES, 15 STOPS,

Containing 183 extra quality, double riveted, specially treated grand orchestral reeds, as follows:

Bass Side.	Treble Side.
Diapason Reeds.....24 notes	Melodia Reeds.....37 notes
Principal Reeds.....24 notes	Celeste Reeds.....37 notes
Bourdon Reeds.....24 notes	Flute Reeds.....37 notes

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These reeds produce a delightful quality of tone and are all controlled by the following stops :



For your complete information we list these stops with their tone quality and pitch, as follows :

Bass Coupler	A mechanical stop, coupling the octaves in the bass.
Bourdon	Deep, full tone, substrata of the organ; 16-foot pitch.
Diapason	Round, full and sonorous; 8-foot pitch.
Dulciana	Sweet and soothing. Soft stop of the Diapason.
Principal	Full, soft and clear; 4-foot pitch.
Viola	Soft and sweet. Soft stop of the Principal.
Principal Forte	A mechanical stop that increases the volume of tone in the treble.
Vox Humana	A mechanical stop that produces a wavy, undulating effect.
Diapason Forte	A mechanical stop that increases the volume of tone in the bass.
Flute	Brilliant and clear with beautiful flute quality; 8-foot pitch.
Cremona	Soft and soothing. Soft stop of the Melodia.
Melodia	Sweet and full; 8-foot pitch.
Dulcet	Very pleasing and of soft quality. Soft stop of the Celeste.
Celeste	Beautiful, sympathetic and brilliant; 8-foot pitch.
Treble Coupler	A mechanical stop for coupling the octaves in the treble.

This action also includes two knee swells, the Grand Organ and the Swell Organ.

To guide you to a proper use of the stops in this beautiful action we make the following suggestions :

If you wish to play very soft music, draw the Dulciana and Cremona stops. These are the soft stops of the Diapason and Melodia set of reeds and work on the same sets as the Melodia and Diapason stops, as explained in the list of stops above given. To build up the tone and make it still louder, draw the Diapason and Melodia stops. This permits the full value of these two sets of reeds to sing out in all their purity. For still louder work, as an accompaniment to voices, etc., draw the Principal and Celeste. This makes a very pleasing combination with much body of tone. To build the tone still further, draw the Flute stop and the Bourdon. The tone may be further increased by drawing the Bass Coupler and Treble Coupler, and the Principal Forte and Diapason Forte as well. This will secure the full power of the organ, which may also be secured by opening both knee swells to their fullest capacity. For solo work use the Dulciana stop and Celeste stop, together with the Vox Humana. In this event you must be sure not to play the accompaniment higher than the first F above middle C, because that is where one set of reeds ends and the other begins.

Another beautiful and louder solo effect may be secured by using the Principal stop for the accompaniment with the Cremona and Celeste for the melody, with or without the Vox Humana.

Another effective combination is obtained by drawing the Celeste and Flute in the treble with the Principal accompaniment in the bass, or another can be secured by drawing the Melodia and Flute in the treble and the Viola in the bass. A combination of the Celeste as a solo stop, accompaniment by the Dulciana in the bass, is also much used, and with the addition of the Vox Humana makes a very effective combination, provided the accompaniment is light.

The couplers should never be used except as an auxiliary to the full organ, as the practice of using them on combinations of two or more stops is not correct and does not

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secure the best effects. For accompanying four to eight instruments or voices, an effective combination is secured by using the Celeste and Melodia in the treble with the Bourdon and Diapason in the bass. This may be reinforced with the Flute if necessary, although the Flute, being essentially a solo stop, should not be used for accompaniments unless it is necessary to increase the volume. The use of the Vox Humana is a matter of personal taste and your own judgment will tell you when you can use it to best advantage. The right knee swell is used for increasing the tone. You can play the organ very softly if desired, and by pressing very slowly on the right knee swell you can swell out the tone just as the tone is swelled out in the great pipe organ.

### GRAND ORCHESTRAL ACTION C, 5 OCTAVES, 17 STOPS,

Containing 244 extra quality, double riveted, specially treated grand orchestral reeds, as follows:

#### Bass Side.

Diapason Reeds.....	24 notes
Principal Reeds.....	24 notes
Clarinet Reeds.....	24 notes
Bourdon Reeds.....	24 notes

#### Treble Side.

Melodia Reeds.....	37 notes
Celeste Reeds.....	37 notes
Flute Reeds.....	37 notes
Cornet Echo Reeds.....	37 notes

These reeds produce a delightful quality of tone and are all controlled by the following stops:



For your complete information we list these stops with their tone quality and pitch, as follows:

Bass Coupler	A mechanical stop, coupling the octaves in the bass.
Bourdon	Deep, full tone, substrata of the organ; 16-foot pitch.
Cornet Echo	Beautiful, soft cornet quality of tone; 4-foot pitch.
Principal	Full, soft and clear; 4-foot pitch.
Viola	Soft and sweet. Soft stop of the Principal.
Diapason	Round, full and sonorous; 8-foot pitch.
Dulciana	Sweet and soothing. Soft stop of the Diapason.
Principal Forte	A mechanical stop that increases the volume of tone in the treble.
Vox Humana	A mechanical stop that produces a wavy, undulating effect.
Diapason Forte	A mechanical stop that increases the volume of tone in the bass.
Cremona	Soft and soothing. Soft stop of the Melodia.
Melodia	Sweet and full; 8-foot pitch.
Cornet	Soft and sweet. Soft stop of the Celeste.
Celeste	Beautiful, sympathetic and brilliant; 8-foot pitch.
Flute	Brilliant with beautiful flute quality; 4 foot pitch.
Clarinet	A beautiful solo stop of strong reedy quality; 16-foot pitch.
Treble Coupler	A mechanical stop for coupling the octaves in the treble.

This action also includes two knee swells, the Grand Organ and the Swell Organ.

To guide you to a proper use of the stops in this beautiful action we make the following suggestions:

If you wish to play very soft music, draw the Dulciana and Cremona stops. These are the soft stops of the Diapason and Melodia set of reeds and work on the same sets as the Melodia and Diapason stops, as explained in the list of stops above given. To build up the tone and make it still louder, draw the Diapason and Melodia stops. This permits the full value of these two sets of reeds to sing out in all their purity. For still louder work,

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as an accompaniment to voices, etc., draw the Principal and Celeste. This makes a very pleasing combination with much body of tone. Now, by drawing the Flute and Bourdon stops, the volume will be largely increased. To build up the tone to the full capacity of the organ, draw the Clarionet and Cornet Echo, then the Bass and Treble Coupler, to which may be added, if desired, both the Principal and Diapason Forte stops. As the Viola is a soft stop of the Principal, and the Cornet is a soft stop of the Celeste set of reeds, the above combination will secure the full power of the Grand Organ, just as it may be secured by opening both of the knee swells to their fullest capacity.

For solo work use the Dulciana stop and Celeste stop, together with the Vox Humana. You must be sure not to play the accompaniment higher than the first F below middle C, because that is where one set of reeds ends and the other begins.

Another beautiful and louder solo effect may be secured by using the Principal stop for the accompaniment with the Cremona and Celeste for the melody, with or without the Vox Humana.

Another effective combination is obtained by drawing the Celeste and Flute in the treble with the Principal for accompaniment in the bass; or another can be secured by drawing the Melodia and Flute in the treble and the Viola in the bass. A combination of the Celeste as a solo stop, accompanied by the Dulciana in the bass is also much used, and with the addition of the Vox Humana makes a very effective combination, provided the accompaniment is light.

For ordinary playing sufficient volume may be secured by drawing the Diapason, Melodia, Principal and Celeste. These stops will combine the two solid 8-foot sets and give considerable volume.

On no account should you draw the Clarionet when playing an accompaniment for four or eight voices; but, should the occasion warrant, the combination can be reinforced with the Flute.

Other charming combinations may be had as follows:

A combination of the Clarionet in the treble with the Cornet Echo in the bass, using care not to play the accompaniment above first F below middle C. This may be reinforced with the Flute in the treble and Viola in the bass for slightly heavier work.

Another combination is to use the Cremona and the Cornet stops with the Viola accompaniment.

Do not overdo the use of the Vox Humana stop; it should be used with discrimination. Your own artistic sense will prompt you when to use it to advantage. Never use the Vox Humana with the full organ; it is not necessary. It is only a valuable accessory in combination with solo stops.

The Bourdon bass should never be drawn except as an aid to the full organ, provided the knee swell is not used. Being of a 16-foot pitch it necessarily would produce an overpowering accompaniment which would ruin an ordinary combination. The organist should pay particular attention to this, as many otherwise fine effects are ruined by attempting to use this stop in the bass against the lighter stops in the treble.

Use the couplers with discrimination. Unless nearly the full organ is used it is liable to produce a squeaky result, caused by the fact that the Treble Coupler couples up higher than the Bass Coupler does, not only in the Beckwith but in all organs, thus making the organ top heavy. Many organists have a tendency to use the couplers with one or two stops in the bass and treble. This is a mistake and should be avoided.

A further fine combination is the Diapason, Melodia, Principal, Celeste, Cornet Echo and Flute, adding the couplers if required to give an increased volume of tone, using the

right knee swell when necessary. Such a combination in this organ will carry from 200 to 300 voices effectively and will sustain them without any trouble whatever.

It might be well to add a word of warning and to repeat that the Clarionet stop is essentially a solo stop and should not be used in ordinary accompaniments such as the one above mentioned.

Another combination is the Celeste and Melodia, Bourdon and Diapason. According to taste, this may be reinforced with the Flute, although the Flute, being essentially a solo stop, should not be used for accompaniments unless it is desirable to increase the volume.

Many organists, when they sit down to an organ, press the right knee swell over and keep it there all the time. By so doing the maximum volume of the organ is produced and it leaves the organist nothing to help out with if he wishes to secure louder effects.

The right knee swell is used for increasing the tone. You can play the organ very softly if desired, and by pressing very slowly on the right knee swell you can build up the tone, just as the tone is swelled out in a great pipe organ. The left knee swell brings into use every set of reeds in the organ and all the mechanical stops excepting those controlled by the right knee swell, namely, the Principal Forte and Diapason Forte.

### GRAND ORCHESTRAL ACTION D, 6 OCTAVES, 11 STOPS,

Containing 146 extra quality, double riveted, specially treated grand orchestral reeds, as follows:

#### Bass Side.

Diapason Reeds.....24 notes  
Principal Reeds.....24 notes

#### Treble Side.

Melodia Reeds.....49 notes  
Celeste Reeds.....49 notes

These reeds produce a delightful quality of tone and are all controlled by the following stops:



For your complete information we list these stops with their tone quality and pitch, as follows:

Bass Coupler	A mechanical stop, coupling the octaves in the bass.
Diapason	Round, full and sonorous; 8-foot pitch.
Dulciana	Sweet and soothing. Soft stop of the Diapason.
Principal	Full, soft and clear; 4-foot pitch.
Diapason Forte	A mechanical stop that increases the volume of tone in the bass.
Vox Humana	A mechanical stop that produces a wavy, undulating effect.
Principal Forte	A mechanical stop that increases the volume of tone in the treble.
Celeste	Beautifully sympathetic and brilliant; 8-foot pitch.
Cremona	Soft and soothing. Soft stop of the Melodia.
Melodia	Sweet and full; 8-foot pitch.
Treble Coupler	A mechanical stop coupling the octaves in the treble.

This action also includes two knee swells, the Grand Organ and the Swell Organ.

To guide you to a proper use of the stops in this beautiful action we would ask you to read the suggestions shown on page 14, referring to Grand Orchestral Action A, 5 octaves. This is the same action identically, except that it has two extra octaves of reeds on the treble side, but all controlled by the same stops. Therefore, by following the suggestions for using the stops in Grand Orchestral Action A, you will get the best effects possible to secure in this action as well, for it has the same sets of reeds as Grand Orchestral Action A. It has identically the same action, is built the same, controlled by the same stops, the only difference being the two extra octaves of reeds on the right hand side, a total of 146 in all.

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## GRAND ORCHESTRAL ACTION E, 6 OCTAVES, 17 STOPS,

Containing 292 extra quality, double riveted, specially treated grand orchestral reeds, as follows:

Bass Side.	Treble Side.
Diapason Reeds.....24 notes	Melodia Reeds.....49 notes
Principal Reeds.....24 notes	Celeste Reeds.....49 notes
Clarionet Reeds.....24 notes	Flute Reeds.....49 notes
Bourdon Reeds.....24 notes	Cornet Reeds.....49 notes

These reeds produce a delightful quality of tone and are all controlled by the following stops:



For your complete information we list these stops with their tone quality and pitch, as follows:

Bass Coupler	A mechanical stop, coupling the octaves in the bass.
Bourdon	Deep, full tone, substrata of the organ; 16-foot pitch.
Cornet Echo	Beautiful, soft cornet quality of tone; 2-foot pitch.
Principal	Full, soft and clear; 4-foot pitch.
Viola	Soft and sweet. Soft stop of the Principal.
Diapason	Round, full and sonorous; 8-foot pitch.
Dulciana	Sweet and soothing. Soft stop of the Diapason.
Principal Forte	A mechanical stop that increases the volume of tone in the treble.
Vox Humana	A mechanical stop that produces a wavy, undulating effect.
Diapason Forte	A mechanical stop that increases the volume of tone in the bass.
Cremona	Soft and soothing. Soft stop of the Melodia.
Melodia	Sweet and full; 8-foot pitch.
Cornet	Clear and brilliant cornet quality of tone. Soft stop of Celeste.
Celeste	Beautiful, sympathetic and brilliant; 8-foot pitch.
Flute	Brilliant and clear with beautiful flute quality; 4-foot pitch.
Clarionet	A beautiful solo stop of strong reedy quality; 16-foot pitch.
Treble Coupler	A mechanical stop for coupling the octaves in the treble.

This action also includes two knee swells, the Grand Organ and the Swell Organ.

To guide you to a proper use of the stops in this beautiful action we would ask you to read the suggestions given on pages 16 and 17, referring to Grand Orchestral Action C, 5 octaves. This is the same action identically, except that it has four extra octaves of reeds on the treble side, but all controlled by the same stops. Therefore, by following the suggestions for using the stops in Grand Orchestral Action C, you will get the best effects possible to secure in this action as well, for it has the same sets of reeds as Grand Orchestral Action C. It has identically the same action, is built the same, controlled by the same stops, the only difference being the four extra octaves of reeds on the right hand side, a total of 292 in all.

## GRAND ORCHESTRAL ACTION F, 5 OCTAVES, 18 STOPS,

Containing 257 extra quality, double riveted, specially treated grand orchestral reeds, as follows:

Bass Side.	Treble Side.
Diapason Reeds.....24 notes	Melodia Reeds.....37 notes
Principal Reeds.....24 notes	Celeste Reeds.....37 notes
Clarionet Reeds.....24 notes	Flute Reeds.....37 notes
Bourdon Reeds.....24 notes	Cornet Echo Reeds.....37 notes
Sub-Bass Reeds.....13 notes	

We are not responsible for any bills for repairs not authorized by us in writing.

These reeds produce a delightful quality of tone and are all controlled by the following stops:



For your complete information we list these stops with their tone quality and pitch, as follows:

Bass Coupler	A mechanical stop, coupling the octaves in the bass.
Sub-Bass	Deep and majestic, a ponderous pipe organ tone; 16-foot pitch.
Bourdon	Deep, full tone, substrata of the organ; 16-foot pitch.
Cornet Echo	Beautiful, soft cornet quality of tone; 2-foot pitch.
Principal	Full, soft and clear; 4-foot pitch.
Viola	Soft and sweet. Soft stop of the Principal.
Diapason	Round, full and sonorous; 8-foot pitch.
Dulciana	Sweet and soothing. Soft stop of the Diapason.
Principal Forte	A mechanical stop that increases the volume of tone in the treble.
Vox Humana	A mechanical stop that produces a wavy, undulating effect.
Diapason Forte	A mechanical stop that increases the volume of tone in the bass.
Cremona	Soft and soothing. Soft stop of the Melodia.
Melodia	Sweet and full; 8-foot pitch.
Cornet	Soft and sweet. Soft stop of the Celeste.
Celeste	Beautiful, sympathetic and brilliant; 8-foot pitch.
Flute	Brilliant with beautiful flute quality; 4-foot pitch.
Clarionet	A beautiful solo stop of strong reedy quality; 16-foot pitch
Treble Coupler	A mechanical stop for coupling the octaves in the treble.

This action also includes two knee swells, the Grand Organ and the Swell Organ.

To guide you to a proper use of the stops in this beautiful action we make the following suggestions:

If you wish to play very soft music, draw the Dulciana and Cremona stops. These are the soft stops of the Diapason and Melodia set of reeds and work on the same sets as the Melodia and Diapason stops, as explained in the list of stops above given. To build up the tone, draw the Diapason and Melodia stops. This permits the full value of these two sets of reeds to sing out in all their purity. For still louder work, as an accompaniment to voices, etc., draw the Principal and Celeste. This makes a very pleasing combination with much body of tone. By adding the Flute and Bourdon stops, the volume will be largely increased. To build up the tone to the full capacity of the organ, draw the Clarionet and Cornet Echo, then the Bass and Treble Coupler, to which may be added, if desired, both the Principal and Diapason Forte stops. As the Viola is a soft stop of the Principal, and the Cornet is a soft stop of the Celeste set of reeds, the above combination will secure the full power of the Grand Organ, just as it may be secured by opening both of the knee swells to their fullest capacity.

For solo work use the Dulciana stop and Celeste stop, together with the Vox Humana. You must be sure not to play the accompaniment higher than the first F below middle C, because that is where one set of reeds ends and the other begins.

Another beautiful solo effect may be secured by using the Principal stop for the accompaniment with the Cremona and Celeste for the melody, with or without the Vox Humana.

Another effective combination is obtained by drawing the Celeste and Flute in the treble with the Principal for accompaniment in the bass; or another can be secured by drawing the Melodia and Flute in the treble and the Viola in the bass. A combination of the Celeste as a solo stop, accompanied by the Dulciana in the bass is also much used, and with the addition of the Vox Humana makes a very effective combination, provided the accompaniment is light.

For ordinary playing sufficient volume may be secured by drawing the Diapason, Melodia, Principal and Celeste. These stops will combine the two solid 8-foot sets and give considerable volume.

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Do not draw the Clarionet when playing an accompaniment for four or eight voices; but, should the occasion warrant, the combination can be reinforced with the Flute.

A combination of the Clarionet in the treble with the Cornet Echo in the bass, using care not to play the accompaniment above first F below middle C. This may be reinforced with the Flute in the treble and Viola in the bass for slightly heavier work.

Another combination is to use the Cremona and the Cornet stops with the Viola accompaniment.

Do not overdo the use of the Vox Humana stop; it should be used with discrimination. Your own artistic sense will prompt you when to use it to advantage. Never use the Vox Humana with the full organ; it is not necessary. It is only a valuable accessory in combination with solo stops.

The Bourdon bass should never be drawn except as an aid to the full organ, provided the knee swell is not used. Being of a 16-foot pitch it necessarily would produce an overpowering accompaniment which would ruin an ordinary combination. The organist should pay particular attention to this, as many otherwise fine effects are ruined by attempting to use this stop in the bass against the lighter stops in the treble.

Use the couplers with discrimination. Unless nearly the full organ is used it is liable to produce a squeaky result, caused by the fact that the Treble Coupler couples up higher than the Bass Coupler does, not only in the Beckwith but in all organs, thus making the organ top heavy. Many organists have a tendency to use the couplers with one or two stops in the bass and treble. This is a mistake and should be avoided.

A further fine combination is the Diapason, Melodia, Principal, Celeste, Cornet Echo and Flute, adding the couplers if required to give an increased volume of tone, using the right knee swell when necessary. Such a combination in this organ will carry from 400 to 600 voices effectively and will sustain them without any trouble whatever.

It might be well to add a word of warning and to repeat that the Clarionet stop is essentially a solo stop and should not be used in ordinary accompaniments.

Another combination is the Celeste and Melodia, Bourdon and Diapason. According to taste, this may be reinforced with the Flute, although the Flute being essentially a solo stop, should not be used for accompaniments unless it is desirable to increase the volume.

Many organists, when they sit down to an organ, press the right knee swell over and keep it there all the time. By so doing the maximum volume of the organ is produced and it leaves the organist nothing to secure louder effects.

The right knee swell is used for increasing the tone. You can play the organ very softly if desired, and by pressing very slowly on the right knee swell you can build up the tone, just as the tone is swelled out in a great pipe organ. The left knee swell brings into use every set of reeds in the organ and all the mechanical stops excepting the Sub-Bass reeds and those controlled by the right knee swell, namely, the Principal Forte and Diapason Forte.

The Sub-Bass in this organ is extremely powerful and heavy, too much so to be used for anything except with the full organ, and is primarily meant for that particular class of work. By the full organ is meant the full organ with all the stops drawn out except the two couplers and the two Forte stops. It may also be used as an accompaniment to congregational singing when the full organ is in nearly every instance in use, and you will find that this ponderous set of reeds gives wonderful foundation to the singing.

### GRAND ORCHESTRAL ACTION G, 6 OCTAVES, 18 STOPS,

Containing 305 extra quality, double riveted, specially treated grand orchestral reeds, as follows:

#### Bass Side.

Diapason Reeds.....	24 notes
Principal Reeds.....	24 notes
Clarionet Reeds.....	24 notes
Bourdon Reeds.....	24 notes

#### Treble Side.

Melodia Reeds.....	49 notes
Celeste Reeds.....	49 notes
Flute Reeds.....	49 notes
Cornet Reeds.....	49 notes

Sub-Bass Reeds..... 13 notes

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These reeds produce a delightful quality of tone and are all controlled by the following stops:



For your complete information we list these stops with their tone quality and pitch, as follows:

Bass Coupler	A mechanical stop, coupling the octaves in the bass.
Sub-Bass	Deep and majestic, a ponderous pipe organ tone; 16-foot pitch.
Bourdon	Deep, full tone, substrata of the organ; 16-foot pitch.
Cornet Echo	Beautiful, soft cornet quality of tone; 2-foot pitch.
Principal	Full, soft and clear; 4-foot pitch.
Viola	Soft and sweet. Soft stop of the Principal.
Diapason	Round, full and sonorous; 8-foot pitch.
Dulciana	Sweet and soothing. Soft stop of the Diapason.
Principal Forte	A mechanical stop that increases the volume of tone in the treble.
Vox Humana	A mechanical stop that produces a wavy, undulating effect.
Diapason Forte	A mechanical stop that increases the volume of tone in the bass.
Cremona	Soft and soothing. Soft stop of the Melodia.
Melodia	Sweet and full; 8-foot pitch.
Cornet	Clear and brilliant quality of tone. Soft stop of Celeste.
Celeste	Beautiful, sympathetic and brilliant; 8-foot pitch.
Flute	Brilliant and clear with beautiful flute quality; 4-foot pitch.
Clarinet	A beautiful solo stop of strong reedy quality; 16-foot pitch.
Treble Coupler	A mechanical stop for coupling the octaves in the treble.

This action also includes two knee swells, the Grand Organ and the Swell Organ.

To guide you to a proper use of the stops in this beautiful action we would ask you to read the suggestions given on pages 19, 20 and 21, referring to Grand Orchestral Action F, 5 octaves. This is the same action identically, except that it has four extra octaves of reeds on the treble side, but all controlled by the same stops. Therefore, by following the suggestions for using the stops in Grand Orchestral Action F, you will get the best effects possible to secure in this action as well, for it has the same sets of reeds as Grand Orchestral Action F. It has identically the same action, is built the same, controlled by the same stops, the only difference being the four extra octaves of reeds on the right hand side, a total of 305 in all.

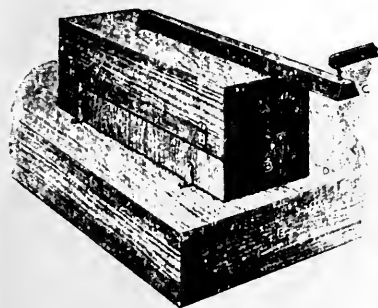


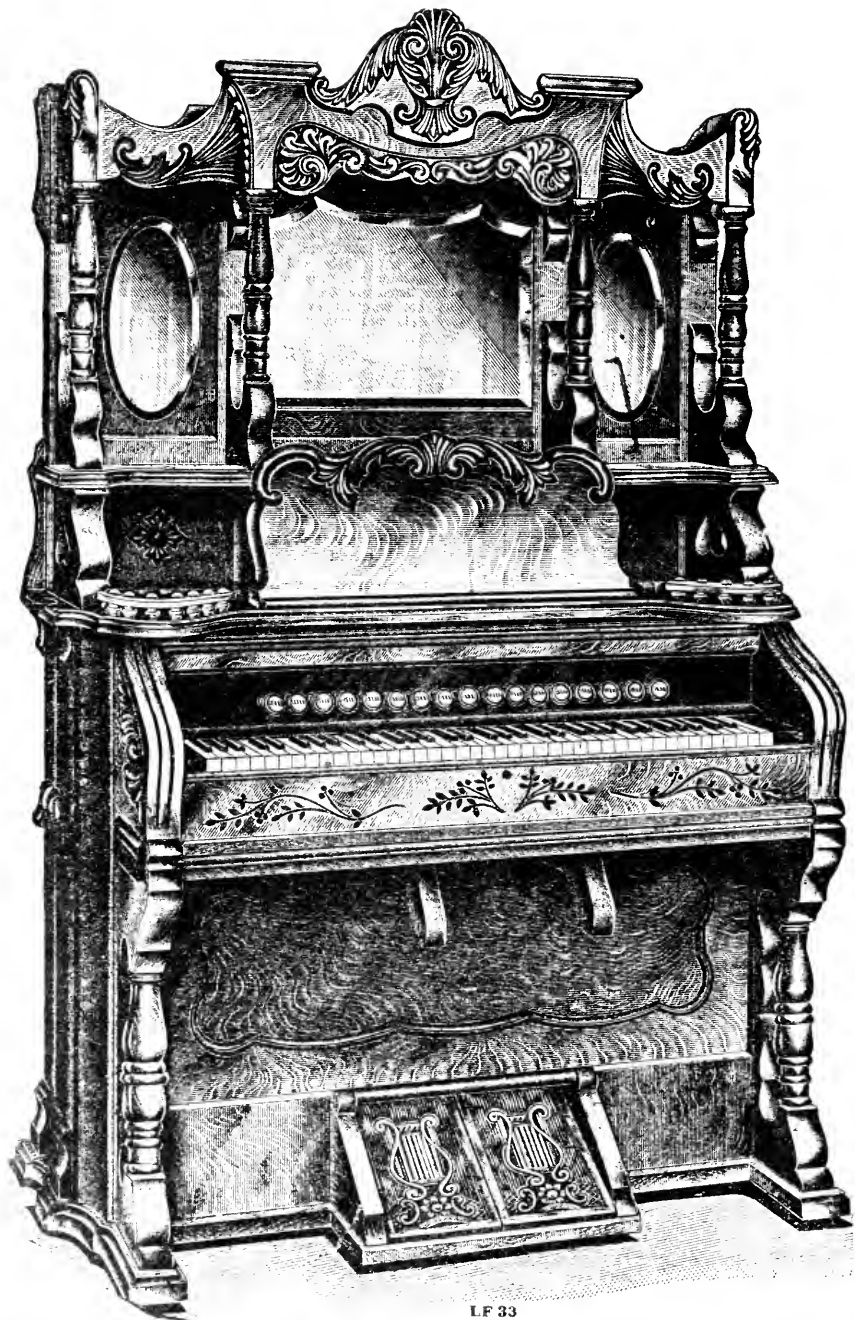
Fig. 27

- A—Valve Chamber.
- B—Reed Cell and Tracker Pin Chamber.
- C—Mute.
- D—Sounding Board.
- E—Reservoir.

### THE BECKWITH SUB-BASS.

The mechanism of the Sub-Bass used in the Beckwith Organ is a distinctive Beckwith feature. A very large reed is used, and instead of placing it inside of the reservoir the reed is placed outside. This construction, together with the improved Sub-Bass action, the delicately adjusted valves and the manner of placing the tracker pin so as to overcome all lost motion, is a very valuable improvement in organ construction. This Sub-Bass set of reeds is only furnished in Grand Orchestral Actions F and G with which the Cathedral Pipe Tone Organ is fitted.

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