

## MUSIC APPRECIATION SECTION

### ✓ THE LARGEST OF ALL MUSICAL INSTRUMENTS

THE first piano was built by an Italian instrument maker named Bartolomeo Cristofori. The oldest piano in existence was built by Cristofori in 1720. (See *The Young Citizen* for October, 1939, page 362.) But long, long before that pipe organs were built. The pipe organ is a very ancient instrument, although its mechanism, of course, has been vastly improved in modern times.

The organs of early days were very different from the organs of today. The first instrument of this type was the Pan's pipes of the ancient Greeks, which consisted of a set of pipes of different lengths bound together and made to sound by the player's breath.

About two centuries before Christ a device was invented for forcing air into pipes by water power, and keys were added to open and close the pipes. This hydraulic (water) organ was common among the Greeks and Romans. Centuries later the bellows came into use, instead of water-power, to furnish air.

An organ built in the 10th century for Winchester Cathedral in England had a bellows so powerful that 70 men were needed to pump it. In the organs of today the electric power that pumps the bellows is equal to 25 or even 40 horsepower; yet so improved is the mechanism of the keyboard that the touch of a finger is all that is required to open the pipe-valve.

When you look at the keys of a pipe organ, you see only a very small part of the organ itself, for it is the largest of all musical instruments. Sometimes above the keys of some organs you see rows of

pipes that make the tones, but more often the organ is built as a part of the building in which it is placed, and some of the pipes, like the rest of the machinery, are hidden behind the walls. Often the pipes are placed at the sides of the auditorium, in the ceiling, or even in another room.

In a pipe organ there are hundreds—sometimes even thousands—of pipes. In large organs some of the pipes are as large as the trunks of full-grown trees; these make the deep, heavy tones. Some pipes are smaller than a lead pencil; these make the higher tones.

The pipes are arranged in groups. Each group is controlled by a stop which is placed in reach of the organist. When he wishes to use any particular group, he opens the proper stop and thus connects it with the keyboard.

The air which causes the pipes to sound is forced into them from an air chamber into which air has been pumped by a great bellows or in some cases by an electric fan.

The pipe organ has several keyboards—two or three or four, sometimes even five. These keyboards are called manuals because they are played by the hands. The several manuals make possible quick changes of power and tone quality. All modern pipe organs also have a pedal keyboard on which a skillful organist plays with as much dexterity, almost, with both feet as with his hands on the manual keyboard. The keys of the pedal keyboard are of wood and are very large because the organist has to play them with his feet.

In order to provide for still greater variation in power, some of the sets of pipes are enclosed in a practically sound-proof chamber called the "swell-box." This room is provided with shutters that can be opened and closed at will. When the shutters are closed, the tone is so soft that we can scarcely hear it. When the shutters are opened, we can hear the tone at its full strength.

The manual keyboards, the pedal keyboard, the combination pedals, the stops, etc. are collectively called the "console." The console is often at a considerable distance from the pipes that actually produce the tones.

In modern pipe organs the greatest improvements are due to the use of electricity. So much of the machinery of the pipe organ is now operated by electricity that the inside of the organ looks like a telephone exchange. By means of these electrical devices almost an infinite variety in power and quality is at the organist's command.

The use of mechanical devices on the pipe organ is called "registration." By making full use of all the devices which

the organist has at his command, he is able to control a greater extent of range and power than any other musical performer. The playing of an organ compares with the possible performance of a symphony orchestra.

Not only is the pipe organ the largest of all musical instruments, but it is the most difficult instrument to play. Dr. Eliot, formerly the president of Harvard University, has been quoted as saying that the performer on a modern pipe organ does more things at the same time than are demanded by any other type of human activity.



*The Mighty Organ*

#### REVIEW

1. Tell about the first organ.
2. Look at the picture of the organ on this page.
3. Where is the console?
4. Where are the pipes?
5. Are there more pipes than the photograph shows?
6. How many manual keyboards do you see?
7. Where is the pedal keyboard?
8. Tell about the size of the pipes of a pipe organ.

*(Please turn to page 419.)*

## SAVORY DISHES

*(Continued from page 413)*

wash the fish. If they are small, it is better to wrap them in pieces of banana leaf.

Place the fish wrapped in banana leaf in a clay or a porcelain pot. Add a small amount of salt water—just enough to prevent the fish from burning and to have a few tablespoonfuls left after cooking. Cover the pot. Cook slowly from 15 to 20 minutes. Serve with *calamansi*.

*Camias* or green tamarind may be placed in the pot and boiled with the fish. This adds flavor and produces an acid taste to the fish.

*Boiled Rice*

Get one cup of rice and three-fourths of a cup of water.

Wash the rice two times with cold water. Drain and put in a pot. Add three-fourths of a cup of cold water. Cover and bring to a boil. When boiling, lower the fire and let it cook very slowly until the rice is well cooked. From 10 to 12 minutes is required.

It is better to cook the rice without washing it, because Vitamin B, minerals, proteins, and fat are washed away during the process of washing.

## GOOD YOUNG CITIZEN

*(Continued from page 404)*

## YOUNG CITIZEN IS ORDERLY.

Amando does not take things which do not belong to him. He returns anything left on a desk. He does not copy the work of his neighbors in school. In examinations he does not cheat in order to secure high grades. A GOOD YOUNG CITIZEN IS HONEST.

If Amando is asked a question, he always tells the truth. Sometimes it is hard to do this, but he will not lie. A GOOD YOUNG CITIZEN IS TRUTHFUL.

One day after the class was dismissed, as Amando was going home he passed a *tienda*. He put his hand in his pocket to get some money; he thought he would buy some candy. But he said to himself, "Mother has cooked a nice dinner for me. I will not eat between meals." So he saved his money. A GOOD YOUNG CITIZEN IS THRIFTY.

These are some of the things which a good young citizen does. Any boy or girl can do such things as these, and be classed as a good young citizen. Try

## LARGEST INSTRUMENT

*(Continued from page 407)*

9. What can you say of improvements in modern pipe organs?

10. Is the pipe organ a difficult instrument to play? Why?

11. What did Dr. Eliot say about a performer on a pipe organ?

12. The playing of a pipe organ compares with the possible performance of what group of musicians?

13. What use is made of electricity in a modern pipe organ?

14. Tell how the pipes of an organ are arranged. Where may they be placed?

15. Have you heard a large pipe organ?

16. Have you seen one?

17. Would you like to learn to play a pipe organ?

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to be like Amando. Perhaps you can do even better.

## SOMETHING TO DO AND TO THINK ABOUT

1. Make a list of the statements in this article about a good young citizen. Memorize those statements.

2. What can you do to observe each of those statements? Think about what Amando did.