

Instruments of the Orchestra

Brass and Drums

The accompanying article from the pen of Mr. C. Whitaker-Wilson (published originally in the "Wireless Magazine") is one that will appeal to those who wish to interpret the orchestral and band music they hear over the air. The author is a prominent English orchestral conductor.

THE first, and one of the most important, is the horn. This is an instrument of considerable antiquity. Lip-blown instruments have been used in every age from the primitive days of man onwards. It has always been necessary, even in the very earliest times, to have some means of summoning men and women together.

Horns of every imaginable description have been used in war, and a large number of varieties in peaceful pursuits also. The hunting horn is undoubtedly the immediate precursor of what we now call the French horn.

Two forms of the horn have been in common use for musical purposes—the natural hand-horn, sometimes called the valve or vent-horn, sometimes called the chromatic horn. The term chromatic may be appropriate for the modern vent-horn; the hand-horn was anything but chromatic. The number of notes which it could produce was limited, and such notes really sprang from a foundation note.

The player could raise the lowest note of the horn to higher notes by altering the position of his fingers, which were inserted in the bell.

This instrument is still in use, but most players prefer the vent-horn, which makes all notes possible and is more satisfactory in every way.

The introduction of the vent-horn revolutionised both the actual playing of the instrument and the composing for it. In the old days it was only possible to compose simple passages for the horn; long and sustained notes were preferred; but now it is possible to write almost anything for this beautiful instrument.

Brass and Drums.

Horns are used in pairs; most orchestras have two players, but the larger orchestras have four. Tchaikovsky and Wagner nearly always employed four horns in their scores. Perhaps, of all the brass instruments, the horn is the most effective on the wireless, because its tone is soft and round.

To look at, it is nothing more than a long tube coiled in a circular form. The tube near the mouthpiece is not more than a quarter of an inch in diameter; at the bell end it is eleven inches at least.

From the point of view of scoring, the horn is another of the transposing instruments. At one time crooks for nearly every key were carried by the players; recently it has been the custom to use only the F crook. So that in writing for horns in F the horn part is written in the key a fifth above that of the whole piece; no key signature is employed, but sharps and flats are put in where required.

Distinctive Trumpet.

AT one time there was not a very great difference between the tone of the trumpet (which we must now consider) and that of the horn; the Alpine horn, for instance, was very like a trumpet in many respects. But all that has passed now, and the trumpet is a very distinctive instrument. Just as there has been a natural horn, so there has been a natural trumpet, but

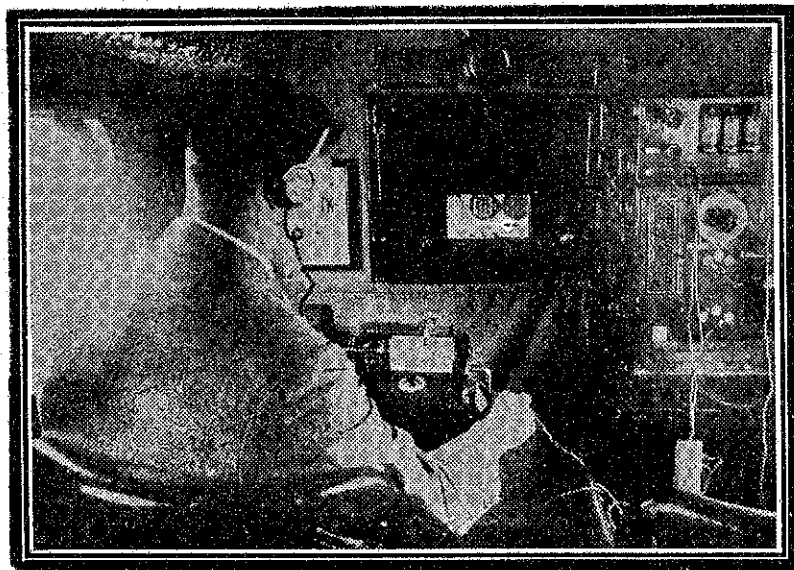
the modern valve-trumpet has long since replaced the older kind so far as orchestras are concerned.

The trumpet is a very brilliant instrument; this is probably due to the cylindrical nature of the tube.

In scoring for the trumpet it should be remembered that it is a transposing instrument. Although it is not so very

it a vulgar instrument, but I wish it had not been vulgarised.

Cornet solos are all very well on a pier-head, but they are not usually included in classical concerts. The French, strangely enough, have always used them in their symphony and operatic orchestras, but we so far have been inclined to fight shy of them. The



Receiving Pictures in the Air.—A remarkable experiment was recently carried out in Germany. A Fultograph receiving apparatus was carried in a large air liner, and successfully picked up photographs and charts through its wireless apparatus. It was an experiment to test the possibilities of transmitting to pilots such documents as maps and weather charts.

—Central Press, photo.

long since most players carried crooks for the various keys, it has become the custom to treat the instrument like a clarinet and to have it played in either B flat or A natural. All this transposing makes an orchestral score very complicated, and many have been the students of orchestration who have heaved heavy sighs over these complications. Yet it is extraordinary how quickly one gets used to looking up a score and transposing mentally as one does it.

In most orchestras there is one trumpet; in many there are two; in the larger ones there are three players. The trumpet is, however, by no means the same instrument as the cornet.

Cornet-a-pistons.

THE cornet-a-pistons is too well known to need much description so far as appearance goes. It can never be compared with the trumpet for dignity nor, indeed, for brilliance. I do not go so far as to say I consider

day may come when we shall accept them instead of trumpets.

You may be inclined to ask why. The answer is, or is supposed to be, that, whereas the trumpet takes a lifetime to play well, "any fool" can play a cornet. As I play neither myself, I give that statement with reserve. But the fact remains; the cornet has not the same majesty and dignity which characterises the trumpet.

The Trombone.

THE next instrument on the list is the trombone; not a very old one, but it was, nevertheless, used in the days of Handel and Bach. It is played with a slide by means of which the player can shorten or lengthen the tube as he pleases and so produce the notes.

There are alto-tenor and bass trombones in fairly common use, but the alto is not much used in small orchestras. The tone of the trombone is noble and dignified, and amazing effects can be produced when

it is played softly. When played loudly there is something very stately and dignified about a trombone.

In large orchestras where four horns, three trumpets, and three trombones are employed, there is no end to the possibilities for effects. Wagner and Tchaikovsky, particularly, were alive to the effects to be had with a good supply of brass in the orchestra; their work are heavily scored for these instruments in consequence.

Some composers have used the lesser known brass instruments, such as the tuba, the saxhorn, the ophicleide, and the serpent, some of which are very large and cumbersome instruments capable of producing very low notes.

A microphone is not kind to very low notes or very loud ones, and in the station studio the brass family is kept well at the back, and away from the microphone. So far as that goes, the same procedure is adopted in a concert hall; any other method would mean that the brass instruments would be bound to predominate.

Lack of Balance.

THERE is frequently such a lack of balance in small orchestras, especially municipal bands. Many a municipal conductor has had to fight a town council in order to secure enough string players. Town councillors are very seldom musicians, and very few of them appreciate that four first violins, three seconds, two violas, one cello, and a double-bass are not enough to stand up against two horns, a cornet, and a couple of trombones.

In properly balanced orchestras, such as the London Symphony, there are forty violins at least, with a full complement of the lower strings, the whole orchestra amounting to something like one hundred and twenty players. At the broadcasting studios it is possible to do with far less because, so long as the stringed instruments are nearer the microphone and the brass and drums further away, the effect can be so "faked" as to sound perfectly balanced.

What is known as a "brass band" is a different organisation altogether. All the instruments are wind instruments; there are no strings. The string portion of a symphony orchestra is replaced by military clarinets, a small type of clarinet in E flat. The rest of the band is composed of cornets, saxhorns, trombones, euphoniums, and suchlike instruments.

Different Scoring.

BUT the brass instruments of the modern symphony orchestra may be similar to, but they are not identical with, those which form what we call a brass band. They do not have the same task to perform. Cornets in a brass band are expected to produce much of the melody of the piece; trumpets in the modern orchestra do not preponderate in the same way. The method of scoring is therefore quite different.

So long as they keep to the type of music which is fitted for them, nothing can be said against them; it is only when they attempt to reproduce part of a Tchaikovsky symphony (which was written for a symphony