

## How Brass Bands are Made.

BY EDWARD SALMON.

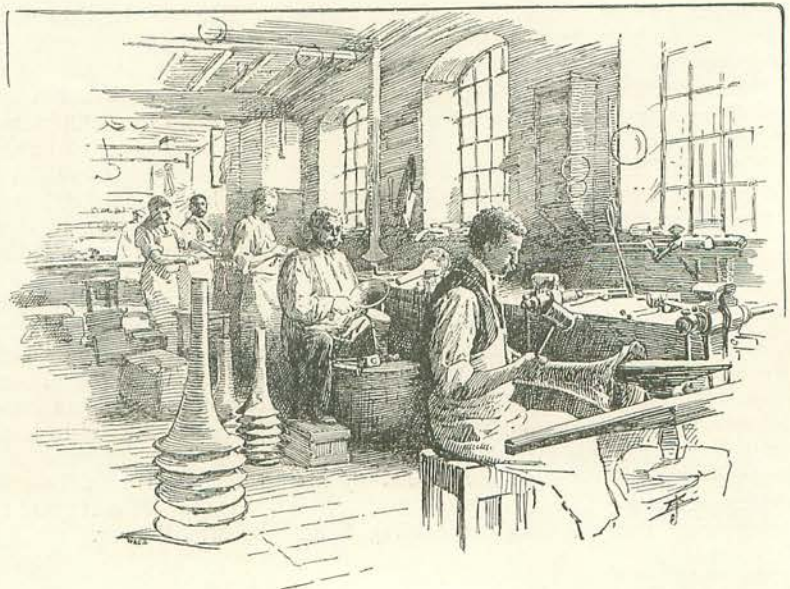


HE average citizen, asked to define his pet aversion, might conceivably indicate a brass band manipulated by German fingers. How many subjects of the German Emperor who

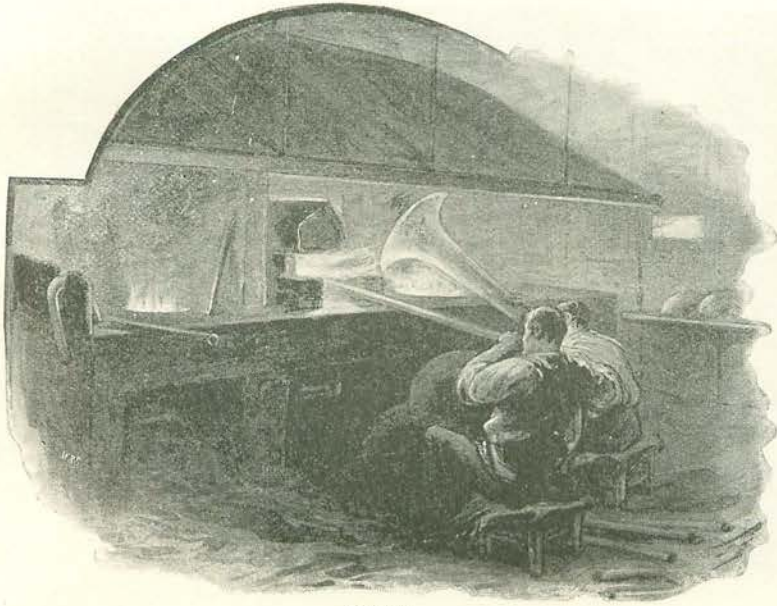
have serenaded one inharmoniously under one's window at home or at the seaside have been consigned to the worst penalties of perdition it would be difficult to say, but the number with most of us is probably considerable. Yet there are brass bands and brass bands, and between an indifferent and a first-rate body of performers, with first-class instruments, there is as wide a difference as between the *vin ordinaire* of a third-rate French *café* and a bottle of '47 port. Those, indeed, whose teeth have been set on edge by a really bad band, or who have even heard a fairly good one, and have never heard a body of performers drilled and conducted by a Dan Godfrey, can have no idea of the gulf fixed between the two. Bad music is the very quintessence of horror, if, that is, bad music, like bad grammar, is not an impossibility. Either music is good or it is not music. The virtues of the brass band have not always been recognised, and thanks, no doubt largely, to the Teutonic terror, they are not known now as widely as they should be. The fact is that the Goddess of Harmony assumes no more seductive shape than that in which she is bodied forth by the best of brass bands, and in the last twenty years their popularity has increased by leaps and bounds. That this circumstance is due to

the perfection which has been attained in the manufacture of the instruments, no one who has gone into the matter can for a moment question.

There is as much difference between the brass instrument of to-day and that of a quarter of a century since, as between the bicycle of the seventies and the "safety" of the nineties. It is, therefore, of considerable interest to inquire how a brass band is made, or to be more precise, how an instrument in a brass band is made, for one instrument, however much it varies in detail, is constructed on the same principle as another. If we say that Messrs. Besson stand at the head of all such instrument makers, we utter not merely our own opinion but that of the brass-band world. Messrs. Besson make for every government under the sun whose army avails itself of the thrilling and inspiring effects to be obtained from these instruments when well played, and with Besson bands, many thousands of pounds have been won by amateurs in public contests, concerning which we shall have a few remarks to make. From China to Peru, it may be said that Messrs.



MAKING THE BELLS.



BRAZING.

will bear some resemblance to a bell. The soldering or "brazing" process takes place in a separate apartment containing several furnaces, which emit sufficient sulphur to supply the wants of a much less desirable region. Here the men are engaged in firing the bells, so to speak. Seated on stools, they hold the bell over the flame and look up it, turning it about as parts get red-hot. The experienced eye instantly detects the least

flaw. When it leaves the brazier the bell is still uneven, and a mass of small indentations. Careful hammering reduces these till the bell is fairly smooth, when it is put upon a lathe and spun. On the lathe it assumes its natural brass colour once more and is brought to the utmost degree of smoothness and symmetry.

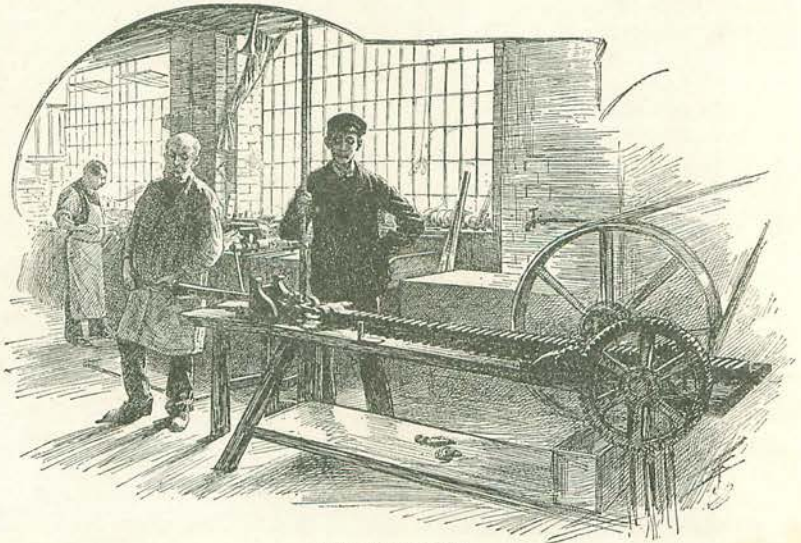
Besson's instruments enjoy the reputation of pre-eminence. Perfection in construction has been attained, so far as perfection ever is attainable in things human, by an invention which is known as the prototype system. Messrs. Besson's instruments are the "prototype"—a name which adequately conveys an idea of the similarity of one to another. The prototype is a steel implement, long and spiral in shape, by means of which it is possible for the makers to guarantee that two instruments of the same class and size do not deviate by so much as a hair's-breadth from each other.

From the bell of a large instrument—a bombardon, say—run tubes which form half circles. If we reflect for a moment, we shall wonder how the makers manage to

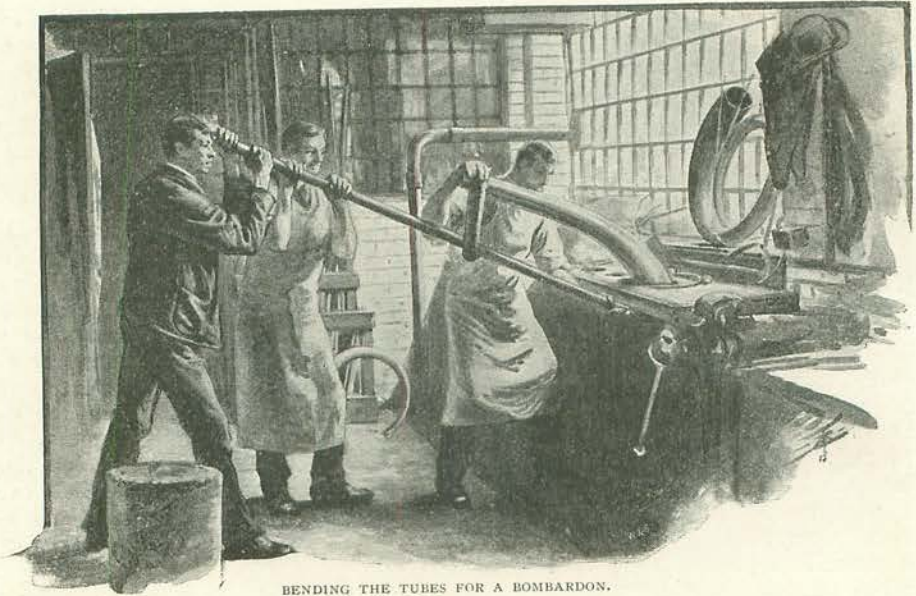
By far the most interesting stage of the manufacture of a brass-band instrument is the beginning. The first thing we are shown is a rough, apparently carelessly cut, piece of dull brass. It is suggestive of nothing in particular, but by-and-by its edges will be neatly soldered, and it

From the bell of a large instrument—a bombardon, say—run tubes which form half circles. If we reflect for a moment, we shall wonder how the makers manage to

By far the most interesting stage of the manufacture of a brass-band instrument is the beginning. The first thing we are shown is a rough, apparently carelessly cut, piece of dull brass. It is suggestive of nothing in particular, but by-and-by its edges will be neatly soldered, and it



THE DRAW-BENCH.



BENDING THE TUBES FOR A BOMBARDON.

effect the bending of the tubes without a crack or a bladder, or any defect to indicate that at some time or other these tubes were perfectly straight. In dealing with them, we soon realize the significance of the prototype. One is placed on a prototype, which is so hard as to be unimpressionable, the end of the prototype is put through a stout ring of lead and is affixed to a pair of

nippers on a draw-bench. The prototype, covered with the brass tube, is then drawn through the lead, and as the other end of the prototype is a great deal larger than that first placed through the hole in the lead, which it exactly fills, it is easy to imagine the force which must be brought to bear to draw the whole thing through. But the machinery is all powerful; the lead yields,



MAKING THE VALVES.

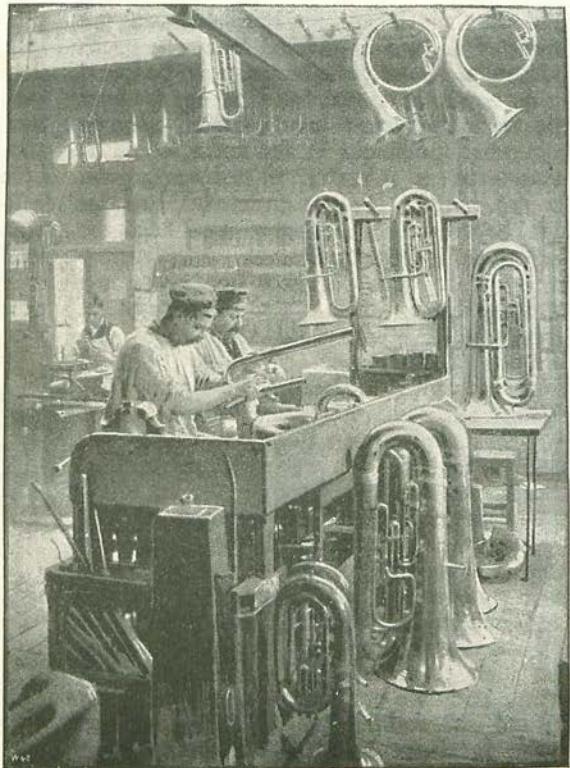


MAKING SMALL INSTRUMENTS.

and the prototype being released from the nippers, we see that, whilst the hole in the lead has increased from an inch to three or four inches in diameter, the tube itself has become absolutely smooth inside and out. This accomplished, it is now necessary to bend the tube to the shape required, and to the uninitiated, the means adopted will have all the charm of novelty.

Near by is a boiler full of molten lead. Some of this is ladled into the tube and, when cold, it is possible, slowly but surely and with infinite care, so that the brass does not pucker, to bend the tubing as shown in our illustration. Inch by inch the curve required is effected, and it is easy to understand the part the lead plays in preserving the tube from being seriously dented, and consequently spoiled. When the bend is complete, the lead is, of course, removed by a further application of heat.

All this takes place in the basement, where our artist has been busy with his camera and sketch-book, whilst we have made jottings, mental



MAKING THE LARGE INSTRUMENTS.

and other, for the purposes of this article. Whilst he is securing realistic impressions, and before making our way to other departments, we will talk for a while with the manager of Messrs. Besson, who is good enough to be our guide, philosopher, and friend on this occasion. He enlarges readily on the popularity of the brass band to which we have already referred, and one of the best proofs he can give us of this is that there flourishes a newspaper—the *Brass Band*

*News*—devoted to band interests, recording all band news, and giving publicity to the views of all band performers who have anything to say worth saying.

It is a circumstance of which comparatively few people are aware, that the north of England and the south are as divided from each other in their regard for brass bands as the north of Ireland is divided from the south politically. Good brass bands are to be found in the south, of course, but it is not far from the truth that many bands, looked upon as somewhat indifferent in the north, would be considered as tolerably, if not very, good in the south. In the industrial counties lying between the Thames and the Tweed, the brass band is almost universal. Nearly every village of any size possesses one, and some of these bands—to wit, the "Besses o' th' Barn," the "Black Dike Mills," and the "Wyke Temperance"—are able to hold their own with the best in the world. The sons of toil, fresh from a hard day's labour, give up their evenings to practice, and their families and friends are as eager as they themselves can be that they should attain proficiency in the art and mystery of "the lip." In the north of England a band contest arouses the utmost enthusiasm, while it is noteworthy that "bonnie Scotland" is beginning to display a disposition to share. An instructor is usually engaged to enable the men to practise with a maximum of profit, and two or three guineas are paid by a band—of working-men, be it remembered—for a single lesson. No matter how severe a musical martinet the instructor

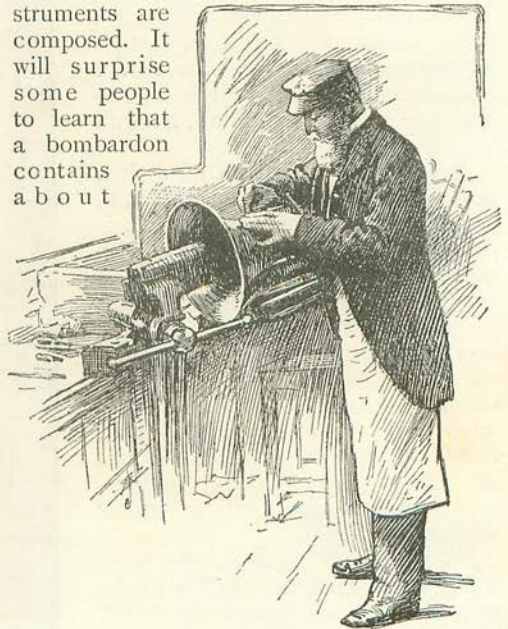


TRYING CORNETS.

they engage may be, everyone is prepared to render him implicit obedience, and it is recorded that an instructor once locked the doors and kept a band at practice for eight consecutive hours in order to get a certain difficult piece correct. One or two of the men grew rather fierce under the ordeal, but the instructor had the sense of the gathering with him, and knew what he was about. Nor must it be supposed that these men play second or third-rate music. They master

the most abstruse pieces—such, for instance, as Berlioz's *Faust*—and when public contests take place, some of the leading bands play so well that the listener might close his eyes, and almost imagine he were present at a grand organ recital.

Let us now proceed in our inspection of the process of band instrument making. We next visit the valve makers' shop on the ground-floor. Here are made and perfected the various valves and multitudinous bits of which most brass instruments are composed. It will surprise some people to learn that a bombardon contains a b o u t



ENGRAVING.

200 pieces. In this room forty or more men are usually to be found busy at their benches, with gas-jet, blow-pipe, and instruments and implements necessary to the turning of valves of all sorts. Another floor is devoted to the men who are called makers, to whom the parts are sent after manufacture for the purpose of being put together, and a good deal of energy is noticeable as the men take piece after piece until the instrument in the rough seems perfect.

But it is probably a matter of appearance only. Certain of the parts temporarily brought together are not allowed to pass their days in union. It is one thing to fit an instrument of perfect pieces together, it is another to get the most perfect music out of it, and it is found by experience that two pieces identical in all respects, and more like each other than the proverbial two peas in a pod, will yet when linked with other parts that, from the mechanical point of view, make an equally good instrument, give forth sounds which to the trained ear leave something to be desired.

The mechanic may, therefore, propose the abiding union of two pieces; the tuner will dispose: and it generally happens that those which the former has brought together the latter will, in his wisdom, put

asunder on the plea of incompatibility. The tuning shop of a brass band manufacturer is a sort of divorce court, with a delightful difference from that in which poor humanity cuts so bad a figure at times. When the tuner grants a *decreo nisi* he never fails to display the utmost assiduity in finding partners for the divorced with whom both may go happily through the rest of their days, be they long or short.

From the tuners the instruments pass to the polishers, where, with the aid of a strip of emery-cloth, used fiddlewise, and plenty of grease, elbow and other, they attain a brilliancy which makes them as pleasing to the eye as their notes are to the ear. In special cases they go still further, and pass into the hands of men who engrave a design on them. The deftness and rapidity, the accuracy and effect with which a flower or an inscription will be engraved on the surface of the bell are wonderful, for, prone to mistakes even when indicting an ordinary letter as most of us are, we cannot but remember that on such an instrument a false line would be fatal. On a cornet or a bombardon, worth anything from £20 to £200, the designer has of necessity to be very confident of his skill before operating, or disaster may be the result.



POLISHING