

## PATENT SPECIFICATION

447,673

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## COMPLETE SPECIFICATION

## Improvements in the Manufacture of Mouth-whistles

I, JAMES CLIFFORD HUDSON, British Subject, of 244, Barr Street, Hockley, Birmingham, 19, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to mouth-whistles, particularly the kind wherein the body portion or casing comprises a cylindrical barrel part and a tangential mouth-piece, although the invention is applicable to other forms of mouth-whistles. The object of the invention is to provide improved means for making mouth-whistles which enables the cost of manufacture to be reduced, whilst providing an article of a strong and efficient construction.

According to the invention a mouth-whistle is provided having a body portion or casing comprising two separately-formed halves or parts each made by a casting or moulding operation. Preferably the whistle casing is formed from two cast or moulded parts so shaped that the joint made by their meeting edges, when the parts are fitted together, divides the casing longitudinally into two halves, which may be held together by a single eyelet or rivet. The edge of the one half may be formed with an integral flange or rib adapted to register with a ledge or rebate around the edge of the other part, and in applying the invention to a mouth-whistle having a casing comprising a cylindrical barrel portion with a tangential mouth-piece, the said casing may be divided longitudinally into two halves, each formed by casting or moulding and each comprising one half of the barrel portion and one half of the mouth-piece, the two parts, which have interengaging rebated and ribbed edges, being secured together by an eyelet passed through holes provided in the said parts.

Figure 1 of the accompanying drawings is a perspective view of a whistle in which the casing is formed by two separately-cast halves secured together by an eyelet in accordance with this invention.

Figure 2 is a plan view of same.

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Figure 3 represents a cross-section through the mouth-piece of the casing on the line  $x-x$ , Figure 2, and upon a larger scale.

Figure 4 is a cross-section, upon a larger scale, on the line  $x^1-x^1$ , Figure 2, showing the eyelet which connects the two parts together.

Figure 5 represents a sectional view similar to that shown in Figure 4, but with the parts separated.

Figure 6 illustrates a cross-section on the line  $x^2-x^2$ , Figure 1.

Figure 7 shows a longitudinal section through the whistle.

Figure 8 is a perspective view of the two halves of the whistle casing before being applied together.

Referring to the drawings, the whistle illustrated is of a known type, the whistle casing; which is of metal, consisting of a cylindrical or barrel-shaped part 1 and a tangentially-disposed mouth-piece 2, the said barrel part having the usual slot or aperture 3 and containing a ball 4, being provided at the rear with a lug carrying an attachment ring 6. According to the invention the said casing or body portion of the whistle is formed by die casting and is made in two separate parts  $a$  and  $b$  which are so shaped that the completed casing, formed by the said parts  $a$  and  $b$  fitted together, is divided longitudinally into two halves. Thus, each part  $a$  or  $b$  of the whistle casing comprises one half of the rear barrel part 1 and one half of the mouth-piece 2, which is integral with the said half of the barrel part, each half of the mouth-piece 2 being internally of a taper shape and being thickened at its inner end, upon the underside, at its junction with the respective half of the barrel part 1, so as to leave a substantially triangular metal connecting portion 7, as shown in Figure 8. This metal connecting portion 7 is formed with a transverse hole 8 for subsequently receiving an eyelet 9 (see Figure 4) for securing the two parts of the casing together, the hole 8 in each part being internally shouldered at  $8^a$  as shown in Figure 5. Each half of the whistle casing has the top of the barrel part 1 cut away to form the one

half of the slot or aperture 3, and at the rear of the said barrel part is an integral pierced ear 5 which forms one half of the lug which carries the ring 6. The two halves *a* and *b* of the whistle casing are substantially the same excepting as regards the formation of their opposed faces or edges which are stepped and shaped to register with one another. Thus, formed along the edge or face of the part *a* is a rebate or set-down ledge or shouldered part 10 which extends along the inner edge of the mouth-piece portion and also around the inner edge of the respective half of the barrel portion, as shown in Figure 8, whilst formed on the opposed edge or face of the other part *b* of the whistle casing is an integral flange or rib 11, which likewise extends along or around the mouth-piece and barrel portions, being so disposed that it registers exactly with, and seats itself upon, the rebate or shoulder of the part *a* when the two parts are fitted together. Formed at the outer end of the mouth-piece portion of each half, upon its underside, is an integral transverse rib 12. The two halves *a* and *b* of the whistle casing are formed, as stated, by die casting, and each half is cast separately by two dies suitably spaced apart and shaped to conform respectively with the desired inside and outside configuration of the particular half, the filling aperture of the dies being suitably disposed and leaving on the casing, when the latter is ejected, a certain amount of excess metal or sprue which is subsequently cut off, leaving the finished casting as shown in Figure 8. The two castings *a* and *b* have the mouth-piece portions directed to the right and left respectively, as shown, so that they form the complete casing when fitted together, the casting *a* having the rebate or shoulder 10 and the casting *b* having an integral registering flange or rib 11, as previously described. To form the whistle casing the completed castings *a* and *b* are applied together face to face, after the ball 4 has been inserted, so that the rib 11 on the part *b* engages or registers with the rebate or shoulder 10 around the face or edge of the other part *a*, the two opposed faces being shaped to fit closely against one another, as shown. The arrangement is such that the integral ears 5 projecting from the rear of the half-barrel portions 1 of the castings then come together and form the lug for the attachment ring 6, whilst the ribs 12 lie end to end and form a lip and the holes 8 in the two castings exactly register with one another. The eyelet 9 is then passed through the holes 8 until the flange at its one end engages

against the internal shoulder 8<sup>a</sup> in one of the holes. The other end of the eyelet 9 is then expanded or upset on to the shouldered part of the other hole, as shown in Figure 4, thus firmly securing the two castings *a* and *b* together. Finally, the ring 6 is attached and the whistle is complete. By forming the whistle casing in two halves by die casting in the manner described the whistle may be cheaply manufactured, very little or no final finishing being necessary, the edges of the two castings forming a close longitudinal joint around the casing, as illustrated, whilst the interengaging ribbed and rebated edges effectively prevent the parts from turning about the eyelet 9.

If desired, the two parts *a* and *b* of the whistle casing may be moulded to the desired shape from a non-metallic mouldable material, such as a material with a synthetic resin basis, instead of being formed from metal; or they may be formed of any other suitable material which is capable of being fashioned to the required shape by a casting or moulding operation.

The invention is applicable to mouth-whistles of the straight barrel type, or to mouth-whistles of any other suitable construction, and the whistle casing may be formed from two cast or moulded parts shaped so that the joint formed by their meeting edges divides the casing either longitudinally or in any other manner, whilst the two parts need not necessarily be of the same size.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A mouth-whistle having a body portion or casing comprising two separately-formed halves or parts each made by a casting or moulding operation.

2. A mouth-whistle having a body portion or casing divided longitudinally into two halves or parts each of which is made by a casting or moulding operation.

3. A whistle having a hollow body portion or casing comprising a cylindrical barrel part and a tangential mouth-piece, the said casing or body portion being divided longitudinally into two halves each formed by a casting or moulding operation.

4. A whistle as claimed in any one of the preceding claims, wherein the two halves or parts of the body portion or casing are secured together by an eyelet or rivet.

5. A whistle, as claimed in any one of

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the preceding claims, wherein the inner edge of one half or part of the casing or body portion is stepped or shouldered forming a ledge or rebate which is engaged by a flange or rib on the opposed inner edge of the other half or part of the casing or body portion.

6. A mouth-whistle made in two halves

or parts substantially as herein described with reference to the accompanying 10 drawings.

Dated this 30th day of January, 1936.

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[This Drawing is a reproduction of the Original on a reduced scale.]

