PATENT SPECIFICATION 763,309

Date of filing Complete Specification : Aug. 26, 1955.

Application Date : Sept. 30, 1954. No. 28223/54.

Complete Specification Published : Dec. 12, 1956.

Index at Acceptance :—**Class 83(2)**, A83.

COMPLETE SPECIFICATION.

Improvements in or relating to the Manufacture and Construction of Coin Cups for Coin-Freed Amusement Apparatus.

I, TUDAH WALTER GLOVER, of 780 High Road, Tottenham, London, N.17, British Nationality, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to coin-freed amusement apparatus and more specifically to the repayment cups commonly utilised on those types of apparatus wherein a coin or coins may be returned to the player.

A convenient construction of such cup which has been commonly used hitherto takes the form of an apertured plate member adapted to be secured to the usual vertical front wall of the apparatus and a substantially hemi-spherical cup portion inserted therein so as to project substantially equally from both sides, i.e. half the cup is inside the apparatus and the other half outside it.

For the better appearance of the apparatus it has been usual to chromium plate at least those parts of the cup means which are presented to the outside. It is also necessary to provide suitable means for securing the device to the front wall of the apparatus. The method and construction most commonly utilised hitherto for such cup means has been constituted in casting a plate member with integral bosses at each end on its inside surface. This necessitated hand filing of the aperture to make it a suitably exact fit for the cup. Furthermore the surface presented to the outside and requiring to be plated had to be ground or filed smooth and buffed prior to plating. Again, the bosses had to be drilled and tapped, and if by accident a screw was over-tightened therein the cup device was made useless short of re-drilling and re-tapping to a larger size. The constant passage of coins through the cup portion means a high rate of wear thereon and the cups must preferably be readily replaceable. Hitherto, the replacement of a cup has entailed unsoldering of the cup portion, with consequent spoiling of the plating, and the re-soldering in the plate portion of a new cup, followed by re-plating of the whole. The initial expense of such cup means, and the cost of their replacement, are consequently high, particularly in view of the amount of hand-work involved.

It is the object of the present invention to provide an improved method and construction whereby the hand-work required is considerably reduced, the construction and assembly of the cup means simplified, and the length of life of the cup means lengthened. In particular the invention provides cup means which is reversible without other attention and can thus give twice the life of the usual type.

According to the present invention the method of constructing coin-cup means for coin-freed amusement apparatus includes the steps of stamping a flat apertured plate from sheet metal, forming a cup portion, and securing the cup portion into the aperture of the plate.

Preferably the cup portion is made by spinning into an approximately hemi-spherical shape. Such a cup can conveniently be secured symmetrically in the aperture with an equal projection thereform at both sides. Soldering, brazing or other equivalent method may be used for securing the cup portion in the plate.

Advantageously fixing holes are formed in the plate in the same stamping operation as is used to provide the aperture. Such fixing holes permit the use of simple fixing bolts, as opposed to the threaded bosses on the plate usual hitherto, and thereby make the coin-cup means reversible.

[*Price* 3*s.* 0*d.*]

In order that the nature of the invention may be more readily understood, an embodiment of coin-cup is hereinafter particularly described with reference to the accompanying drawing, wherein:—

Fig. 1 is a front elevation of a stamped plate portion, prior to insertion and fixing of the cup.

Fig. 2 is a corresponding edge elevation of the plate portion.

Fig. 3 is a central vertical section through the cup.

Fig. 4 is a perspective elevation of the plate and cup assembled by soldering or brazing.

In these Figures, 1 denotes a plate prepared by a single stamping operation from suitable sheet metal such as one-eighth inch brass sheet. An aperture 2 for the coin cup (see Fig. 3) and two fixing holes 3 are produced by the same single operation, and no other preparatory work is required on them. The holes 3 are made rectangular as shown so as to receive the usual rectangular shaft ends of known coach bolts and prevent the latter from rotating when the usual securing nut is being tightened.

In Fig. 3, a cup 4 has a turned-over strengthening rim 5, the whole being prepared, for example by spinning, from suitable smooth sheet metal such as copper sheet, so as to be ready for subsequent plating without any initial treatment other than, perhaps, simple buffing. The shape of the aperture 2 of the plate 1 can be readily made to correspond exactly to the outline of the cup 4 and no subsequent filling operations are required.

For assembly, the cup 4 is placed symmetrically within the aperture 2 of the plate 1 and is then soldered or brazed therein along the line indicated by reference 6. As the hitherto usual fixing bosses are eliminated, and there are as a result no projections of the plate 1 on either side of it, the whole device can be used without alteration both ways round so that when one side is worn it can be simply unbolted and reversed.

As has been indicated above, simple coach bolts or other bolts can be used for fixing. As a result there is no danger of loss of time or damage to the coin-cup device by overtightening of a bolt. If the bolt breaks or the thread strips, it is merely necessary to use another bolt, whereas with the previous constructions using bosses, the stripping of a thread therein required re-drilling and re-tapping of the boss.

With such a construction, the operations necessary for manufacture are reduced to stamping out the plate, e.g. with a fly-press, buffing the plate, making a cup, soldering or brazing of the cup in the plate, and plating of the whole.

This represents a considerable saving in time and labour, and in addition the cup as a whole is reversible and can thus give double the life.

What I claim is:—

1. The method of constructing coin-cup means for coin-freed amusement apparatus including the steps of stamping a flat apertured plate from sheet metal, forming a cup portion, and securing the cup portion into the aperture of the plate.

2. The method of constructing coin-cup means, as claimed in Claim 1, wherein the cup portion is approximately hemi-spherical and is made by spinning.

3. The method of constructing coin-cup means, as claimed in Claim 2, wherein the cup portion is secured symmetrically in the aperture of the plate with an equal projection therefrom at both sides of the plate.

4. The method of constructing coin-cup means, as claimed in any one of the preceding claims, wherein during the stamping operation fixing holes are formed in the plate.

5. The method of constructing coin-cup means, as claimed in any one of the preceding claims, wherein the cup portion is soldered or brazed in the plate.

6. Coin-up means for coin-freed amusement apparatus comprising an apertured plate of sheet metal, and an approximately hemi-spherical spun sheet metal cup portion soldered or brazed symmetrically in said aperture with an equal projection from each side of the plate.

7. Coin-cup means, as claimed in Claim 6, wherein the plate has apertures for fixing bolts whereby the coin-cup means is made reversible.

8. Coin-cup means for coin-freed amusement apparatus constructed in the manner particularly described with reference to the figures of the accompanying drawing.

CHATWIN & COMPANY,
Chartered Patent Agents,
253 Gray's Inn Road,
London, W.C.1.

PROVISIONAL SPECIFICATION.

Improvements in or relating to the Manufacture and Construction of Coin Cups for Coin-Freed Amusement Apparatus.

I, TUDAH WALTER GLOVER, of 780 High Road, Tottenham, London, N.17, British nationality, do hereby declare this invention to be described in the following statement:

This invention relates to coin-freed amusement apparatus and more specifically to the repayment cups commonly utilised on those types of apparatus wherein a coin or coins may be returned to the player.

A convenient construction of such cup which has been commonly used hitherto takes the form of an apertured plate member adapted to be secured to the usual vertical front wall of the apparatus and a substantially hemi-spherical cup portion inserted therein so as to project substantially equally from both sides, i.e. half the cup is inside the apparatus and the other half outside it.

For the better appearance of the apparatus it has been usual to chromium plate at least those parts of the cup means which are presented to the outside. It is also necessary to provide suitable means for securing the device to the front wall of the apparatus. The method and construction most commonly utilised hitherto for such cup means has constituted in casting a plate member with integral bosses at each end on its inside surface. This necessitated hand filing of the aperture to make it a suitably exact fit for the cup. Furthermore the surface presented to the outside and requiring to be plated had to be ground or filed smooth and buffed prior to plating. Again, the bosses had to be drilled and tapped, and if by accident a screw was over-tightened therein the cup device was made useless short of re-drilling and re-tapping to a larger size. The constant passage of coins through the cup portion means a high rate of wear thereon and the cups must preferably be readily replaceable. Hitherto, the replacement of a cup has entailed unsoldering of the cup portion, with consequent spoiling of the plating, and the re-soldering in the plate portion of a new cup, followed by re-plating of the whole. The initial expense of such cup means, and the cost of their replacement, are consequently high, particularly in view of the amount of hand-work involved.

It is the object of the present invention to provide an improved method and construction whereby the hand-work required is considerably reduced, the construction and assembly of the cup means simplified, and the length of life of the cup means lengthened. In particular the invention provides cup means which is reversible without other attention and can thus give twice the life of the usual type.

According to the present invention, the improved method of construction of cup means, of the kind having an apertured plate and a cup soldered therein, comprises the stamping, from suitable sheet metal, of the plate portion complete with its aperture and fixing holes, and the soldering (or brazing) therein of a spun cup portion. Such a cup means, if prepared from suitably smooth sheet metal, is ready for its plating without any surface treatment other than, perhaps, simple buffing. The shape of the aperture can be made an exact fit ready for the insertion of the cup and no filing is required. As no bosses have to be provided on either surface of the plate portion, the whole device can be used either way round on the vertical front wall of the apparatus, and can accordingly be simply reversed when worn at one side. Simple bolts or screws can be utilised for securing the plate portion to the apparatus, and in particular square holes can be stamped therein to receive the usual square shank of coach bolts. If a screw or bolts is over-tightened, only the screw or bolt need be replaced and the cup means is unaffected.

With such a construction, the operations necessary for manufacture are reduced to stamping out the plate, e.g. with a fly press, buffing the plate, soldering in the cup, and plating the whole. This represents a considerable saving in time and labour, and in addition the entire cup is reversible and can thus give double the life.

CHATWIN & COMPANY,
Chartered Patent Agents,
253 Gray's Inn Road,
London, W.C.1.

Abingdon: Printed for Her Majesty's Stationery Office, by Burgess & Son (Abingdon), Ltd.—1956.
Published at The Patent Office, 25, Southampton Buildings, London, W.C.2,
from which copies may be obtained.

763309 COMPLETE SPECIFICATION
1 SHEET This drawing is a reproduction of the Original on a reduced scale

Fig.1.

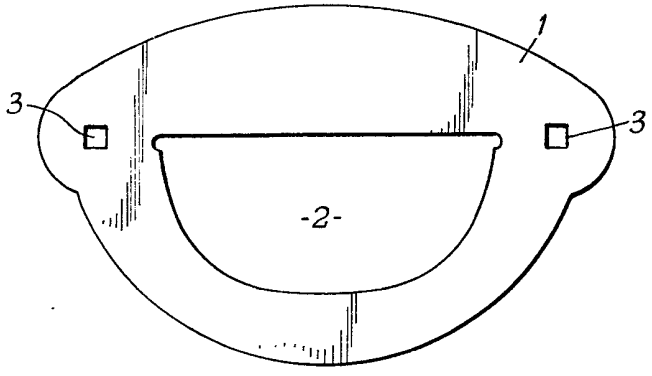

Fig.2.

Fig.3.

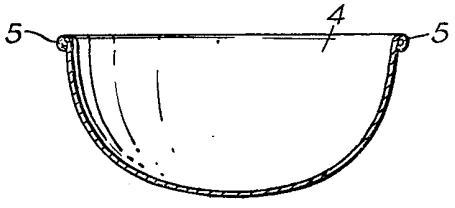

Fig.4.