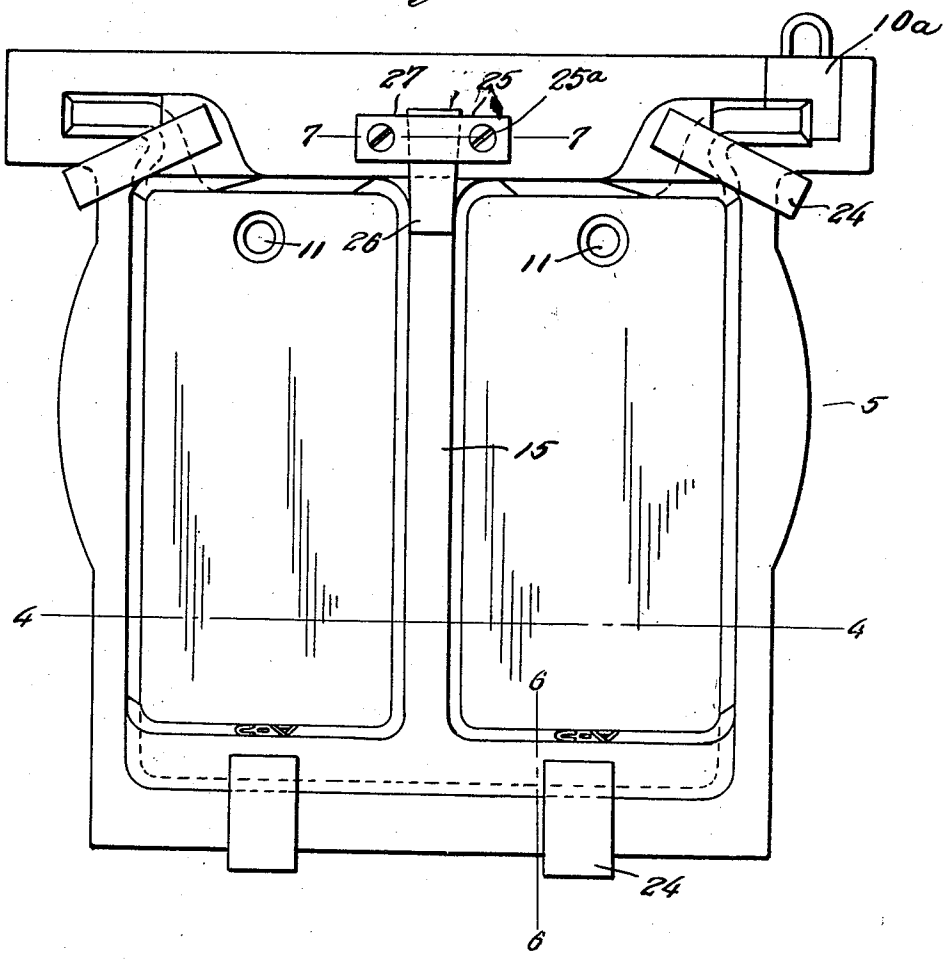
June 23, 1931. H. A. CLARK 1,811,258

ADAPTER FOR MOLDS

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Fig. 1.



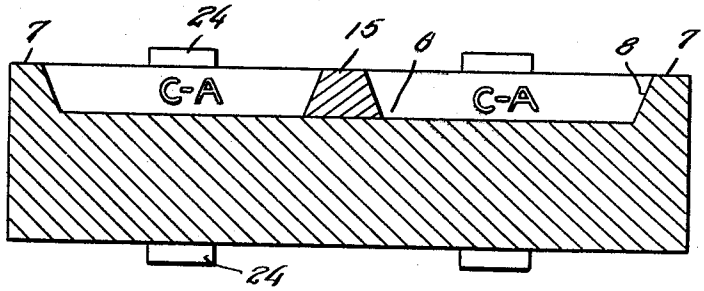


Fig. 4.

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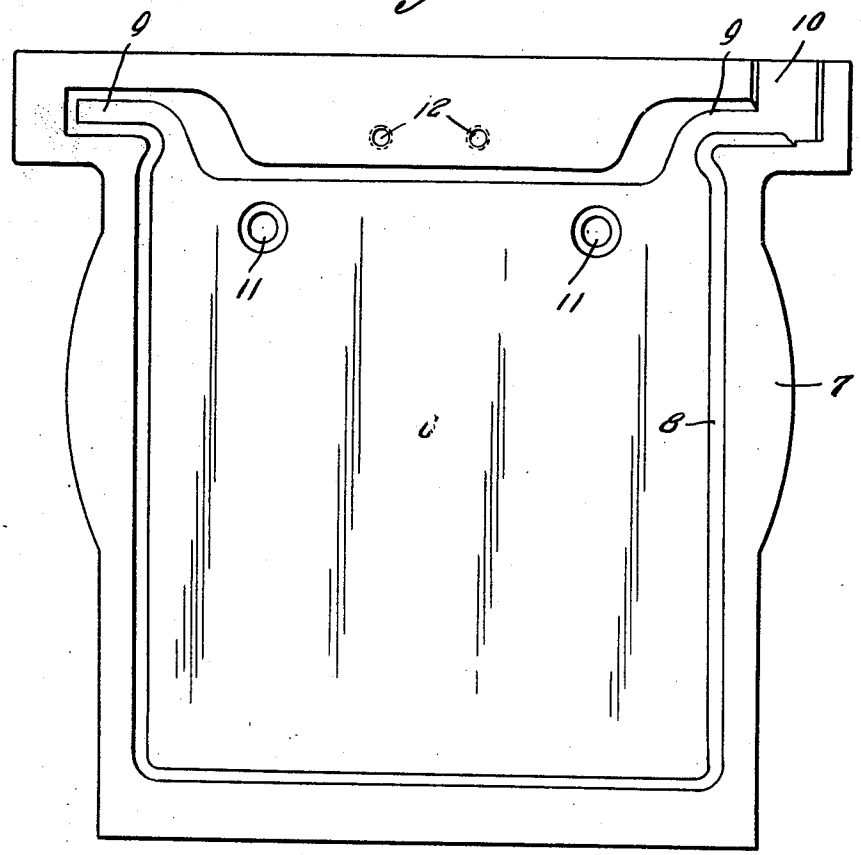
Attorney

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ADAPTER FOR MOLDS

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Fig. 2.



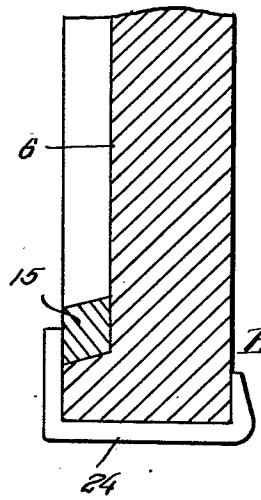


Fig. 6.

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ADAPTER FOR MOLDS

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Fig. 3.

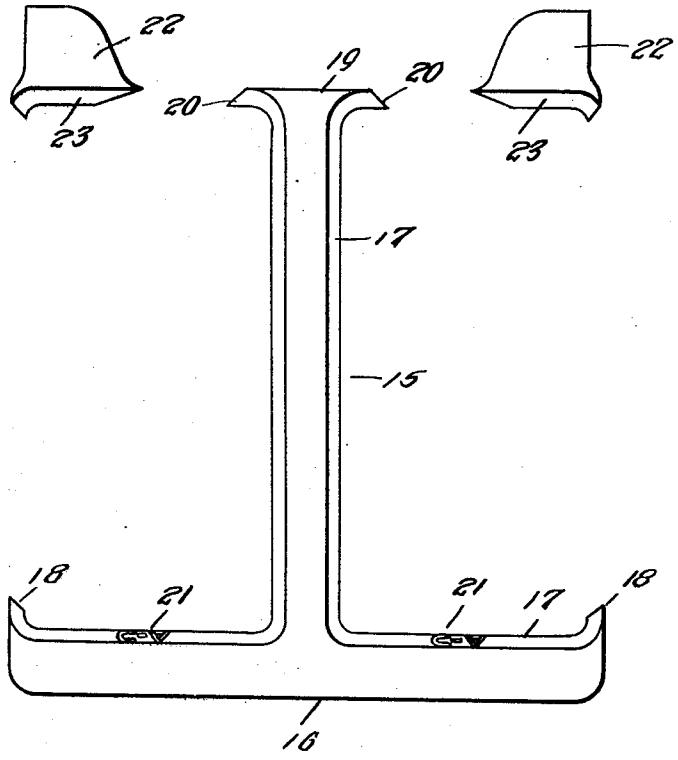


Fig. 7.

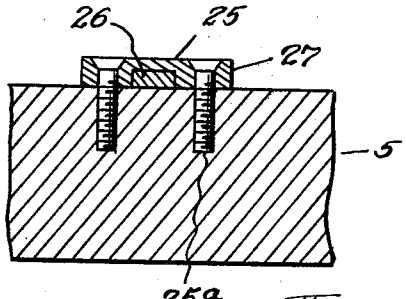
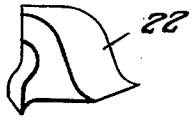


Fig. 5.



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Patented June 23, 1931 1,811,258

UNITED STATES PATENT OFFICE

HARRY A. CLARK, OF WARREN, ARIZONA

ADAPTER FOR MOLDS

Application filed July 29, 1930. Serial No. 471,505.

This invention relates generally to accessories for molds and particularly to the type of accessory which is known as an adapter for a mold, which enables the division of a mold for casting a plurality of smaller articles in a mold originally built for casting a large article.

This invention has particular relation to adapters for anode molds which are employed for casting copper or the like anodes. Anode molds are usually made of copper or cast iron, but the invention has equal application to molds constructed of other material for casting metals of difference character.

The purpose of the invention is to provide an adapter to change the size and shape of the casting which may be cast from the original anode mold to one or more castings of another size and shape, without destroying, altering, or damaging the original mold.

It is also an object of this invention to provide an adapter of this type which is simple, easy and cheap to manufacture and install.

It is also an object of this invention to provide an adapter which saves the expense and labor incident to providing separate sets of molds for each different size and shape of casting required, and to save the expense and labor of handling said different sizes and types of molds.

It is understood that this invention is not limited to the particular embodiment set forth herein and illustrative thereof, and any changes in material or structure may be made consistent with the spirit and scope of the invention.

The objects enumerated, and other and further objects, the nature of the invention, its composition, and arrangement and combination of parts will be clearly understood by anyone acquainted with the art to which this invention relates by an inspection of the accompanying description of the appended drawings, in which:

Figure 1 is a top plan view showing my adapter in position in an anode mold.

Figure 2 is a similar view to Figure 1 with the adapter removed.

Figure 3 is a top plan view of the element composing my adapter.

Figure 4 is a sectional view of Figure 1 on the line 4—4 downwardly.

Figure 5 is a detail of one of the elements of the adapter.

Figure 6 is a detail cross section showing the manner of clamping the adapter in the mold, on the line 6—6 of Figure 1.

Figure 7 is a cross sectional view on the line 7—7 of Figure 1.

Referring in detail to the drawings, it will be noted that I have designated an anode mold generally by the numeral 5 and that it is composed of a plate 6 having walls 7 at its edges, said walls having an outward inclined bevel 8 and said walls are indented as at 9 to form ears, and one of said indentations terminates in a gate at 10 which is provided with a closure 10*a*. Thus is formed a substantially rectangular trough composed of the plate 6 and the beveled walls 8, the indentations 9 and the closure 10.

This trough conforms to the shape and size of the anode and constitutes the original mold. Provision for extracting pins is made as shown at 11 and clamp bolts holes are provided in the end wall adjacent the indentation 9, said holes being designated by the numeral 12. The adapter consists of a cast iron T-shaped form generally designated 15.

The arms constituting the crosshead of the T form 15 designated by the numeral 16 are provided at their outer ends with curved portions 18 to conform with the shape of the walls of the mold. The foot of the T is provided with lateral projections 20 to engage the other end of the mold. A similar bevel 17 to the bevel 8 is provided along the edges of the foot and the cross head as shown, to co-operate with the said bevel edge 8 in giving form to the plurality of castings.

Designations 21 and 21 are embossed on the inner bevel of each arm of the cross head to give designation to the plurality of molded articles. Pieces 22 are adapted to close the upper corners of the mold broken by the indentation 9, and they are formed with a bevel 23 to conform with the bevels 17 and 8 already alluded to, to complete the formation of the molds as divided by the T-shaped member.

Figure 5 shows a detail of one of these pieces 22 showing the various faces thereon for co-operation with the ear forming indentation 9. It should be noted that the outer contacting surfaces of the T-shaped member and the pieces 22 are bevelled where they contact the bevel 8 of the mold. Suitable staple clamps 24 are adapted to engage the outer surface of the form 15 and the pieces 22 to clamp the same rigidly in the mold.

A clamp structure 25, 26, 27, is adapted to be screwed or bolted to the frame of the mold by means of bolts through the holes 12 in the upper end of the mold. Figure 7 discloses a cross sectional view through the clamp structure 25, 26 being a wedge, and 27 a suitable keeper secured to the mold by the screws or bolts 25*a*.

Should the pieces 22 for the ear forming indentations be made of plastic material, no clamps will be necessary. It will be obvious that my invention enables the formation of what are called in the industry "blister bars", without rearranging, reforming, damaging, or altering the original mold intended for casting anodes. It will also be evident that the specific materials and arrangements in the construction described above might be varied to provide for casting any number of said blister bars or the like.

By the use of a divided mouth pouring spoon, two or more bars of blister copper, for example, may be poured at once in the open and will conform to the shape limited by the sides of the mold and the T-shaped member.

By simply removing the clamps, the adapter may be lifted from the mold. The mold is then in condition for resuming the casting of anodes.

It will now be evident that I have provided an adapter of the character described, which is cheap and easy of manufacture, which is greatly saving of labor and materials, and which is simple and easy, and very effective in operation, and that I have provided a device of this kind which is otherwise highly satisfactory for the purposes for which it is designed.

I claim:

1. An adapter for a copper anode mold comprising a T-shaped element having bevelled edges to conform to the walls of the mold, and irregularly shaped pieces similarly beveled to close the lug recesses of said mold, and clamps adapted to clamp said adapter and irregularly shaped pieces in position in said mold and to divide said mold into a plurality of chambers.

2. An adapter for an anode mold comprising an anode mold having bevelled inner walls, a T-shaped adapter having end contacting surfaces to engage one end of the mold, and a foot portion adapted to engage the other end of the mold, bevelled surfaces on said T-shaped member to conform with the bevel in the walls of the mold, and lug recess closure members adapted to fit in the lug recesses of the mold, and bevel surfaces on said closure members to conform with the bevelled walls of the mold, said closure members and said T-shaped member adapted to form a plurality of molding chambers within said anode mold, an extracting pin in the floor of each chamber and staple clamps disposed about the edges of the mold and upon said closure members and the T-shaped member to clamp the same rigidly within the mold, and a wedge clamp at one end of said T-shaped member and adjustably attached to said anode mold to clamp said T-shaped member therein.

3. A T-shaped adapter for anode molds comprising a crosshead and a bar portion, said crosshead and said bar portion being provided with bevelled edges to conform with the bevel of the walls of the mold, and adapted to contact said walls when in the mold, and lug recess gates adapted to be placed in the lug recesses of the mold, bevelled edges on said gates adapted to conform with the bevels on the walls of the mold, said bar, said crosshead, and said gates co-operating with the walls of the mold to provide a plurality of casting chambers, and clamps engaging said recess gates and the adapter to clamp the same in rigid position in the mold, and clamps engaging the crosshead and the foot of the bar and the mold, to clamp the same in rigid position within the mold.

4. An open mold, an adapter for the mold comprising a T-shaped member consisting of a cross head adapted to engage one end of the mold and a bar projecting intermediate the ends of the crosshead adapted to subdivide said mold, a foot portion on the end of said bar adapted to engage the opposite end of the mold, said T-shaped member disposed in said engagement within the chamber of the mold, and subdividing said chamber into a plurality of casting chambers, and staple clamps adapted to clamp said T-shaped member rigidly in said position in the mold.

5. An adapter for an open mold comprising a T-shaped member adapted to be placed therein in conforming relation with the walls of the mold, said T-shaped member formed and disposed to divide said mold into a plurality of smaller molds.

In testimony whereof I affix my signature.

HARRY A. CLARK.