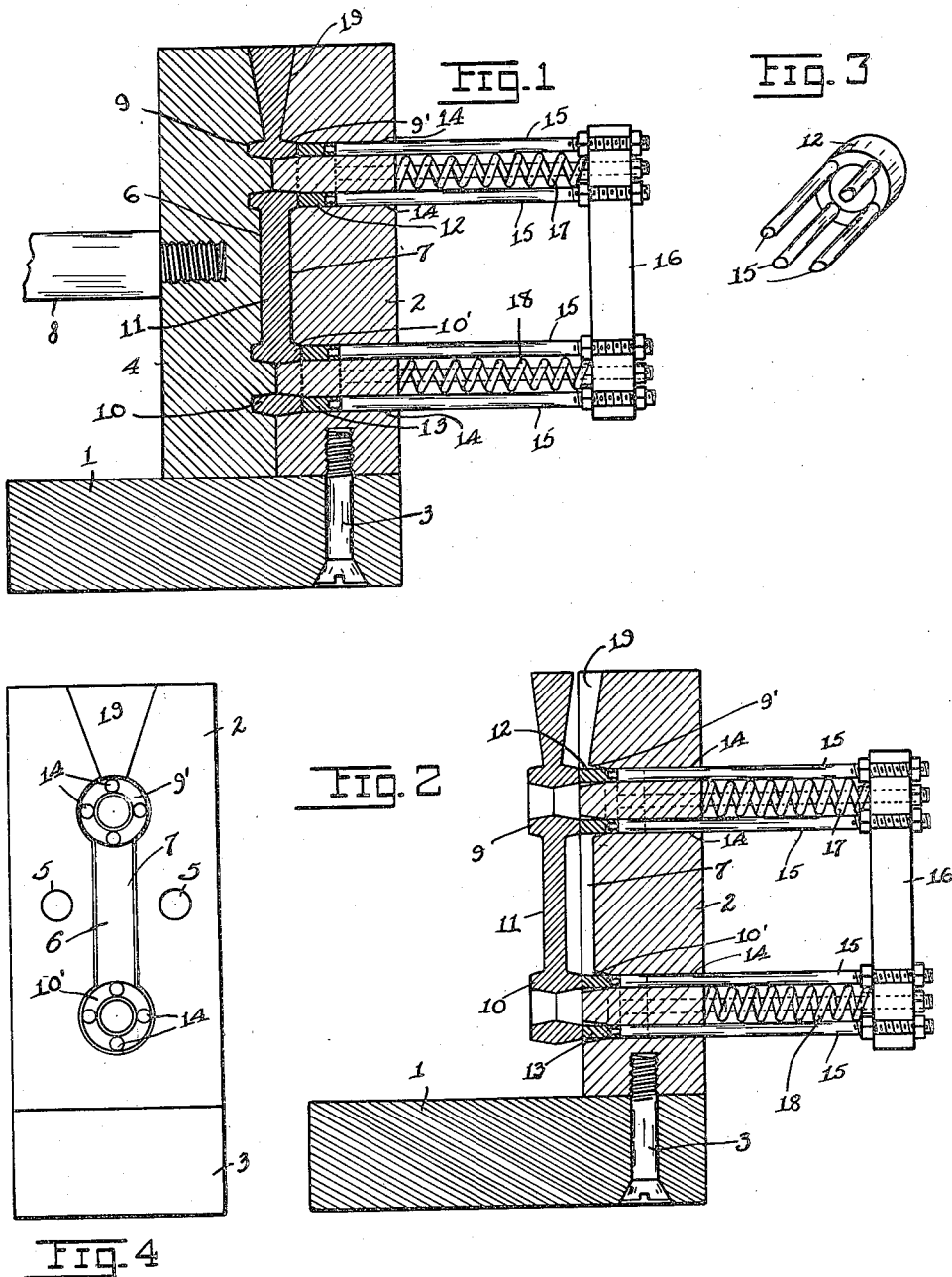


T. C. PENN.
CASTING APPARATUS.
APPLICATION FILED APR. 10, 1918.

1,318,404.

Patented Oct. 14, 1919.



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CASTING APPARATUS.

1,318,404.

Specification of Letters Patent.

Patented Oct. 14, 1919.

Application filed April 10, 1913. Serial No. 227,656.

To all whom it may concern:

Be it known that I, THOMAS C. PENN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Casting Apparatus, of which the following is a full, clear, and exact description.

This invention relates to an improvement in apparatus for metal casting and is more particularly adapted for casting lead storage battery parts. In casting these lead parts iron molds are used which cool and solidify the lead immediately, so that the articles are ready to be removed at once, although they are still too hot to handle and stick rather firmly in one of the sides of the mold. On account of this it is necessary to pry them out by means of a pointed rod, and in so doing the castings sometimes are bent if they happen to stick in the mold very tightly.

The object of the present invention is to provide for the ready removal of the articles from the mold.

In the drawings apparatus is shown illustrating the manner in which the invention is embodied in a mold for casting a storage battery plate post connector.

Figure 1 is a cross section of the mold in position for casting articles.

Fig. 2 is a section showing the manner in which the connector is removed.

Fig. 3 is a detail of a portion of the ejector.

Fig. 4 is a front view of the stationary mold part with the ejector removed.

On the base 1 a stationary mold part 2 is fastened in any suitable manner as by means of screws 3. The other part 4 of the mold is movable and adapted to be placed on the base 1. Suitable openings in the movable part are adapted to register with dowel pins 5 of the stationary part, to cause the cavities 6, 7 of the mold parts 4 and 2 respectively, to register. The movable mold part 4 has a handle 8 which the operator grasps when separating the two parts. The general outline of the connector is the same as the mold cavity 6 (Fig. 4) and consists of two hollow rings 9, 10 connected by a strap 11.

According to the invention, each of the ring forming cavities 9', 10' of mold part 2, are extended an additional depth to provide a space for ejector rings 12, 13 which form

the base of the ring forming cavities 9', 10' when the rings are fitted therein. Two or more holes 14 are drilled from the bottom of the cavities 9', 10' through the mold part 2 (four being shown in each cavity by way of example). The holes serve as guideways for rods 15 which are fastened at one end to the rings 12, 13. At the other end all the rods are connected to a block 16. A compression spring 17 is placed between the four rods connected to the ring 12, and a similar spring 18 is fitted between the rods attached to the ring 13. The springs at one end abut against the back of the mold part 2 and at the other end against the block 16 so that the rings 12, 13 are normally drawn into the bottom of the mold cavities 9', 10'.

To cast an article the two parts 2, 4 are fitted together and lead is poured in at the gate 19. When the mold is filled the operator grasps the handle 8 and removes the mold part 4. By having more draft on mold part 4 than on part 2, the connector is caused to stick in part 2 rather than part 4 and it is then removed by pressing the block 16 toward the mold. This forces the connector out of the cavity by pushing the rings 12, 13 forward in the ring forming cavities, and eliminates the necessity for poking and prying to remove the article. As soon as the article is removed the ejector rings will be pulled back into the cavities by the springs 17, 18.

In the drawings a mold is shown for casting one connector at a time, but the invention obviously is not limited to such a specific construction.

Having described my invention, what I claim is:—

1. In apparatus for casting articles having a body portion and a thickened portion, a mold consisting of a movable part and a stationary part each having article-forming cavities therein, said stationary part having a depression adapted to form the thickened portion of the article, a plunger having a face corresponding with the thickened portion and adapted to form a closure for said depression, a projection attached to said plunger and protruding from the stationary portion of the mold, said protruding end being adapted to be pushed forward whereby the plunger engages the thickened portion of the article to remove it from the mold.

2. In apparatus for casting storage battery
post connectors having a ring shaped end, a
mold consisting of a movable part and a sta-
tionary part each having article forming
5 cavities therein, a portion of said cavities be-
ing ring shaped, a ring adapted to be fitted
in the ring shaped cavity of the stationary
part, a plurality of rods passing through and
protruding from the mold, each connected at
10 one end to the ring, said protruding ends be-
ing adapted to be pushed forward whereby
the ring engages the ring shaped portion of
the article to remove it from the mold.
3. In apparatus for casting storage battery
15 post connectors having ring shaped ends, a

mold consisting of a movable part and a sta-
tionary part, said parts having cavities
adapted to mold said connector, ejector rings
adapted to be fitted in the ring shaped por-
tions of the cavities in the stationary part, 20
means for moving said ejector rings back
and forth comprising a plurality of rods con-
nected to each ring and passing through the
mold, a block for connecting the protruding
ends of the rods and a spring between the 25
block and the back of the stationary mold
part.

In testimony whereof, I hereunto affix my
signature.

THOMAS C. PENN.