

(No Model.)

J. H. BARLOW.
BULLET MOLD.

No. 489,580.

Patented Jan. 10, 1893.

Fig. 1.

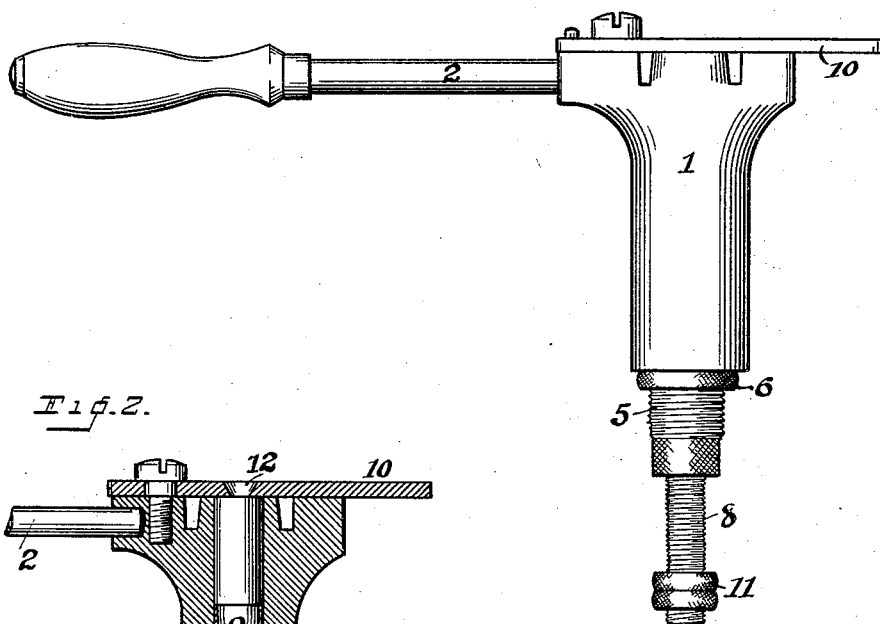


Fig. 2.

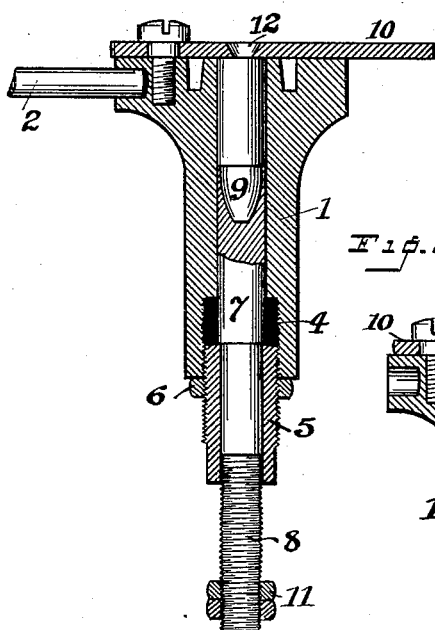


Fig. 3.

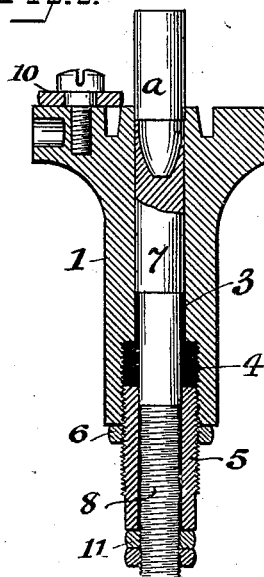
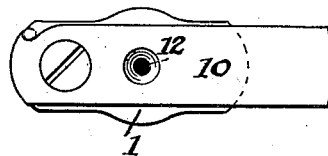


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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BULLET-MOLD.

SPECIFICATION forming part of Letters Patent No. 489,580, dated January 10, 1893.

Application filed May 12, 1892. Serial No. 432,928. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. BARLOW, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Bullet-Molds; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in bullet molds, but more particularly to molds such as are used for casting bullets whose bearing surface is afterward covered with an inclosing patch of paper or thin metal.

It is the object of my invention to provide a mold which shall cast a bullet with a perfectly smooth and true bearing surface; which shall be quickly adjustable to produce bullets of different lengths and which shall be provided with means for readily ejecting the bullet from the mold cavity; and with these ends in view my invention consists and resides in the construction and combination of elements hereinafter fully explained and then recited in the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction and method of operation, I will describe the same in detail, reference being had to the accompanying drawings, which form a part of this specification, and in which,

Figure 1, shows my mold in side elevation, Fig. 2, shows it in vertical section, Fig. 3, is a section in the same plane as Fig. 2, but with the bullet ejected, and Fig. 4, is a plan view.

The same numerals and letters denote the same parts in each of the figures.

The body of the mold 1, is preferably made from a casting or forging, and at one side it is furnished with a handle 2. Through this body from top to bottom is formed a hole 3, which is enlarged near its lower end and screw-threaded as shown at 4. Within this screw-threaded portion of the hole is seated a sleeve 5, adjustable therein for the purpose of changing the length of the casting cavity as will presently appear. A check nut 6 running upon the sleeve serves to hold the latter at any desired adjustment. A plunger 7 having

its lower end reduced somewhat and exteriorly screw-threaded, as seen at 8, passes through the sleeve. Its upper portion is a close fit within the hole in the mold body, as is clearly shown at Figs. 2 and 3, and its extremity is hollowed out at 9 into the shape of the point of the ball to be cast. In order that the bullet may have only a slight shoulder or offset at the joining line between the base of its tapering point and its cylindrical body, the edges of the concave-pointed plug or plunger are very thin indeed, and as they might be dented or otherwise injured if permitted to strike the ingate plate 10, which is pivoted on top of the mold, I provide the diminished and screw-threaded lower end of the plunger with check nuts 11 whereby the upward movement of the plunger is limited substantially as is shown at Fig. 3. In Fig. 3, *a* represents the bullet.

In the operation of my invention the mold is adjusted so as to produce the length of bullet desired, by loosening the check nut on the sleeve, and then screwing the latter inward or outward relative to the body of the mold, thereby raising or lowering the concave-ended plunger in its seat so as to leave a greater or less space between it and the lower face of the ingate plate. The downward movement of the plunger is determined and limited by the engagement of its external shoulder with the top of the sleeve, as clearly appears at Fig. 2. The check nuts on the end of the plunger are then adjusted so that the upper end of the plunger with its thin edges may not be raised high enough to be damaged by contact with the ingate plate or any external object.

When the parts are in the position shown at Figs. 2 and 4 lead may be poured into the mold through the opening 12 in the ingate as in ordinary molds. The conical forward end of the ball is formed by the hollowed extremity of the plunger and the cylindrical body is formed by the side walls of the hole in which the plunger slides. After the introduction of the lead the ingate plate is swung upon its pivotal point, thereby severing the sprue from the flat base of the ball. Then by raising the plunger from the position shown at Fig. 2 to that shown at Fig. 3, the ball is projected upward so that it may be removed by hand, or

by turning the mold slightly it will drop out. The plunger is then permitted to drop back to its normal position as shown at Fig. 2, and the mold, after closing the ingate plate, is ready for a new casting.

By the use of the invention herein described it is apparent that a large number of different lengths and weights of bullets may be cast, thereby making one mold suffice to manufacture all sizes of bullets of a given caliber that may be demanded, and this is highly convenient. Furthermore it will be observed that by the use of this mold the bearing surface of each bullet will be perfectly smooth and unmarred by the slight longitudinal fins inseparable from the use of a two part or jointed mold, and which must be removed by sizing or swaging. The method of ejection, too, is in no way calculated to injure the ball, since the plunger may be pushed gently upward instead of being raised by a blow upon its lower end.

I claim,

1. The mold body having the opening there-
through, the sleeve screw-threaded axially of
the lower end of said opening, and the should-
ered plunger having its upper end conformed
to the shape of the point of the ball, and fill-
ing the opening and having its lower end
passing loosely through the sleeve, the whole
arranged substantially as specified.

2. In a bullet mold of the character de-
scribed, the combination with the body hav-
ing a vertical opening extending through the
same, said opening adapted to fix the diame-
ter of the ball, of a vertically movable plun-
ger having its upper extremity conformed to
the shape of the tip of the ball to be cast and
provided with a shoulder, and a sleeve con-
nected to the body and adjustable therein,
the plunger adapted to have a sliding move-
ment within said sleeve, substantially as de-
scribed.

3. In a bullet mold of the character de-
scribed, the combination with the body having
the opening extending through the same, of
the plunger having a shoulder thereon and
seated in the opening, a sleeve engaging the
plunger beneath the shoulder and adapted to
limit its downward movement and a screw-
threaded connection between the sleeve and
body whereby the former is rendered adjust-
able within the latter and thereby the ca-
pacity of the mold varied, substantially as
and for the purpose set forth.

In testimony whereof I affix my signature in
presence of two witnesses.

JOHN H. BARLOW.

Witnesses:

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