United States Patent

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[54] **BULLET MOLD**
5 Claims, 3 Drawing Figs.

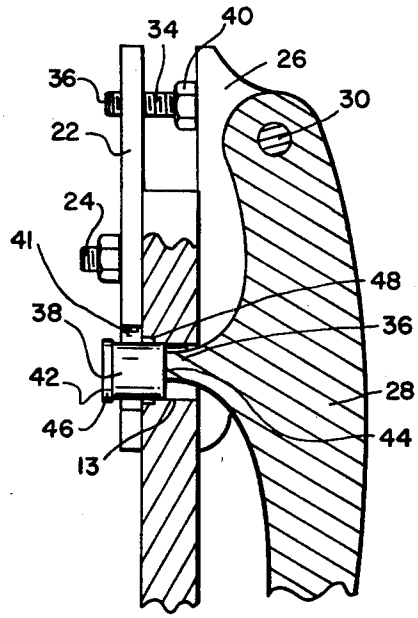
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[50] **Field of Search** 164/47, 69,
70, 131, 137, 264, 342, 344, 347; 249/161, 66, 77

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ABSTRACT: A bullet mold for molding bullets of the wad cutter type which are generally cylindrical and having flat nose portions and base portions; comprising three plates, one of which has a cylindrical cavity therein, another of which has a sprue opening and cutter, and the other of which forms a backup plate for the opposite end of the cylindrical cavity from the sprue cutter, and means for pivotally shifting the sprue cutter and the backup plate out of alignment with the cavity in order to eject a cylindrical bullet therefrom.



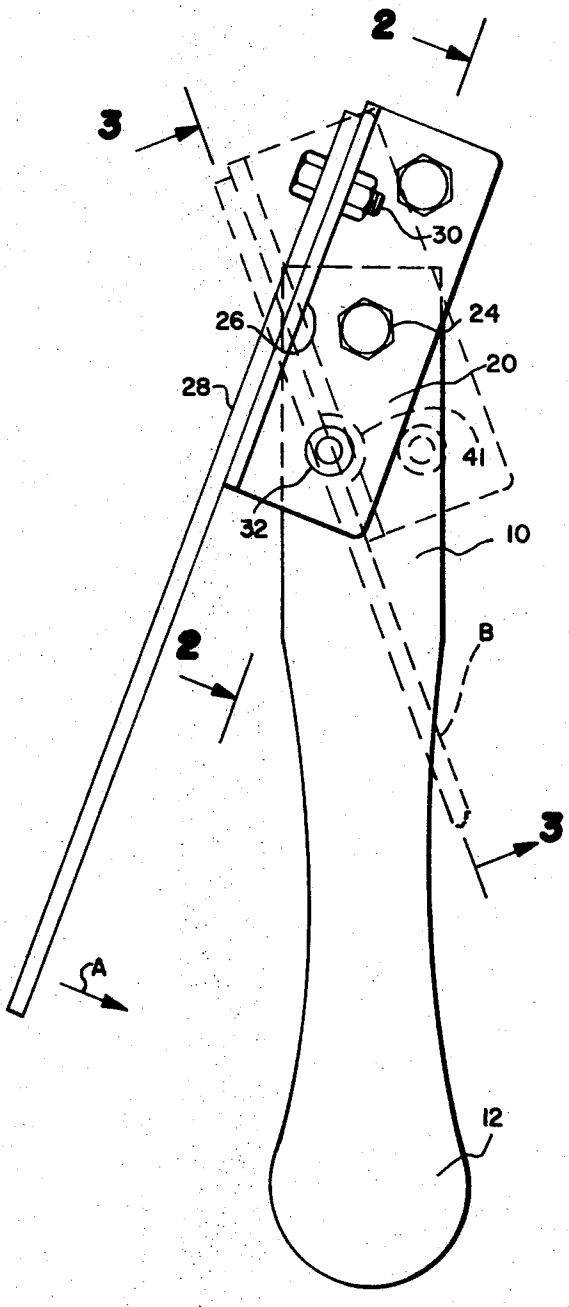


FIG. 1.

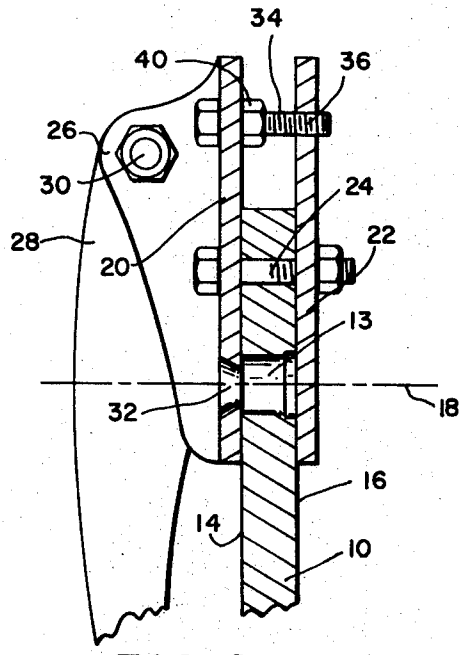


FIG. 2.

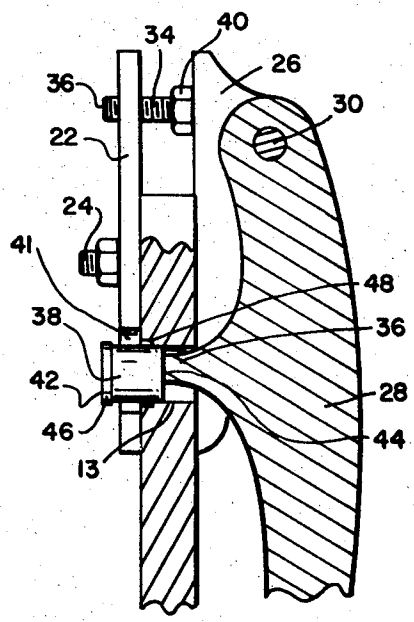


FIG. 3.

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BULLET MOLD

BACKGROUND OF THE INVENTION

Various bullet molds have been made and used for the purpose of casting various types of bullets for revolvers and rifles, however, many of them are constructed of a pair of blocks having semicircular cavity portions opposed to each other and pivotally movable apart.

These molds are expensive to manufacture and oftentimes difficult to use and maintain due to the fact that slight damage of the mold at the edge of a semicircular portion of the cavity may result in difficulty in removing bullets from the cavity or in the casting of accurate bullets.

SUMMARY OF THE INVENTION

The present invention is particularly adapted for use in casting bullets generally known as wad cutters, and particularly for use in revolvers or pistols. The wad-cutter-type bullet is generally cylindrical in shape, having a generally flat base and a generally flat nose portion. The invention is provided with a cavity member having a straight cylindrical cavity therein extending to opposite sides of the member and adjacent said opposite sides are pivotally mounted two members, one being a sprue cutter plate and the other being a backup plate, these plates being pivotally mounted on the cavity members, such that they may be movable into and out of register with the cavity to expose opposite ends thereof, and also to enclose one end and expose the other end to a sprue cutter in the sprue cutter plate of the invention. Additionally, the invention comprises a novel handle member which also serves as a pivotally mounted bullet ejector adapted to eject bullets from the cylindrical mold when the sprue cutter and backup plate are moved out of register with opposite ends of the cavity.

Accordingly, it is an object of the present invention to provide a very simple and economical bullet mold for making wad-cutter-type bullets having flat bases and flat nose portions.

Another object of the invention is to provide a novel bullet mold for making wad-cutter-type bullets employing a straight solid cylindrical cavity structure from which bullets are easily and readily ejected axially therefrom.

Another object of the invention is to provide a bullet mold which is very simple and easy to operate in the production of wad-cutter-type bullets for various cartridges, such as revolvers, pistols or rifles.

Another object of the invention is to provide a very economical and simple bullet mold which is capable of producing very accurate bullets.

Further objects and advantages of the invention may be apparent from the following specification, appended claims, and accompanying drawings:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top or plan view of a bullet mold in accordance with the present invention, and showing by broken lines, varying positions of the sprue cutter, backup plate, and bullet ejecting and operating handle of the invention;

FIG. 2 is a fragmentary sectional view taken from the line 2–2 of FIG. 1; and

FIG. 3 is a sectional view taken from the line 3–3 of FIG. 1, and showing the structure in accordance with its broken line position in FIG. 1, such that the operating handle of the invention is pivoted into position to eject a bullet from the cylindrical cavity of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

As shown in FIG. 1 of the drawings, the invention comprises a cavity member **10** having a handle portion **12** which may be suitably insulated, if desired.

The cavity member **10**, as shown in FIG. **2** of the drawings, is provided with a hollow cylindrical cavity **13** in which a wad-cutter-type bullet may be cast. Opposite ends of the cavity **13** extend to and are open at opposite sides **14** and **16** of the cavity member, and the axis of the cavity **13** is generally as indicated by line **18** in FIG. **2** of the drawings.

A sprue cutter **20** partially encloses the end of the cavity **13** at the side **14** of the cavity member **10**, while a backup plate **22** encloses the cavity **13** at the side **16** of the cavity member **10**.

These plates **20** and **22** are pivotally mounted on a bolt **24** extending through the cavity member **10**, and this permits the plates **20** and **22** to pivot to the broken line position, as shown in FIG. **1** of the drawings.

The plate **20** is provided with an upstanding flange **26** on which an operating handle **28** of the invention is pivotally mounted by means of a bolt **30**. This handle **28**, together with the handle portion **12** may be used to pivot the plates **20** and **22** about the axis of the bolt **24**, as will be hereinafter described in detail.

The sprue cutter plate **20** is provided with a conically shaped opening **32** adapted to align with the axis **18** of the cavity **13** at the side **14** of the cavity member **10**, and the backup plate **22** is adapted to enclose the cavity **13** at the side **16** of the cavity member **10** so that bullet metal may be poured through the sprue cutter opening **32** to fill the cavity, whereupon the sprue may be cut, as will be hereinafter described.

In order to maintain the plates **20** and **22** tightly engaged with opposite sides **14** and **16** of the cavity member **10** at opposite ends of the cavity **13**, a screw **34** is provided with a screw-threaded portion **36** adjustable screw threaded in the plate **22**, and a nut **40** on the screw **34** is adapted to bear against the inner side of the plate **20** to generally force the plates **20** and **22** slightly apart at one end and to force the opposite end thereof together in accordance with restraint provided by the bolt **24**. Thus, opposite ends of the cavity **13** are effectively sealed at opposite sides **14** and **16** of the cavity member **10** by the plates **20** and **22** so that bullet metal may be poured through the sprue opening **32** without leakage from the cavity **13**.

When the sprue cutter plate **20** is aligned with the cavity **13**, as shown in FIGS. **1** and **2** of the drawings, molten metal may be poured through the sprue and allowed to freeze in the cavity **13**, whereupon the operating handle **28** may be moved in the direction of the arrow A with respect to the handle **12** to shear off the sprue and to move the handle member **28** to the broken line position B, as shown in FIG. **1** of the drawings, wherein an ejector projection **36** of the handle member **28** aligns with the cavity **13** in order to eject a bullet **38** therefrom. It will be seen that the plate **22** is provided with a notch portion **40** which clears the cavity **13**, when the sprue cutter plate **20** and the handle **28** are in the broken line position, as shown in FIG. **1** of the drawings.

The buttle **38**, as shown in FIG. **3**, is provided with a flat nose portion **42** and flat base portion **44**, and adjacent the nose **42** is an enlarged rim **46** adapted to abut the mouth of a cartridge case in order to provide proper seating depth thereof. The cavity **13** is provided with a corresponding enlarged portion **48** for casting the enlarged portion **46** on the bullet **38**.

It will be seen that the cavity **13** is a very economical cavity to produce, since it may be drilled and reamed in one simple operation, and that the remaining portions of the mold and bullet ejection mechanism are very simple and economical to produce so that the bullet mold of the invention may be produced very cheaply and economically to efficiently produce very accurate bullets.

It will be obvious to those skilled in the art that various modifications may be resorted to within the spirit of the invention.

I claim:

1. A bullet mold comprising: a cavity member having spaced opposite sides; a generally cylindrical cavity extending through said cavity member; a sprue cutter plate on one side of said cavity member and partially enclosing one end of said cavity, and a backup plate disposed at the opposite side of said

cavity member and enclosing the opposite end of said cavity in sealing relationship therewith; means for supporting said plates in movable relation to said cavity member to cause movement of said plates relative to said cavity member in a direction laterally of the axis of said cavity.

2. The invention, as defined in claim 1, wherein: said plates are substantially flat at opposite ends of said cavity and opposite sides of said cavity member to produce a wad-cutter-type bullet having a substantially flat base and a substantially flat nose portion.

3. The invention, as defined in claim 1, wherein: said cavity member is provided with a handle portion extending away from said cavity; a handle member mounted on one of said plates and adapted to move them relative to said cavity member for moving said sprue cutter relative to said cavity.

4. The invention, as defined in claim 1, wherein: said sprue cutter plate and said backup plate are pivotally mounted on said mold member; an operating handle pivotally mounted on said sprue cutter plate; said operating handle having a punch projection pivotally movable into alignment with said cavity and pivotally movable to eject a bullet from said cavity, when said plates are pivoted out of alignment therewith; and means adapted to spread said plates apart at an opposite side of said pivotal mounting bolt from said cavity in order to maintain said plates in close fitted proximity with opposite sides of said cavity member and at opposite ends of said cavity.

5. The invention, as defined in claim 1, wherein: said cavity is provided with a slightly enlarged diameter portion adapted to form an external ridge on a bullet cast therein, said enlarged portion being adjacent one end of said cavity and adjacent one of said plates; the central axis of said cavity being substantially at right angles to opposite sides of said cavity member; said plates being substantially flat adjacent said ends of said cavity and opposite sides of said cavity member in order to produce a bullet of generally wad cutter shape and of configuration having a flat nose and a substantially flat base portion.