Dec. 22, 1925. 1,566,864

L. C. HAUER

DIE HOLDER

Filed Dec. 19, 1924

Fig. 1

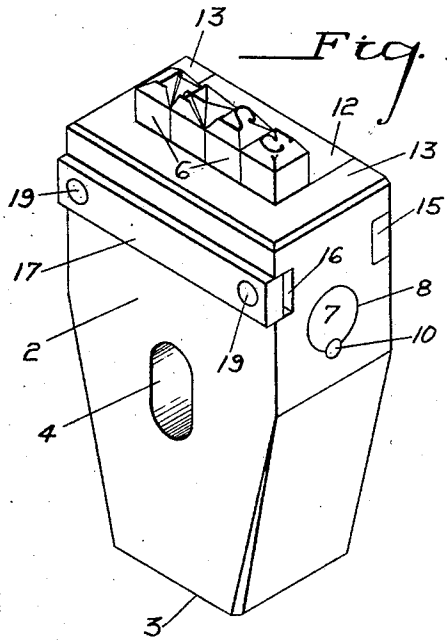


Fig. 2

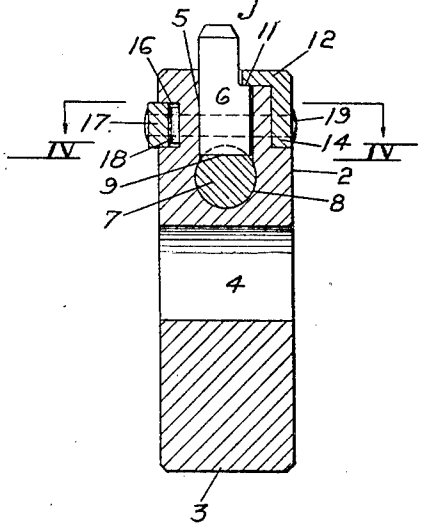


Fig. 3

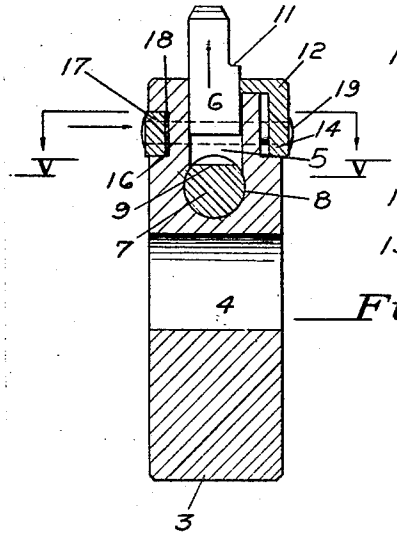


Fig. 4

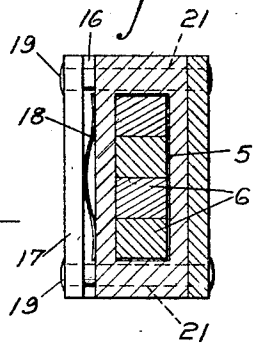


Fig. 5

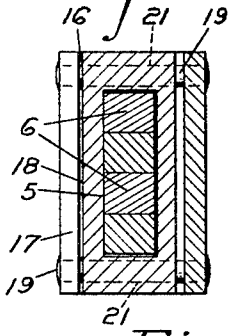


Fig. 7

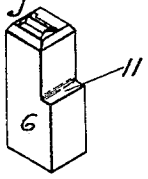
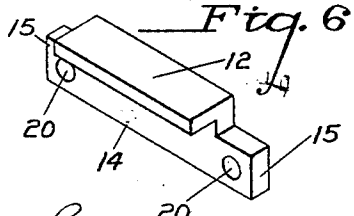


Fig. 6



INVENTOR.

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BY

O. M. Mears

ATTORNEY

Patented Dec. 22, 1925. 1,566,864

UNITED STATES PATENT OFFICE.

LEON C. HAUER, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO PANNIER BROS. STAMP CO., OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

DIE HOLDER.

Application filed December 19, 1924. Serial No. 757,071.

To all whom it may concern:

Be it known that I, LEON C. HAUER, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Die Holders, of which the following is a specification.

My invention consists of an improvement in die holders, of the kind used for stamping metal. It has in view to provide such a device comprising a one-piece head having a terminal socket for the individual type or stamping dies, spring retracted means for holding and releasing the dies, an inserted hard metal bearing member, and a shouldered die for use therewith, with other features of improvement as hereinafter described.

In the drawings, showing one preferred embodiment of the invention:

Fig. 1 is a perspective view of the die holder and dies in position therein;

Fig. 2 is a central vertical sectional view thereof;

Fig. 3 is a similar view, showing the die partly withdrawn;

Fig. 4 is a horizontal section on the line IV—IV of Fig. 2, showing the clamping bar in holding position;

Fig. 5 is a similar section on the line V—V of Fig. 3, showing the bar retracted;

Fig. 6 is a perspective detail view of the clamping bar; and

Fig. 7 is a similar view of one of the shouldered dies.

The main head or body 2 of the die holder is generally rectangular in cross section, preferably tapering towards the top 3 providing a hammer applying terminal, and has a middle transverse hole 4 for insertion of a helve or handle for swinging the dies against a hot metal surface, when so used.

Its opposite end is provided with a rectangular socket 5 of sufficient proportions to receive a series of dies 6 by their widened bases snugly within it for positive seating against a hardened steel bearing bar 7. Said bar is made of a round section so that a corresponding round receiving hole 8 may be easily bored or drilled clear through the head to receive it. The middle bearing face for the dies is planed off flat, as at 9, between the cylindrical ends and the bar is held against rotation by one or more keys 10. In this manner, the flat bearing seat is positively maintained at right angles to the walls of the socket 5 for direct contact with the base of the dies 6, so as to absorb the thrust of the blows incident to using the dies in their intended way.

The several dies 6 are each shouldered as at 11, so as to provide a positive retaining abutment for engagement by the inner edge of clamping bar 12. Said bar fits inwardly between the corner portions 13 of the head 2 by its outer locking portion and is generally L-shaped, as shown. A lower cross arm 14 of the bar 12 extends clear across the opposite, outer face portions of the holder 2 by its terminals 15, which terminals normally lie inwardly in suitable receiving channels thereof, as in Figs. 1 and 2. At the other side is a similarly recessed socket 16 adapted to receive a cross pressure bar 17 and its retracting spring 18, of leaf form. Bar 17 is connected with locking bar member 14 by studs or bolts 19 fixedly connected by riveting or otherwise in holes 20, the studs being longitudinally slidable in transverse holes 21 drilled through opposite edge portions of the head 2.

By such construction, it will be seen that the terminals 15 extend laterally beyond the middle holding portion of the clamping bar 12, and that the bolts 19 are also at each side of such middle portion. The bolts extend through the side portions of the holder, and require equalizing pressure at each end of the pressure bar to effect movement of the clamping bar. By such construction, it will be seen that the clamp may be pressed outwardly to open the socket to receive or release the dies, by pressing inwardly on the cross bar 17. Upon releasing the pressure, the spring 18 will retract the clamping bar through the connecting bolts 19, with or without inserted dies.

When the dies are in place and so held, they bear inwardly against the face of bar 7 and are very firmly and positively held. The shouldered engagement with the dies is external of the holder, the movement of the clamping bar is very limited, and the mounting of it and its connecting studs and pressure bar and spring is such as to in no way interfere with the solid integral socket for the dies.

The device may obviously be made in any

desired size or proportions, and in use may be grasped in one or both hands for manipulation of the pressure and holding bars, as desired.

What I claim is:

1. A holder for a removable die consisting of a body member having a die socket, an outer clamping bar, an opposite spring retracted pressure bar, and means at each side of the die socket rigidly connecting the clamping bar and pressure bar.

2. A holder for a removable die consisting of a body member having a die socket, an outer clamping bar, an opposite spring retracted pressure bar, and studs extending through the holder at each side of the die socket and rigidly connecting the clamping bar and pressure bar.

3. A holder for a removable die consisting of a body member having a die socket, an outer L-shaped clamping bar having a locking edge extending inwardly over the socket, an opposite spring retracted pressure bar, and studs extending slidably through the holder at each side of the die socket and rigidly connecting the clamping bar and pressure bar.

4. A holder for a removable die consisting of a body member having a die socket, a round bar extending through the body member having a flattened bearing face forming a die seat, and means for clamping a die in the socket.

5. A holder for a removable die consisting of a body member having a die socket, a round bar extending through the body member having a flattened bearing face forming a die seat, means for non-rotatably holding the bar, and means for clamping a die in the socket.

6. The combination with a die holder having a rectangular end socket, of a transverse clamping bar having a holding lip extending across one edge of the socket, an opposite pressure bar recessed across the face of the holder with an intervening spring and clearance, and studs fixedly connecting the opposite end portions of the clamping bar and pressure bar extending slidably through the holder.

In testimony whereof I hereunto affix my signature.

LEON C. HAUER.