July 1, 1952 L. C. HAUER 2,601,824

STAMPING DIE HOLDER

Filed May 21, 1947

Fig. 1

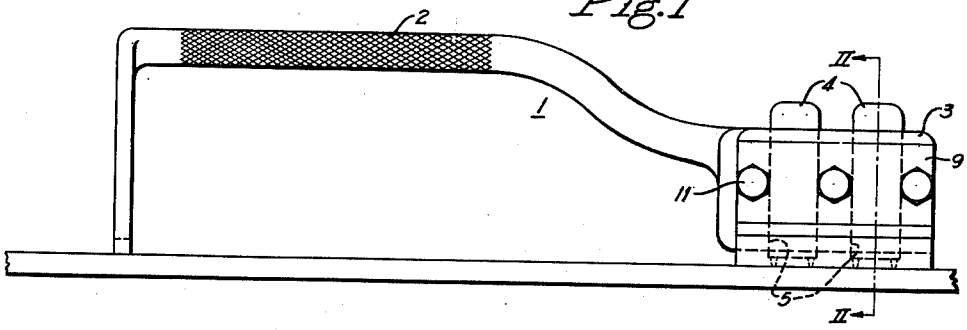


Fig. 2

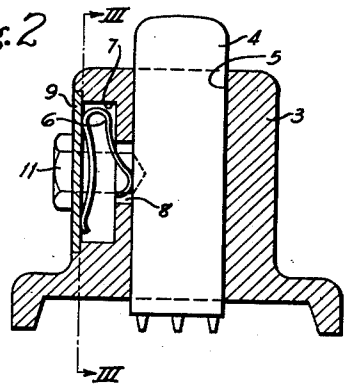


Fig. 3

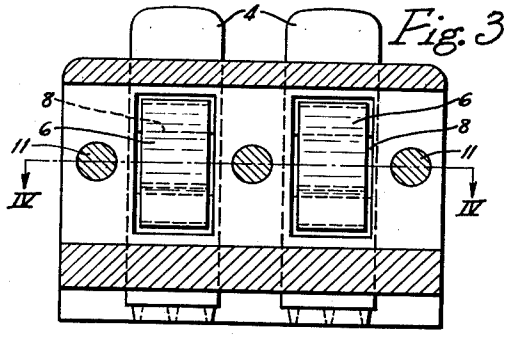
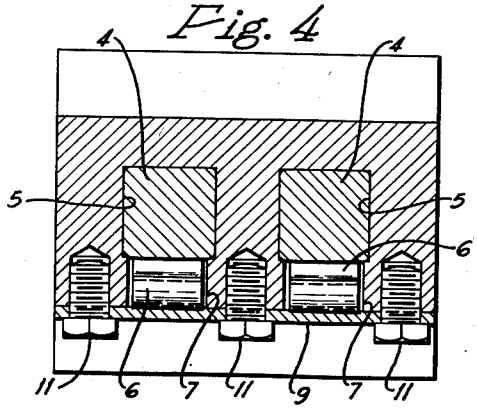


Fig. 4



INVENTOR.
LEON C. HAUER
BY J. E. Dickinson
his Attorney

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STAMPING DIE HOLDER

Leon C. Hauer, Pittsburgh, Pa., assignor to M. E. Cunningham Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application May 21, 1947, Serial No. 749,439

1 Claim. (Cl. 101—28)

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This invention, although not necessarily so limited, has to do with tool holders, and more particularly with an improvement in the mounting of a stamping die in a die holder.

A primary object of the invention is to provide an improvement in the mechanism employed for yieldably holding a stamping die in a holder.

This and the various other objects and advantages of the invention will become apparent when the following detailed description is read in conjunction with the accompanying drawings in which:

Figure 1 is a side elevation of a stamping tool embodying the invention;

Figure 2 is a section on the line II—II of Figure 1;

Figure 3 is a section on the line III—III of Figure 2; and

Figure 4 is a section on the line IV—IV of Figure 3.

Referring in detail to these drawings, the numeral 1 designates generally the entire tool which consists broadly of a handle 2, an integral head 3, and a plurality of stamping dies 4. In the head of the holder there is located a suitable opening 5 for each stamping die 4.

In tools of this character the stamping die must be so mounted in the holder as to allow for ready replacement and for the necessary movement of the die when it is struck with a hammer or the like to make the imprint. At the same time it must be so held in place that it will not drop out of the holder when the latter is moved from place to place.

In accordance with this improvement, this latter objective is accomplished through the use of individual spring-type resister elements 6 associated with each stamping die 4. These elements are preferably made out of a thin narrow strip steel, having the necessary resiliency and strength. As shown, they are formed by bending the strip back upon itself somewhat in the shape of a hairpin. One leg of the spring, although not necessarily so, is preferably made longer than the other and has its free end turned outwards and its intermediate portion bowed inwardly. This provides the element with a line contact with the surfaces it engages and increases its spring action. The other leg is similarly shaped, though disposed at its free end at an angle inclined away from the longitudinal axis of the spring.

Recesses 7 are provided for the reception of the resister elements or springs 6 in the one side face of the holder opposite the opening 5 in which the stamping dies are carried. Between these recesses and the die-receiving opening 5 windows 8 are provided and through these the outwardly inclined end of the one leg of each resister element is extended to engage the side

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of the stamping die, and exert a spring pressure thereon, tending to hold the die in a given position in the holder.

To facilitate the assembly of the resister elements 6 and hold them in place, a cover plate 9 is employed which is secured to the side of the holder by screw bolts 11.

To improve the functioning and life of the spring element 6, the recesses 7 and the windows 8 are made sufficiently long to allow a small amount of endwise movement of the springs in the housing so they can, to a limited extent, follow the impact and recoil movement of the stamping dies 4. This relieves the springs of some of the shock which they would otherwise experience and thereby lengthens their life, which is highly desirable in view of early failure of other types of elements heretofore used for this purpose.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

In a tool holder a die or the like having flat side walls mounted for axial movement in an opening conforming to the shape of the die provided in the holder for its reception, a leaf spring which is bent back on itself about its center portion with the legs thereof inclined to one another, said spring being mounted in a recess in said holder with one leg bearing at its end against the side of the die exposed to said recess and the other against the back wall of the recess and which is affixed to the holder, the spring having a length which is shorter than the axial length of the recess in which the spring is mounted to permit limited axial movement of the spring in the recess.

LEON C. HAUER.

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