

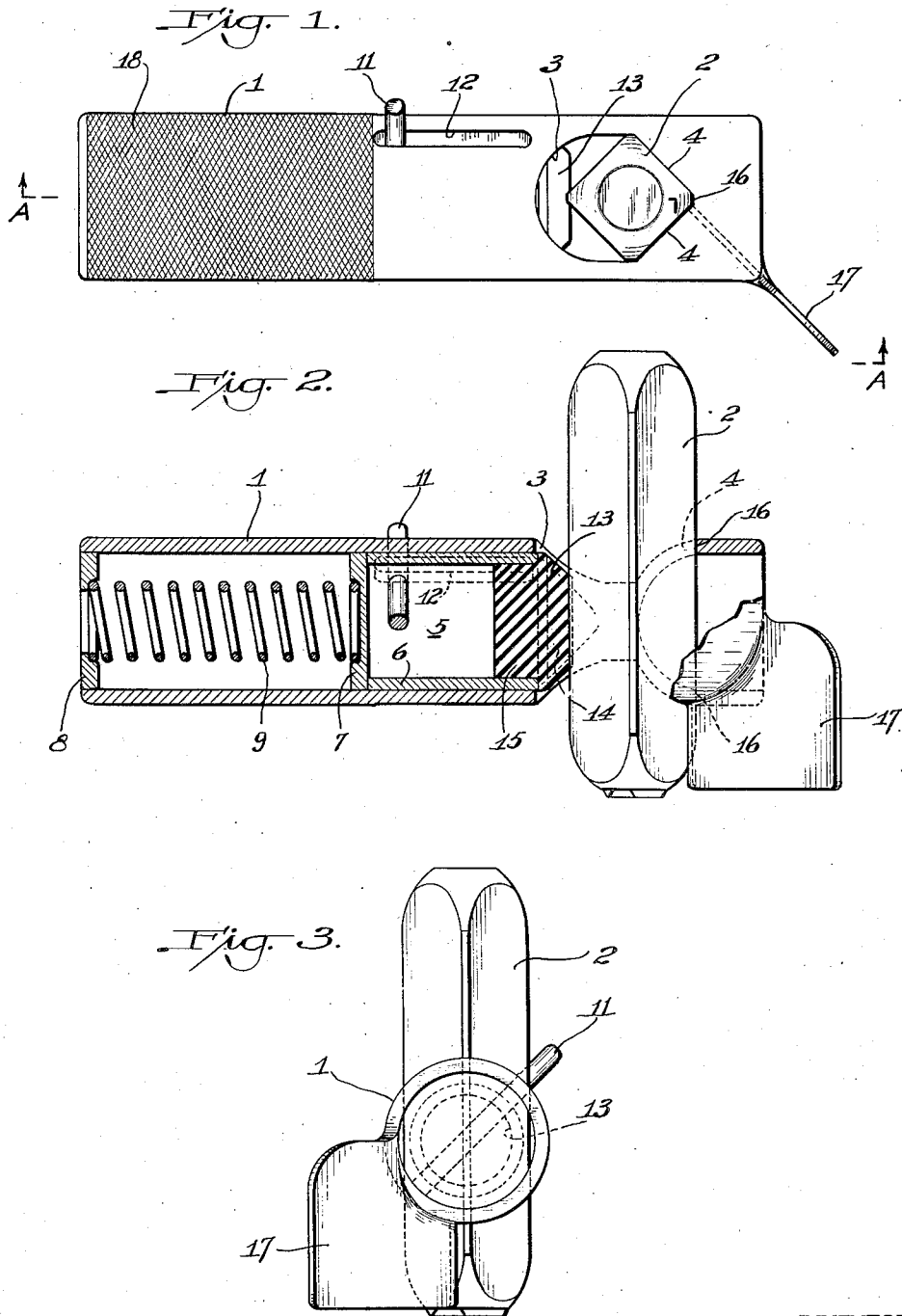
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TOOL HOLDER

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TOOLHOLDER

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This invention relates to a tool holder and while not necessarily so limited, has been developed more particularly as a means for holding a metal stamping die so that the user is protected against injury or shock when the stamp is struck by a hammer and the stamp may be accurately positioned on the object being marked.

One object of the invention is to provide a holder of this type which is simple and inexpensive to manufacture and use, and at the same time durable and dependable in operation.

Another object is to provide a holder which greatly facilitates the accurate application of the die and which is adapted to assist in absorbing the shock imparted to it by an inaccurate application of the stamping force while more effectively gripping the tool or die in the holder as compared with devices of this kind as heretofore used.

These and various other objects, as well as the various other novel features and advantages of the invention, will be apparent when the following detailed description is read in conjunction with the accompanying drawing of which Figure 1 is a plan view of an embodiment of the invention which has been found highly satisfactory in service, Figure 2 a sectional view taken on line A-A of Figure 1, and Figure 3 an elevation looking into the tool end of the holder.

Referring in detail to the drawing, the numeral 1 designates the frame proper of the holder, which consists of a section of simple metal tubing. To receive the tool or stamping die 2 an opening 3 is cut through this tubular frame 1 adjacent one of its ends. To most effectively engage the tool or die 2 the opening 3 looking downwardly upon it is made non-circular and preferably with a pair of angularly converging edges 4 against which the tool rests.

For resiliently and releasably engaging the tool, a plunger denoted generally by the numeral 5 is provided. As shown, this plunger and its operating parts consist of a tubular section 6 which is slidably fitted in the frame tube 1 and equipped with a welded or otherwise secured enclosure 7 between which and a similarly located enclosing wall 8 in the end of the frame 1 opposite the tool opening 3, a coil spring 9 is positioned. This is disposed to normally urge the plunger head into its tool-engaging position. For retracting the plunger a pin 11 is fitted in the inner tube section 6 with its one end projecting through a slot 12 in the frame 1 where it can be readily and conveniently actuated by the operator.

In the tool-engaging end of the plunger tube 6 to provide a resilient and shock-absorbing jaw on the plunger and also one which will so hold the tool as to prevent it from slipping very easily, there is provided a yieldable rubber or similar head 13. As shown, this is made somewhat in the form of a cork with a mushroom-shaped top 14 and a straight or slightly tapered wall portion 15 fitting in the outer end of the plunger tube 6. As will be readily appreciated, this rubber head folds around the tool or die when forced against it and engages the die over a wide area. It also provides a yielding and shock-absorbing medium which cushions the forces normally imparted to the holder when a blow is struck the tool or die 2 in the event the blow is inaccurate or the tool does not contact the workpiece correctly, as well as allows the tool or die to move a limited extent in the holder when pressed against the workpiece.

As will also be appreciated, by using a fixed jaw formed by the tubular frame 1, spaced contacting face points 16 are provided opposite the plunger head 13 which engage the tool or die 2 at two separated points whereby more rigidly holding the tool in place. This holding feature is further enhanced by the great area of contact with which the plunger head 13 also engages the tool.

A further feature of the invention resides in the provision of a guide and indicator which consists of a strut-like element 17 that is welded or otherwise secured to the tool end of the holder frame 1 in alignment with one of the contacting surfaces 16. This indicator so mounted functions as a guide to the operator for aligning his stamp accurately on the workpiece which is particularly desirable where it is desired to make a series of characters on the object to be marked and keep them in a straight line. A further purpose of this strut is to aid the operator in holding the die or tool 2 firmly on the workpiece. Toward this end the lower edge of the strut is extended preferably below the frame 1 and in alignment with the lower end of the die so that the operator can press the die and strut both against the workpiece. If the die projects below the edge of the strut, the pressing of the holder down to bring the strut in full contact with the workpiece is readily permitted by the yielding action of the plunger head 13. While to facilitate the operator's grip on the holder, the frame 1 is roughened or knurled over that portion 18 where it is engaged by the user's hand.

While I have illustrated and described the

present preferred embodiment of my invention which comprises a combination of exceedingly simple and easily fabricated parts, it will be understood that it is not limited thereto, and that the invention may be otherwise embodied within the scope of the following claims.

I claim:

1. A tool holder comprising a tubular handle-forming frame having a tool-receiving opening passing therethrough adjacent one end and forming thereby spaced tool-engaging surfaces, a releasable jaw-forming plunger slidably fitted in said frame, a spring disposed between the opposite end of said frame and said plunger and normally biasing said plunger toward its tool-engaging position, and a pin projecting from said plunger through a slot in said frame for manually retracting the plunger.
2. A tool holder comprising a tubular handle-forming frame having a tool-receiving opening passing therethrough adjacent one end and forming thereby spaced tool-engaging surfaces, a releasable plunger consisting of a tubular section slidably fitted in said frame, a spring disposed between an end wall at the handle end of said frame and an end wall provided in adjacent end of said plunger to normally urge the plunger against the tool, a resilient composition fitting engaged in the tool end of said plunger providing a yieldable tool-engaging jaw face, and a pin engaging said plunger projecting through a slot in said frame for retracting the plunger.
3. A tool holder comprising a tubular handle-forming frame having a non-circular tool-receiving opening passing diametrically there-

through and forming a two-point contact fixed jaw for the holder, a plunger slidably fitted in said frame, spring means normally urging said plunger to its tool-engaging position, manual means for retracting said plunger, and a yieldable composition head fitted to said plunger for engaging the tool.

4. A tool holder according to claim 1 provided with an indicating guide secured to the tool end of the holder frame for guiding the operator in accurately positioning the tool on a workpiece.

5. A tool holder according to claim 1 provided with a strut secured to the tool end of the holder frame having its lower edge projecting below the lower edge of the frame to provide a rest for the holder whereby to assist the operator in holding the tool in place.

6. A tool holder comprising a handle having a tool-receiving opening passing therethrough adjacent one end, a tool-engaging clamp consisting of one jaw formed by a wall of said opening and another jaw formed by a movable plunger mounted in said handle, means normally urging said movable jaw to hold a tool between it and said other jaw and a yieldable facing forming the tool-engaging surface of one of said jaws.

7. A work unit according to claim 3 including a tool releasably fitted in the tool holder and provided with a non-circular exterior conforming in shape to the shape of the tool-receiving opening in the tubular handle-forming frame.

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