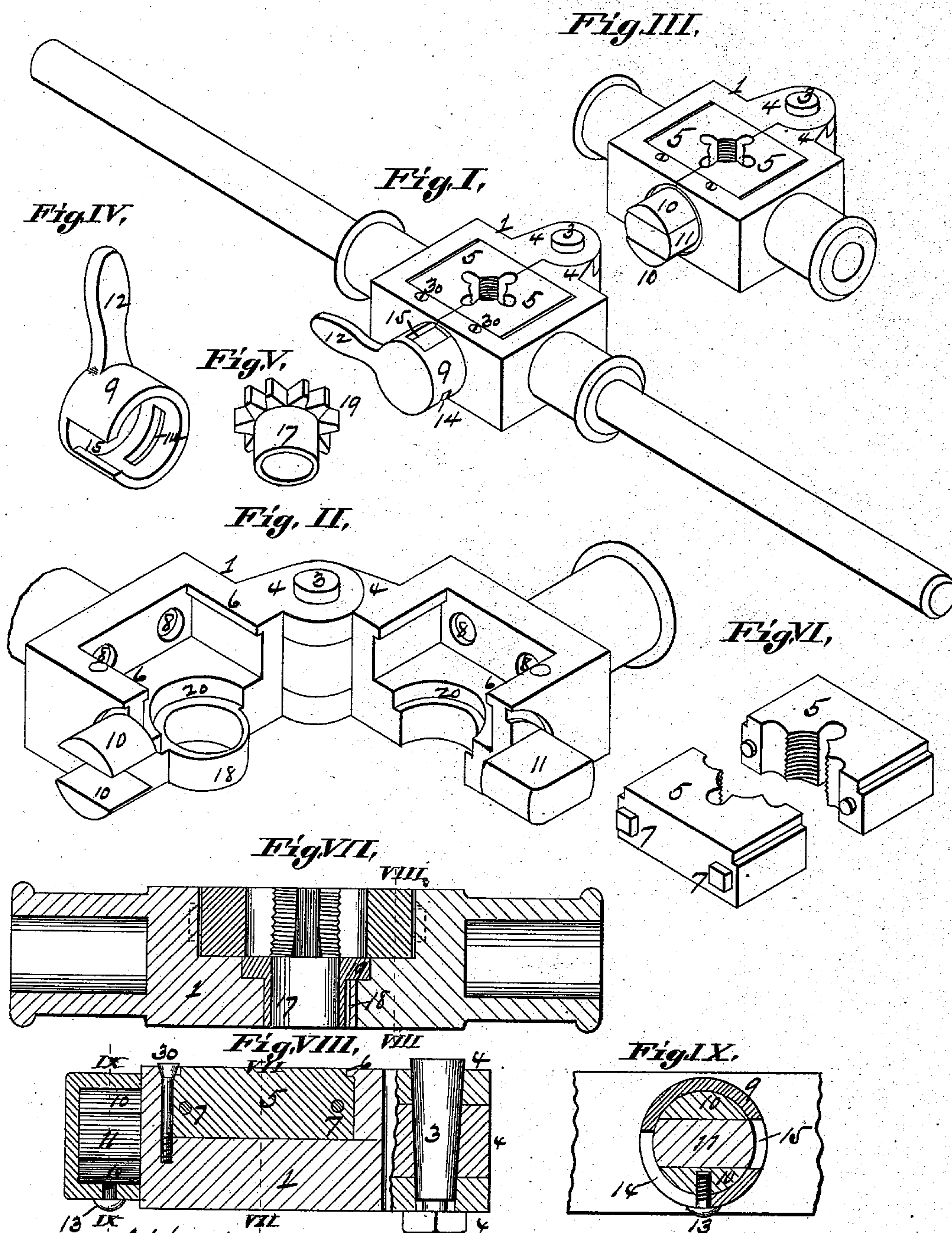


(No Model.)

E. J. HERMAN.  
SCREW CUTTING DIE.

No. 377,614.

Patented Feb. 7, 1888.



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# UNITED STATES PATENT OFFICE.

EMILE J. HERMAN, OF ST. LOUIS, MISSOURI.

## SCREW-CUTTING DIE.

SPECIFICATION forming part of Letters Patent No. 377,614, dated February 7, 1888.

Application filed April 2, 1887. Serial No. 233,449. (No model.)

*To all whom it may concern:*

Be it known that I, EMILE J. HERMAN, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Screw-Cutting Dies, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure I is a perspective view of my improved die. Fig. II is an enlarged perspective view showing the stock open and the die-plates removed. Fig. III is a perspective view with the lock and handles of the die removed. Fig. IV is a perspective view of the lock. Fig. V is a perspective view of the guide. Fig. VI is a perspective view of the die-plates. Fig. VII is a longitudinal section taken on line VII VII, Fig. VIII. Fig. VIII is a transverse section taken on line VIII VIII, Fig. VII. Fig. IX is a section taken on line IX IX, Fig. VIII.

My invention relates to certain improvements in dies for cutting threads on bolts; and my invention consists in features of novelty, hereinafter fully described, and pointed out in the claims.

Referring to the drawings, 1 represents the stock of a die, having die-plates, as usual. The stock is divided into two parts, hinged together by a pin, 3, passing through extensions 4 on the respective members of the stock.

5 represents the die-plates, which fit in the stock and are held therein by projections 6, (see Figs. II and VIII,) which enter grooves in the upper corners of the plates.

As a means for adjusting the plates toward each other when they become worn, I place one or more screws, 7, (I have shown two,) in the back of each plate, which bear against the stock, as shown at 8 in Figs. II and VII. It will thus be seen that by opening the stock, as shown in Fig. II, and removing the plates, the set-screws may be turned outward slightly, and then when the plates are replaced they will be held nearer together than before.

By forming the stock in two parts and hinging them together the die-plates can be conveniently inserted and removed by opening the stock into the position shown in Fig. II.

Another advantage of forming the stock in two parts is that each time a thread has been formed, instead of running an instrument off

by turning it backward, it is only necessary to slightly open the stock and the plates will be disengaged from the thread and the instrument can be lifted off. When the instrument is used, the two parts of the stock are held together, preferably, by means of a lock-ring, 9, fitting over projections 10 11 on the respective members of the stock. These projections 10 11 are so arranged upon the respective members of the die-stock that when said members are in closed position said projections will unite in cylindrical form, so that the ring may fit and be capable of rotation thereon. The ring is provided with a handle, 12, by which it may be turned, and it is held upon the projection 10 by means of a screw, 13, (see Fig. IX,) which passes through a slot, 14, in the ring. The ring is provided with an opening, 15, the size of the projection 11, so that by turning the handle up into the position shown in Fig. IX the stock may be opened, the projection 11 passing out through the slot or opening 15.

In Fig. I the ring is turned one-quarter of the way around, or thereabout, and in this position the slot 15 is removed from opposite the projection 11 and the two members of the stock are held firmly together.

17 represents a guide sleeve or nut, which fits in a socket, 18, on one member of the stock. Through this guide the bolt to be threaded is inserted and held, it having a head, 19, which fits in a counter-seat, 20, in the stock, and the head 19 is preferably notched, as shown in Fig. V, to provide recesses into which the chips or cuttings will fall, and which, when the stock is opened, will fall from the instrument.

In cases where very deep threads are cut the guide might prevent the withdrawal of the instrument from the bolt, even when the stock is opened, (it being understood that the guide or ring is carried and held by one member of the stock, and it would be the die-plate of this member that it would be thus held into engagement with,) were it not for the fact that I form the socket 18 elongated, as shown in Fig. II, so that when the stock is opened the guide and bolt may be moved slightly away from the die-plate, and then the bolt can be withdrawn. The next time the stock is closed the guide will be forced back into line with the die-plates by seating in the counter-seat 20.

30 represents screws passing down between



the stock and the sides of the die-plates, which bear against the latter and keep them from longitudinal movement in the stock.

The ring 9 is preferably countersunk into the stock, as shown, and the pin 3 is preferably tapering, with a nut on its lower end, as shown in Fig. VI, so that as it becomes worn it may be tightened by turning on the nut.

I claim as my invention—

1. In a die-stock, the combination of two members hinged together, each having a seat for a die-plate, projections on said members, which projections, when said members are in closed position, unite in cylindrical form, and a ring adapted to fit over said projections and hold the stock in its closed position, substantially as set forth.

2. In a die-stock, the combination of two members hinged together, each having a seat for a die-plate, projections which, when said members are in closed position, unite in cylindrical form, a ring secured to the projection on one member by a slot and pin, whereby it is capable of rotary movement, and having a slot-notch for the passage of the projection on the other member, substantially as set forth.

3. In combination with the stock and die-plates, a movable guide-ring, substantially as and for the purpose set forth.

4. In combination with the stock and die-plates, the ring having a notched head, substantially as and for the purpose set forth.

5. In combination with the stock and die-plates, the guide-ring and elongated socket 18, in which the guide is supported, substantially as and for the purpose set forth.

6. In combination with the hinged stock and die-plates, the guide-ring provided with a head, 19, and holder 18, the stock having a counter-seat, 20, substantially as and for the purpose set forth.

7. In a die-stock, the combination of the members hinged together, a die-plate carried by each member, a pair of projections, 10, on one member and a projection, 11, on the other member, said projections being so arranged as to unite in cylindrical form when the members are closed together, the ring 9, secured to one of the projections 10 by a slot and pin, and having a notch, 15, for permitting the projection 11 to enter between the projections 10, substantially as and for the purposes set forth.

EMILE J. HERMAN.

In presence of—

EDW. S. KNIGHT,  
JOSEPH WAHLE.