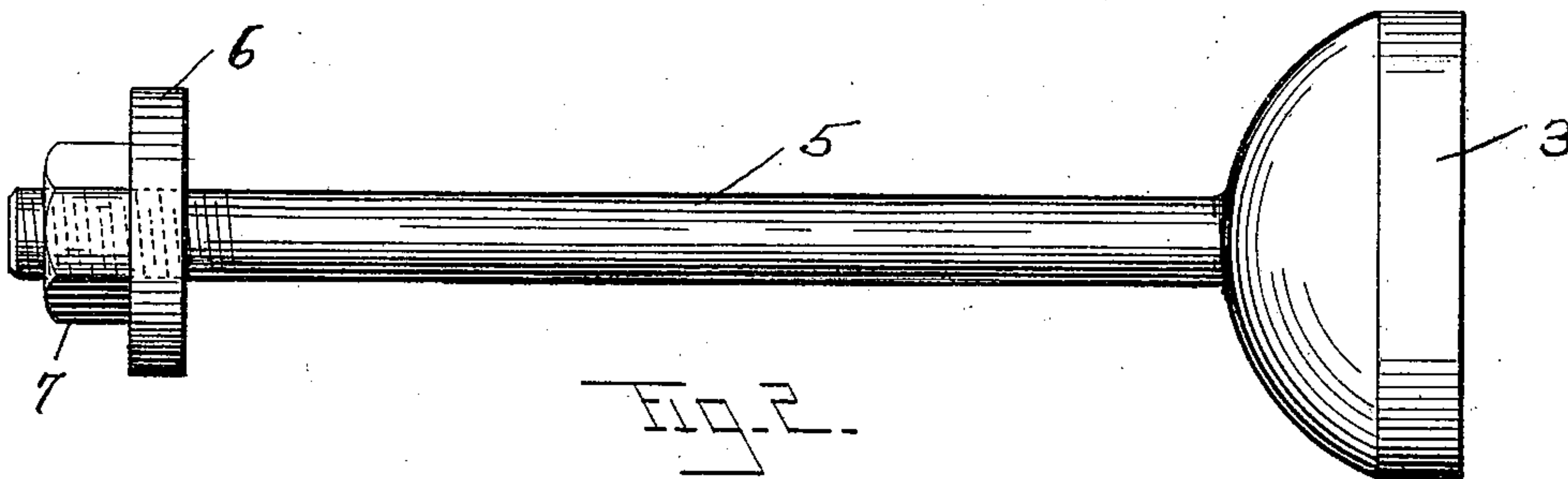
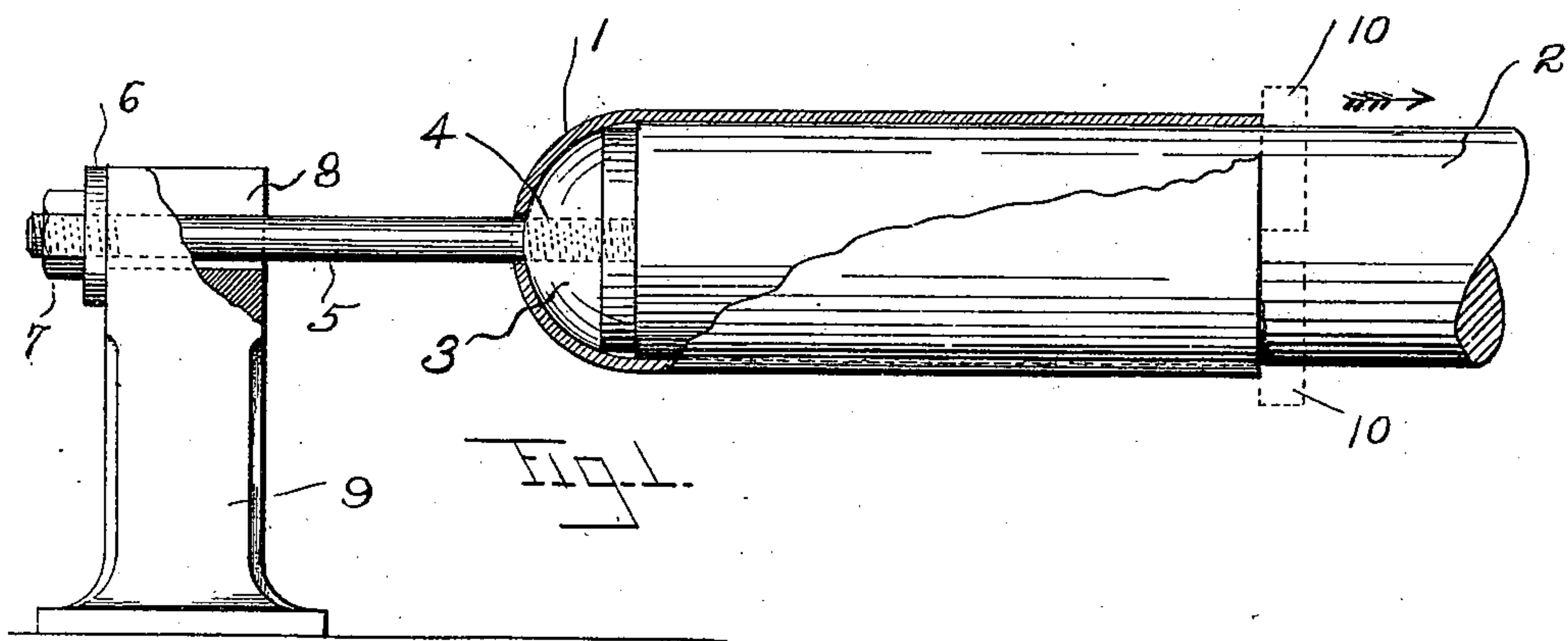


(No Model.)

F. DEMING.
STRIPPING DEVICE.

No. 560,480.

Patented May 19, 1896.



WITNESSES:

William Priles
Bennet M. Chatfield

INVENTOR

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UNITED STATES PATENT OFFICE.

FERDINAND DEMING, OF WATERBURY, CONNECTICUT, ASSIGNOR TO
RANDOLPH & CLOWES, OF SAME PLACE.

STRIPPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 560,480, dated May 19, 1896.

Application filed December 24, 1895. Serial No. 573,229. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND DEMING, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Stripping Devices; and I do hereby declare the following, when taken in connection with the accompanying drawings and the figures of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side elevation, partly in section, of the stripper in connection with the punch and cross-head; Fig. 2, a side elevation of the stripper complete.

My invention relates to that class of stripping devices which are designed to strip the tube from the male die or punch of a draw-bench after it has been drawn, and applies more especially to that class of tubes of large diameter whose walls are of thin metal and provided with a hole bored in their otherwise solid end. Before my invention the tube was removed from the punch after being drawn through the female die by encircling the punch with strippers, as shown by broken lines in Fig. 1 and designated 10 10, which were circular in form and rested against the rear face of the female die, the motion of the punch being reversed. The tube was held in a fixed position by the action of the strippers and die, while the punch continued its motion and was finally withdrawn.

It is my object to produce a device which is simple in structure and can be easily applied, manufactured at a low cost, and which will strip the tube from the punch by means of an inside pressure rather than to force it off by a pressure upon the ends of the walls of the tube, as done heretofore. The tube in the process of drawing clings tightly to the punch, requiring great pressure to remove it, and under the old method above described the tube was frequently destroyed by wrinkles and buckles forming longitudinally in its wall, when the punch was withdrawn. These objections are overcome in my device by removing the tube from the punch by the pressure being applied upon the inside of the end of the tube, thus distributing the strain

much more equally than if the pressure were applied wholly upon the ends of the walls of the tube.

The punch 2 of a draw-bench is shown in Fig. 1 with the tube 1 upon it, occupying the relative positions which they occupy after the tube has been drawn through the dies and is ready to be removed from the punch. The stripper-head 3, whose rear face is flat, is shaped to fit the inside of the tube and sets firmly against the end of the punch 2. Through the center of the stripper-head 3 is a tapped hole 4, whereby it may be secured to the threaded rod or stripper-body 5. Rod 5 may be of any convenient length and is threaded upon both ends, of which one is adapted to receive the head 3 and the other the nut 7. Head 3 and rod 5 may be made of a single piece of metal, as shown in Fig. 2, and preferably so in some cases. The annular ring or washer 6, with the bore sufficiently large to slide freely upon the rod 5, may be made of any suitable form, provided it is larger than the slot 8 in the top of the cross-head 9. Cross-head 9 is securely fastened to the floor or the base of the machine by any of the common methods, and a slot 8, whose walls are parallel to the axis of the punch, is cut through its upper portion, so that the rod 5 may lie therein. The stripper may be held by any means which will retain it in a permanently-fixed position, and I do not, therefore, limit myself to the use of a cross-head, as shown herein.

The device is used in the following manner: Head 3 is placed in the tube to be drawn before it is forced upon the punch 2. After the process of drawing, and when the tube is ready to be removed, the rod 5, having upon one end the nut 7 and washer 6, is screwed into the tapped hole 4 in the head 3 and allowed to rest in the slot 8 of the cross-head 9. The motion of the punch is now reversed, it moving in the direction of the arrow, and as the washer 6 is drawn up against the cross-head 9 the tube is held stationary while the punch is withdrawn.

It is obvious that there are many minor changes that can be made within my invention, and I would therefore have it understood that I do not limit myself to the exact

construction herein shown and described, but hold myself at liberty to make such changes and alterations as fall fairly within the spirit and scope of my invention; but

5 What I do claim as new, and desire to secure by Letters Patent, is—

1. A stripper for removing tubes from the punch or male die of a draw-bench which can be inserted in the tube before the process of
10 drawing, with means for holding said stripper in a fixed position after such drawing, thereby securing the tube in a stationary position while the punch is being withdrawn substantially as hereinbefore set forth.

15 2. In a stripper adapted to be placed in the tube before the completion of the drawing thereof, the combination of a stripper-head and a rod or stripper-body, one end of said rod or stripper-body adapted to be attached

to said stripper-head and the other to receive 20 a nut and washer, with means for securing said stripper in a fixed position during the operation of stripping, substantially as described.

3. In a stripper adapted to be placed in the 25 tube before the completion of the drawing thereof, the combination of the head 3, rod 5, and nut 7 on said rod, with means for securing said stripper in a fixed position during the operation of stripping substantially as de- 30 scribed.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FERDINAND DEMING.

Witnesses:

J. BLACKNALL,
GEO. H. CLOWES.