

(No Model.)

A. LOEHNER.

COMBINED RATCHET DRILL AND DIE STOCK.

No. 366,965.

Patented July 19, 1887.

Fig. 1.

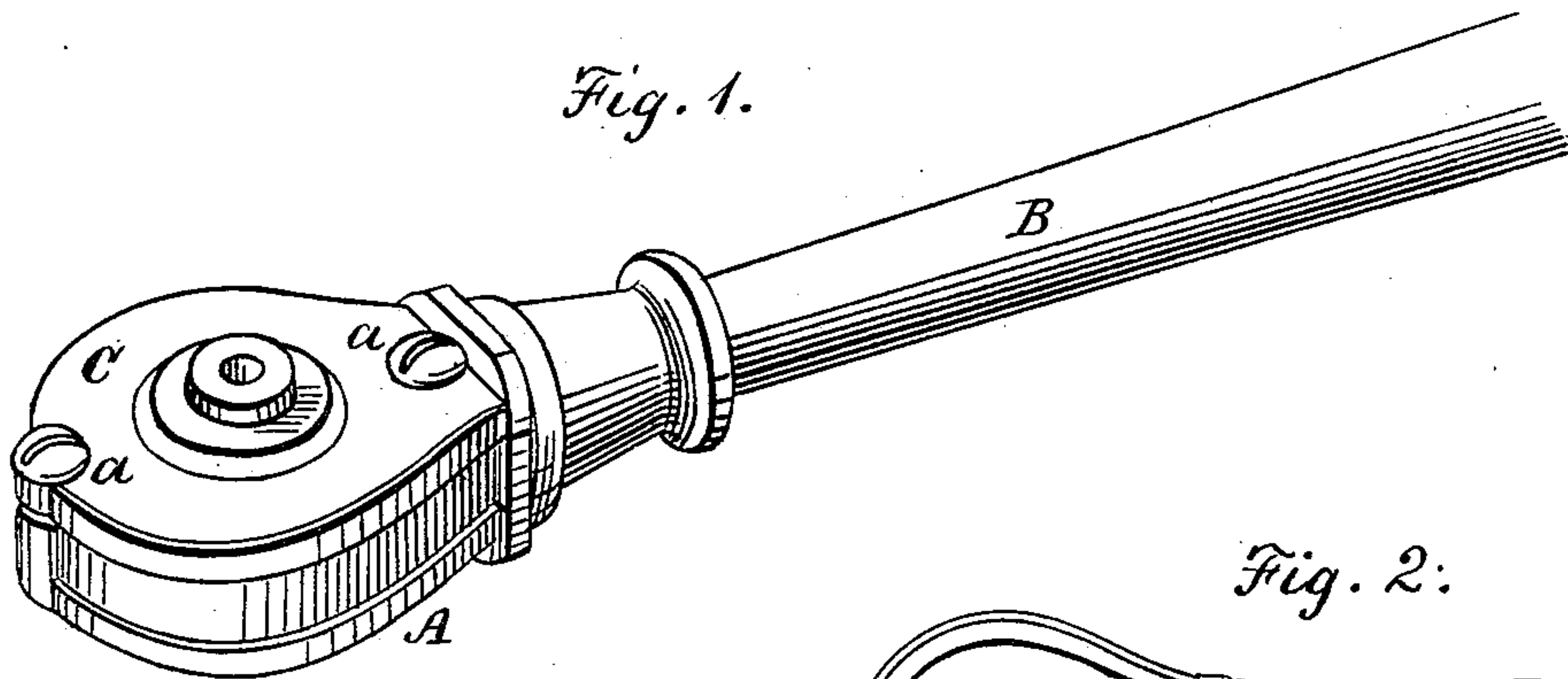


Fig. 2.

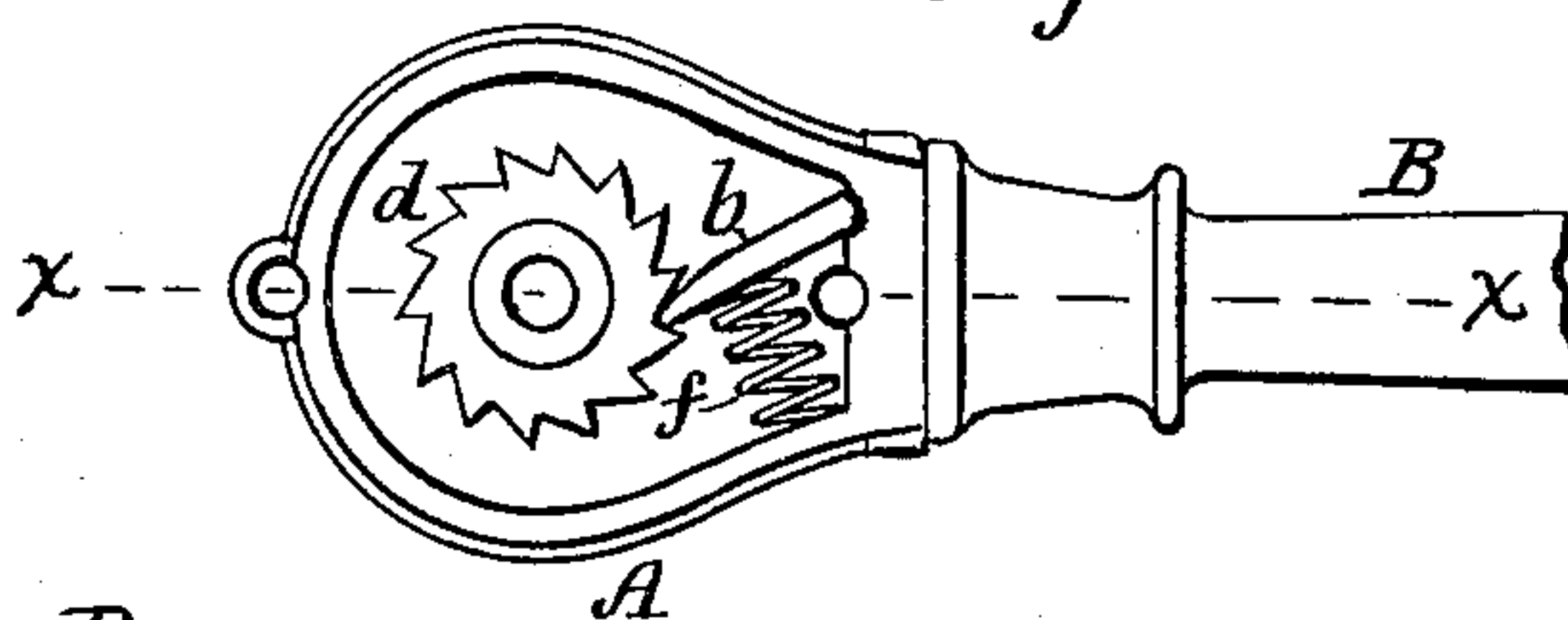


Fig. 3.

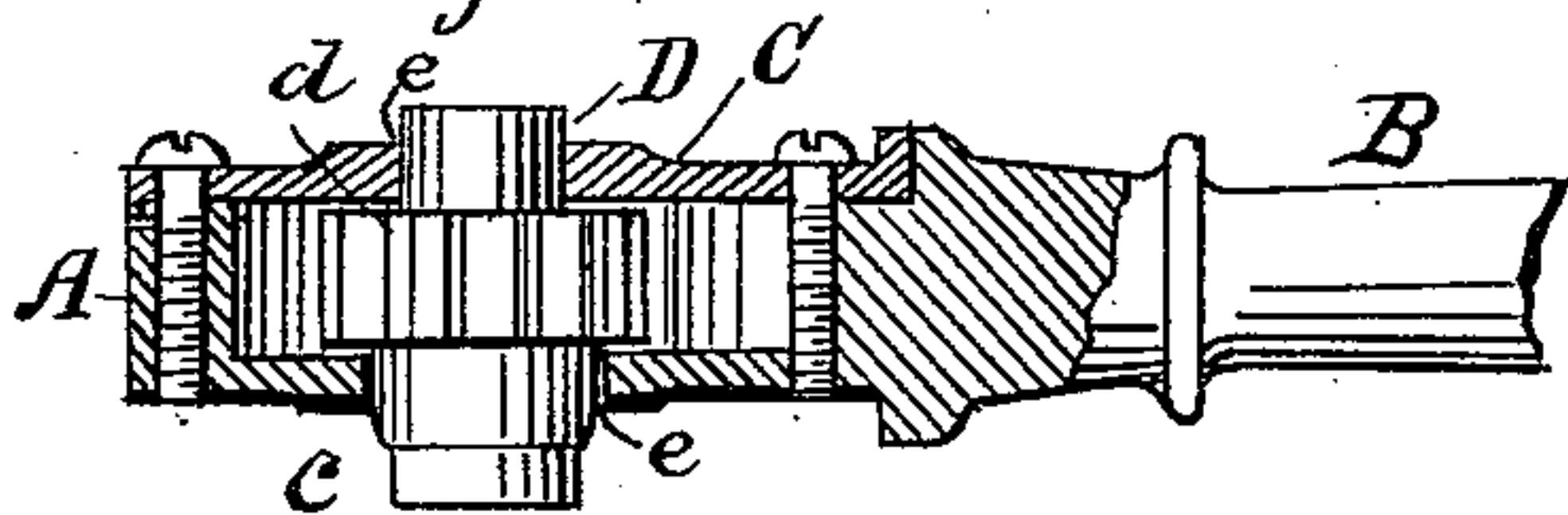


Fig. 4.

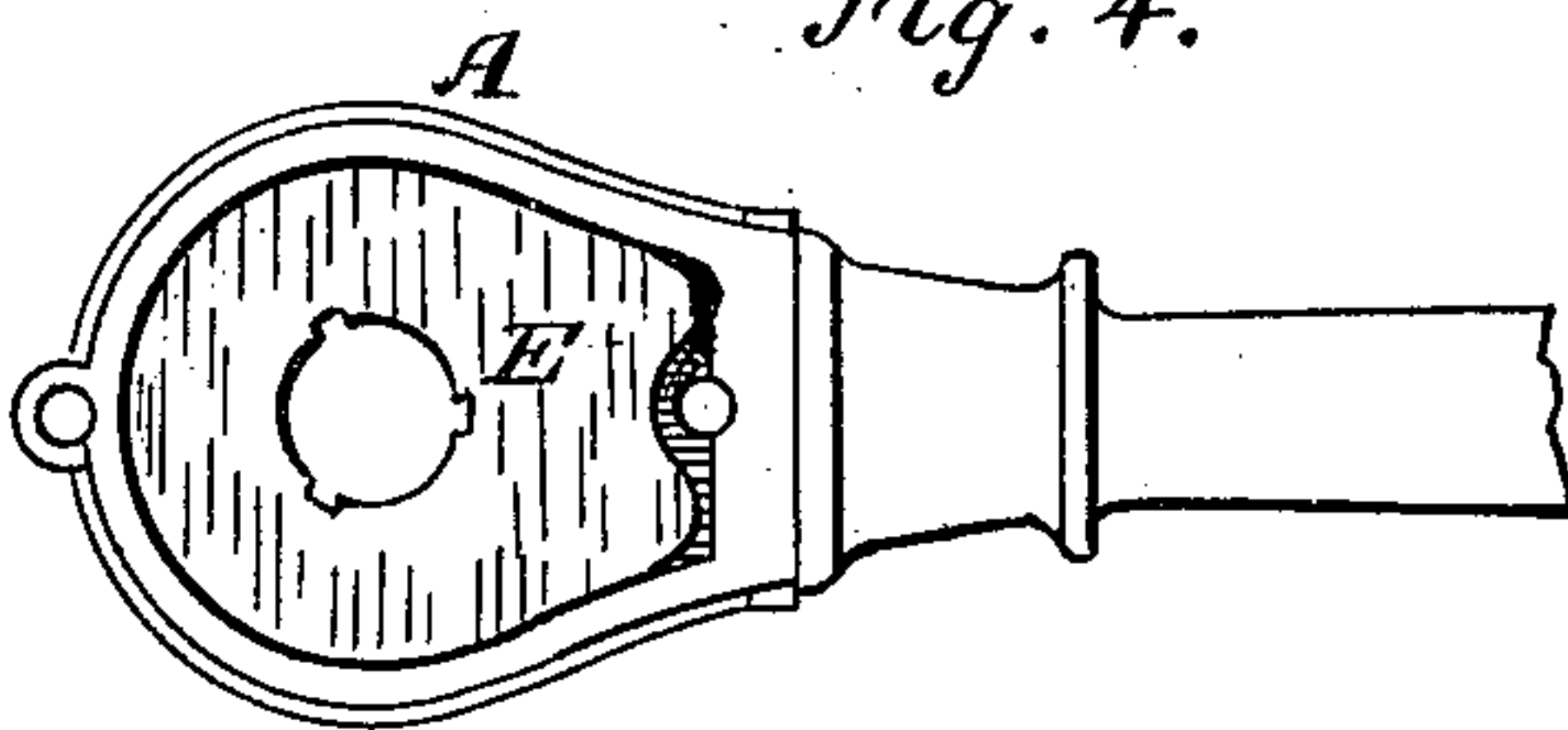


Fig. 5.

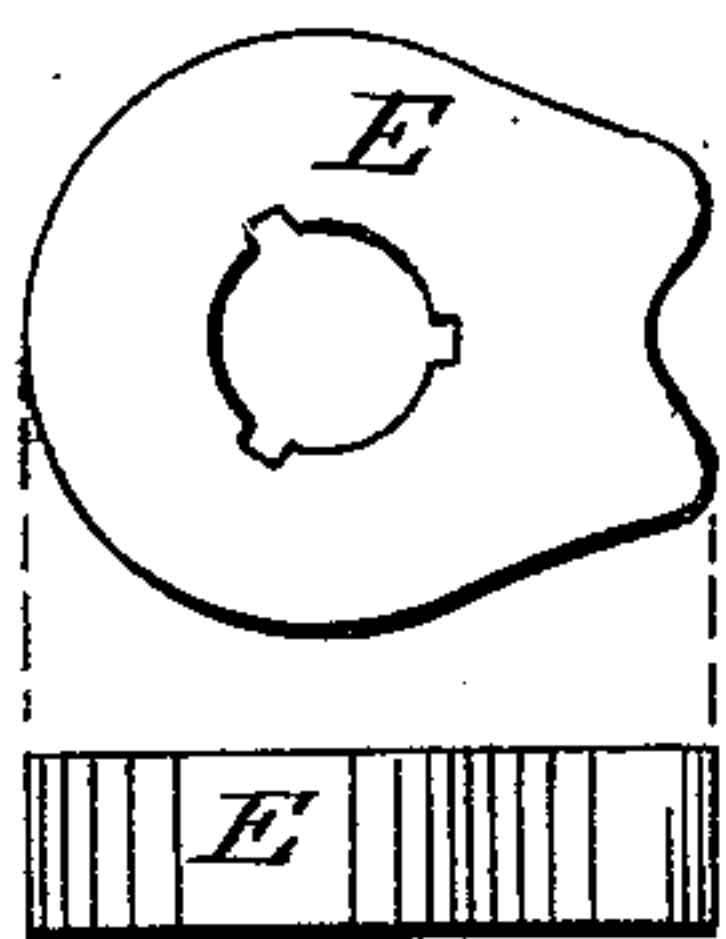


Fig. 6.

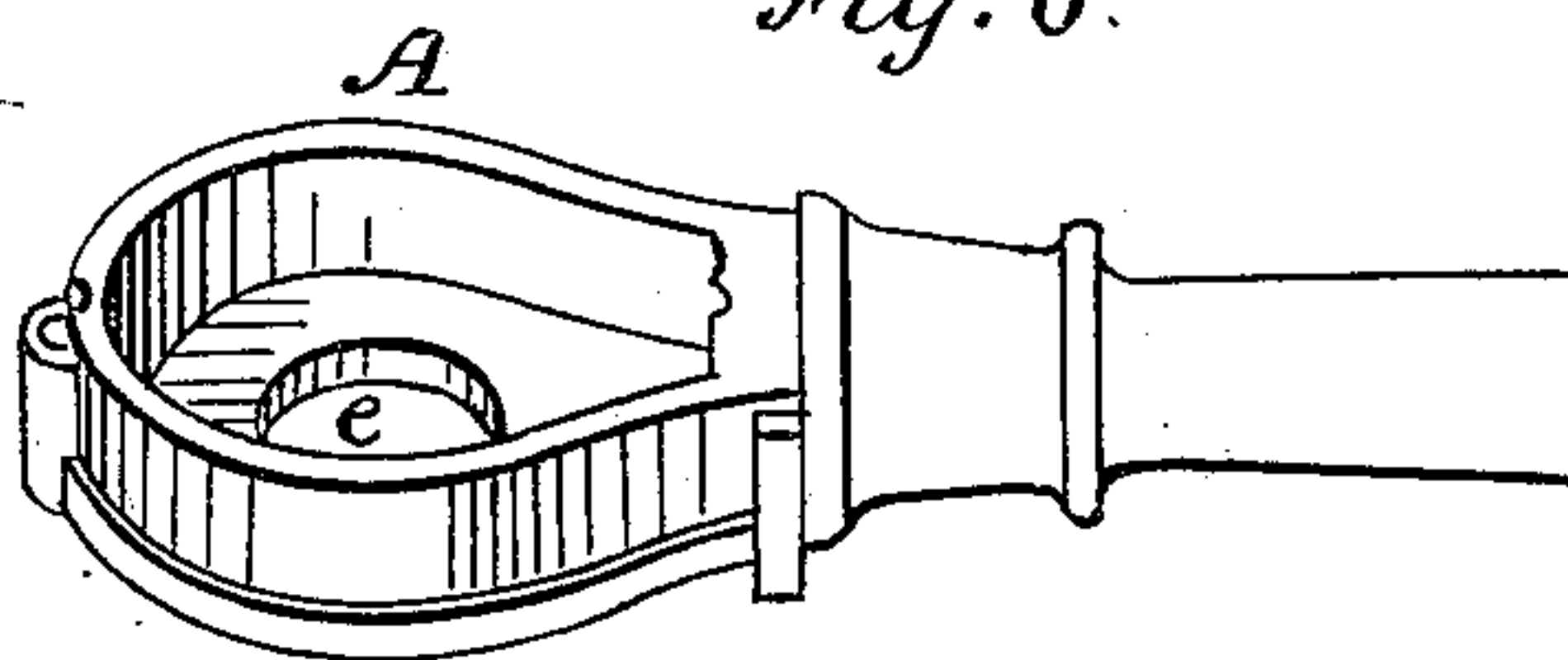


Fig. 8.

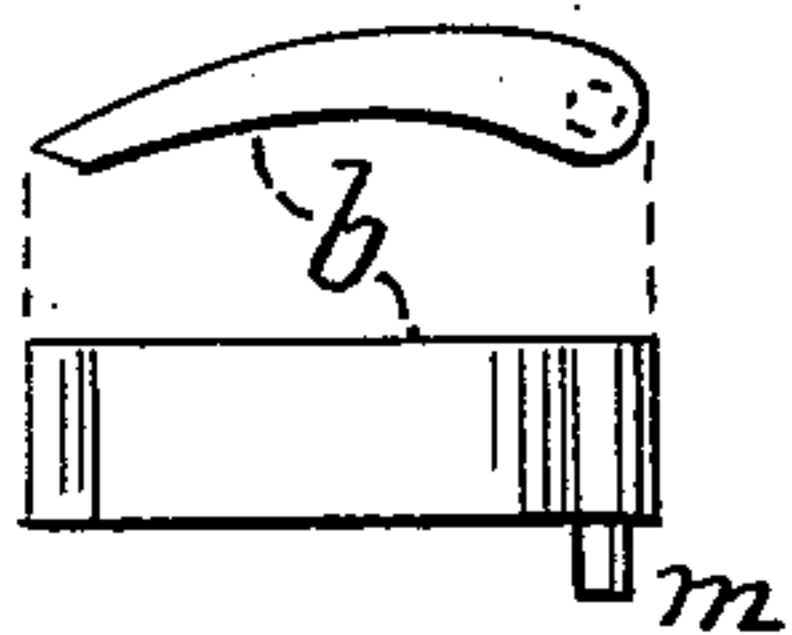


Fig. 7.

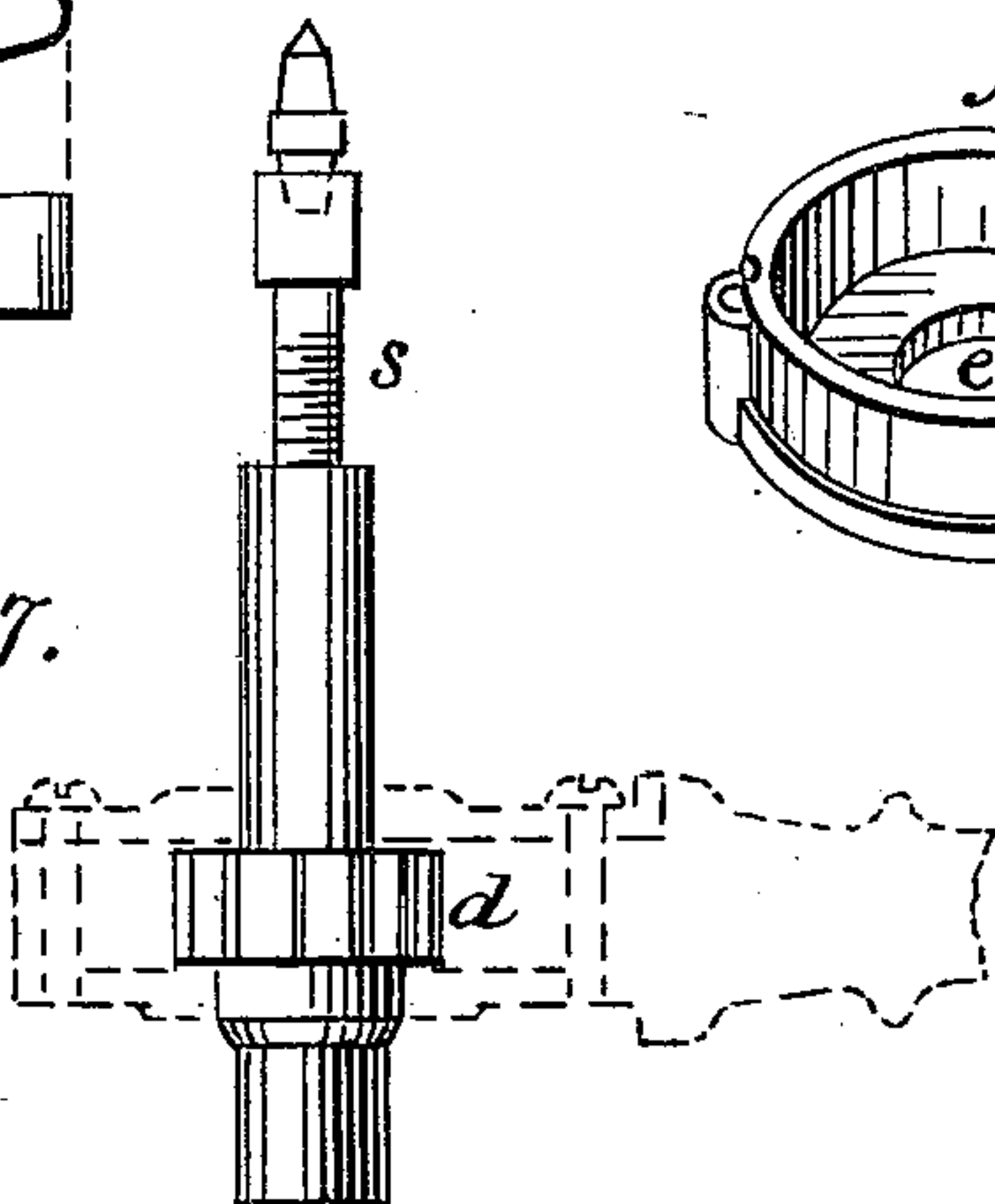
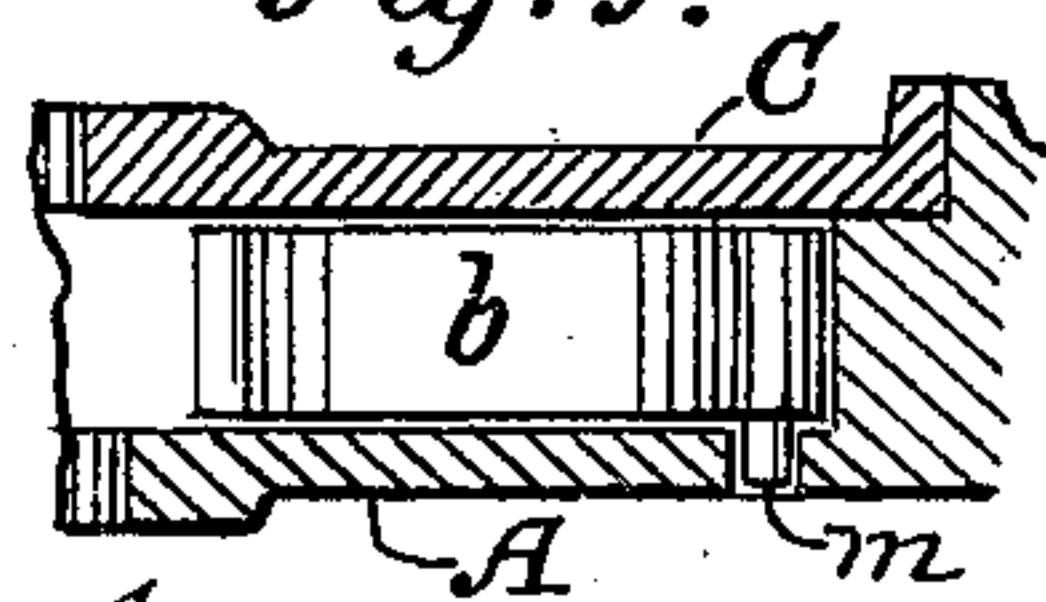


Fig. 9.



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AUGUST LOEHNER, OF ST. LOUIS, MISSOURI.

COMBINED RATCHET-DRILL AND DIE-STOCK.

SPECIFICATION forming part of Letters Patent No. 366,965, dated July 19, 1887.

Application filed August 21, 1886. Serial No. 211,549. (No model.)

To all whom it may concern:

Be it known that I, AUGUST LOEHNER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain
5 new and useful Improvements in Combined Ratchet-Drills and Die Stocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same.

This invention relates to ratchet-drills and die-stocks; and it consists in an improved construction adapted for the purposes of such tools, as hereinafter described and claimed.

15 In the accompanying drawings, Figure 1 is a perspective view of my improved implement adjusted for application to a drill. Fig. 2 is a plan view of the same, the upper plate being removed. Fig. 3 is a section taken on line *x x*
20 of Fig. 2. Fig. 4 is a plan view of the frame or casing of the implement, the drill mechanism being removed and a die being placed therein. Fig. 5 represents a die formed to fit in the housing when the die-stock is required.
25 Fig. 6 represents the main frame of the implement, the other parts being removed. Fig. 7 represents a modified form of central cylinder with ratchet-wheel, &c. Fig. 8 represents in side and edge views a removable pawl, herein
30 described. Fig. 9 illustrates in section the housing provided with a removable pawl.

The main frame of the device consists of the housing A, provided with a lever-handle, B. The housing has a removable upper plate, C,
35 which is secured thereto by the screws *a*, which pass down through the housing, as shown. The central cylinder, D, being constructed with a ratchet-wheel, *d*, and drill-socket *c*, has bearings in the housing A, which is formed with
40 apertures *e e'* for such purpose.

The cylinder, ratchet-wheel, and socket are formed of one piece of metal, the parts being thus rendered very strong and firm in position and not liable to be affected by the strain to
45 which they are subjected in operating the drill. A pawl, *b*, within the housing engages with wheel *d*, said pawl being pressed by a spring, *f*. The said pawl is provided with a fixed pin or stud, *m*, on its resting edge, which enters a

hole in the bottom of the housing and serves 50 to retain the pawl and prevent it getting out of place during operation.

The ratchet-cylinder and other parts in the housing A are readily removed as desired, so that a die may be placed in the housing, as 55 hereinafter stated.

Different styles of ratchet-cylinders may be used in connection with housing A, the short cylinder shown in Fig. 2 being adapted for use in a drill-frame which carries a vertical 60 screw by which the drill is pressed downward. The long cylinder shown in Fig. 7 contains a vertical screw, *s*, by which the drill is forced downward, this form being often desirable where a drill-frame cannot be employed for 65 want of space or means of fastening it in position.

E indicates a die for cutting screw-threads, formed to fit in the chamber of housing A, and by removing the ratchet-cylinder, pawl, and 70 spring from the housing and substituting the die the implement is adjusted for a die-stock, convenient for use in repairing railway-tracks. When bolts are driven out and the screw-threads on them are damaged, or new threads 75 are required to be cut, the die-stock is readily prepared, as above stated, for the purpose.

I claim—

1. The combination of a housing for drill mechanism with a lever-handle, a removable 80 central cylinder, D, a ratchet-wheel and socket made in one piece with the cylinder, and a removable spring-pawl, substantially as set forth.

2. The combination, with the housing and its handle, of interchangeable drill mechanism 85 and the screw-cutting die, substantially as and for the purposes described.

3. In combination with the housing of a ratchet-drill mechanism, a removable pawl provided with a retaining-pin, which, when the 90 pawl is in use, extends into a hole in the housing, substantially as described and shown.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUST LOEHNER.

Witnesses:

FRANCIS VALLE,
JOHN O. CODELING.