

No. 747,833.

PATENTED DEC. 22, 1903.

J. ALGER & J. F. COOK.
SCREW MAKING MACHINERY.

APPLICATION FILED OCT. 3, 1902.

NO MODEL.

Fig. 1

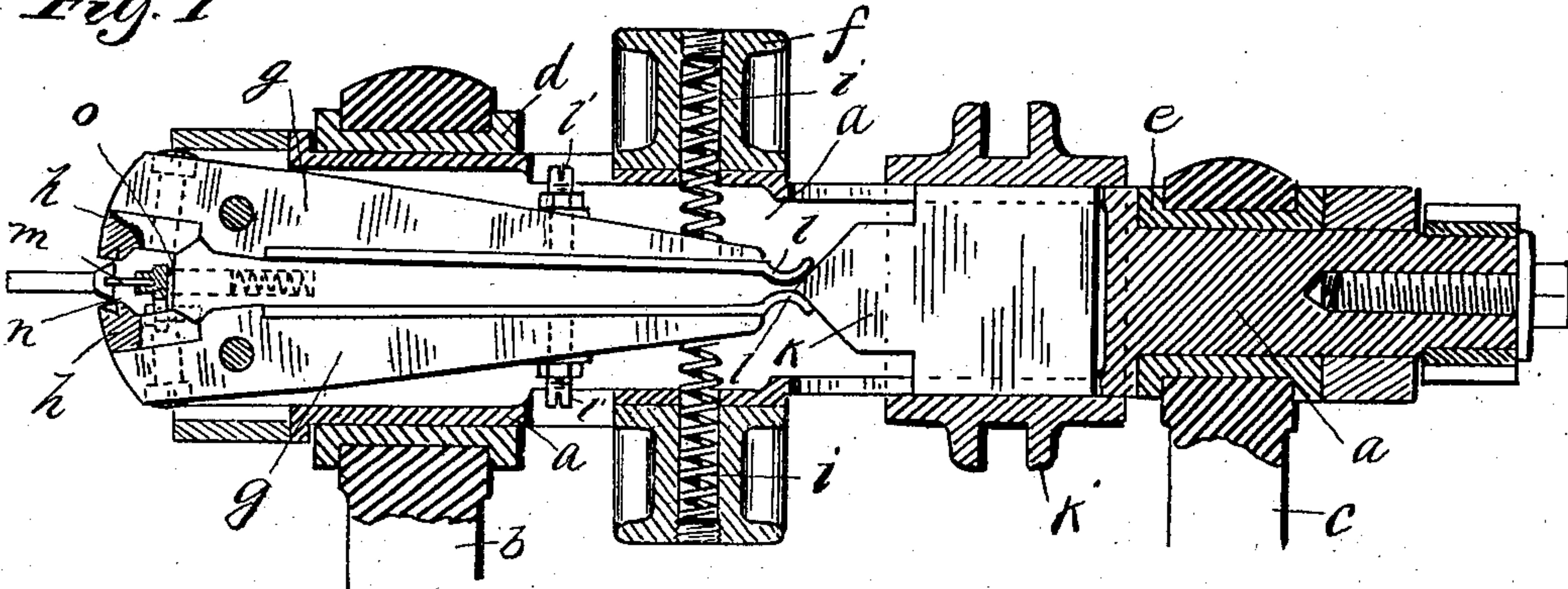


Fig. 2

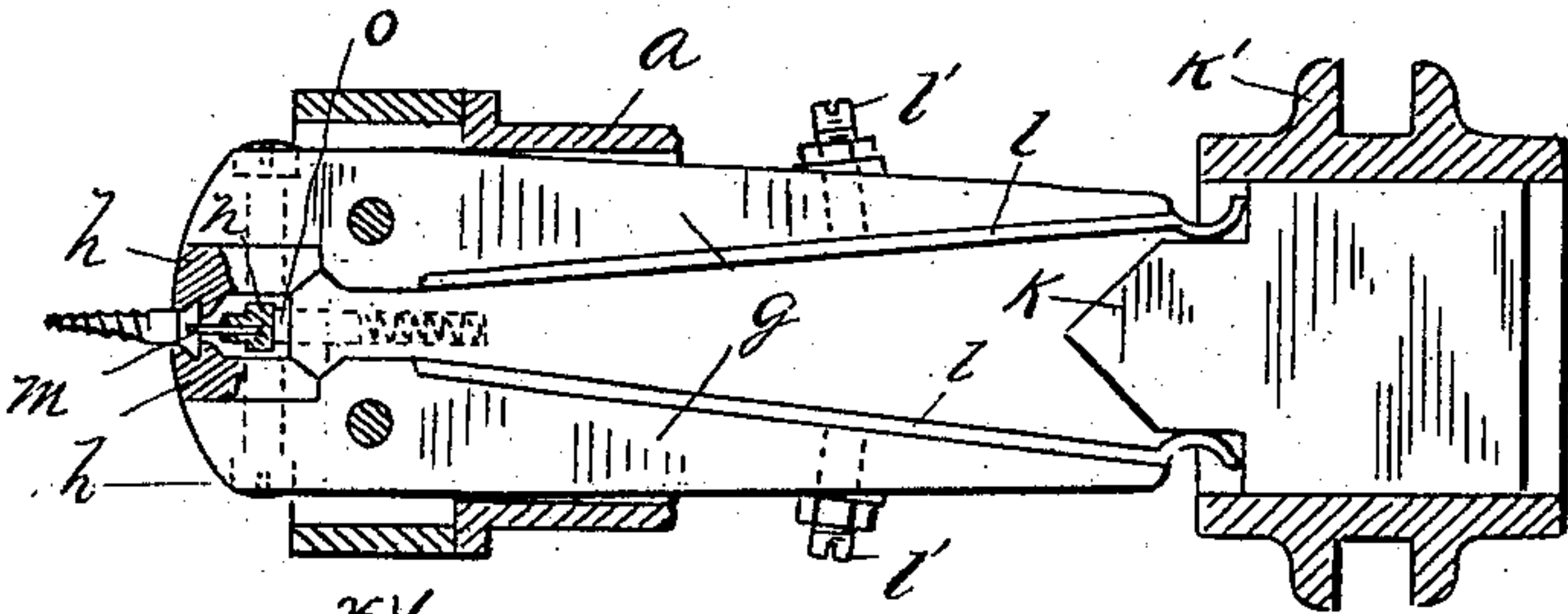


Fig. 3

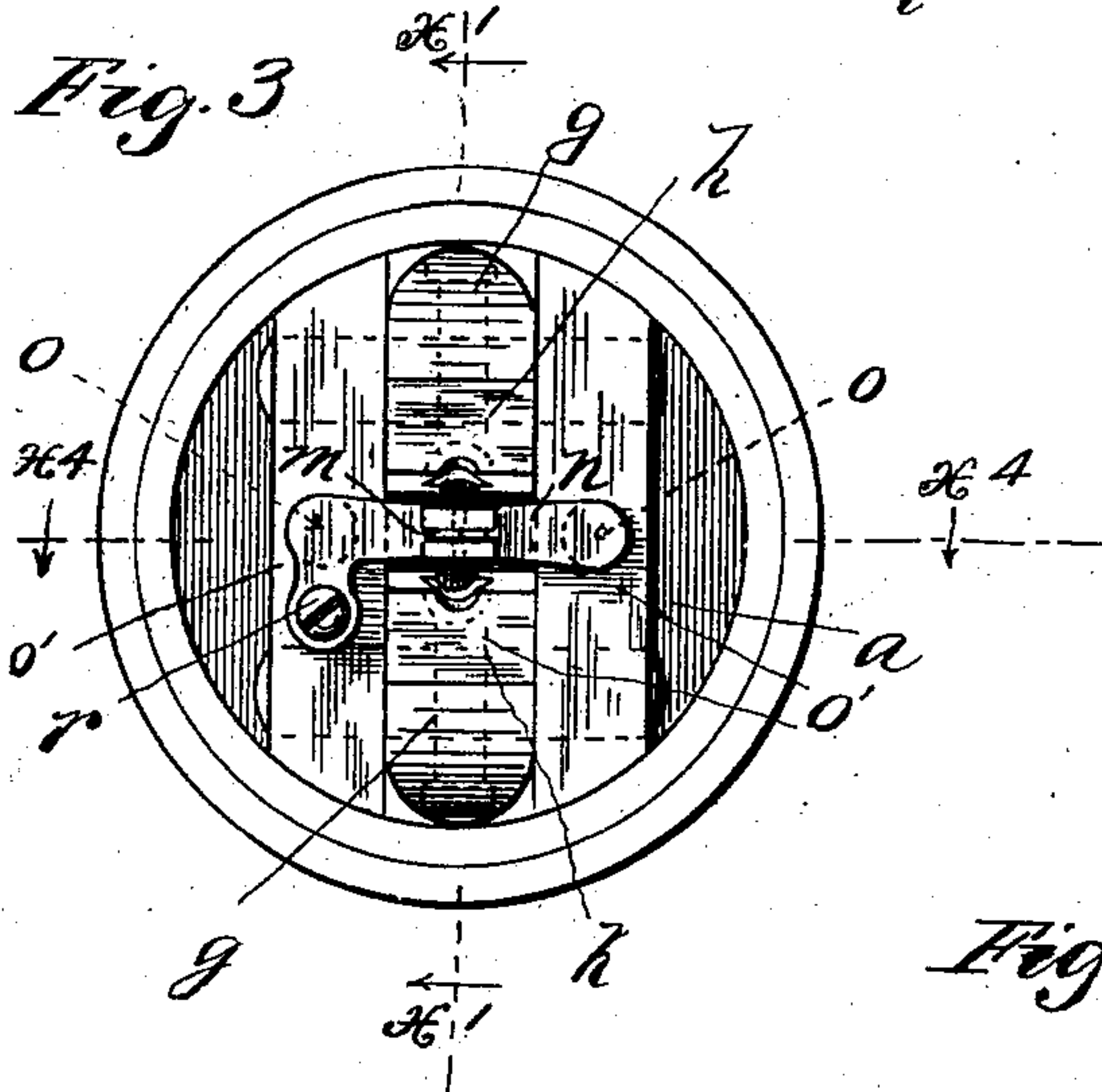


Fig. 4

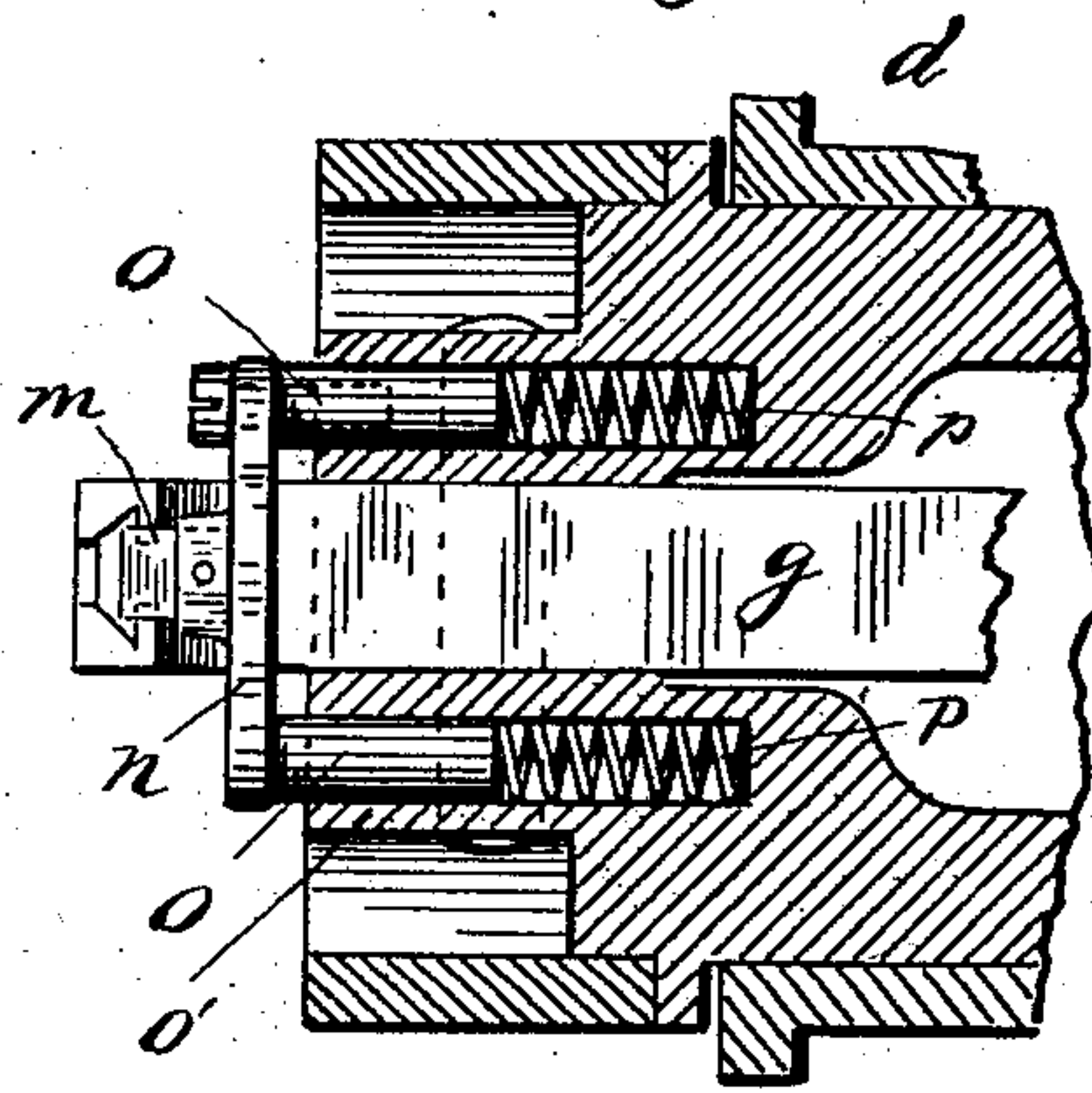
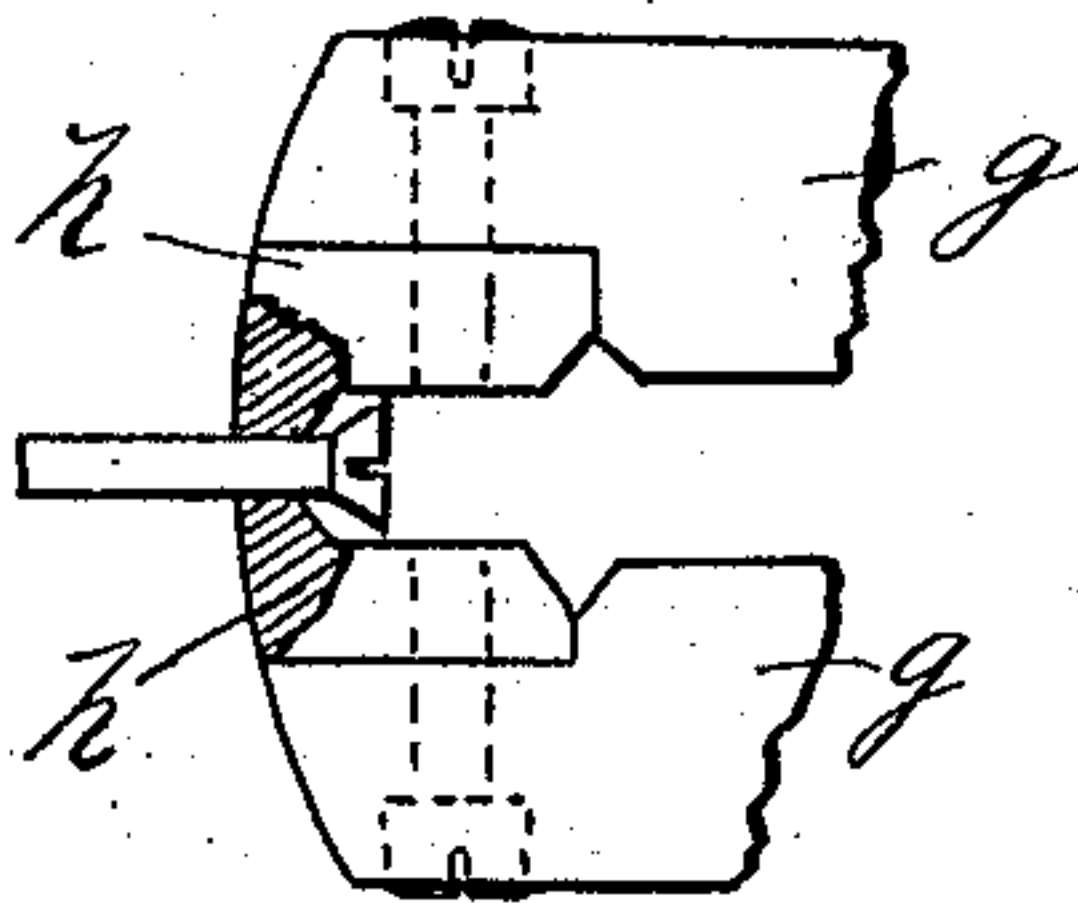


Fig. 5



Witnesses
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JOHN ALGER AND JOHN F. COOK, OF HARTFORD, CONNECTICUT.

SCREW-MAKING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 747,833, dated December 22, 1903.

Application filed October 3, 1902. Serial No. 125,763. (No model.)

To all whom it may concern:

Be it known that we, JOHN ALGER and JOHN F. COOK, citizens of the United States of America, residing at Hartford, in the county of Hartford and State of Connecticut, have
5 invented certain new and useful Improvements in Screw-Making Machinery, of which the following is a specification.

The object of this invention is the improvement of machines applicable to making
10 screws.

In the accompanying drawings, Figure 1 is a central vertical longitudinal section, on the line $x'x'$ of Fig. 3 looking in the direction of
15 the arrows, of mechanism embodying the essential parts of this invention. Fig. 2 is a detail side elevation, similar to Fig. 1, of the jaws closed upon a screw and the operating mechanism of the jaws. Fig. 3 is a front end
20 view of the device on enlarged scale. Fig. 4 is a detail sectional view, on the line x^4x^4 of Fig. 3 looking in the direction of the arrows. Fig. 5 illustrates a modification of the device shown in Fig. 2.

In the accompanying drawings the letter a denotes a revoluble hollow shaft. b and c denote standards which support the same, and d and e denote bearing-boxes for the
25 same.

The letter f denotes a driving-pulley fast on the shaft a .

The letters g denote two gripping-levers which are pivoted within and practically borne by the revoluble shaft, so that they re-
35 volve therewith.

The letters h denote gripping-jaws which are suitably fastened to the front ends of the gripping-levers, and when in the following claims the gripping-levers are mentioned
40 it is intended to include the jaws therewith. These gripping-jaws are normally opened by the springs i . They are closed by the longitudinal motion of the wedge k , which is carried in the revoluble shaft a and which may
45 be moved back and forth by a proper manipulation of the shipper k' . This wedge operates upon the gripping-levers through the medium of the springs l . They may be adjusted toward or away from each other by the set-
50 screws l' .

The letter m denotes what may be called a "blade." It is borne by the bridge n , which in turn carries bridge-legs o , which have longitudinal play in a base o' , which is revoluble with the shaft a . The springs p tend to push
55 the blade m outward.

The letter r denotes a screw, which is a stop-screw to define and limit the outward movement of the blade, the bridge, and the bridge-legs, and being a screw it is of course adjustable. This construction is necessitated
60 by reason of the fact that the depth of the slots in the screw-heads varies with different-sized screws, and the device as a whole is intended for use in the manufacture of screws
65 of different sizes.

In the operation of the mechanism the jaws are made to close upon such a blank as is shown in Fig. 1, and simultaneously there-
70 with the blade enters the slot in that blank. This blade causes or assists the revolution of the blank, so that it may be operated upon by a stationary tool, and at the same time obviates the crushing of the head of the screw-blank by the gripping-jaws.
75

Heretofore it has been necessary to have the gripping-jaws grip the head of the screw-blank with great force, so that the operation of the wedge required a great deal of power, and, moreover, this great pressure upon the
80 head of the screw-blank was liable to and often did press the head together so as to practically obliterate the slot. Both of these troubles are cured by the present improvement, in the use of which it is not necessary
85 that the gripping-jaws should grip the head of the blank other than lightly, and all danger of the crushing of the head together is avoided.

We claim as our invention—

1. In combination with the revoluble shaft, and the driving means therefor, jaws pivoted within said shaft, a bridge extending between the said jaws, legs resiliently supported in said shaft on opposite sides of the jaws and
90 being secured to said bridge, a blade carried by said bridge, and means for operating said jaws.

2. In a machine of the type set forth the combination with a revoluble shaft of a pair
100

of pivoted levers formed at one end with gripping portions, and pivoted within said shaft, the other ends thereof being extended, springs secured to the inner faces of the last-named
5 portions, screws projecting through said levers for forcing said springs outwardly, means engaging said springs for operating said levers and means for revolving said levers.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN ALGER.
JOHN F. COOK.

Witnesses:

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