

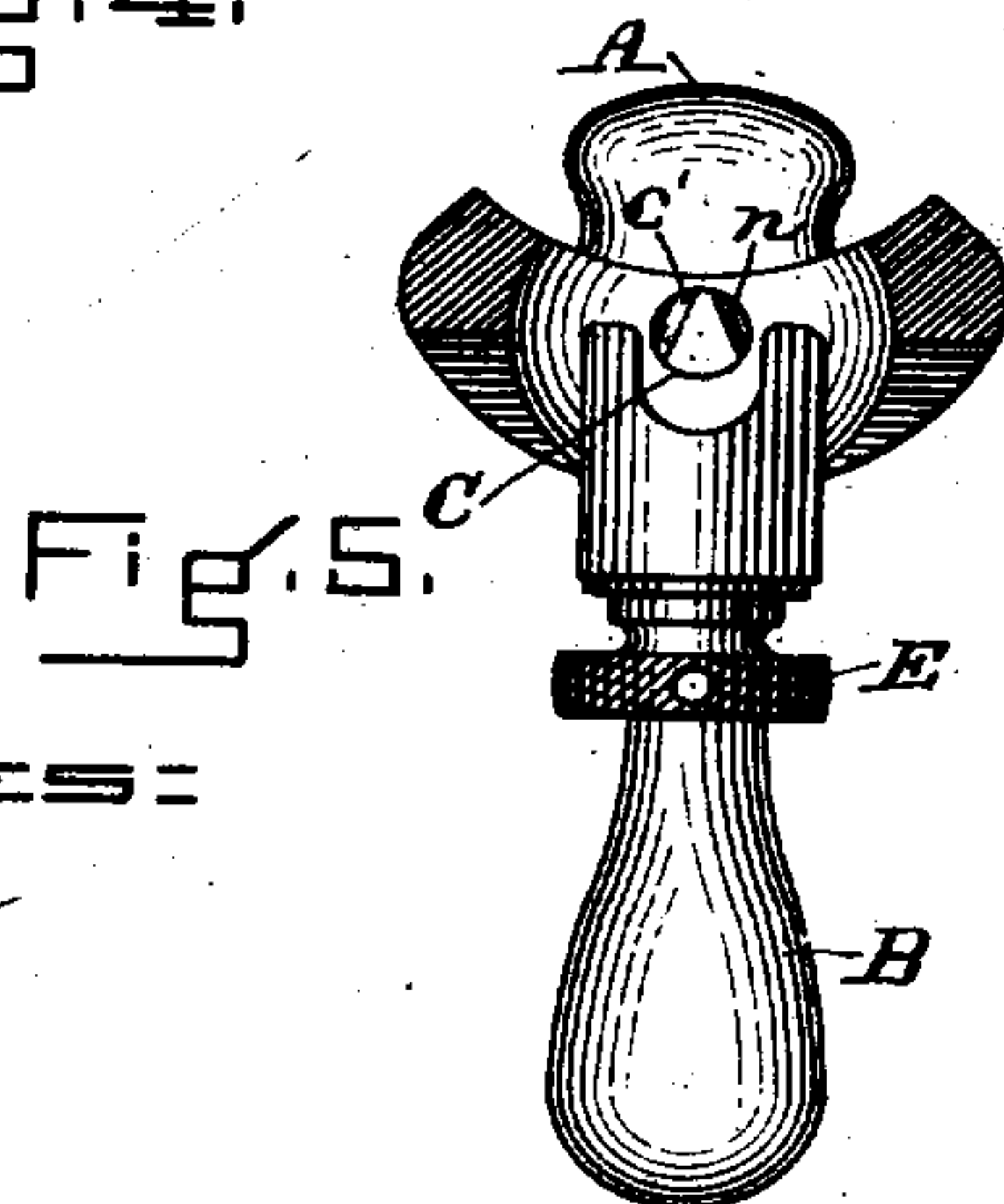
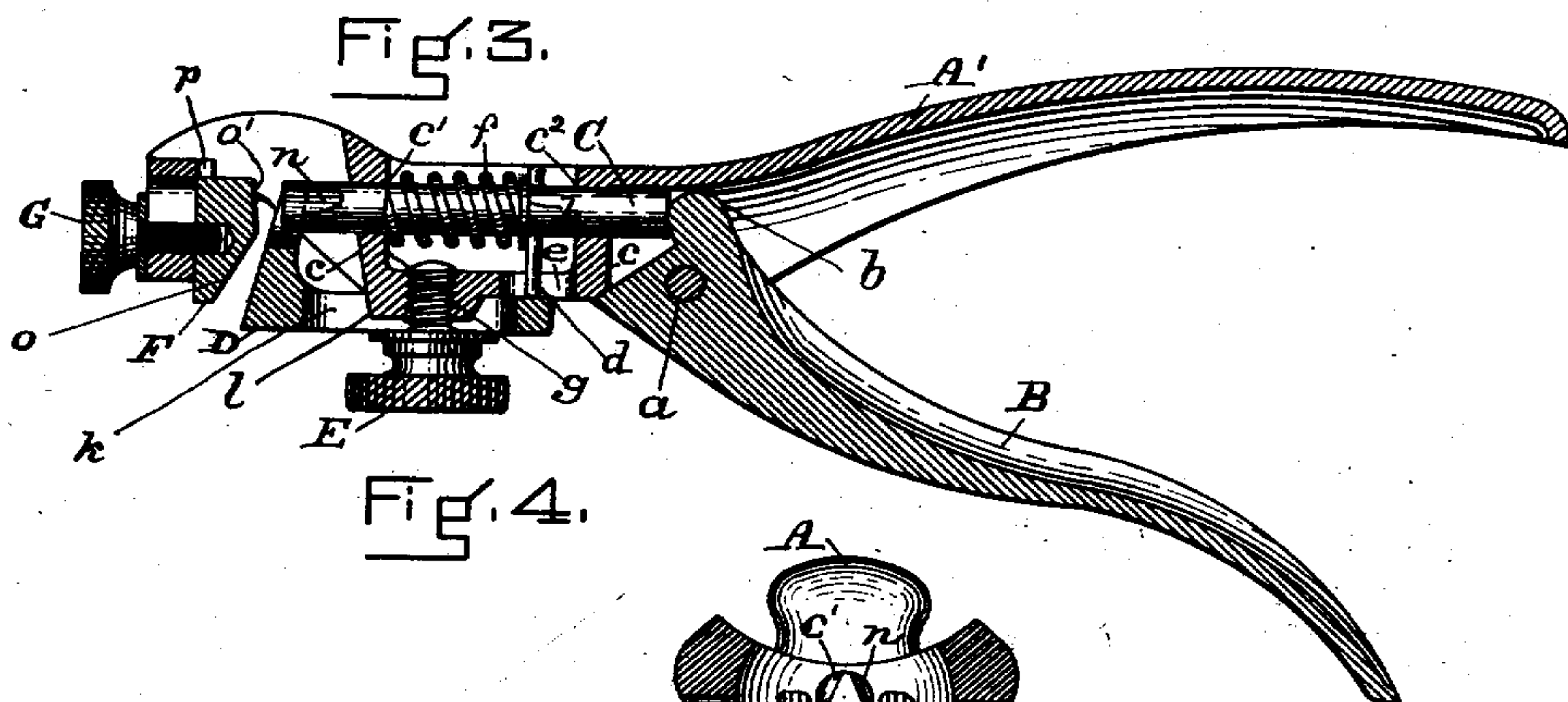
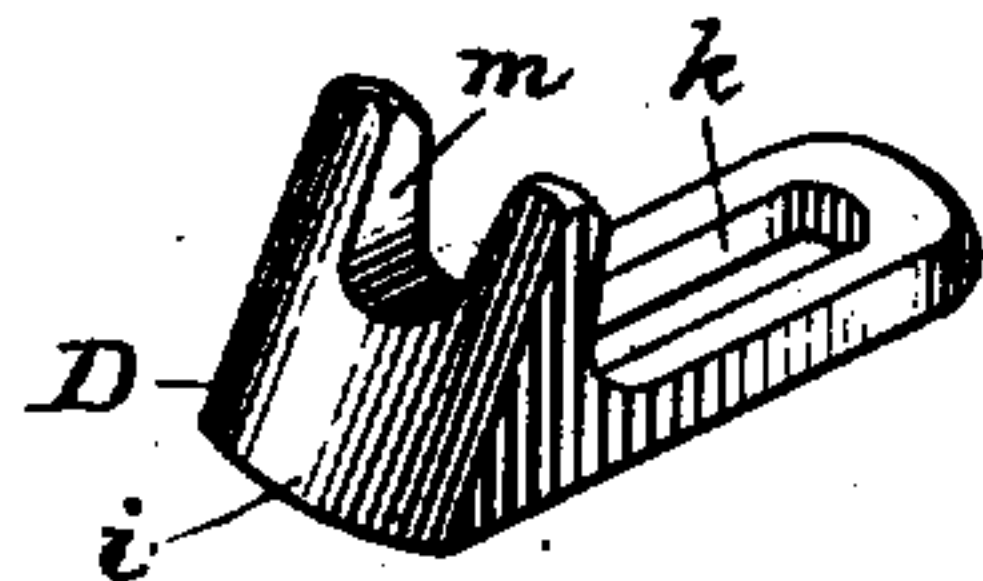
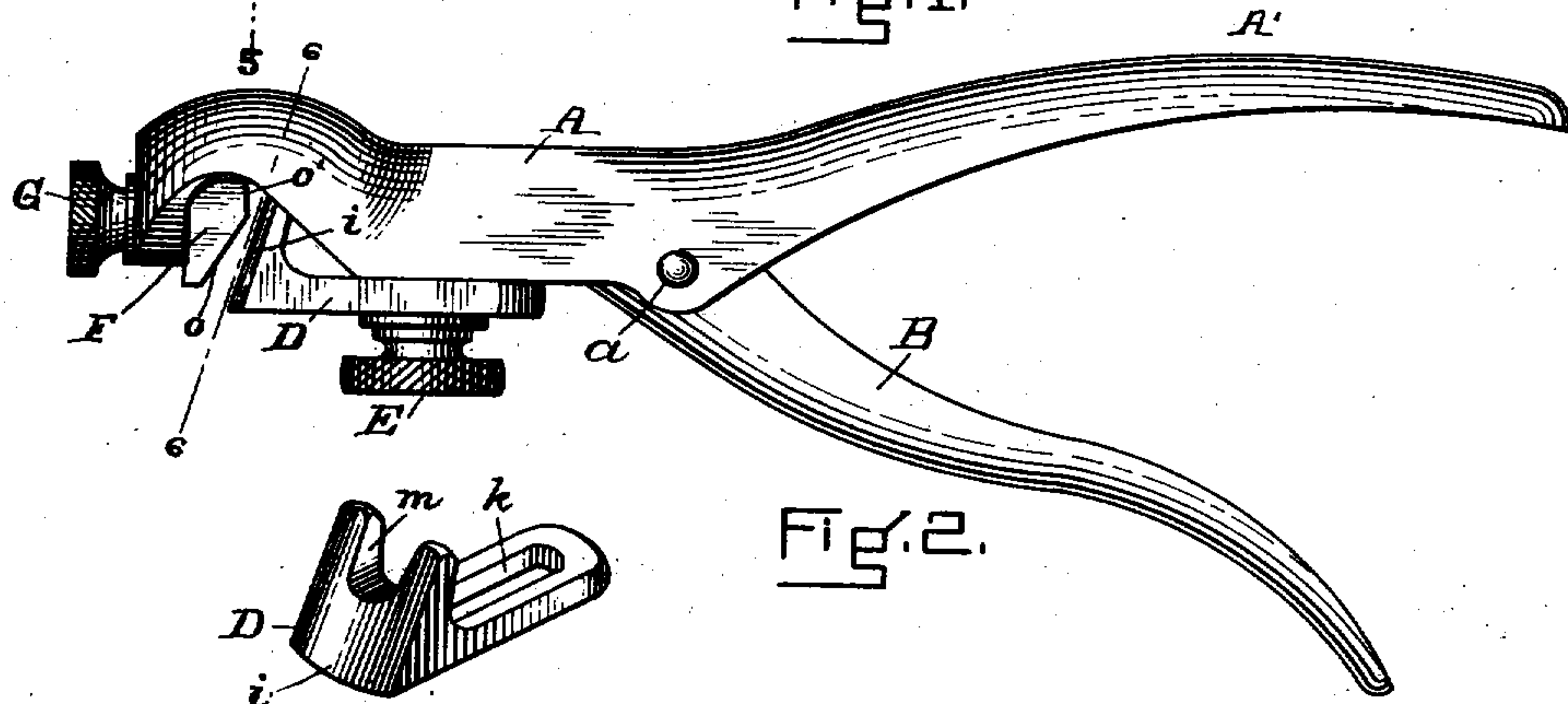
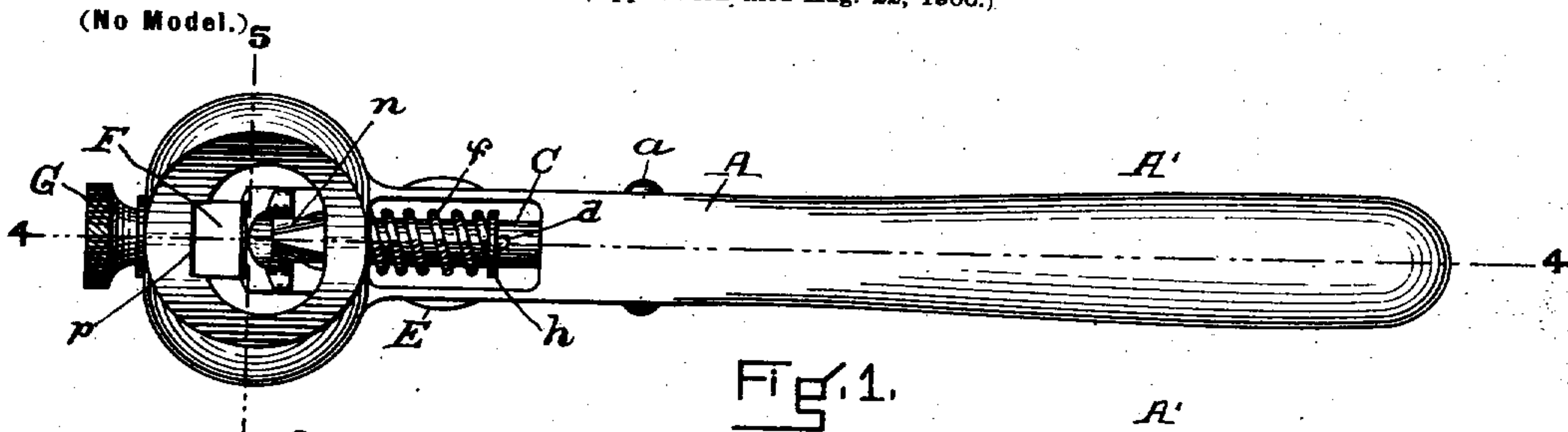
No. 683,938.

G. L. HOLT.
SAW SET.

Patented Oct. 8, 1901.

(Application filed Aug. 22, 1900.)

(No Model.)



WITNESSES:
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INVENTOR:
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UNITED STATES PATENT OFFICE.

GARDNER L. HOLT, OF HARTFORD, CONNECTICUT.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 683,938, dated October 8, 1901.

Application filed August 22, 1900., Serial No. 27,708. (No model.)

To all whom it may concern:

Be it known that I, GARDNER L. HOLT, of Hartford, in the county of Hartford and State of Connecticut, have invented a new and Improved Saw-Set, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of my improved saw-set. Fig. 2 is a side elevation thereof. Fig. 3 is a perspective view of the pitch-gage, herein called the "gage." Fig. 4 is a vertical section through the line 4 4 of Fig. 1. Fig. 5 is a cross vertical section through the line 5 5 of Fig. 1.

The same letters refer to the same parts.

My invention relates, first, to the gage, which is made curved or in such other shape that a line of metal and substantially no more rests crosswise against the plate of the saw from contact with the gage to hold the saw in place against the anvil for the operation of the tool. A considerable bearing of the gage against the saw is necessary to hold it firmly in place against the anvil, so that a mere point is insufficient. Since it cannot afford such bearing, it distorts the saw-plate when pressed against the same to hold it, and its location for properly holding ordinary saws prevents its use for holding narrow, band, and ribbon saws; but if this bearing extends lengthwise of the saw-plate inequalities of the plate or change of form due to the setting of a tooth are apt to render it difficult to pass the tool along the saw for its operation, but require it frequently to be lifted off and replaced in position to set the next tooth. This is substantially obviated by making this bearing not much more than a vertical line, so that bends in the plate will not cause it to stick in the bearing, which is effected by giving the gage, as presented to the saw-plate surface in the tool shown a curved surface, as of a cylinder bearing on the saw-plate crosswise, the curve securing this line bearing, although the saw-plate or tool be turned angularly sidewise when in the position required for tooth-setting, and also providing a shape least affecting such bearing by wear. Secondly, my saw-set contains a cheap and efficient device to prevent rotation of the plunger in its longitudinal bearing, consisting of a pin passing into and moving in a slot in the frame of the tool,

which pin also compresses the spring to retract the plunger and by impinging on the frame limits the retraction of the plunger, holding the parts in place. If removed and if the pivot *a* and gage *D* be taken away, the tool is easily taken to pieces. Of the two parts which form the handle of the tool—namely, the projection of the frame shown and the lever which drives the plunger—I have located the lever on the bottom of the frame in its position when applied to a saw-plate having the teeth upward, it thus requiring a simple movement of the fingers to operate the plunger instead of carrying the whole arm and hand downward, as usual in tools of this kind. This makes the tool work more easily and steadily and reduces the liability to break saw-teeth.

A is the frame, consisting of the main body of the tool, to which the other parts are attached when required for use, a projection *A'* of which serves in connection with the lever *B* as a handle for the tool. Said lever *B* is pivoted in the frame by the pivot *a* and having a cam *b*, bearing against the plunger *C*, operating in the longitudinal bearing *c*, composed of the two bearings *c'* *c''* in the frame, said plunger having fixed in it a pin *d*, passing into and working in a slot *e* in the frame, whereby the plunger is prevented from any rotary motion in its bearing. This plunger is retracted from the motion it receives from the lever by a spring *f*, bearing against a shoulder *g* of the frame, and a ring *h*, pressing against the pin, though obviously the pin would perform the function without the ring.

D is the gage, having the curved face *i* and a slot *k*, into which enters a projection *l* of the frame, which fits into the slot and extends longitudinally thereof, preventing rotation of the gage on the set-screw *E*, which, passing through the slot, screws into the frame, and when set binds fast the gage in any of the positions it may take on the projection *l*. Through the face of the gage is a slot *m*, through which moves the triangular-faced end *n* of the plunger.

F is the anvil, having two faces *o* *o'* and fitted into a slot *p* of the frame, in which it is adjusted for motion longitudinally of the slot, and it is fastened in any of its positions therein by the set-screw *G*, passing through the slot

and screwing into the anvil, both parts being drawn thereby against bearings upon the frame. The anvil and gage are adjusted by moving and fastening them in their respective slots to admit the use of the tool on varying thicknesses of saw-plate and sizes of teeth and to give the teeth a greater or less bend over the ridge *r* of the anvil.

The operation of the tool is simple. The saw is adjusted on the line 6 6, Fig. 2, in the tool. The gage and anvil are adjusted thereto, and to give the teeth the desired inclination the lever is pressed toward the frame, driving the triangular end *n* of the plunger against the saw-tooth opposite it and bending it on the anvil as desired, when on release of the lever the spring retracts the plunger.

It is obvious that the projection of the gage affording a bearing against the saw-plate may be a corner or may consist of any number of small projections. Instead of having the curved form provided it gives a bearing on the saw-plate having a sufficient length crosswise thereof without much extension longitudinally thereof.

What I claim as my invention, and for which I pray Letters Patent, is—

1. In a saw-set an anvil supported in the frame, a gage adjustable to hold a saw-plate in position for setting a tooth thereof over the ridge of the anvil, with means of holding the gage in place for the purpose, which gage has one or more surfaces, constituting a bearing for the saw-plate in said position, of sub-

stantial extension crosswise of the saw-plate but not longitudinally thereof, substantially as described.

2. In a saw-set the frame A, lever B pivoted thereto, plunger C having a bearing in the frame, the anvil F and the gage D having the curved face *i*, combined with means of holding the anvil and gage in place in the frame all said parts being constructed and arranged substantially as described.

3. The frame A, the plunger C having a bearing in the frame, the pin *d* attached to the plunger, the slot *e* in the frame, the pivoted lever B, the spring *f*, the anvil F and gage D all combined with means of holding the anvil and gage in place in the frame and constructed and arranged substantially as described.

4. In a saw-set the frame A having the handle projection A' the plunger C having a bearing in the frame, the anvil F and gage D, said anvil and gage each being adjustable as specified in different positions on the frame with means to hold it in such positions, the spring *f*, the slot *e* in the frame and pin *d*, and the lever B pivoted to the frame and located on the same side thereof as the opening to receive the saw-plate for setting the teeth thereof, all said parts being constructed and arranged substantially as described.

GARDNER L. HOLT.

Witnesses:

JOHN B. CONE,
A. E. RISLEY.

Corrections in Letters Patent No. 683,938.

It is hereby certified that in Letters Patent No. 683,938, granted October 8, 1901, upon the application of Gardner L. Holt, of Hartford Connecticut, for an improvement in "Saw-Sets," errors appear in the printed specification requiring correction, as follows: Line 21, page 2, the period after the word "projections" should be stricken out and a comma inserted, and the following word "instead" should begin with a small "i," thus making a continuous sentence; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case of the case in the Patent Office.

Signed, countersigned, and sealed this 29th day of October, A. D., 1901.

[SEAL.]

F. L. CAMPBELL,

Assistant Secretary of the Interior.

Countersigned:

F. I. ALLEN,

Commissioner of Patents.

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