

No. 692,226.

Patented Feb. 4, 1902.

J. G. BAKER.

SAW SET.

(Application filed May 8, 1901.)

(No Model.)

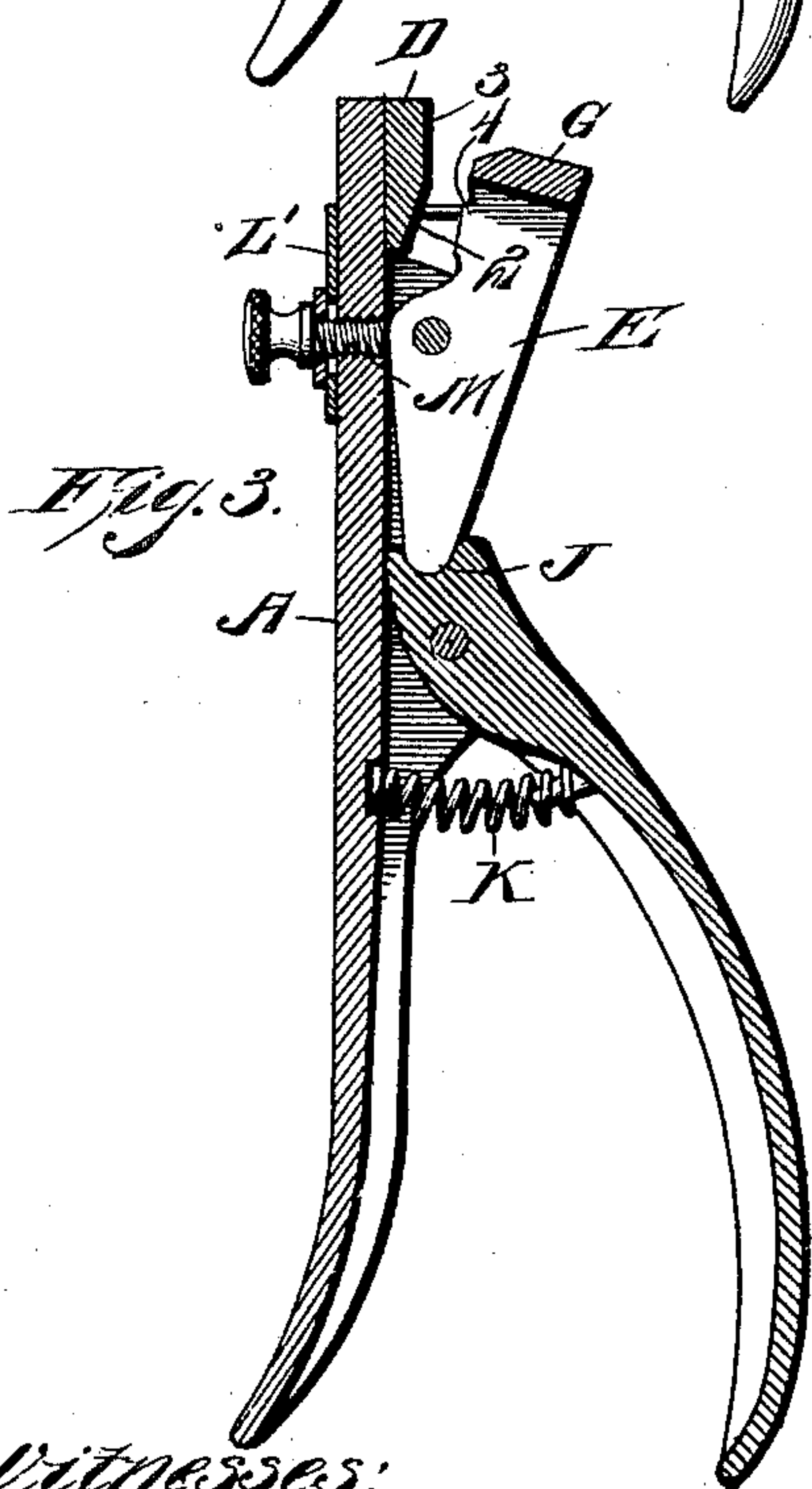
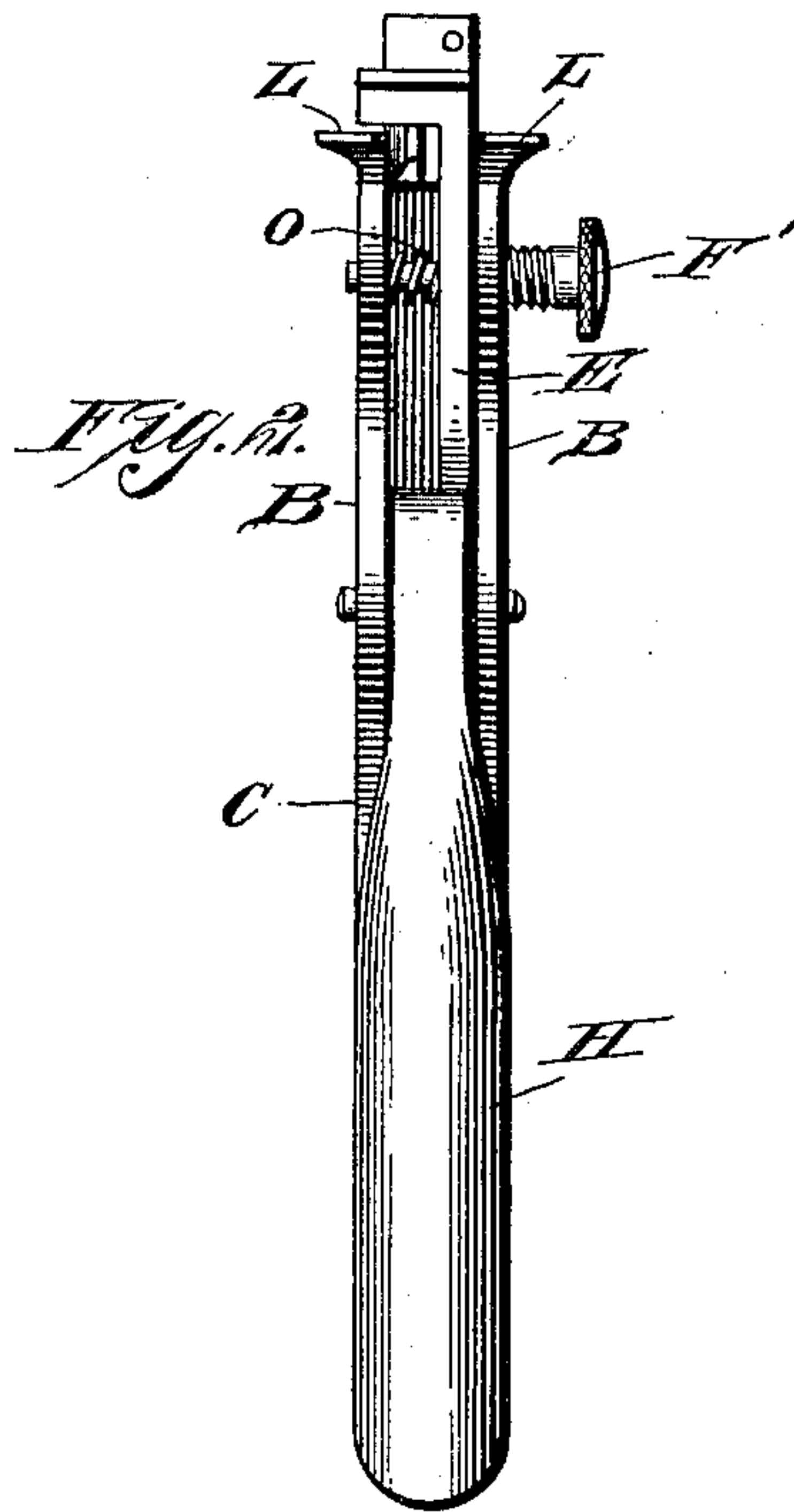
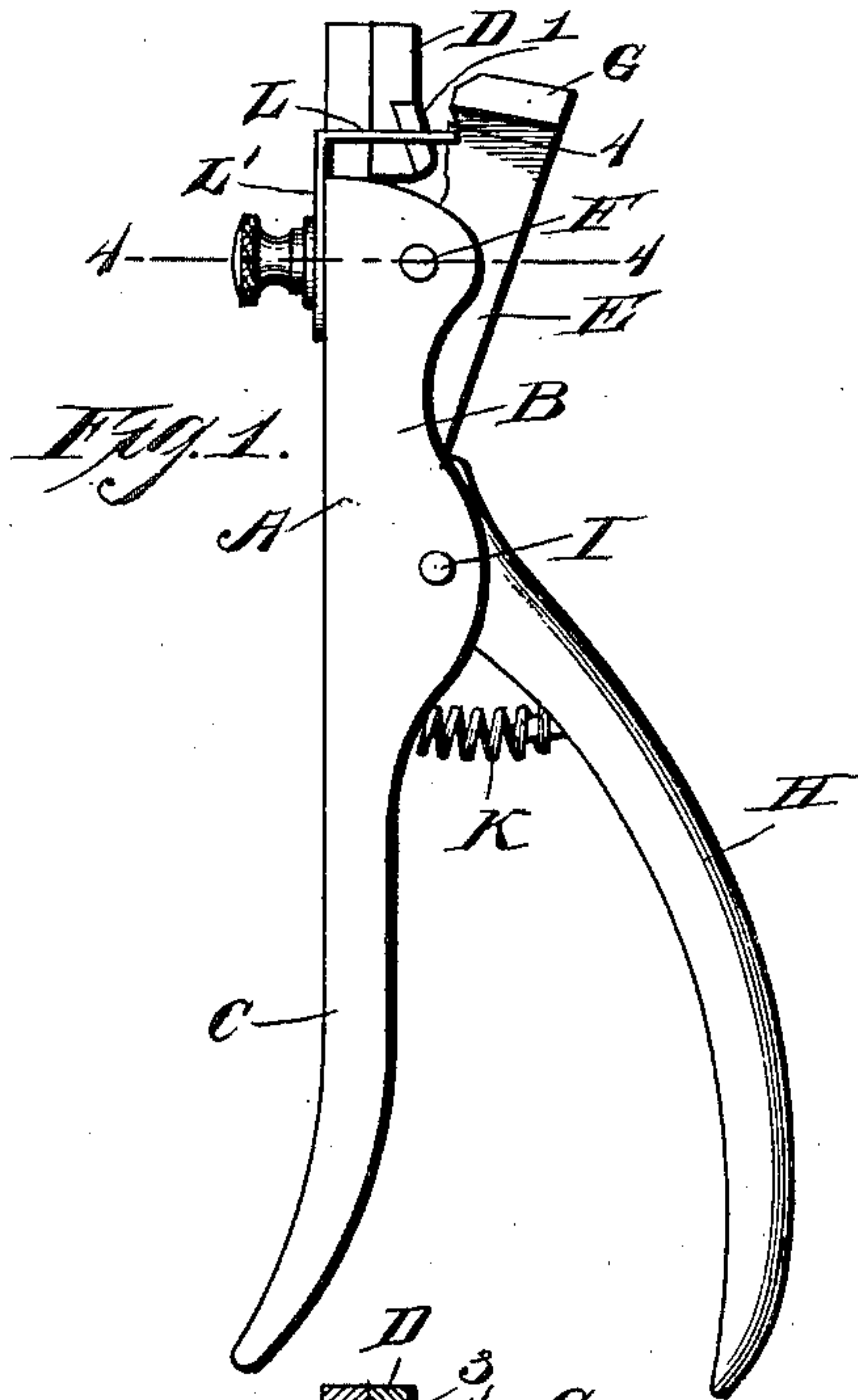


Fig. 4.

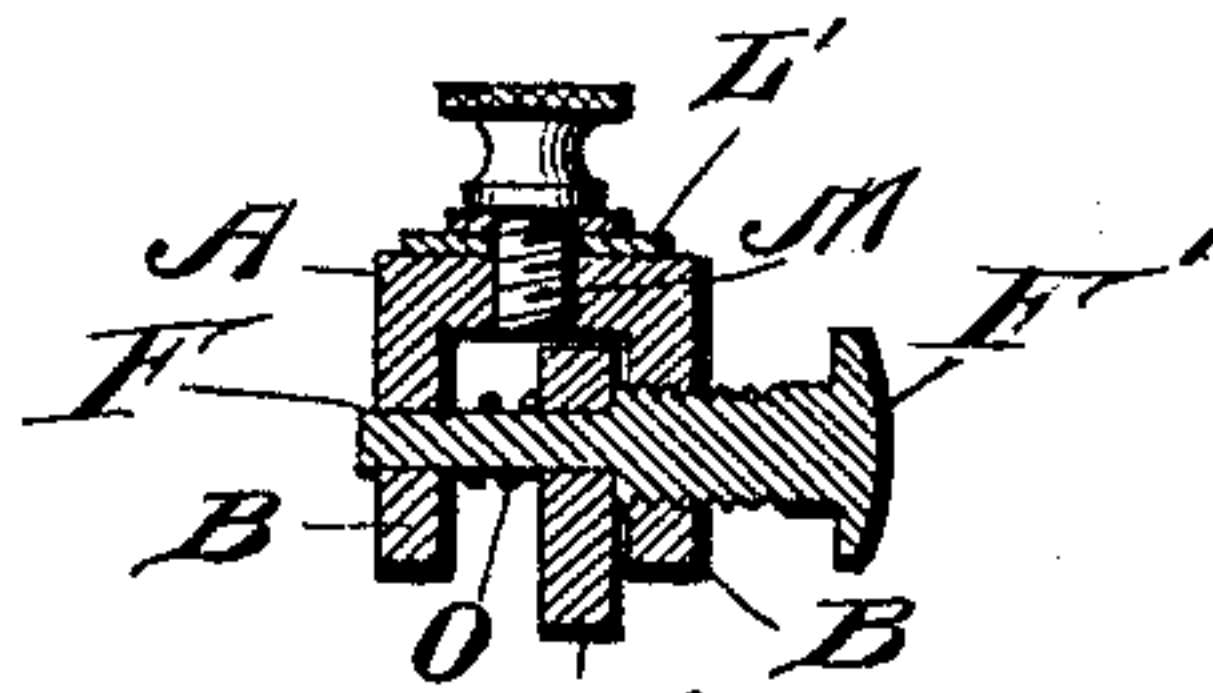


Fig. 6.



Fig. 8.



Fig. 10.



Fig. 12.



Witnesses:

Louis D. Heinrichs
L. H. Morrison

Inventor
Joseph G. Baker
by
W. Preston Williamson
Atty

UNITED STATES PATENT OFFICE.

JOSEPH G. BAKER, OF PHILADELPHIA, PENNSYLVANIA.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 692,226, dated February 4, 1902.

Application filed May 8, 1901. Serial No. 59,199. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH G. BAKER, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Saw-Sets, of which the following is a specification.

My invention relates to a new and useful improvement in saw-sets, and has for its object to provide a tool of this description which will set two adjacent teeth of the saw at opposite directions to one another at the same operation.

A further object of my invention is to provide adjustments whereby the operation of setting a saw will be facilitated.

Another object is that by constructing a tool of a few parts the same can be manufactured at a comparatively small cost and yet is durable and effective.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of my device in its normal position; Fig. 2, a front elevation of the same; Fig. 3, a longitudinal section of Fig. 1; Fig. 4, a section on the line 4 4 of Fig. 1; Fig. 5, a detail view of the two dies, showing that portion of the dies which bends one of the teeth in one direction; Fig. 6, a detail view of the dies, showing that portion adapted to bend the other tooth in the other direction; and Fig. 7 is a modification showing the cross-section of a stationary die and the upper part of the body, showing said die made adjustable instead of the pivoted die.

In carrying out my invention as here embodied, A represents the body of the tool, which has the flanges B turned up upon each side, so that the upper part of the tool, is channeled. The lower part of the body extends downward and is formed into a handle C.

To the inner face of the body A is secured a stationary die D, which die is secured to

the body A by means of rivets or in any other suitable manner.

E is a lever which is pivoted between the flanges B at the point F. This lever E carries upon its upper end the die G.

H is a lever which is pivoted or fulcrumed between the flanges B at the point I. The upper end of this lever has a notch J formed in it, in which the lower end of the lever E projects. Thus when the lever H is compressed toward the handle C the lever E is caused to rock upon the pivot F, which will force the die G toward the stationary die D. A spring K is interposed between the handle C and the lever H for the purpose of causing the levers H and E to resume their normal position. The die D has formed upon its face the two beveled surfaces 1 and 2.

The saw is placed between the dies in such a position that the base of the teeth will be on a line with the junction of the beveled surfaces 1 and 2 and the flat surface 3 of the die D, and when the die G is forced toward the die D this die G will strike the saw at or near the base of the teeth. Thus the tooth which lies upon the beveled surface 1 will be set outward. The die G has a small projection 4 extending out from the face, and this projection is arranged in such a position upon the die G that when said die is forced toward the die D it will strike the tooth of the saw at a point between the base and the point of the tooth, and as the beveled surface 2 is beveled inward it will force the tooth in an opposite direction to that tooth which lies upon the beveled surface 1. Thus two teeth of the saw will be operated upon at the same time and set in opposite directions.

For the purpose of assuring that the die G will always strike the teeth at the base of the same I provide guides L, upon which the points of the teeth rest while being operated upon. As teeth in different saws are of different lengths, this guide L, I make adjustable in the following manner: A portion L' of the guide L is bent at right angles and has a slot formed through it, through which protrudes the set-screw M, which is threaded in the back of the body A. Thus the guide L can be adjusted vertically to a certain limit each way. The guides L straddle the upper portion of the body A and the die D and are ar-

ranged upon each side thereof. As there are more or less number of teeth to the inch in different saws of different sizes, one of the dies will necessarily have to be made adjustable.

In Figs. 1, 2, 3, and 4 I show the die G adjusted laterally to the die D by threading the pivot F through one of the flanges B and providing a thread F' upon the end of the same for the purpose of turning it. Between the opposite flanges B and the lever E, I interpose a spring O. Thus the screw-threaded flange B will force the lever E, and consequently the die G, in one direction, and as the screw is turned in the opposite direction the spring O will force the lever E backward. This adjustment is necessary, because one of the teeth should always lie upon the beveled surface 1 of the die D, and the other tooth should lie so that the projection 4 of the die D will strike the same. In Fig. 7 I have shown this adjustment applied to the die D by forming a block D' upon the back of the die D, and this block fits within a slot P, formed through the upper end of the body A. A set-screw Q is threaded into the die D, and its shoulder bears against the body A, thereby setting it in whatever position it is placed.

In operation the saw is placed between the dies, and the guides L are set so that when the points of the teeth rest upon these guides the bases of the teeth will be in such a position that the die G will strike at the base. Then the jaws are adjusted laterally, so that one of the teeth will rest upon the beveled surface 1 of the die D and its next adjacent tooth will rest upon the surface 2 of the die D, so that when the die G is forced toward the same the projection 4 will strike this second tooth. Then by compressing the lever H toward the handle C these two teeth are set in opposite directions to one another at the same time. Then by simply moving the saw somewhat two more unset teeth are presented to the dies. These teeth can be set, and so on until all of the teeth of the saw are set.

The advantages of my invention are that by setting two teeth of the saw in opposite directions at one operation the time required to set a saw is reduced one-half, and another advantage is that by constructing the tool as

I do it consists of comparatively few parts, which cheapens the cost of manufacture and renders the tool less liable to become out of order, while at the same time making the tool very durable and efficient in operation.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. The combination in a device of the character described, a body having flanged sides, a die carried thereby, a lever pivoted to the flanges of a body, an operating-lever pivoted to the body and engaging the first-named lever, two oppositely-beveled surfaces on one of the dies, projections formed upon the second die, the said dies being so formed as to bend two adjoining teeth in opposite directions, substantially as described.

2. The combination in a device of the character described, two dies, one of said dies adapted to be secured rigidly to the body, the other die adapted to be pivoted in the body so as to be caused to rock toward and away from the stationary die, two beveled surfaces formed upon one of the dies, said surfaces being beveled in opposite directions to one another, a flat surface formed upon the face of each die against which the blade of the saw is adapted to rest, an edge formed upon the other die, which edge is adapted to come in contact with the saw at a point opposite the junction of the beveled surfaces, for the purpose of setting one of the teeth in one direction, a projection formed upon the second die, which projection is adapted to come in contact with the saw-tooth at a point between the base and the point of said tooth so as to bend the other tooth in the opposite direction, substantially as described and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOSEPH G. BAKER.

Witnesses:

H. B. HALLOCK,
L. W. MORRISON.