

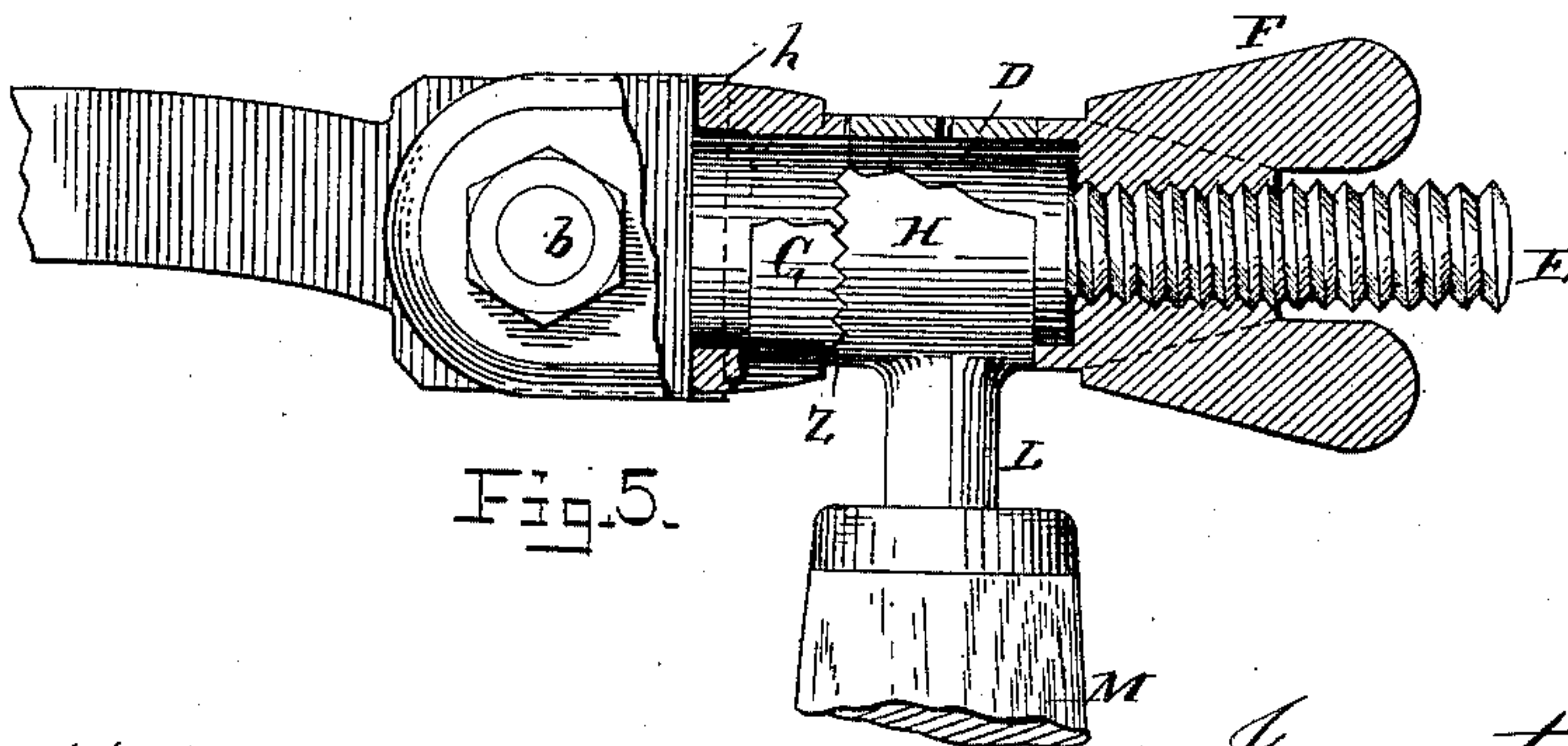
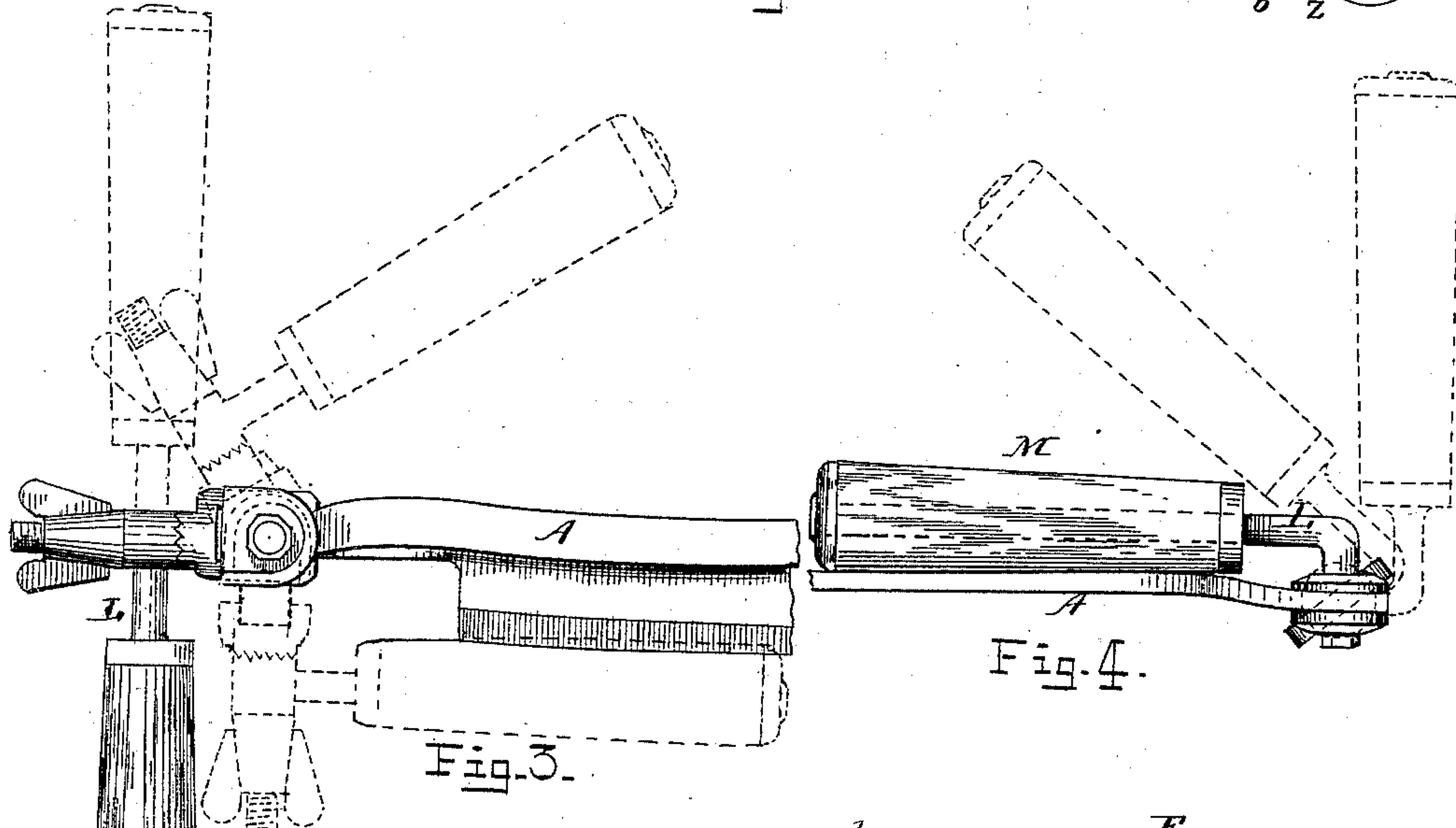
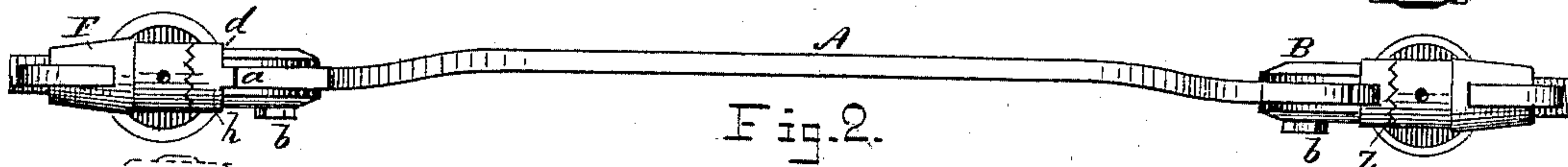
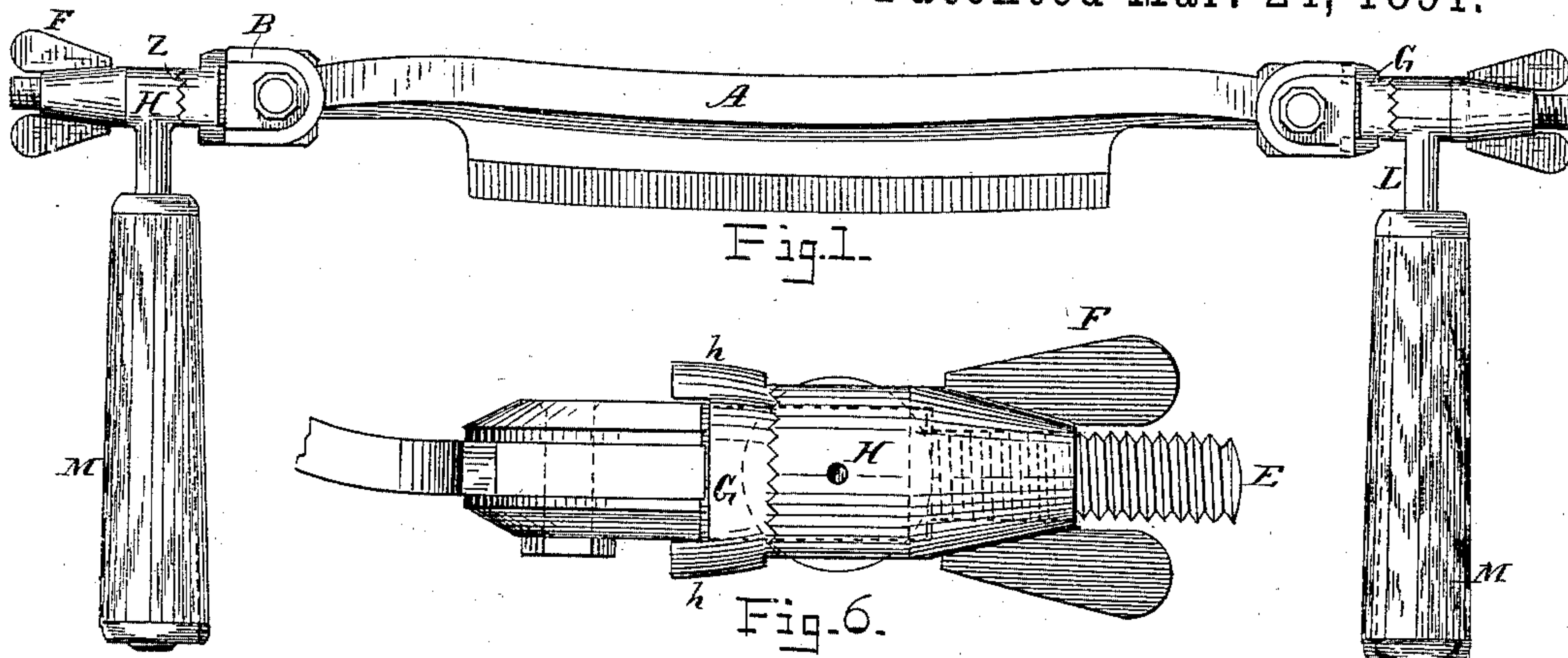
(No Model.)

2 Sheets—Sheet 1.

J. S. CANTELO.  
DRAWING KNIFE.

No. 448,633.

Patented Mar. 24, 1891.



Witnesses.  
Lank S. Pratt.  
Chas. Allen Taber.

Inventor.  
John Solomon Cantelo

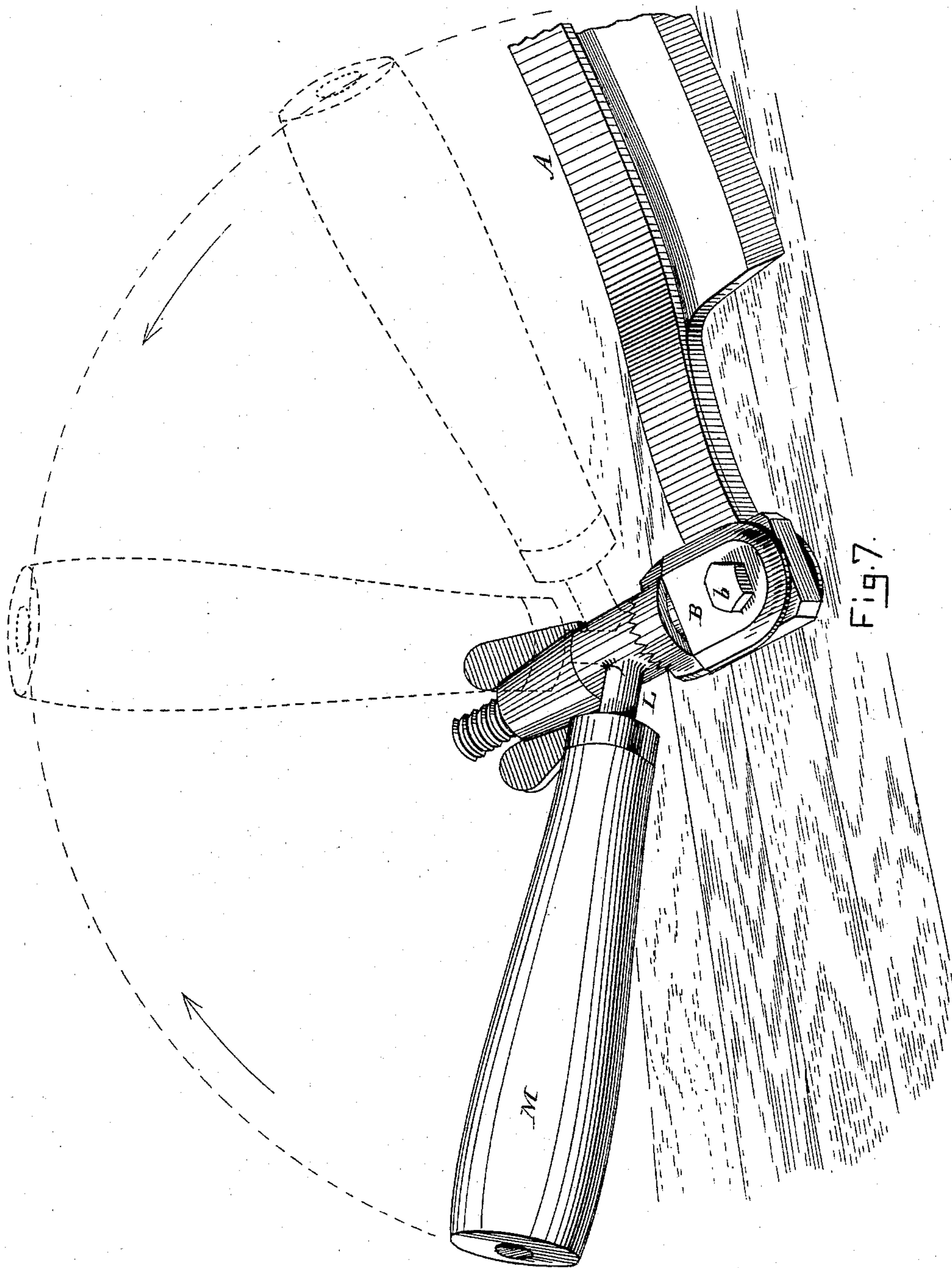
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# UNITED STATES PATENT OFFICE.

JOHN SOLOMON CANTELO, OF BOSTON, MASSACHUSETTS.

## DRAWING-KNIFE.

SPECIFICATION forming part of Letters Patent No. 448,633, dated March 24, 1891.

Application filed April 23, 1886. Renewed August 30, 1890. Serial No. 363,467. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN SOLOMON CANTELO, of Boston, in the State of Massachusetts, have invented a new and useful Improvement in Drawing-Knives, of which the following is a specification.

My invention relates to improvements in that class of drawing-knives used by carriage-makers, coopers, and other mechanics in which it is desirable to have handles constructed so that they may be put in various positions in relation to the blade to accommodate the work; and the objects of my invention are, first, to provide handles that may be, when the knife is not in use, a protection to the edge of the blade; second, to so construct them that they may be put in any desired position in relation to the blade; third, to make them comfortable and satisfactory to the workmen and at the same time rigid and reliable when in use; fourth, to so construct the whole knife that it shall be simple and durable, and yet allow the handle to be changed easily and quickly from one position to any other. I attain these objects of my invention by the mechanism illustrated by the accompanying drawings, in which—

Figure 1 represents the knife with the handle set at right angles to the blade and in the same plane. Fig. 2 is a view of the knife with the handles in the same position as in Fig. 1, showing one form of the ends of the blade and the collars which hold the handles firmly. Fig. 3 is a view of a part of the knife, showing one handle in various positions in relation to the blade. Fig. 4 shows a part of a knife with the handle in various positions in relation to the blade, but not on the same plane, one position showing the handle lying flat on the side of the blade. Fig. 5 shows the interior construction of the handle-joint and the method of forcing the handle up solid against the end of the blade. Fig. 6 is a view from above of the handle-joint, showing one method of holding the parts tightly, the collar clasp over the sides of the blade-joint. Fig. 7 is a view of a part of the blade with one handle turned upon the pivot *b* from the edge to the back of the blade, showing the handle set longitudinally with but raised above the plane of the blade to allow the hand to pass over the bench without interfering.

Similar letters refer to like parts in all drawings.

The blade A may be of any ordinary form and construction, except that the ends should be finished with octagonal faces to give the best results. It is generally about one-quarter of an inch in thickness, and from an inch to an inch and a half wide at end. The ends are fitted to the jaws of the metal holder B D, which turns upon the pins *b b* through the jaws B. Each holder is formed to carry the collar G, and has a round haft D to receive the sleeve H, and a screw E to receive the nut F, as shown in Fig. 5. The collar G may be made to fit against one or more faces of the blade ends, as shown in Fig. 5, and it may have lips to clasp over upon the sides of the jaws B B, as shown in Fig. 6. Either construction will answer the purpose of holding tightly the collar when it is forced into position by the screw F F against the sleeve H, which presses against the collar G.

To hold firmly the sleeve and the handles to which they are attached, I find the best construction to be to form the ends of the collars and sleeves which join with serrated or indented faces, so that they will hold firmly when pressed together by the nuts, and will readily fall apart when the pressure is removed. For a cheaper construction the collar may be left out and the ends of the blade may be made to engage with the teeth Z of the sleeve H. The handles M are connected to the sleeves H H by the rods L L, which are sometimes made straight, as shown in Fig. 5, and sometimes made with an offset, as shown in Fig. 4, which latter construction gives more variety of position, but they may be made in either way, as this is not a material part of my invention.

The handles M M are made of such size, form, and material as may be best adapted to the work to be performed. It has been found very objectionable to have a slot in the handle to receive the edge of the blade, as it hurts the hands of the workmen when cutting tough material and for other reasons, and yet it is necessary to use the handles to protect the edge of the blade when not in use. I have therefore constructed this invention with the sliding sleeve H H fitting closely to the arms L L, so that by turning up the nuts



F F the handles when closed will protect the  
 edge of the blade by lying closely against it,  
 as shown in Fig. 3, either in front of or by the  
 side of the edge. As the edge is ground or  
 5 worn away the handles may be made to fol-  
 low it, being held tightly in place by the screw  
 against the sleeve, thus obviating the neces-  
 sity of any slot in the handle to receive the  
 edge.  
 10 When the knife is to be used, the nuts F F  
 are run back, the sleeves H H fall from the  
 indented faces Z Z of the collars G G, and  
 the collars slip back from their hold upon the  
 jaws B B and the faces of the blade A A. The  
 15 holder B D E is turned upon the pivot b b  
 into the desired position and fastened by slid-  
 ing the collar, G G into place against the faces  
 of the ends of the blade, the handles are  
 turned into any desired position around D D,  
 20 and the nuts F F are run up, holding the  
 sleeves firmly against the collars by means of  
 the indented faces or teeth Z Z, and the col-  
 lars are forced against the faces of the blade  
 ends. If the lips h h are made on the collars,  
 25 as shown in Fig. 6, they add an element of  
 strength to the knife, not necessary, however,  
 except in large knives and for very hard work.  
 In many cases when working in confined  
 space it has been found very difficult to use  
 30 knives of old patterns, as the handles were in  
 the way. By my construction the handles may  
 be turned back behind the blade, as shown  
 in Figs. 4 and 7, entirely out of the way, or  
 put in any other position as the nature of the  
 35 work or the convenience of the workmen may  
 require. It is quite important to raise the  
 hands more or less above the plane of the

blade. No other knife known to the trade  
 allows of these needed changes in the position  
 of the handles. 40

I am aware that prior to my invention  
 drawing-knives have been made having han-  
 dles which swing upon a pivot to close upon  
 the blade, and which opened into certain po-  
 sitions in the plane of the blade, and that 45  
 others have been made in which the handles  
 revolved around the axis of the blade, but  
 only at right angles thereto. I therefore do  
 not claim, broadly, either of these construc-  
 tions; but 50

What I do claim as my invention, and desire  
 to secure by Letters Patent, is—

1. A drawing-knife constructed and ar-  
 ranged with handles, each having near the  
 blade two reversible joints made to operate in 55  
 different planes, whereby each handle may be  
 moved into any desired position in reference  
 to the blade, substantially as described and  
 shown.

2. In a drawing-knife, the combination of 60  
 the blade A, two holders, each consisting of  
 a jaw B, the haft D, and screw E, two nuts  
 F F, two collars G G, and two handles M M,  
 each constructed with a sleeve H, having teeth  
 to engage with those on the collars G G, where- 65  
 by is formed between each handle and the  
 blade two reversible joints operating in dif-  
 ferent planes, substantially as shown and de-  
 scribed.

JOHN SOLOMON CANTELO.

Witnesses:

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