

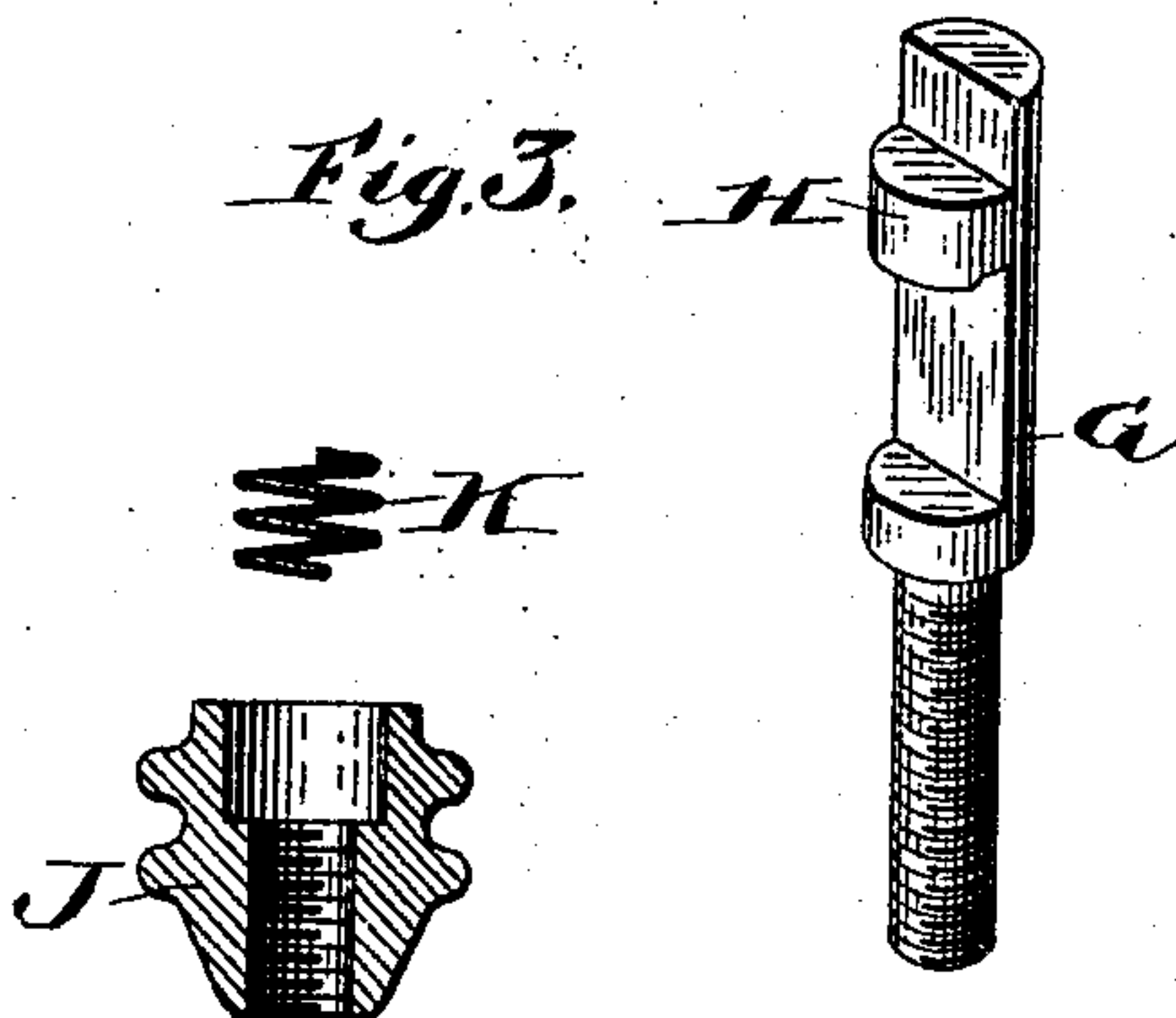
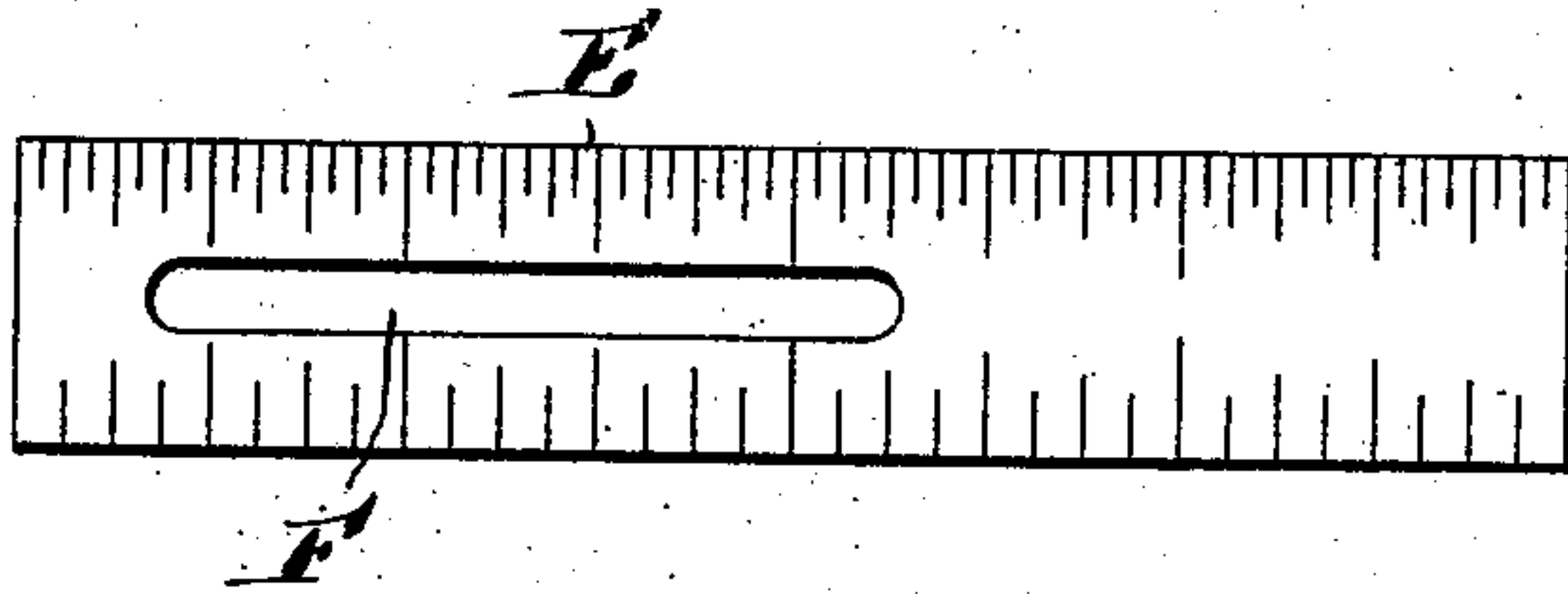
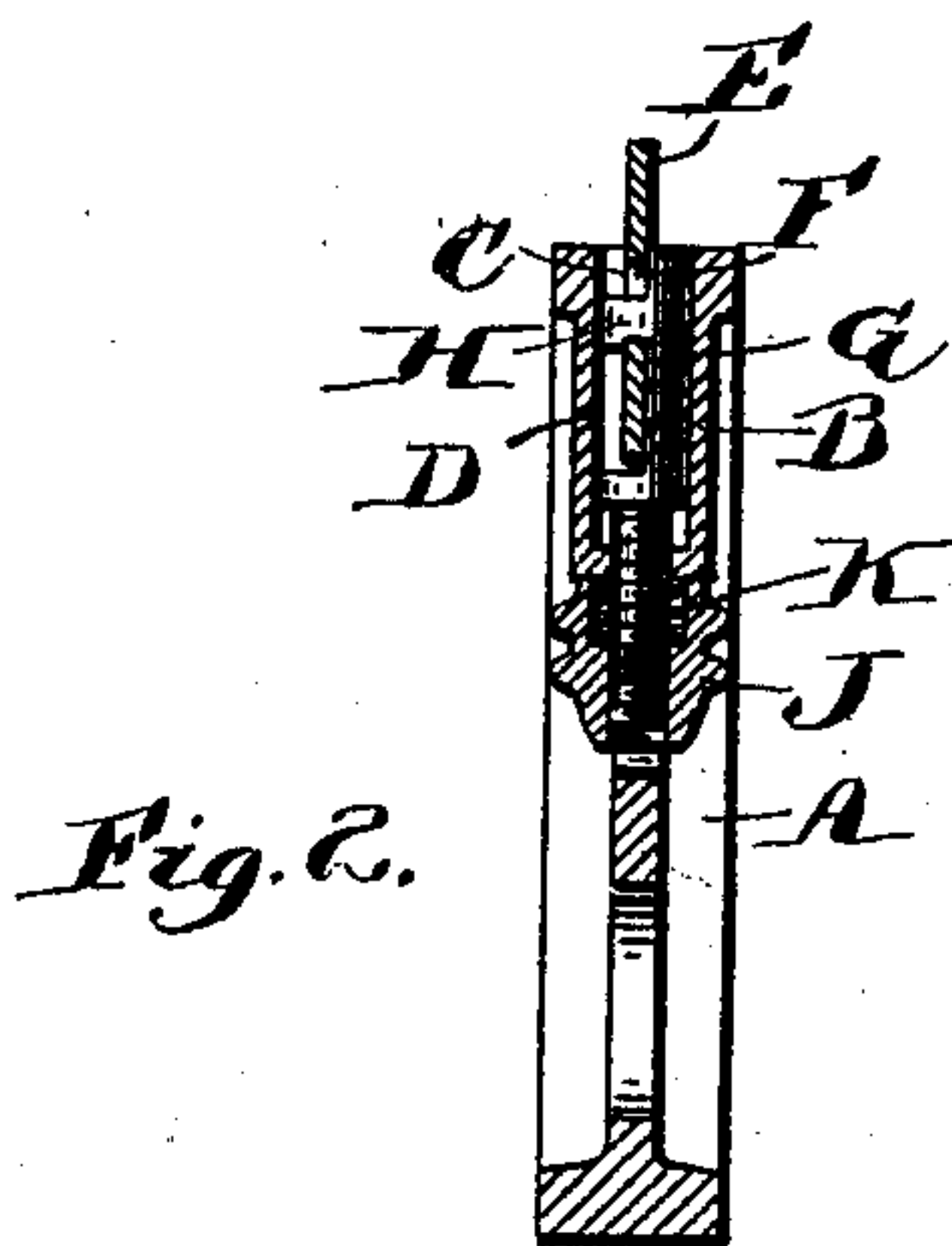
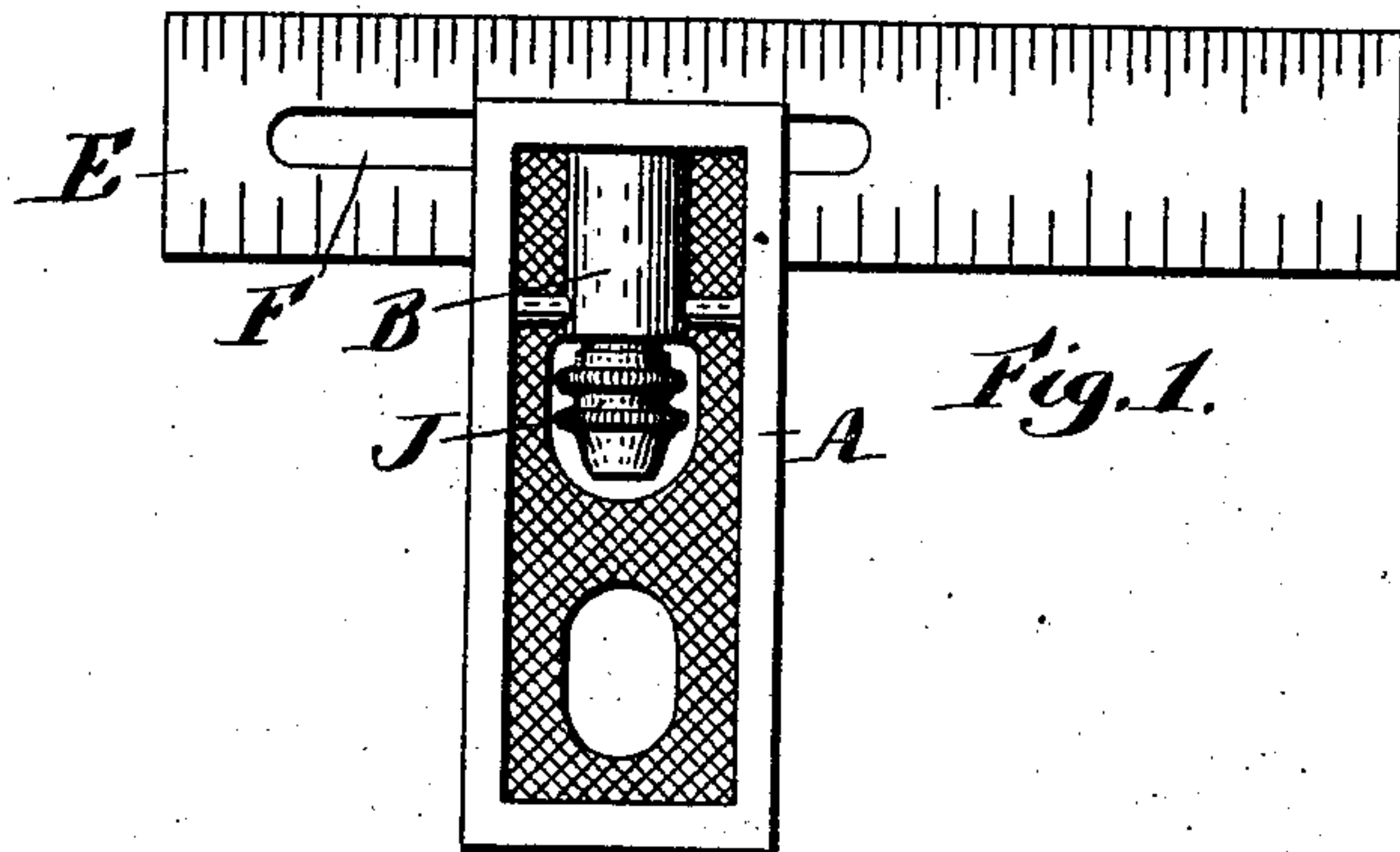
No. 715,703.

Patented Dec. 9, 1902.

L. S. STARRETT.  
ADJUSTABLE SQUARE.

(Application filed May 3, 1901.)

(No Model.)



Witnesses=  
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Inventor=  
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Atty.

# UNITED STATES PATENT OFFICE.

LAROY S. STARRETT, OF ATHOL, MASSACHUSETTS, ASSIGNOR TO THE L. S. STARRETT COMPANY, OF ATHOL, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

## ADJUSTABLE SQUARE.

SPECIFICATION forming part of Letters Patent No. 715,703, dated December 9, 1902.

Application filed May 3, 1901. Serial No. 58,572. (No model.)

*To all whom it may concern:*

Be it known that I, LAROY S. STARRETT, of Athol, in the county of Worcester and State of Massachusetts, have invented certain  
5 new and useful Improvements in Adjustable Squares, of which the following is a specification.

The object of this invention is to provide an accurate try-square having a clamping  
10 stock or head and a thin tempered blade either graduated or plain and adapted to project at one or both sides of the stock or head, being adjustable with relation thereto and furnished with a clamping device adapted to  
15 prevent loss of the blade when the clamp is loosened, my invention providing for a short or long working blade up to its full length, with movement but one-half of it.

My present improvement is embodied in a  
20 square having a thin tempered blade either plain or graduated on one or both edges of its opposite faces and formed with an elongated slot through it midway between its edges and closed at both ends in combination with a rectangular stock or head deeply  
25 grooved at one end to form a seat for such blade and perforated endwise in the plane of said groove, and with a clamping device comprising a bolt or stud in said perforation having  
30 a lateral lug near one end, fitting loosely in the slot of the blade, such bolt or stud being threaded at its opposite end to receive a milled nut adapted to turn in a recess in said head, and a spiral spring surrounding such  
35 threaded stud between said nut and head to hold the blade frictionally.

In the drawings, Figure 1 is an elevation of the tool complete. Fig. 2 is a vertical cross-section in the plane of the clamping-screw;  
40 and Fig. 3 is a view of the parts detached, the bolt, nut, and spring being shown enlarged.

A represents the stock or head (a rectangular casting) having a thin web or central portion, thickened and parallel margins, and at  
45 one end a thickened longitudinal boss B midway between its edges, the web being cut away or recessed at the end of the boss. The end of the stock or head has a deep groove or recess  
50 C to admit the blade edgewise, and a per-

foration D in the same plane through said boss to receive the clamping-bolt. This perforation is of reduced diameter at foot to conform to the smaller part of the bolt.

E is the blade, (a thin strip of tempered  
55 steel,) preferably graduated to different scales on one or each edge of one or both its faces. Through this blade I form a slot F through the thin metal, the edge walls of said slot and blade being perpendicular to the faces. The  
60 slot runs from a point near one end of the blade to or beyond the middle thereof, so that the blade may extend adjustably in either direction. The slot is of uniform width without enlargement at any point and is closed at  
65 both ends.

G is a clamping-screw the stem of which occupies the perforation D and is formed with a lateral lug H near its outer end to enter and traverse the slot F of the blade. As seen  
70 in Figs. 2 and 3, the stem of screw G is cut away laterally below and above the lug H, so that the blade E may fit closely against these flat faces of the stem and the prolonged head and be held very firmly, the lug transversely  
75 filling the perforation D.

J is a milled nut engaging the threaded end of screw G and recessed to receive a spring K, which surrounds the screw. The upper  
80 end of this spring bears against the bottom of the boss B, so that its downward pressure on the nut J will tend to draw the blade downwardly.

In assembling the parts the screw-bolt G is placed transversely on the blade E with the  
85 lug H in the slot F. The screw is then inserted in perforation D, the edge of the blade in groove C, and the nut with spring applied to the screw-tip. Tightening the nut draws down the blade and holds it firmly in its seat  
90 in the end of head A. When the nut is slackened, the blade is held with a yielding pressure, due to the interposed spring K. Thus the blade may be adjusted at different  
95 lengths either way, while the closed ends of the slot prevent endwise detachment of the blade, thus making a try-square with the blade available for use from nothing up to its full length, while the blade is slotted but  
100 about half its length.



My present improvement enables me to use a light thin spring-tempered blade, which on account of its thinness and hardness could not be grooved like the thicker soft blades, as in the adjustable squares shown in my former patent, (now expired,) which I have made for years and still manufacture. The light spring-tempered blades are preferable and more cheaply made, while the lug extending through the open slot, closed at its ends, makes a much better and stronger hook connection than the short lip in the groove of my former patent or as heretofore made. The lug H, transversely filling the perforation D, excludes dust and prevents any sidewise movement of the clamping-bolt.

I claim as my invention—

1. In an adjustable square, the rectangular stock or head A having continuous, raised, parallel edges, a thickened longitudinal boss inclosing the screw-bolt, and a thin central web connecting said edges and boss and recessed transversely to receive the clamping-nut, such stock or head being formed with the endwise groove, C and perforation, D, reduced in diameter at bottom, in combination with the blade E, having closed slot F in said groove, and the screw-bolt G in

said perforation, with its lug, H, in said slot and transversely filling the perforation, the threaded portion of said bolt being reduced in diameter to pass through the smaller end of perforation D, and with a clamping-nut on the screw-tip in said recess, substantially as set forth.

2. The described adjustable square, comprising the rectangular stock or head, A, with transverse recess for the clamping-nut, endwise groove for the blade and perforation for the clamp-screw in the same plane, in combination with blade E, having closed slot, F, of uniform width without enlargement, the edge walls of said blade and slot being perpendicular to its face, the screw-bolt, G, with its lug, H, in such slot, and transversely filling said perforation, and its head, of about half-diameter, prolonged above the lug, the recessed clamping-nut, J, on the screw-tip, and the spring, K, in said nut-recess, substantially as set forth.

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

LAROY S. STARRETT.

Witnesses:

DAVID FINDLAY,  
FRANK E. WING.