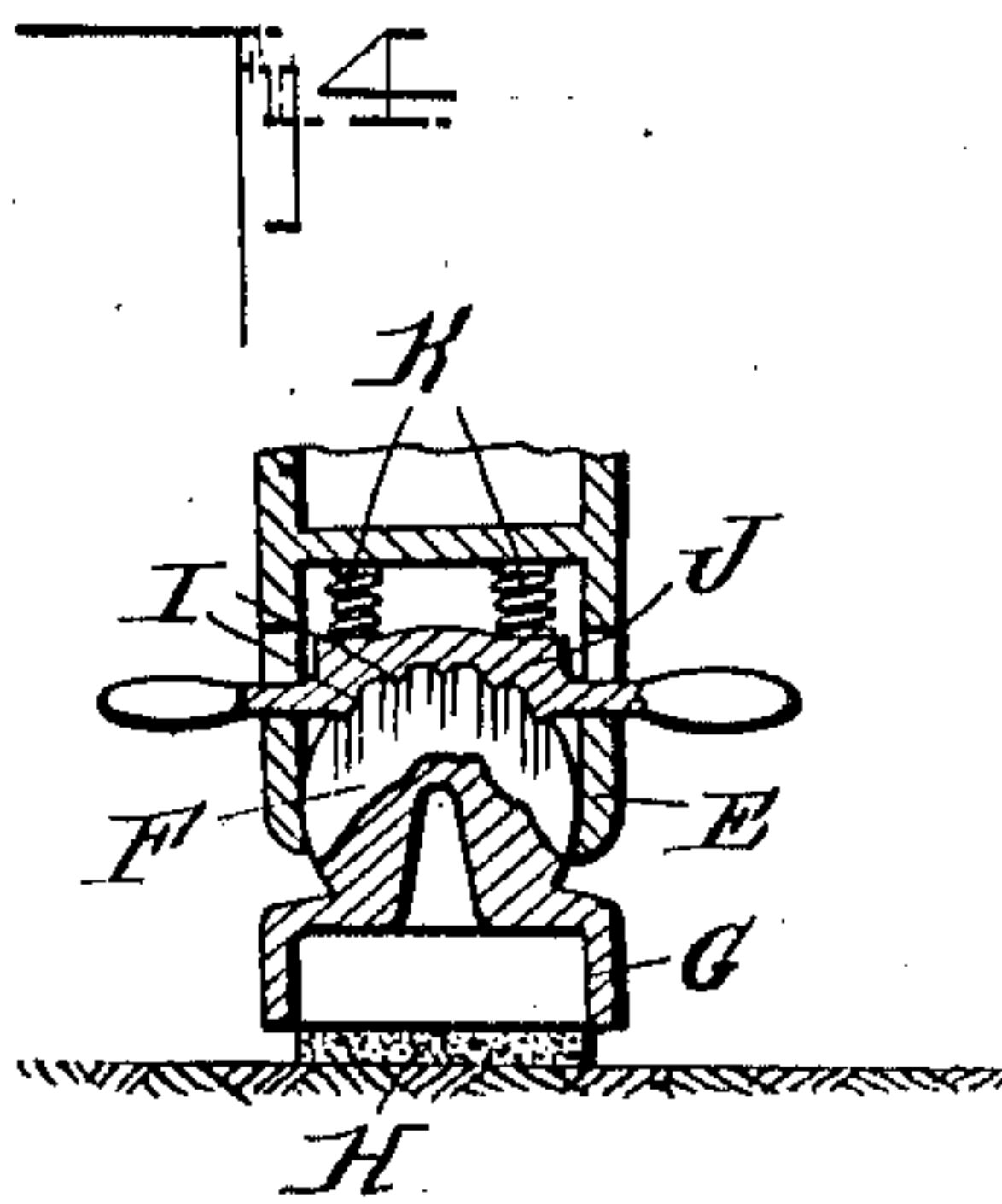
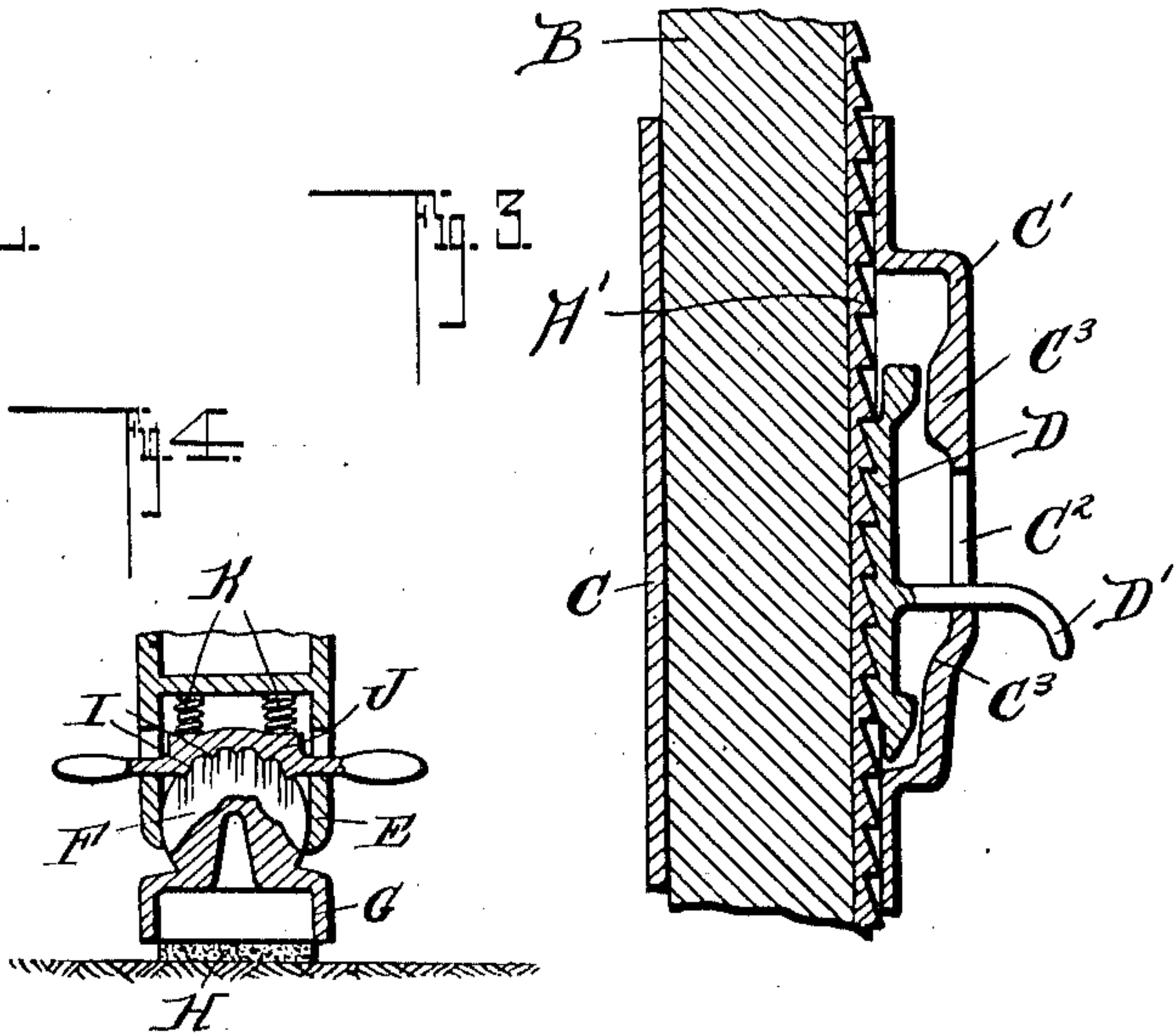
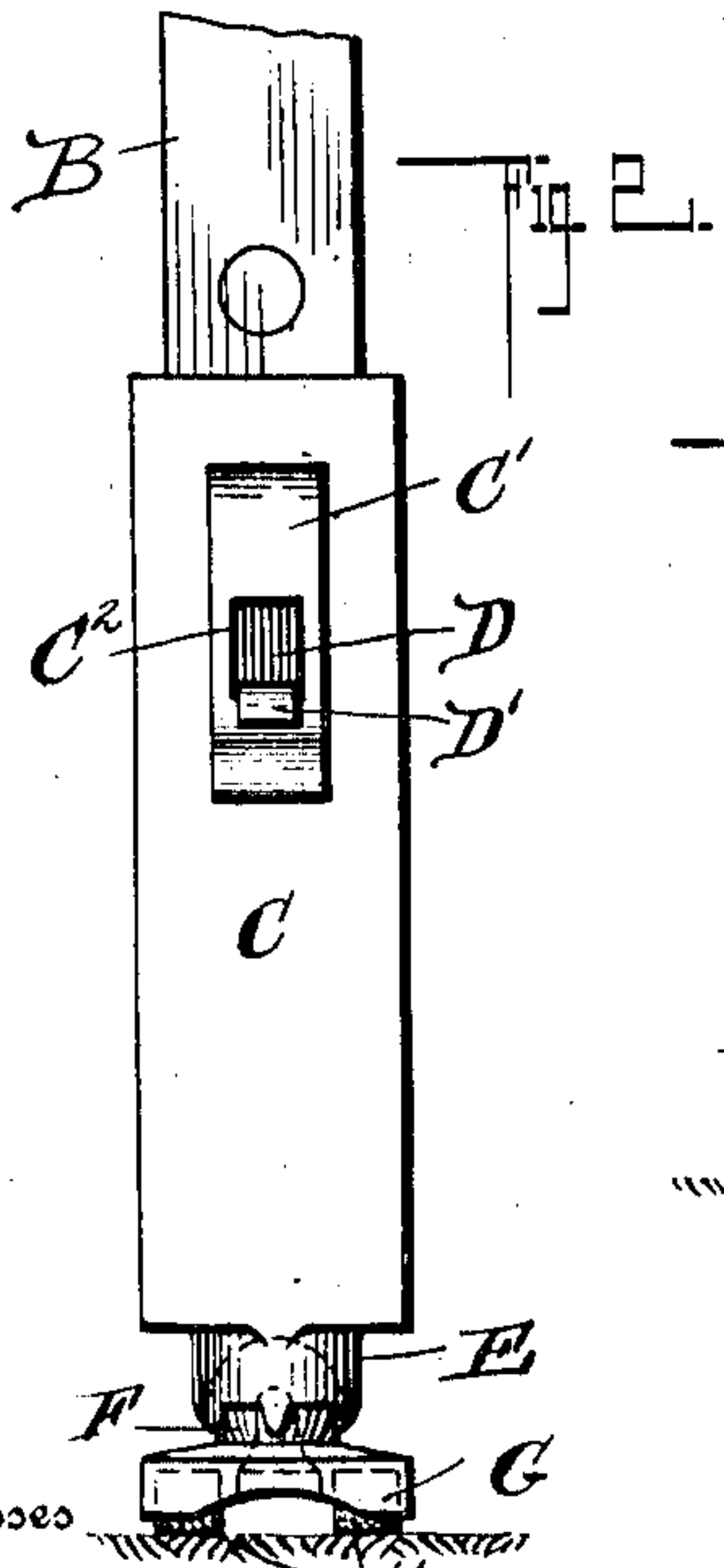
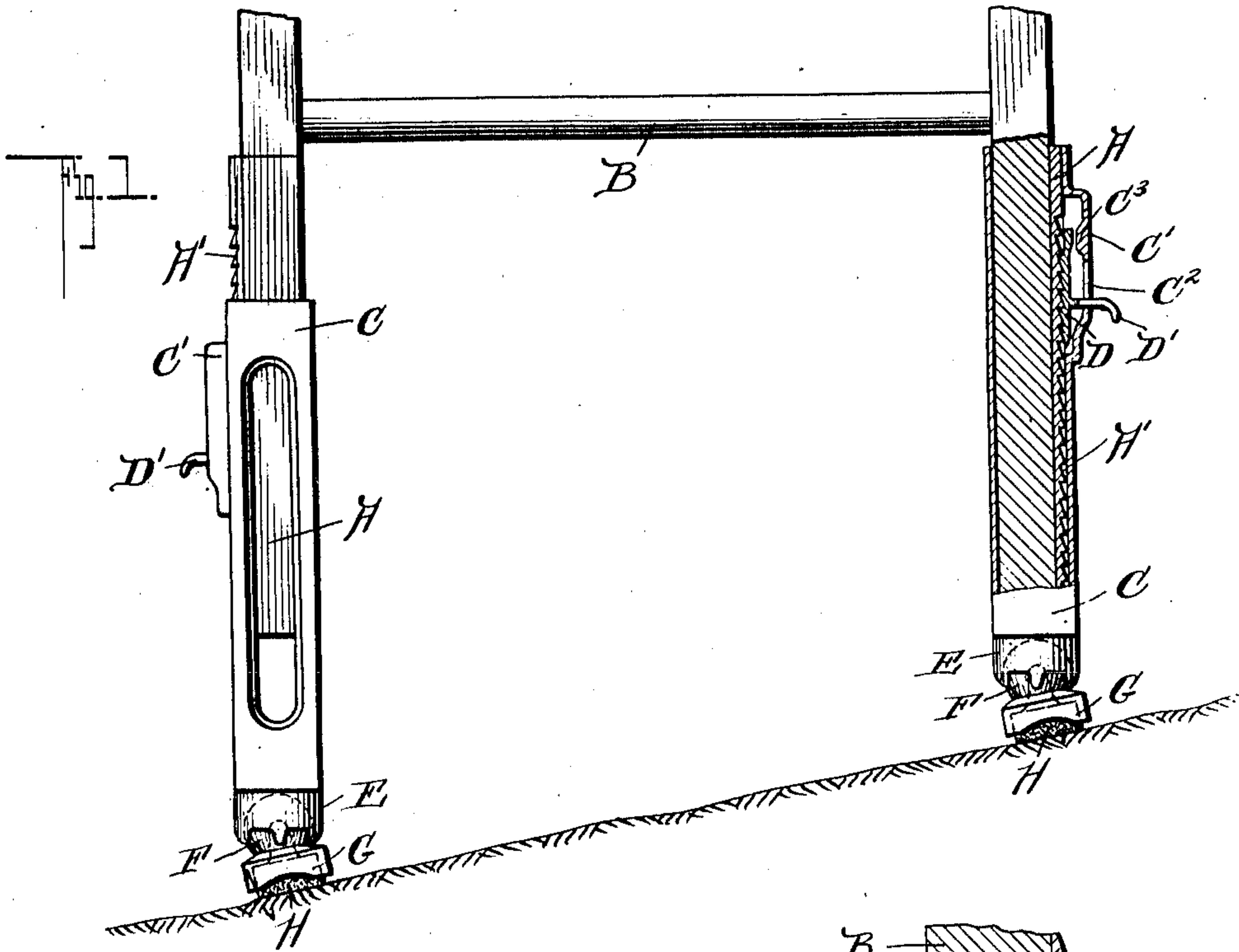


E. J. CURRAN.
LADDER ATTACHMENT.
APPLICATION FILED FEB. 10, 1909.

970,425.

Patented Sept. 13, 1910.



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UNITED STATES PATENT OFFICE.

EDWARD J. CURRAN, OF ALTON, ILLINOIS.

LADDER ATTACHMENT.

970,425.

Specification of Letters Patent. Patented Sept. 13, 1910.

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To all whom it may concern:

Be it known that I, EDWARD J. CURRAN, a citizen of the United States, residing at Alton, in the county of Madison and State of Illinois, have invented a new and useful Improvement in Ladder Attachments, of which the following is a specification.

This invention relates to certain new and useful improvements in my application for ladder attachment filed January 28, 1908, Serial Number 413,116, allowed May 20, 1908, the object being to provide adjustable casings with feet which have a universal connection therewith in order to enable the same to be adjusted to any angle desired.

A further object of my invention is to improve the general construction of locking the casing over the sleeve of the leg of a ladder whereby the same will be locked without the use of springs or set screws.

A still further object of my invention is to provide novel means for locking the feet in their adjusted position in respect to the casings whereby all danger of the same turning after being adjusted to suit the incline of the ground is prevented.

A still further object of the invention is to provide a ball and socket connection for the feet whereby the same can be turned in any direction, said ball being provided with grooves in which tooth members are adapted to be forced by springs which are released by means from the outside of the casings so that the balls can be turned within the socket until the feet have assumed their proper position.

A still further object of my invention is to provide the feet of the ladder with sleeves having tooth portions over which is adapted to be slidably mounted casings having off-set portions provided with slots through which extend the handles of serrated blocks which are adapted to engage the teeth of the sleeves and lock the same when weight is placed on the ladder.

Another object of my invention is to provide the casings with off-set portions of peculiar shape whereby the blocks can be drawn outwardly in the same when in a raised position so that they will be out of the path of the teeth of the sleeves.

With these objects in view, my invention consists of the novel features of construction, combination and arrangement of parts hereinafter described, pointed out in the

claims and shown in the accompanying drawings, in which—

Figure 1 is a front elevation of a ladder showing my improved attachment in place, one of the casings being shown in section. Fig. 2 is a side elevation. Fig. 3 is a detail vertical enlarged section. Fig. 4 is a horizontal section.

In carrying out my improved invention, I employ sleeves A which are adapted to be secured over the lower ends of the legs of a ladder B, said sleeves having serrated side edges A' over which is adapted to be slidably mounted casings C which are provided with off-set portions C' having vertical slots C² through which handles D' of serrated blocks D are adapted to extend, said blocks being adapted to engage the teeth of the sleeves and lock the casings to the sleeves whereby the same can be moved up and down so as to shorten or lengthen the leg of the ladder. The off-set portions C' are provided with enlargements C³ and the blocks D are provided with reduced central portions whereby they can be moved upwardly and drawn outwardly so as to be out of the path of the teeth of the sleeves in order to allow the casing to be moved up and down and by allowing the block to drop into the position as shown in Fig. 3 the teeth of the same will interlock with the teeth of the sleeves and support the same in that position. The lower ends of the casings are provided with sockets E in which the balls F of feet G are adapted to fit which are preferably provided with elastic pads H formed of any suitable material so as to prevent the same from slipping when placed on a smooth hard surface. And it will be seen that by this arrangement when the ladder is placed on uneven ground or an inclined surface the balls will turn in the sockets so as to allow the feet to lie smoothly on the ground whereby all danger of the same slipping is prevented.

The balls are formed with grooves I and the sockets are provided with tooth members J which are held within the grooves by springs K, said members being operated by means extending out through the casings so that the same can be raised to allow the feet to be adjusted in respect to the casings. It will be seen that by this arrangement the casings can be adjusted in respect to the legs of the ladder and the feet in respect

to the casings so that the ladder will assume a position when placed on an uneven surface whereby all danger of the same moving or slipping is prevented.

5 What I claim is:—

1. The combination with a ladder having sleeves secured over the lower ends of the legs provided with serrated side edges of casings slidably mounted over said sleeves
10 provided with off-set portions, serrated blocks mounted in said off-set portions provided with handles extending out through the slots formed in the off-set portions, sockets formed on the lower ends of said casings,
15 feet provided with balls adjustably mounted within said sockets and spring means for locking said balls in their adjusted position in said sockets.

2. A ladder having casings adjustably

mounted on its lower ends provided with 20 sockets, grooved balls mounted in said sockets provided with feet and spring actuated toothed bars mounted in said sockets adapted to engage said balls.

3. The combination with a ladder, of cas- 25 ings adjustably mounted on the lower ends of the side bars of the ladder provided with sockets, grooved balls mounted in said sockets provided with feet, spring actuated toothed bars mounted in said sockets adapt- 30 ed to engage said balls, said bars being provided with outwardly extending portions for operating the same.

E. J. CURRAN.

Witnesses:

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