

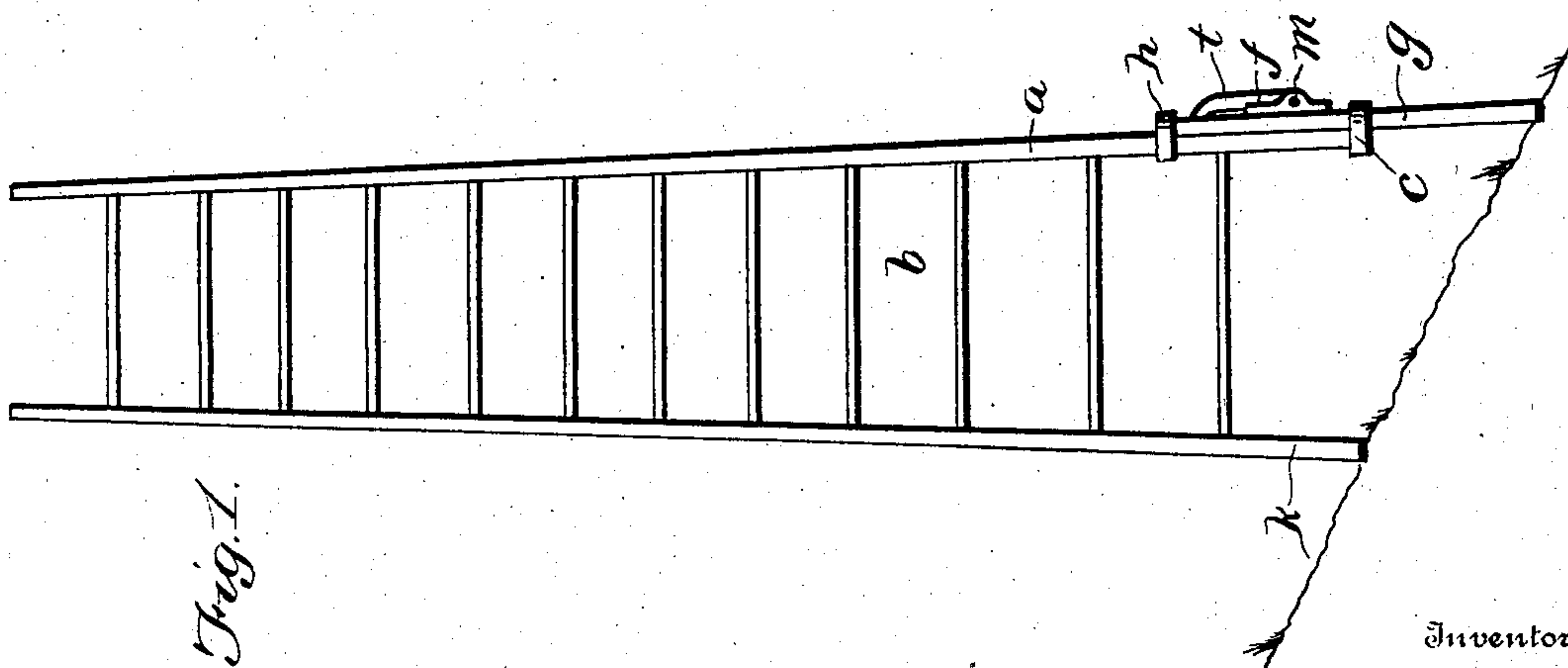
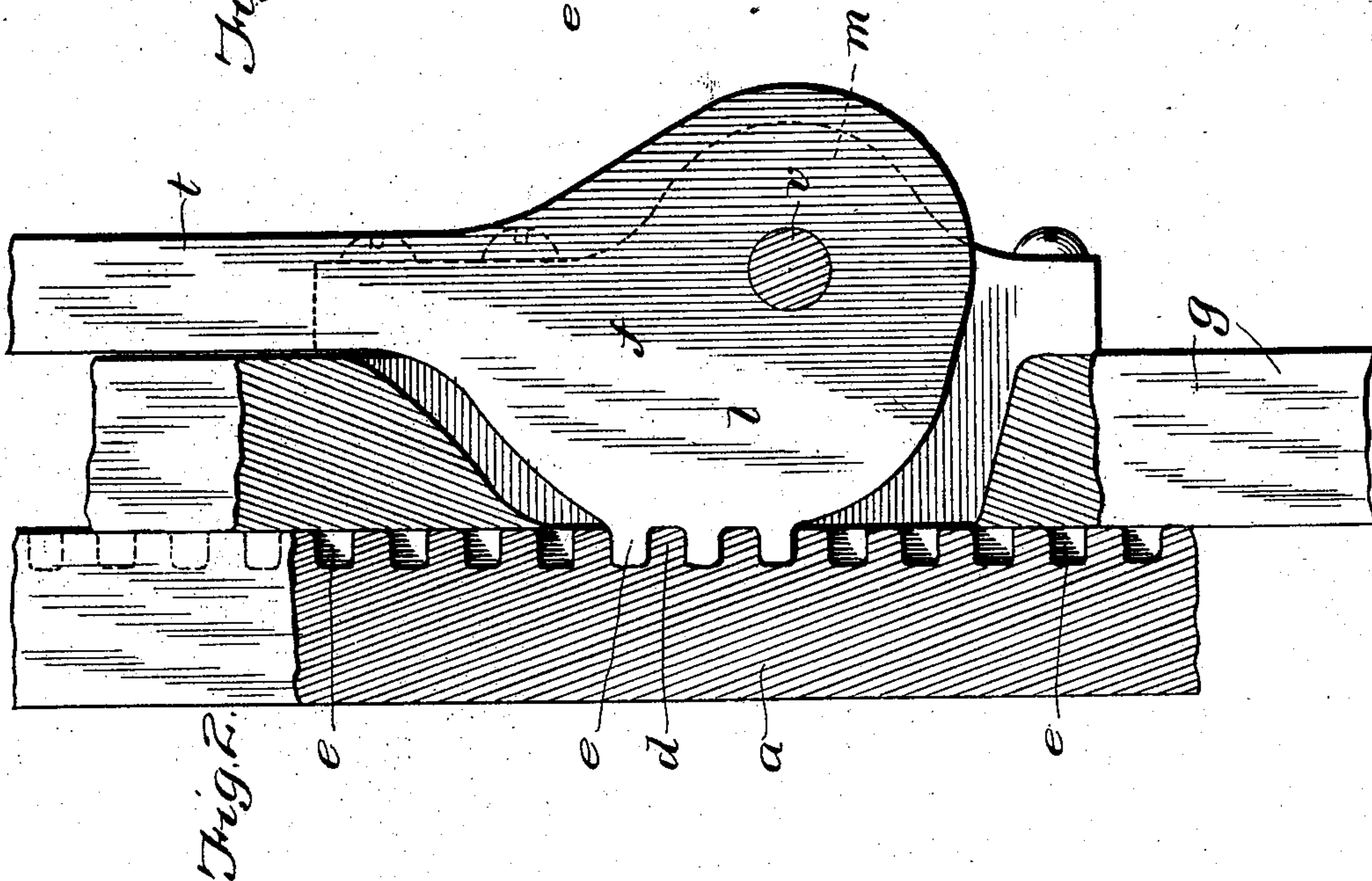
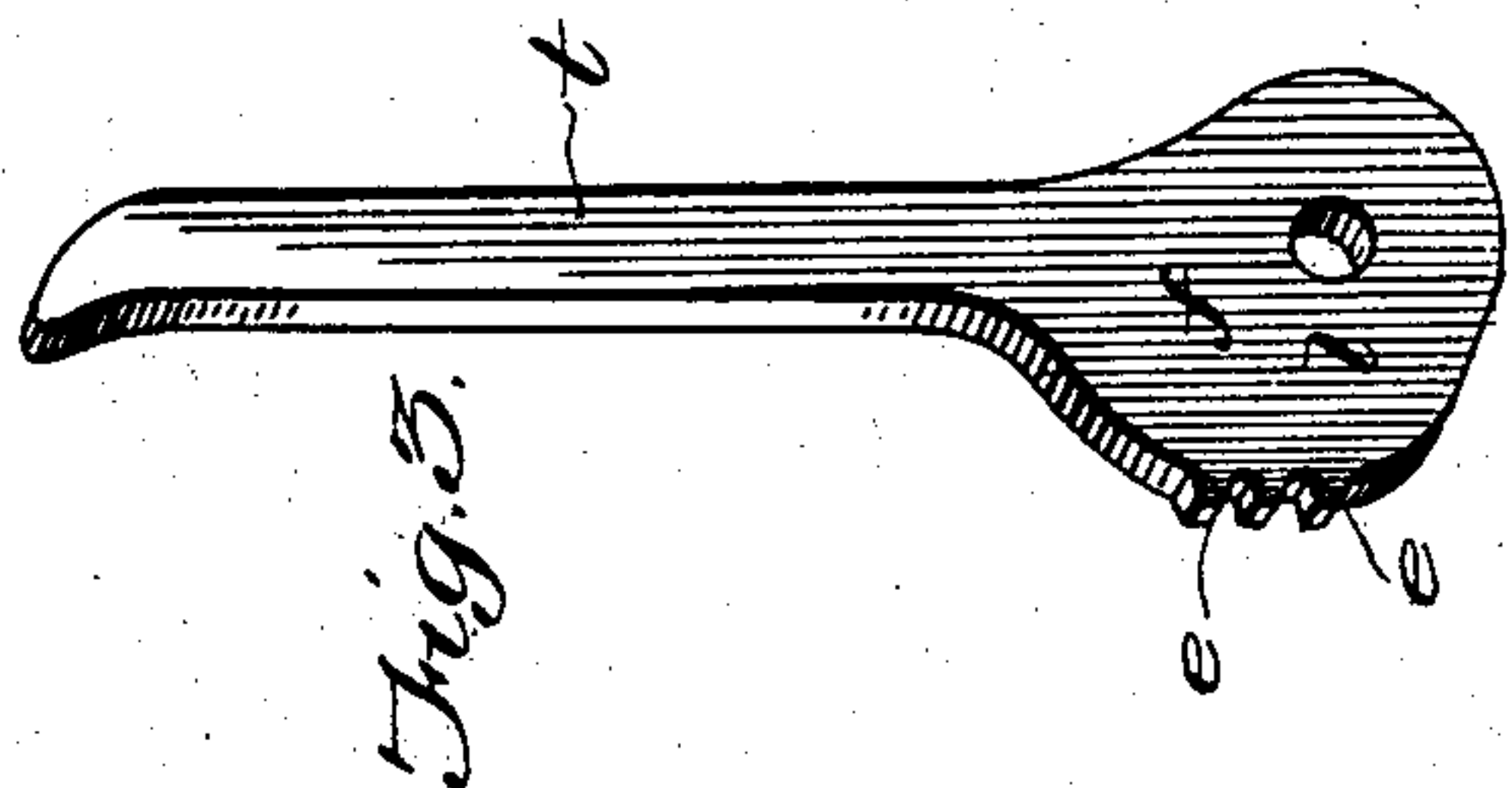
No. 741,541.

PATENTED OCT. 13, 1903.

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LADDER.

APPLICATION FILED JUNE 13, 1903.

NO MODEL.



Witnesses

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364

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# UNITED STATES PATENT OFFICE.

CHARLES D. PHIPPS AND HORATIO F. CHATFIELD, OF FENTON, MICHIGAN.

## LADDER.

SPECIFICATION forming part of Letters Patent No. 741,541, dated October 13, 1903.

Application filed June 13, 1903. Serial No. 161,356. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES D. PHIPPS and HORATIO F. CHATFIELD, citizens of the United States, and residents of Fenton, in the county of Genesee and State of Michigan, have made a certain new and useful Invention in Ladders; and we declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a front elevation of the invention as applied. Fig. 2 is a sectional detail view showing the teeth of catch *f* in engagement with the rack. Fig. 3 is a detail perspective view of the catch *f*.

The invention has relation to adjustable ladders; and it consists in the novel construction and combinations of devices, as hereinafter set forth.

In the accompanying drawings the letter *a* designates one of the upright rails of the ladder *b*, and this rail is provided at or near its lower end with a guide-band *c*, having its bearing presenting outward. Above this guide-band is provided, on the outside of the rail, a rack *d*, having square indentations or teeth to engage the teeth *e* of the holding-catch *f*, which is attached to an adjustable foot-piece *g*. The adjustable foot is provided at or near its upper end with a guide-band *h*, presenting inward and designed to engage the rail *a* of the ladder.

The holding-catch *f* is pivoted in bearings *m*, which are securely bolted to the outside of the foot-piece *g*. The catch consists of the broad toothed head *l* and the lever or handle *t*. The head *l* is provided in its lower corner with the pivot-bearing *v*, through which passes the fulcrum-pivot which connects the catch to the bearings *m*. The head of the catch is broad enough to extend from the outside of the foot-piece to the rack of the rail, which is adjacent to the inside of the foot-piece. The head of the catch is therefore as broad as the foot-piece is thick or broader, and it is made broad in order to give great

leverage, so that when the weight of a man is on the ladder the pressure on the teeth *e*, which are formed in a straight row on the inner edge of the catch, will automatically hold the catch in secure engagement with the rack. When the weight is taken off the ladder, the catch can be released from the rack by pulling the handle outward and such readjustment made as may be advisable.

When the ladder is to be used on uneven ground, the foot-piece is adjusted up or down, as may be required, to obtain a secure bearing on the ground, and the catch is turned upward and inward to engagement with the rack, thereby fastening the foot-piece in position. Any weight now placed on the ladder will, through the increased pressure on the catch, make the fastening on account of the leverage of the catch-head more secure. As the edge teeth of the catch-head are alined, so that they will all engage the rack of the ladder-rail, the connection is very strong, and the catch forms its own stop because of the increasing distance of its teeth in line from the fulcrum.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination with a ladder having a toothed rail, of a longitudinally-adjustable foot-piece, and its laterally-adjustable catch having alined edge teeth adapted to engage with the teeth of said rail, and holding such engagement by the ladder-pressure, substantially as specified.

2. The combination with a ladder-rail, and its outside rack, of a foot-piece, guide-bands connecting the ladder-rail and foot-piece, and a broad-head lever-catch pivoted to the foot-piece, and having alined edge teeth increasing in distance from the fulcrum, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES D. PHIPPS.  
HORATIO F. CHATFIELD.

Witnesses:

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