

No. 775,488.

PATENTED NOV. 22, 1904.

M. TETZLAFF.  
PORTABLE LADDER.

APPLICATION FILED MAR. 10, 1904.

NO MODEL.

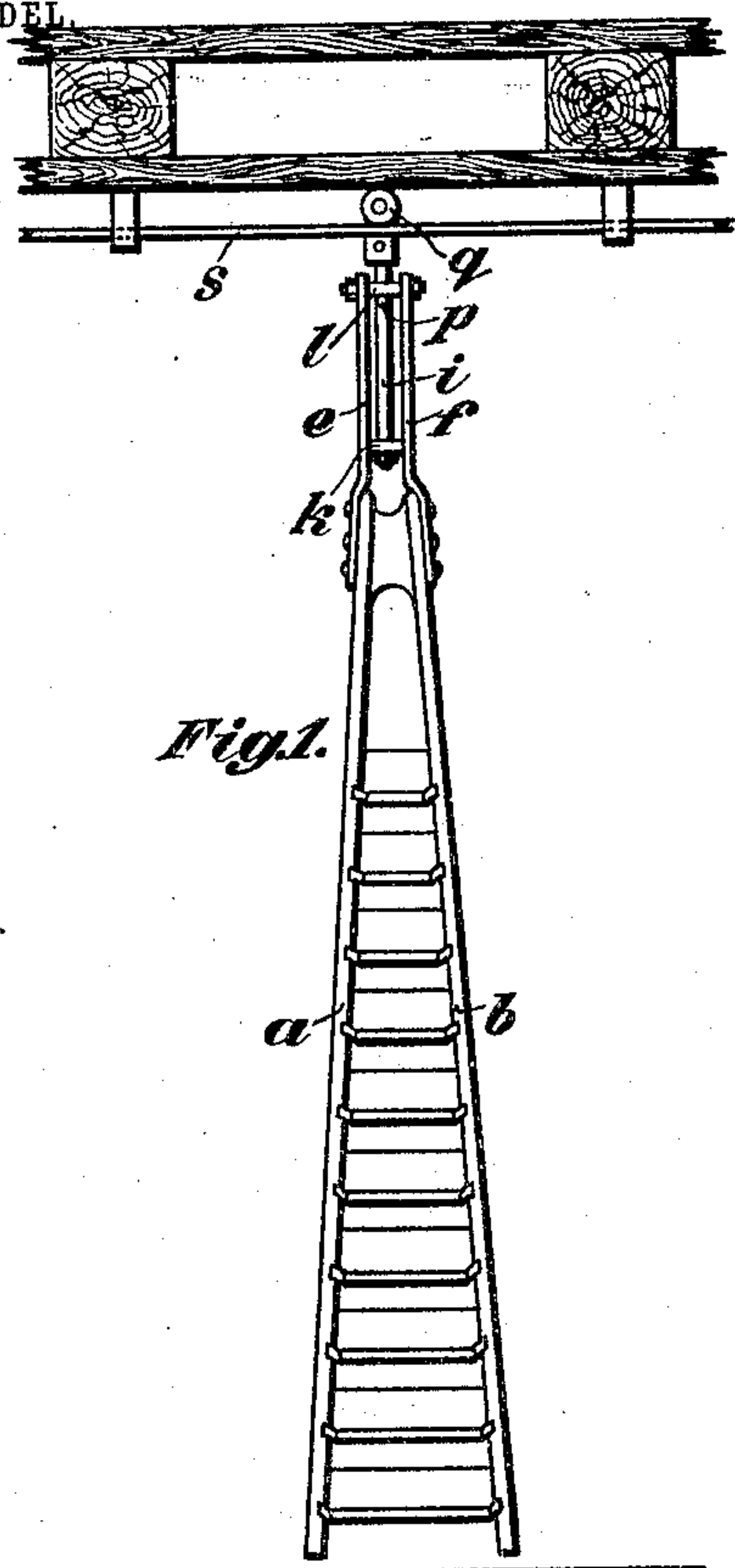


Fig. 1.

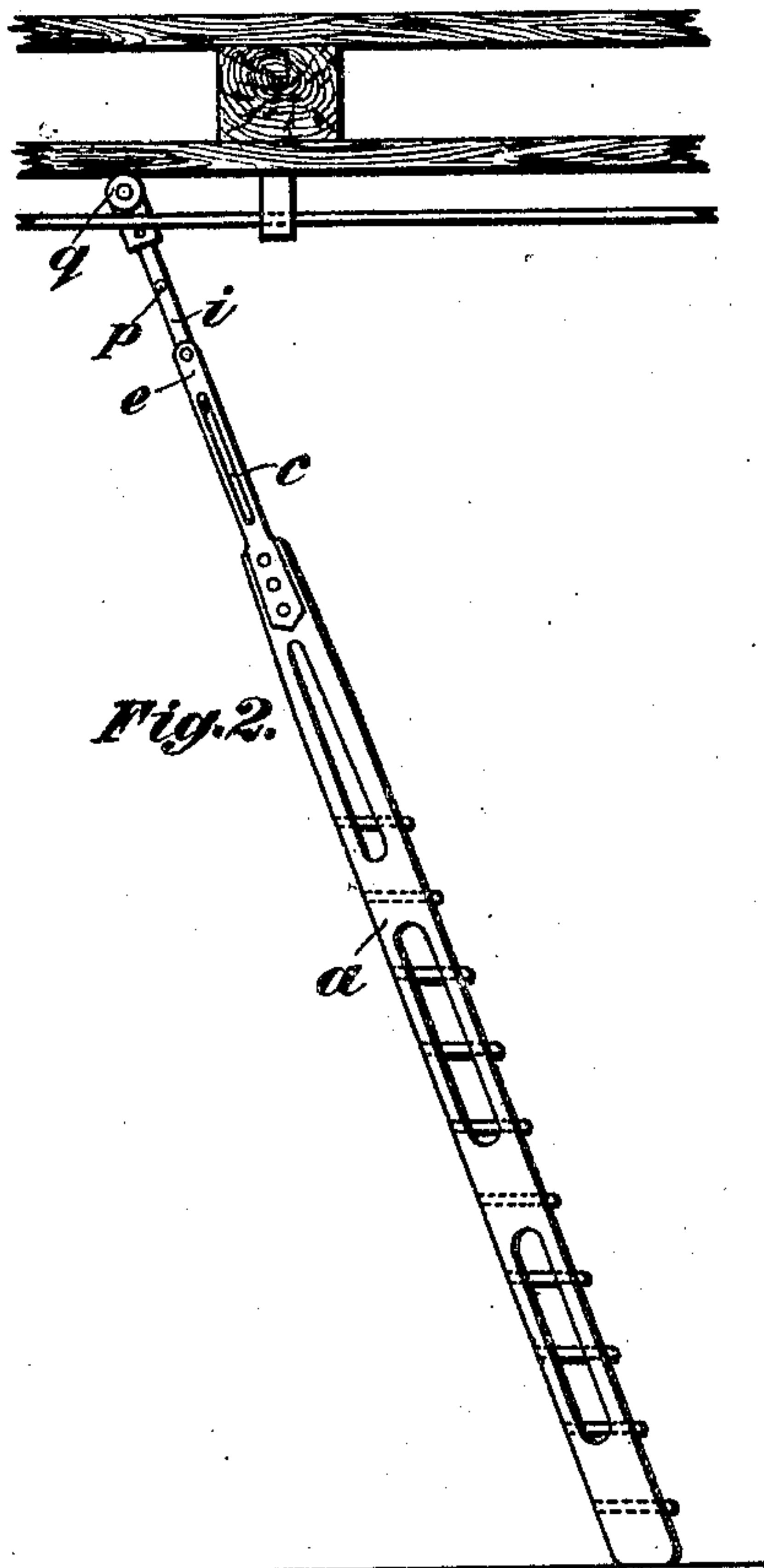


Fig. 2.

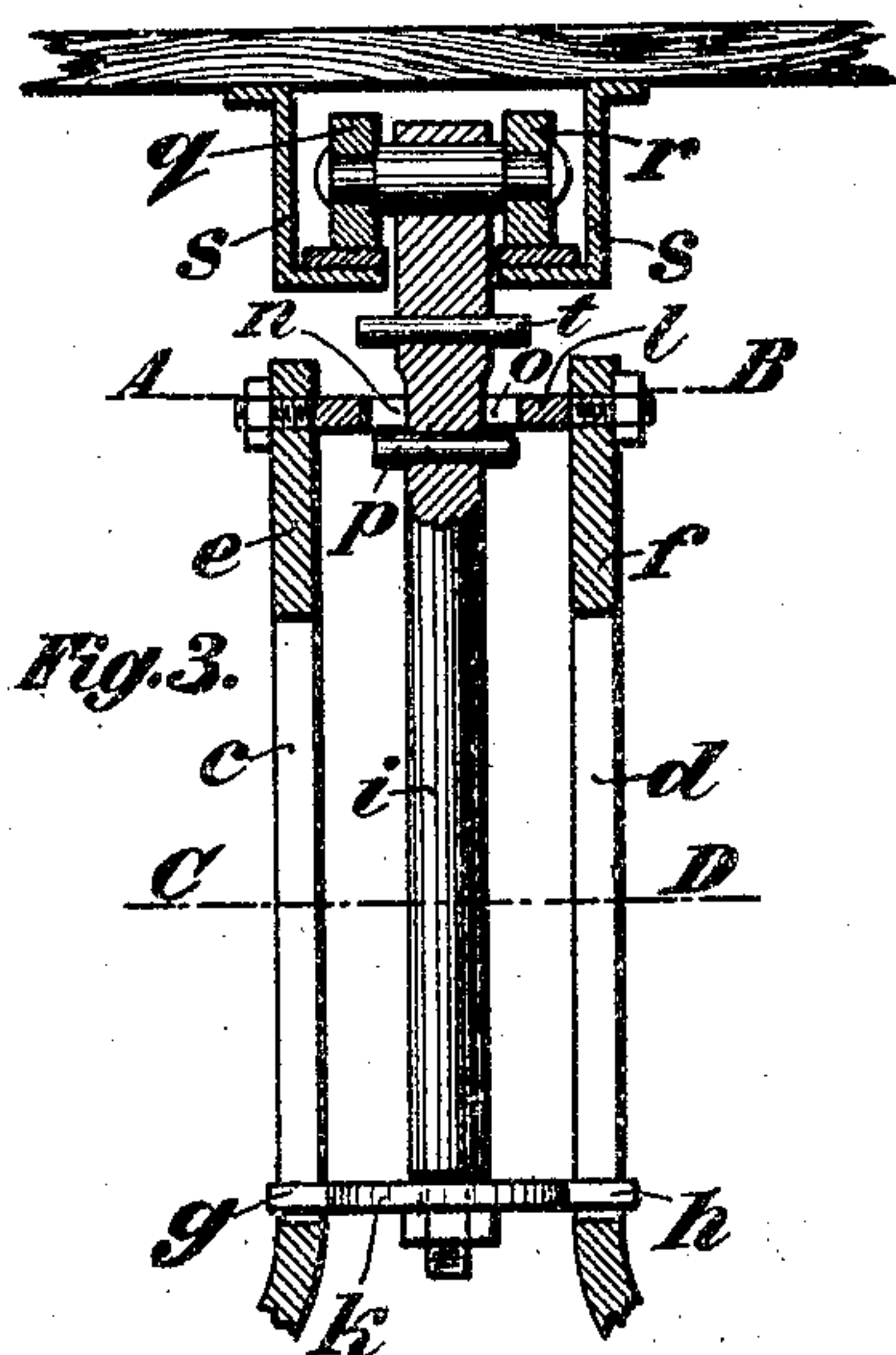


Fig. 3.

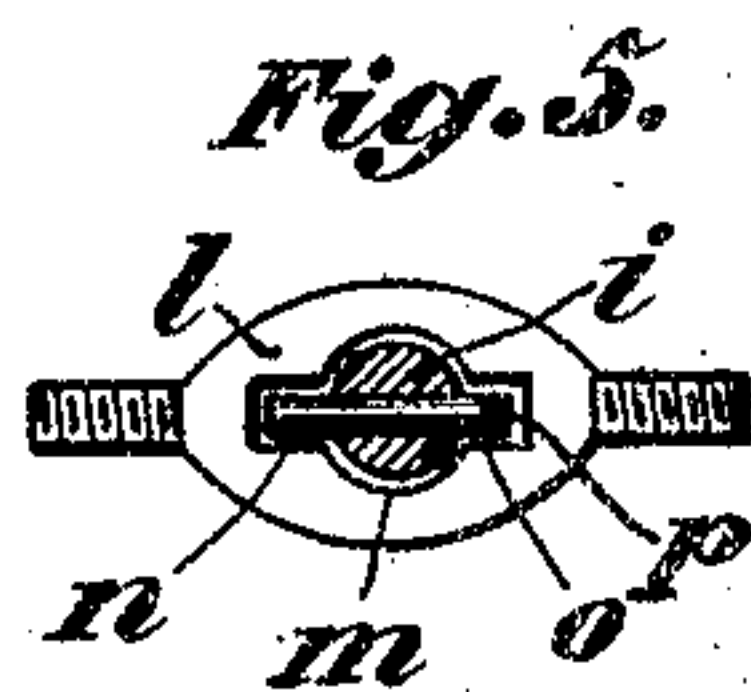


Fig. 5.

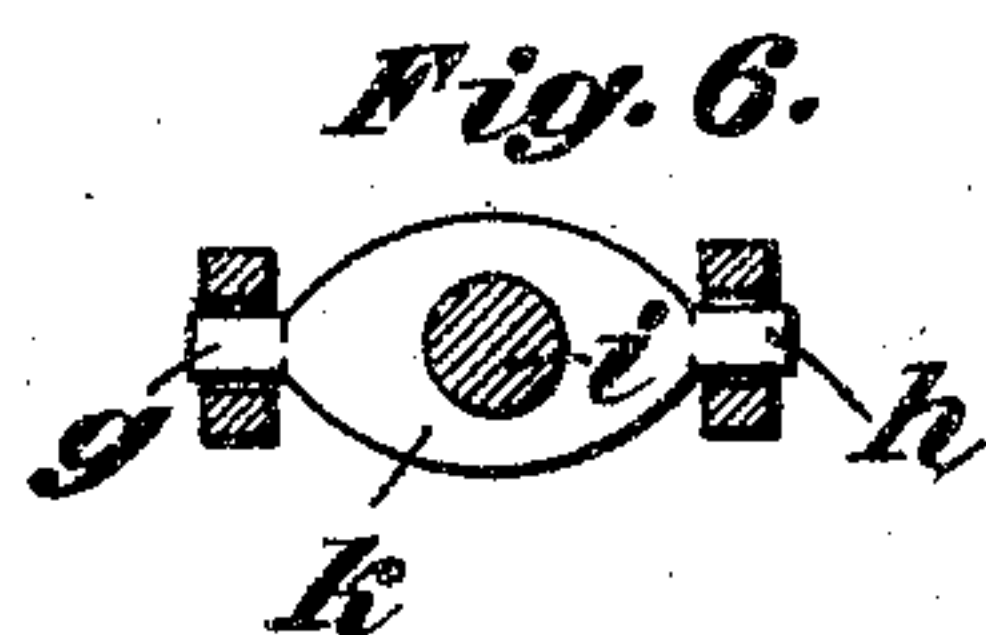


Fig. 6.

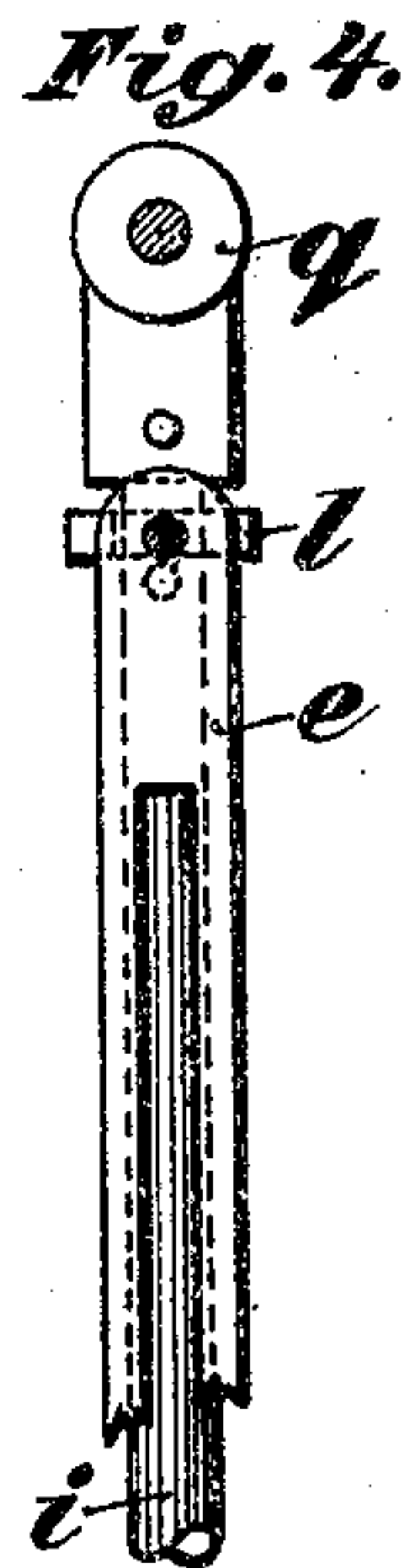


Fig. 4.

Witnesses:  
Geo. Heinicke  
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Max Tetzlaff  
by G. Dittmar  
Attorney.

# UNITED STATES PATENT OFFICE.

MAX TETZLAFF, OF PR. STARGARD, GERMANY.

## PORTABLE LADDER.

SPECIFICATION forming part of Letters Patent No. 775,488, dated November 22, 1904.

Application filed March 10, 1904. Serial No. 197,439. (No model.)

*To all whom it may concern:*

Be it known that I, MAX TETZLAFF, a citizen of the German Empire, residing at Pr. Stargard, Germany, have invented certain new and useful Improvements in and Connected with Portable Ladders, of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention refers to improvements in and connected with ladders, being especially applicable to those used in shops, warehouses, and the like.

Ladders constructed according to my invention are so arranged that they can be easily moved from place to place within certain limits irrespective of their weight. The ladder is supported by a rod hanging on rollers which run on rails. At its highest position the ladder is held hanging from the rod and can be easily moved on the rails. If the ladder is pulled down, it assumes an oblique or slanting position, its lower end resting on the floor and its upper end supported through the intermediary of the rod by the rollers and rails.

I will now describe my invention, with reference to the accompanying drawings, in which—

Figure 1 shows in elevation a simple form of my improved ladder in its highest position. Fig. 2 shows in elevation a side view of the ladder shown in Fig. 1 in the slanting position required for mounting. Fig. 3 shows, mostly in section, the rod, rollers, and rails at the upper end of the ladder. Fig. 4 is a side view of Fig. 3. Fig. 5 is a section of Fig. 3 on the line A B. Fig. 6 is a section of Fig. 3 on the line C D.

Two guide-rods *e f* with longitudinal slots *c d* are fitted to and prolong the upper ends of the sides *a b* of the ladder. A cross-piece *k*, fitted to and turning freely on the lower end of the rod *i*, has projecting studs or bolts *g h*, which engage in the slots *c d*. This cross-piece *k* can form one with or be firmly connected to the guide-rods *e f*, in which case the bolt *i* would slide in the cross-piece *k*. The guide-rods *e f* are united at their upper

ends by a cross-piece *e*, the latter having a hole *m*, in which the rod *i* passes and freely turns. This hole *m* has two incisions *n o* at the sides to allow the ends of a bolt or stud *p* to pass. This bolt or stud *p* passes through the rod *i*. Two rollers *q r* are fitted to the upper end of the rod *i* and run on rails *s*, fitted to the ceiling in any suitable place.

Now if the ladder is so turned that the bolt or stud *p* can pass through the incisions *n o* of the hole *m*, then the ladder can be pushed up so that the cross-piece *l* passes over the stud *i*, as shown in Fig. 3. If the ladder is now turned at right angles, the stud *p*, engaging with the cross-piece *l*, holds the ladder in the raised-up position, as shown in Fig. 1, so that it can thus be easily rolled from place to place. If it is required to place the ladder in position for using, it has only to be turned again at right angles and allowed to drop until it touches the floor.

The length of the rod *i* and the slots *c d* render it possible to give the required slant to the ladder, as shown in Fig. 2. In this position the studs or bolts *g h*, formed on the lower cross-piece *k*, engage with the upper end of the slots *c d*, and thus in the slanting position of the latter limit the forward movement of the rollers *q r* on the rails *s* and at the same time securely support the upper end of the ladder.

In case the rails *s* for some reason or other have to be placed some considerable distance from the ceiling a pin or stud *t* can be provided so as to prevent the rollers *q r* being raised up at the same time as the ladder.

What I claim, and desire to secure by Letters Patent, is—

A movable ladder for stores, warehouses and the like, having at the top end two slotted bars *e f*, connected at the upper end by a slotted cross-piece *l*, in combination with a rod *i* and with rollers *q* running on a cross-pin, secured in the head of the rod *i* and moving along in guides under the ceiling, said rod *i* passing through the slot of the cross-piece *l* and carrying a cross-pin *p* adapted to pass through the slotted cross-piece *l* in one position and



to rest upon the same in a position at right  
angles thereto when the ladder is turned  
through ninety degrees, and said rod *i* carry-  
ing at its lower end a cross-head *k* adapted to  
5 slide in the slots of the bars *e* and *f* substan-  
tially as described and for the purpose set  
forth.

In witness whereof I have hereunto set my  
hand in presence of two witnesses.

MAX TETZLAFF.

Witnesses:

WOLDEMAR HAUPT,  
HENRY HASPER.