No. 884,163. PATENTED APR. 7, 1908.

W. JONES.

LADDER.

APPLICATION FILED JUNE 11, 1907.

Fig. 1.

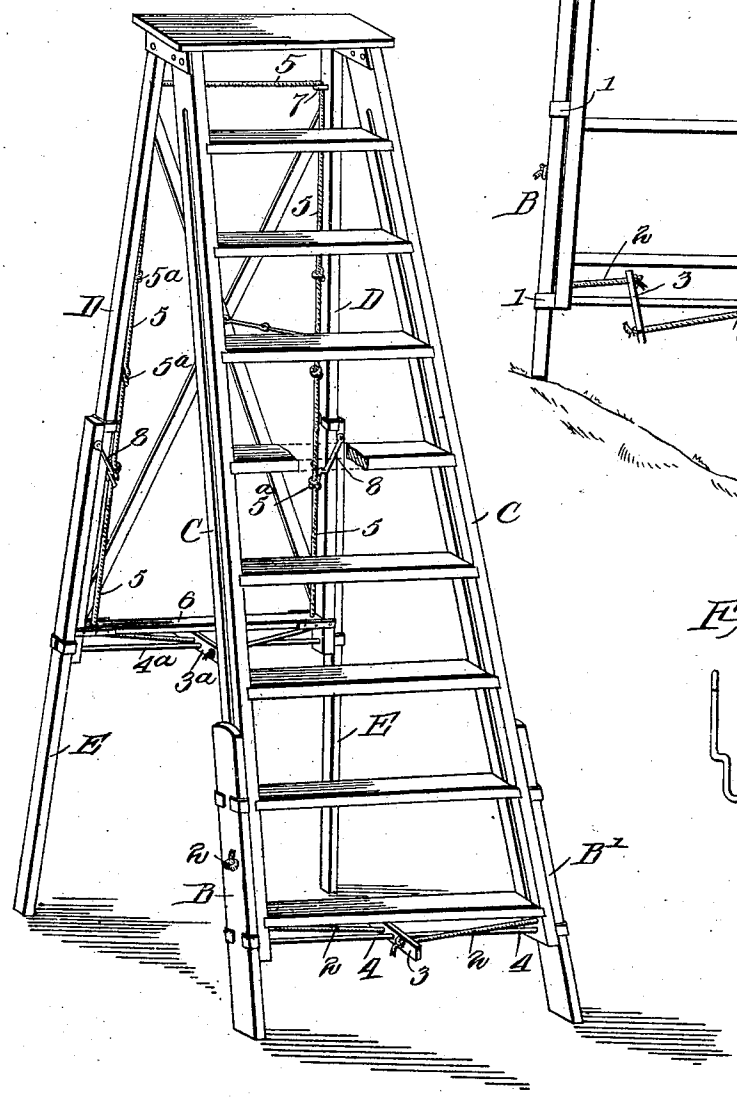


Fig. 2.

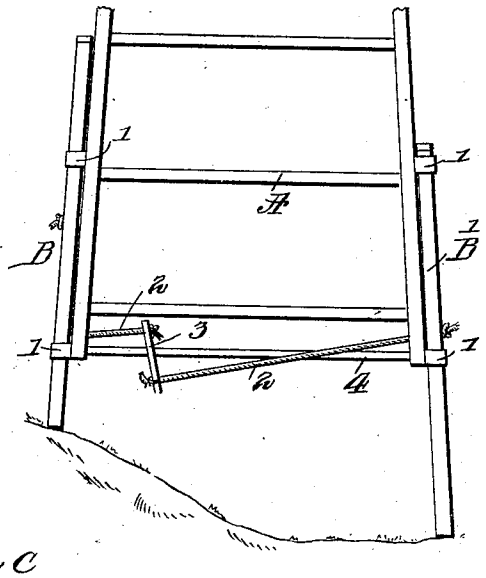
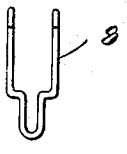


Fig. 3.



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LADDER.

No. 884,163. Specification of Letters Patent. Patented April 7, 1908.

Application filed June 11, 1907. Serial No. 378,385.

To all whom it may concern:

Be it known that I, WALTER JONES, a citizen of the United States, and a resident of Bowling Green, in the county of Warren and State of Kentucky, have invented an Improved Ladder, of which the following is a specification.

My improvement consists in an adjustable leg or foot attachment for ladders whereby the latter may be adjusted to rest, and maintain themselves vertically, upon sloping or uneven surfaces without danger of tilting or falling.

The invention is applicable to ordinary ladders, extension ladders, step-ladders, trestles, and like structures or devices.

The invention is embodied in the construction, arrangement, and combination of parts hereinafter described, and illustrated in the accompanying drawing, in which

Figure 1 is a perspective view of a step-ladder provided with my attachment. Fig. 2 is a face view of the lower portion of an ordinary ladder also provided with my attachment, a portion being broken away to illustrate the interior arrangement of parts. Fig. 3 is a plan view of the clevis or locking device forming a part of my ladder attachment.

I will first describe the invention as illustrated in Fig. 2. A indicates the body of the ladder proper, and B, B′, the slidable extention legs or feet of the same. The latter are adapted to slide in metal clips 1 secured to the body of the ladder and are connected by ropes 2—2 and a metal plate 3. The latter is provided with a central hole and adapted to slide upon an iron rod 4 which connects the side bars of the ladder proper. The inner ends of the ropes 2 are connected with the ends of the plate, as shown, and their opposite or outer ends pass through holes in the extension legs or feet B, B′, and through slots in the lower ends of the side bars of the ladder proper. It is apparent that by this construction, arrangement, and combination of parts the legs may be adjusted at different heights, as shown in Fig. 2, and locked in such position, and by means of the plate 3, which, in such case, binds on the rod 4 when held in an inclined position, as illustrated. By this means the attachment adapts the ladder to be placed and supported upon surfaces which are uneven or inclined, and where it is requisite that one foot or leg shall be higher than the other. When the plate 3 is pressed and tilted to the vertical position, it no longer binds on the rod 4 and may be slid thereon right or left, as required.

In Fig. 1, C indicates the body of a step-ladder, B, B′, the extensible feet therefor, D, the rear legs of the ladder, and E the slidable extension legs or feet applied to the rear legs D. It is apparent that the feet or legs B, B′, applied to the main portion or body C of the step-ladder, are connected and adapted to be adjusted and locked in the same manner and by the same means as shown in Fig. 2 and before described. Hence, no further description is required of this part of the step-ladder. The lower ends of the rear legs D are connected by an iron rod 4^a and upon this a plate 3^a is adapted to slide and lock in the same manner as already described with reference to Fig. 2. The cords 5 connected with such plate pass through a cross-bar 6 arranged above the rod 4^a and thence upward and through guides in the form of metal eyes 7 that are attached to the rest 4 near their upper ends. There is thus practically but one cord 5, and the same is provided with knots 5^a arranged equidistantly, as shown. Devices 8 in the form of clevises—see Fig. 3—are pivoted to the upper ends of the extensible feet or legs E and the legs D pass through them; also the rope 5. The outer end of the clevis 8 is narrowed or contracted in such manner and to such extent that it will prevent the knots 5^a sliding or slipping through it, as will be apparent from inspection of Fig. 1, where the clevises or devices 8 are shown engaging knots on the rope and thus preventing the extension legs E from sliding upward. Thus the rope and devices 8 serve as means for locking and holding the extensible legs in any required adjustment, that is to say, higher or lower on the legs proper D. It is apparent that when pressure on the ladder is relieved, the devices 8 may be swung upward, and thus disengaged from the rope and the knots thereof, the knots in such case passing up or down through the clevises, as will be readily understood. Thus, the legs E with the devices 8 may be readjusted higher or lower on the legs D and again locked with the rope. The plate 3^a

serves to lock the rope, as before described, but the use of this part of the apparatus is hardly necessary in view of the manner in which the devices 8 engage and lock with the rope.

It will be seen that by the construction, arrangement, and combination of parts just described, the extensible legs or feet E may be adjusted together higher or lower, as required to adapt the step-ladder for firm support upon a surface having a gradual inclination, or upon a stairway where the front portion of the ladder requires to be supported upon a lower step than the rear portion thereof. In such case the extensible feet or rests E would obviously rest upon a higher step than the feet B, B'. Further, it will be seen that either of the legs E may be adjusted higher or lower than the other in the same manner as shown and described with reference to the legs B, B', in Fig. 2, and the front attachments of the body of the step-ladder may also be similarly adjusted so that the said ladder may be adapted for firm support upon a surface inclined from left to right or right to left. I thus provide a ladder which is adapted for use in situations where an ordinary ladder or step-ladder cannot be safely employed.

I claim—

1. A ladder having slidable feet adapted for adjustment, to extend either side of the ladder and shorten the other, ropes connecting with said feet and passing through them and the ladder proper, and a means connecting the ropes and adapted for lateral adjustment to take up either rope and let out the other, as described.

2. The combination with the legs proper of a ladder, of slidable extension feet therefor, a cord connecting the two feet, a rod extending between the ladder legs, and a friction plate adapted to slide on the rod, the rope ends being connected with the same on opposite sides of the rope, substantially as described.

3. The combination with the legs proper of a ladder, of slidable extension feet, clevises pivoted to the feet and having their free ends contracted as described, a rope supported on the legs and provided with knots, the same passing through the clevises whose narrowed ends are adapted to engage the knots for holding and locking the feet in any required extension, substantially as described.

4. The combination with the legs proper of a ladder, and slidable extension feet applied thereto, of devices in the form of clevises having narrowed free ends attached to said feet and embracing the ladder legs, ropes provided with knots and adapted to slide, through the body portion of the clevises and to engage the outer ends of the same, and a friction device applied to the lower portion of the ladder legs and with which the ropes are connected, substantially as described.

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Witnesses:
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