(Model.)

L. P. TEED.

Ladder.

No. 238,067. Patented Feb. 22, 1881.

Fig: 1.

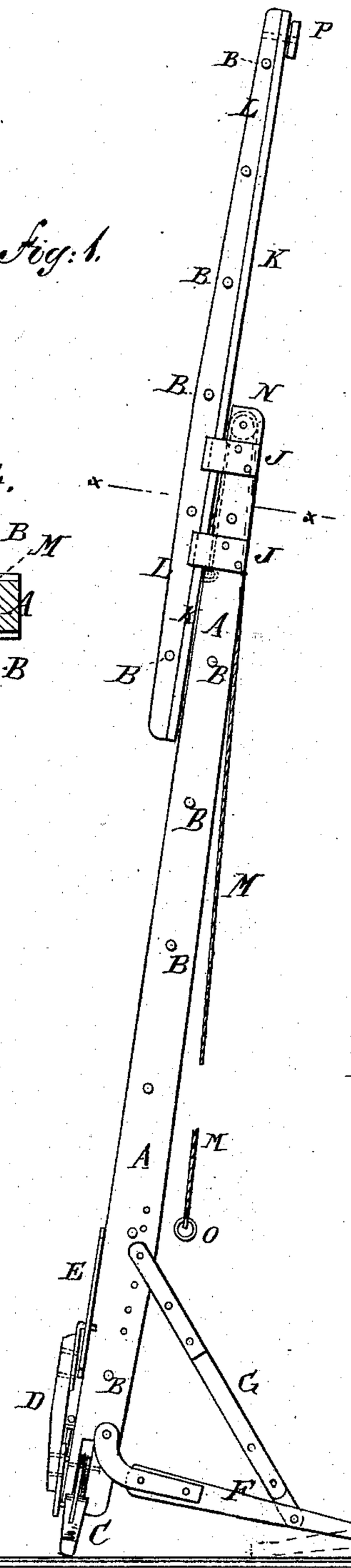


Fig: 3.

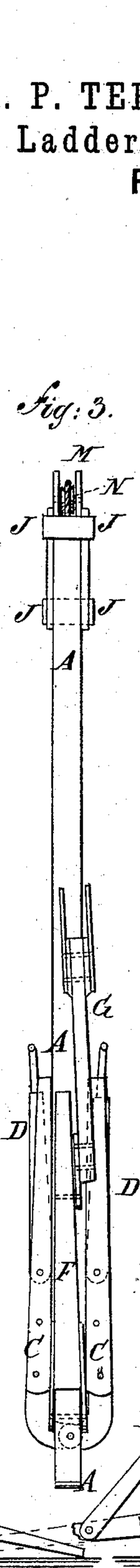


Fig: 2.

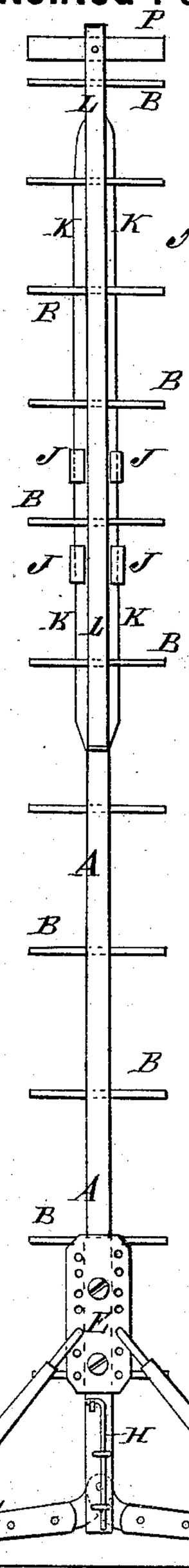


Fig: 4.

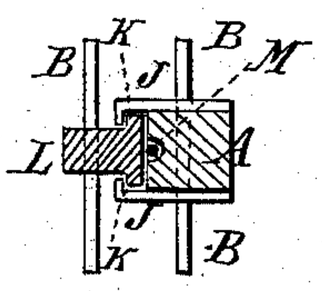
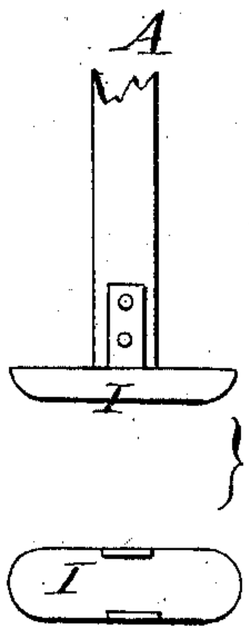


Fig: 5.



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UNITED STATES PATENT OFFICE.

LORENZO P. TEED, OF ERIE, PENNSYLVANIA.

LADDER.

SPECIFICATION forming part of Letters Patent No. 238,067, dated February 22, 1881.

Application filed July 30, 1880. (Model.)

To all whom it may concern:

Be it known that I, LORENZO P. TEED, of Erie, Erie county, Pennsylvania, have invented a new and useful Improvement in Ladders, of which the following is a specification.

Figure 1 is a side elevation of the improvement. Fig. 2 is a front elevation. Fig. 3 is a rear elevation of the lower part of the ladder folded. Fig. 4 is a sectional plan view taken through the line *x x*, Fig. 1; and Fig. 5 shows a shoe attached to the standard

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish ladders designed especially for use in picking fruit from trees, but which may be used to advantage for any of the purposes for which ladders are required, and which shall be simple in construction, easily handled, and reliable in use.

The invention consists in constructing a ladder of a standard having rounds, and provided with three hinged arms and adjustable braces for holding the ladder erect, a shoe for moving the ladder, a sliding rod for preventing the ladder from slipping, an extension-standard having rounds, hook-plates for connecting the extension-standard with the main standard, and a cord and pulley for raising and lowering the extension-standard, as will be hereinafter fully described.

A represents the standard or post of the ladder.

B are the rounds, which are passed through and secured in the standard A at suitable distances apart.

To the opposite sides of the lower end of the standard A are hinged the inner ends of two arms, C.

To the middle parts of each of the arms C is hinged the lower end of a brace, D, the upper end of which has a hook formed upon or attached to it, to be hooked into a hole in the projecting edge of the plate E, the middle part of which is bolted or otherwise secured to the forward side of the standard A. The projecting side parts of the plate E have a number of holes formed in them, to receive the hooks of the braces D, so that the arms C can be adjusted as the surface of the ground may require.

To the rear side of the lower end of the standard A is hinged the end of a third arm, F, to the middle part of which is hinged the end of a brace, G. The other end of the brace G is forked to receive the standard A, and is secured to the said standard by a pin or bolt passing through the ends of the branches of the brace G and through the standard A. Several holes are formed in the standard A, to receive the fastening-pin of the brace G, so that the arm F can be adjusted as the surface of the ground may require. With this construction the standard A will be firmly supported in an upright position without resting the upper end of the standard against any support, and whether the surface of the ground be level, inclined, or uneven. H is a pointed rod, which slides in keepers attached to the forward side of the lower end of the standard A, and which can be thrust into the ground, to prevent the lower end of the standard A from slipping when the ladder is placed upon inclined ground.

To the lower end of the standard A is attached a shoe, I, for convenience in moving the ladder from place to place, which is done by raising the outer end of the arm C upon the side toward which the ladder is to be moved, and using the said raised arm C as a tongue, by one person, for drawing the ladder, while the said ladder is held steady by another person taking hold of the brace D of the other arm, C.

To the opposite sides of the upper end of the standard A are attached two pairs of plates, J, the forward ends of which are bent inward to overlap flanges K, formed upon or attached to the sides of the extension-standard L. The standard L is provided with rounds B in the same manner as the standard A.

To the lower part of the inner side of the standard L is attached the end of a cord, M, which passes up along a groove in the forward side of the standard A, passes over a pulley, N, pivoted in a slot in the upper end of the standard A, extends down along the rear side of the standard A, and has a ring, O, attached to its end. By this construction the extension L B can be raised and lowered by drawing upon and slackening the cord M, and can be secured in any desired position by passing the

ring O over the end of one of the rounds B of the lower standard, A.

To the rear side of the upper end of the extension-standard L is attached a cross-bar, P, which, when the ladder L B is used as an extension part for the ladder A B, is turned longitudinally with the said standard L. When the ladder L B is used independently the cross-bar P is turned at right angles with the standard L, to serve as a foot for the said standard.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A ladder constructed, substantially as herein shown and described, of the standard A, having rounds B, the hinged arms C, having hook-braces D, the hinged arm F, having forked brace G, the eye-plate E, the sliding rod H, the hook-plates J, the extension-standard L, having rounds B and cross-bar P, and the cord and pulley M N, as set forth.

2. In a ladder, the combination, with the standard A, having rounds B, of the hinged arms C, having hook-braces D, the hinged arm F, having forked brace G, the sliding rod H, and the shoe I, substantially as herein shown and described, whereby the ladder can be held erect when unsupported at its upper end, and upon level and inclined ground, as set forth.

3. In a ladder, the combination, with the standard A, having rounds B, hinged arms C C F, braces D D G, shoe I, and sliding rod H, of the hook-plates J, the extension-standard L, having rounds B, the cord M, and the pulley N, substantially as herein shown and described, whereby the ladder can be extended and contracted, as set forth.

LORENZO PETTIS TEED.

Witnesses:
WM. P. HAYES,
JOSEPH JUSTICE.