MOBILE STEP LADDER
APPLICATION FILED AUG. 26, 1904.

Fig. 1.

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Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

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JOHN S. PADON, OF WESTPLAINS, MISSOURI.

MOBILE STEP-LADDER.


To all whom it may concern:

Be it known that I, JOHN S. PADON, a citizen of the United States, residing at Westplains, in the county of Howell and State of Missouri, have invented a new and useful Mobile Step-Ladder, of which the following is a specification.

This invention relates to step-ladders of that character which may be moved from place to place by a person located on the same.

The principal object is to provide means in the form of an attachment that can be readily applied to an ordinary step-ladder to permit the same being propelled from place to place and yet held at any position desired, said attachment being adjustable in size, so that it can be applied to different sizes of ladders.

A further object is to provide in connection with a step-ladder of this character a paper-support which will prove of advantage in supporting wall-paper while the same is being applied.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of a step-ladder with the improvements applied thereto. Fig. 2 is a rear elevation of the lower portion of the step-ladder. Fig. 3 is a side elevation of one of the pitmen. Fig. 4 is a cross-sectional view, on an enlarged scale, through the same. Fig. 5 is a detail view of one of the legs of the ladder member. Fig. 6 is a plan view of the bracket and operating shaft journaled therein, and Fig. 7 is a side elevation of the same.

Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

In the embodiment illustrated the step-ladder may be constructed in the ordinary manner, comprising a ladder member 8, having legs 9, connected by steps 10 and being provided with a platform 11 at its upper end.

A supporting member comprising spaced standards 12 and connecting-stays 13 is pivoted, as shown at 14, to the under side of the platform 11. The ladder member 8 is movably supported on wheels 15, that are journaled on axles 16, the inner ends of said axles being set in the lower ends of the legs 9 and the outer ends being engaged in depending ears 17, secured to blocks 18, that are in turn suitably fastened to said legs 9. The supporting member is likewise mounted on wheels 19, carried by a wheel-shaft 20, journaled in suitable boxings 21, secured to the lower ends of the standards 12. The wheels 19 are fixed to the shaft 20, so as to rotate therewith, and are adjustable longitudinally thereon, being normally held against relative movement with respect to the shaft by means of set-screws 22. The shaft 20 is provided between its ends with angularly-disposed cranks 23, which cranks are preferably, though not necessarily, located at right angles to each other.

The operating means is located at the upper end of the ladder and is constructed as follows: A bracket is employed, comprising a base 24, that rests flat upon the platform 11 and is provided with longitudinally-disposed slots 25. Through these slots pass clamping-bolts 26, that are also passed through the platform and constitute means for attaching the base to the platform, yet permitting the adjustment of the bracket. Said base is provided with spaced upstanding ears 27 and 28, in which is journaled an operating-shaft 29, carrying at one end a handle-crank 30. The shaft 29 is provided between the ears 27 and 28 with angularly-disposed cranks 31, located in corresponding angular relation to those of the wheel-shaft 20. The two shafts are connected by extensible pitmen, each of which comprises overlapping sections 32, slidable mounted in guide-yokes 33, one of the yokes of each pitman being provided with a set-screw 34, which normally holds the sections against relative longitudinal movement, the ends of the pitmen having journal-boxings 35, that receive the offset-pin portions of the cranks. The ear 28 of the bracket is preferably somewhat larger than the ear 27 and is provided with a circular series of sockets 36, surrounding the shaft and adapted to be engaged by the tooth 37 of a spring-pressed holding-dog 38, carried by the shaft 29.

In connection with this ladder, and particularly when the same is used by paper-hangers, a paper-support is employed comprising a standard or stem 39, extending longitudinally of one of the legs 9 of the ladder member and having a slidable engagement, as shown at 40, with the same, said stem or standard also slidably passing through the platform 11 and having at its upper end an
arm 41, that overhangs the ladder and has a roller 42 journaled thereon. The arm and roller are thus capable of being elevated or depressed by sliding the stem or standard 39 longitudinally upon the leg 9, and the support thus formed can be held in adjusted position by any desired means—as, for instance, a clamp 43.

It will be apparent that a workman using the ladder may propel the same from place to place by turning the handle-crank 30 after having first unlocked the same by detaching the dog from the ear 28. This saves a very material amount of time in various kinds of work, particularly paper-hanging, as it avoids the necessity of continually dismounting to move the ladder and remounting the same after such movement. Moreover, it will be apparent that the improvements are in the form of attachments that can be readily applied to any ordinary step-ladder, the wheels 19, constituting the drivers, being adjustable upon the wheel-shaft 20 to suit ladders of different widths and the pitmen being extensible in order that the propelling means may be applied to ladders of different heights. Furthermore, the extensible pitmen are advantageous in folding step-ladders, for, as the pivot-axes of the supporting member of the ladder and the pitmen are not coincident, by loosening the set-screws 34 of the pitmen the ladder may be readily folded without interference on the part of said pitmen. The paper-support is also an important feature, as it does away with the necessity of scaffolding, particularly when papering ceilings, the arm with its roller acting as a support for holding the paper while the same is being applied and the roller permitting the movement of the ladder and the passage of the paper thereover.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

The invention can be constructed in diminutive form for the amusement of children in moving themselves from place to place, and as a toy the invention possesses considerable advantage, furnishing much amusement.

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

1. In a step-ladder, the combination with swinging members pivotally connected at their upper ends, one of said members having a platform, of wheels journaled on the other member, operating means for the wheels movably mounted on the platform, and extensible connections between the wheels and the operating means that permit the swinging of the members toward and from each other.

2. In a step-ladder, the combination with swinging members pivotally connected at their upper ends, of a shaft journaled on the upper end of one member and having cranks, a shaft journaled on the lower end of the other member and having cranks, wheels carried by the latter shaft, and pitmen connecting the cranks, said pitmen permitting the swinging movement of the members.

3. In a step-ladder, the combination with a ladder member having a platform, of a supporting member pivoted to the platform, a shaft journaled on the lower portion of the supporting member, wheels secured to the shaft, an operating-shaft journaled on the platform, and an extensible connection between the shafts.

4. In a step-ladder attachment, the combination with a wheel-shaft having angularly-disposed cranks, of wheels adjustably mounted on said shaft and movable toward and from each other, means for attaching the same to the lower portion of a step-ladder; an operating-shaft having angularly-disposed cranks and a handle-crank, means for attaching the same to the platform of such ladder, and extensible pitmen connecting the cranks of the operating-shaft and the wheel-shaft and comprising overlapping slidably-associated sections.

5. In a step-ladder, the combination with driving-wheels, of an operating-shaft having connections therewith for driving the wheels, and means for adjustably attaching the shaft to the platform of a step-ladder.

6. The combination with a step-ladder having a platform, of a wheel-shaft journaled on the lower portion of the ladder, wheels attached to the shaft, a bracket comprising a base-plate adjustably mounted on the platform and having spaced ears, an operating-shaft journaled in the ears, and connections between the operating-shaft and wheel-shaft.

7. The combination with a ladder having a platform, of a wheel-shaft journaled on the lower portion of the ladder, wheels secured to the shaft, a bracket attached to the platform and including an ear having a circular series of sockets, an operating-shaft journaled on the bracket and in the ear, connections between said operating-shaft and the wheel-shaft, and a dog carried by the operating-shaft and adapted to enter the sockets of the ear.

8. The combination with a step-ladder, of wheels for supporting the ladder, means mounted on the ladder for operating the wheels to move said ladder, a support comprising a standard extending longitudinally of the ladder, said support being longitudinally movable on the ladder and revoluble on its longi-
tudinal axis, and an offset supporting-arm carried by the upper end of the standard and adjustable therewith.

9. The combination with a step-ladder, of 5 wheels for supporting the same, means for operating certain of the wheels, and a paper-support including an arm overhanging the ladder and a roller journaled on the arm.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN S. PADON.

Witnesses:
B. R. WESCOTT,
John F. Williams.