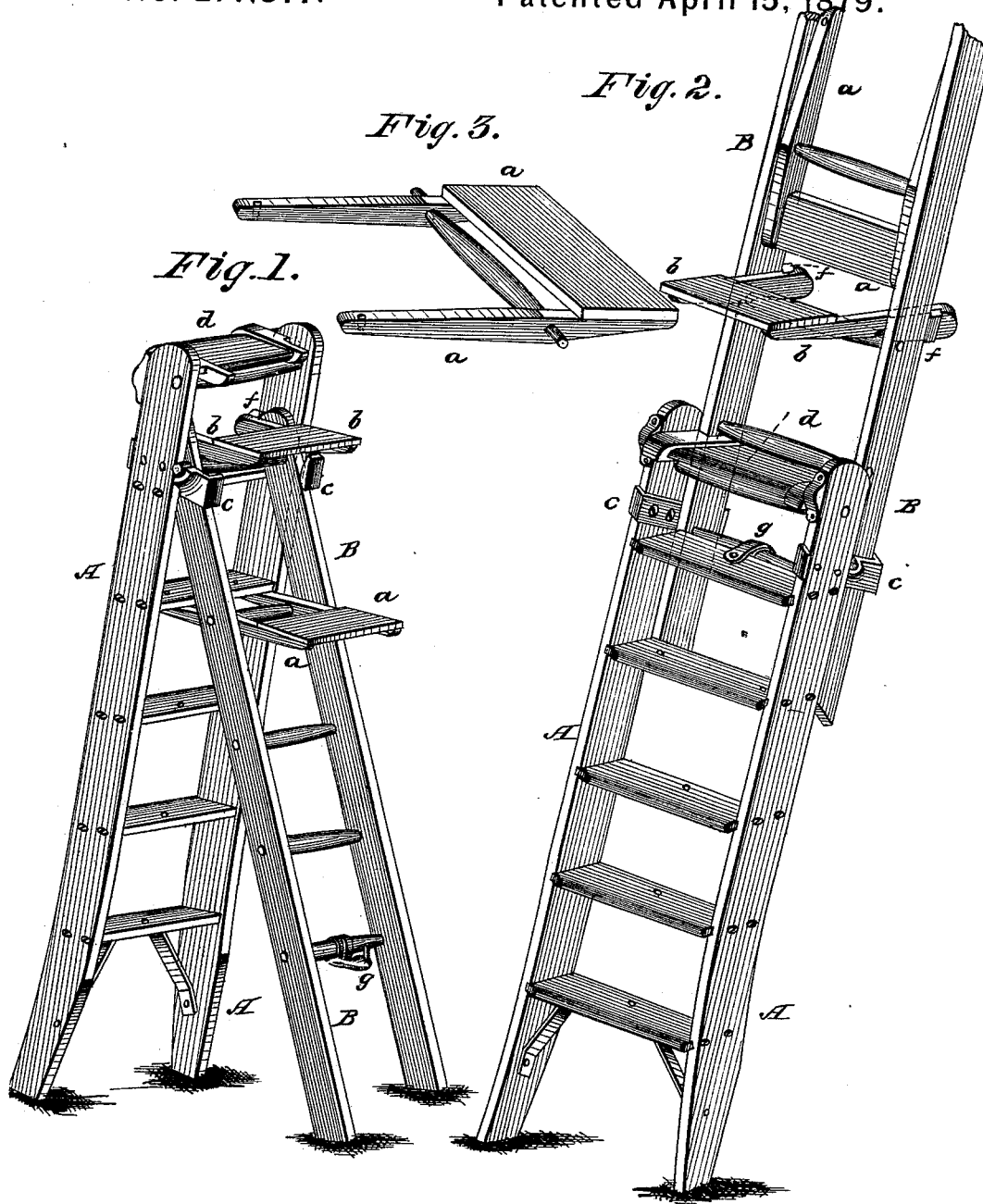


F. DYER.  
Step-Ladder.

No. 214,377.

Patented April 15, 1879.



Witnesses:  
*P. C. Hatch.*  
*Wm. Supperman.*

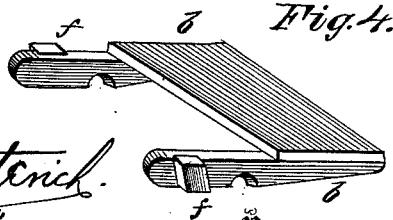


Fig. 4.

Per *Manahan & Ward.*

Inventor:  
*Fayette Dyer.*  
Attorneys.

# UNITED STATES PATENT OFFICE.

FAYETTE DYER, OF ROCK FALLS, ILLINOIS.

## IMPROVEMENT IN STEP-LADDERS.

Specification forming part of Letters Patent No. **214,377**, dated April 15, 1879; application filed September 26, 1878.

*To all whom it may concern:*

Be it known that I, FAYETTE DYER, of Rock Falls, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Step-Ladders; and I do hereby declare that the following is a full, clear, and exact description of my invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention pertains to that class of step-ladders which are also adapted to be used for extension-ladders; and my invention relates to an improved mode of hinging and extending such ladder.

Figure 1 is a side elevation of my invention as a step-ladder. Fig. 2 represents its use as an extension-ladder. Figs. 3 and 4 exhibit detached views of the shelf *a* and shelf *b*.

The ladder is constructed in two parts, which, for convenience in description, we will call A and B. The part A is the main step-ladder, and has near its upper end two clasps, *c c*, attached to the inner side of each side plate. The clasps *c c* extend beyond the side plates of the part B, and engage the outside thereof, as shown.

On the upper edge of the clasps *c c*, and next the side plates of A, are formed semicircular recesses for the reception of the prolongation of the upper round of the part B, which upper round protrudes beyond the side plates of B, for the purpose of resting in such recesses. The upper step, *d*, of the part A is hinged at its front edge, so as to rest upon an extra round in A, as shown, or to turn back when required.

On one of the rounds of the part B is pivoted the shelf *a*, the supporting-arms of which extend under the corresponding step of the part A, and thus support the shelf. On the under side of such step of the part A are small pins, which enter holes in the arms of the shelf, and prevent the movement of the latter. Thus the shelf *a* performs the functions of a support for a basket, pail, &c., and also

serves to hold the parts A and B from spreading when used as a step-ladder.

The shelf *b* is constructed of two arms and a cross-board, as shown, such arms having semicircular recesses on their lower edge to rest upon the rounds of the part B, and having stops *f f* on their sides, near their outer ends, to lock against the outside of the plates of B, and hold the shelf in position. Such shelf is passed between the sides of B by being turned partly edgewise.

The shelf *b* is detachable, and capable of being placed on any round of the part B, whether used as a step-ladder or extension-ladder, and is intended as a support for a bucket or basket in picking fruit, painting, &c.

The operation of the invention as a step-ladder it is not necessary to describe. When intended to be used as an extension-ladder, the shelf *a* is loosened and turned in a line with the part B. The parts are then drawn together, and the part B pushed up beyond the part A. The step *d* of the part A, after the passage of each round of B, drops below such round, and serves as a stop therefor, thus making the gradations of extension the distance between each round of B. On the lower round of B is placed a lock, *g*, the angular point of which fits into corresponding holes in the steps of A, and thus assists in maintaining the rigidity of the ladders when used in extension.

The uses and advantages of an extension step-ladder are apparent. One advantage peculiar to my invention is, that when used as an extension-ladder it can be lengthened or shortened by the person on it without such person taking the time or trouble to descend to the ground.

By slipping the part B entirely out of the clasps *c c*, the parts may be separately used as short ladders.

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

1. In a step-ladder, the part A, when provided with the clasps *c c*, the latter having the recesses described for the reception of the upper round of B, in combination with the

part B, substantially as and for the purpose described.

2. The part A, having the hinged step *d* pivoted thereto, and supported upon its upper round, in combination with the part B, adapted to be supported thereon by its rounds when extended, in the manner and for the purpose shown.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses:

FAYETTE DYER.

Witnesses:

JOHN W. ALEXANDER,

H. C. WARD.