No. 714,849. Patented Dec. 2, 1902.

P. F. WYNN.

STEP LADDER.

(Application filed Feb. 10, 1902.)

(No Model.)

Fig. 3.

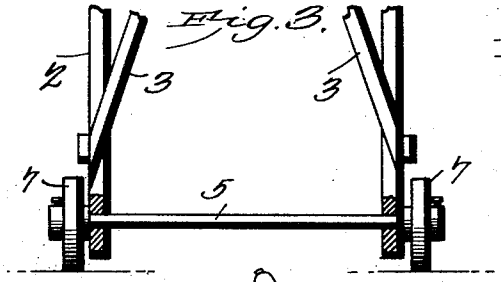


Fig. 4.

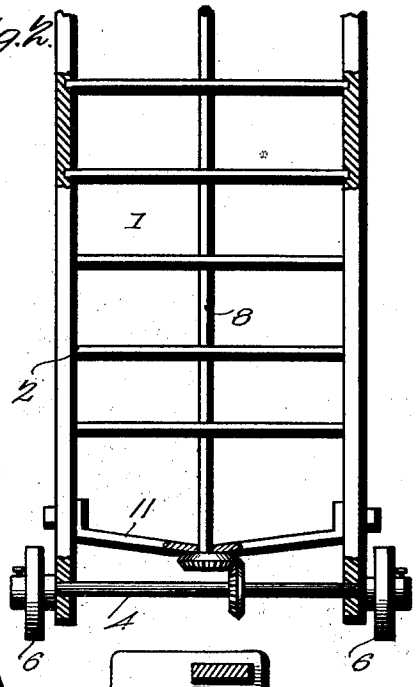


Fig. 1.

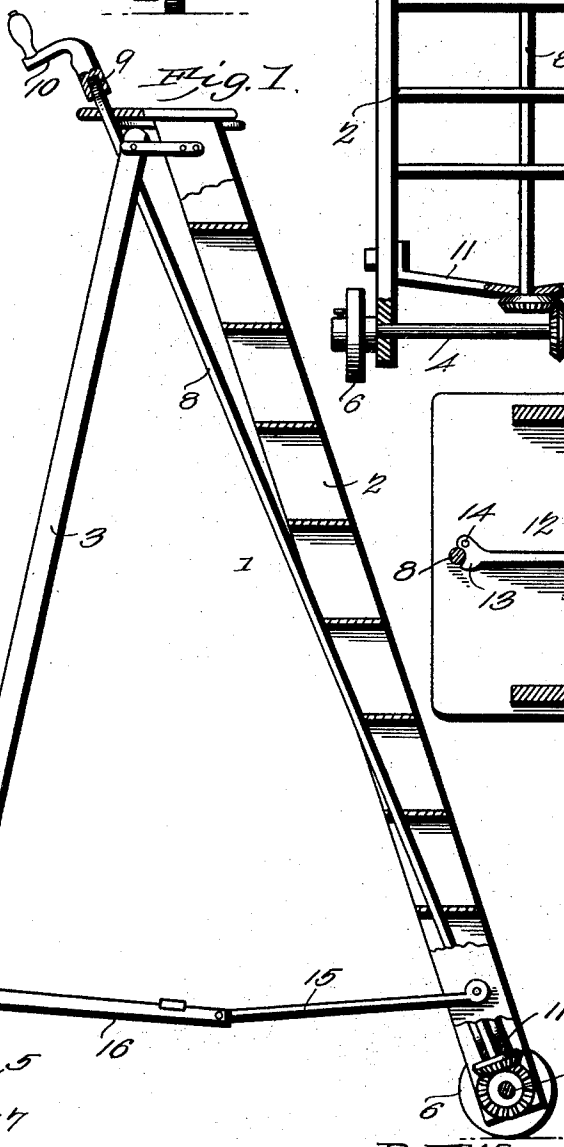
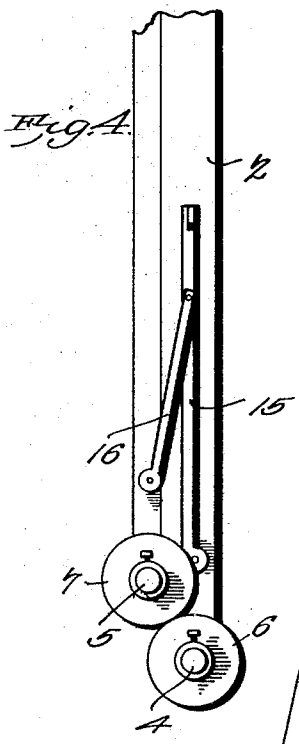


Fig. 5.

Fig. A.



Witnesses
E. F. Stewart
H. F. Riley

P. F. Wynn, Inventor.
by C. A. Snow & Co
Attorneys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PRENTICE FREMONT WYNN, OF MARIETTA, OHIO, ASSIGNOR OF ONE-HALF TO JOHN RANDOLPH WYNN, OF MARIETTA, OHIO.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 714,849, dated December 2, 1902.

Application filed February 10, 1902. Serial No. 93,394 (No model.)

To all whom it may concern:

Be it known that I, PRENTICE FREMONT WYNN, a citizen of the United States, residing at Marietta, in the county of Washington and State of Ohio, have invented a new and useful Step-Ladder, of which the following is a specification.

The invention relates to improvements in step-ladders.

The object of the present invention is to improve the construction of step-ladders, and to provide a simple and comparatively inexpensive one designed for paper-hangers, painters, and the like and for use in stores and similar places and capable of being readily moved backward and forward by a person upon it, whereby different portions of a wall or ceiling and various parts of shelves may be operated on and examined without necessitating the operator descending from the step-ladder.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation, partly in section, of a step-ladder constructed in accordance with this invention. Fig. 2 is a detail view of a portion of the front of the step-ladder, illustrating the manner of mounting the gearing for actuating the ladder. Fig. 3 is a detail view of the lower portion of the rear supporting-frame of the step-ladder. Fig. 4 is a detail view showing the ladder folded. Fig. 5 is a detail view illustrating the manner of locking the step-ladder against accidental movement.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a folding step-ladder composed of the front ladder section or portion 2 and a rear supporting or bracing frame 3, and the said step-ladder is provided at the bottom of its front and rear portions with suitable bearings for the reception of front and rear axles 4 and 5, upon which are mounted wheels 6^a and 7^a, arranged to run upon the floor or other supporting-surface to enable the step-ladder to be moved backward and forward. The front axle 4 is provided near its center with a bevel-gear 6, which meshes with a bevel-pinion 7 of a longitudinal shaft 8, extending to the top of the step-ladder and journaled in suitable bearings of the same and provided at its upper end with a polygonal portion 9 for the reception of a removable crank-handle 10, by means of which the shaft may be readily rotated for communicating motion to the front axle, whereby the step-ladder may be propelled backward or forward. This construction will enable a paper-hanger, painter, plasterer, or other workman to operate at different points without ascending and descending each time it is necessary to change the position of the step-ladder, and a clerk may readily move the step-ladder along the shelves of a store to obtain access to various portions of the stock and for other purposes without descending from the ladder. The longitudinal shaft extends through the steps of the lower portion of the front of the step-ladder and through the top of the same, and the gear-wheel 7 is located directly beneath a transverse brace 11, preferably constructed of metal and secured to the inner faces of the sides of the front portion of the step-ladder. The brace has slightly-inclined sides and is adapted to retain the gear-wheels in mesh with each other.

The shaft is held against accidental rotation by a lever 12, forming a brake and having a head 13, which is pivoted at one side by a suitable fastening device 14 to the lower face of the top board or piece of the step-ladder, and which is provided with a recess conforming to the configuration of the shaft. The locking-lever 12 extends beyond the front of the top piece of the step-ladder and is adapted to be readily swung into and out of engagement with the shaft, and it may be retained in engagement with the shaft by the frictional contact between the locking-lever and the lower face of the top piece of the step-ladder; but any other means may be employed for holding the locking-lever in engagement with the shaft. The locking-lever is adapted to create sufficient friction to prevent the shaft from accidentally rotating should the floor or other supporting-surface be slightly inclined, so that there is no liability

of the step-ladder accidentally slipping backward and forward and changing its position while the operator is upon the same. The folding step-ladder is held in operative position by folding braces 15 and 16, which are arranged as clearly shown in Figs. 1 and 4 and which permit the rear frame, which is hinged at the top, to swing to the position shown in Fig. 4. The folding braces are pivoted at their outer ends to the front and rear portions of the step-ladder and are similarly connected at their inner ends, one of the braces being extended beyond the inner pivotal point and provided with a lug for engaging the other brace, whereby the parts are held in the position shown in Fig. 1.

It will be seen that the step-ladder is exceedingly simple and inexpensive in construction, that it is easily operated, and that it is adapted to permit a person to readily change the position of the step-ladder without descending from the same.

What I claim is—

1. A folding portable step-ladder comprising a front ladder-section, a rear brace or prop hinged at the top to the front ladder-section, wheels arranged at the front and back of the step-ladder and supporting the same, an upright shaft extending from the bottom to the top of the step-ladder and projecting above the same and provided at its upper end with means for rotating it, gearing arranged at the lower end of the upright shaft and connecting the same with the wheels, and a locking device located at the top of the step-ladder and engaging the upright shaft, substantially as described.

2. A step-ladder having front and rear axles provided with wheels, an upright shaft extending through the top piece of the step-ladder, gearing connecting the shaft with one of the axles, and a locking-lever pivoted to the lower face of the top piece and frictionally engaging the same and provided at its inner end with a recessed head for engaging the shaft, said lever being extended beyond the top piece of the step-ladder, substantially as described.

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

PRENTICE FREMONT WYNN.

Witnesses:
WM. A. JUDD,
HOWARD V. SPEER.