

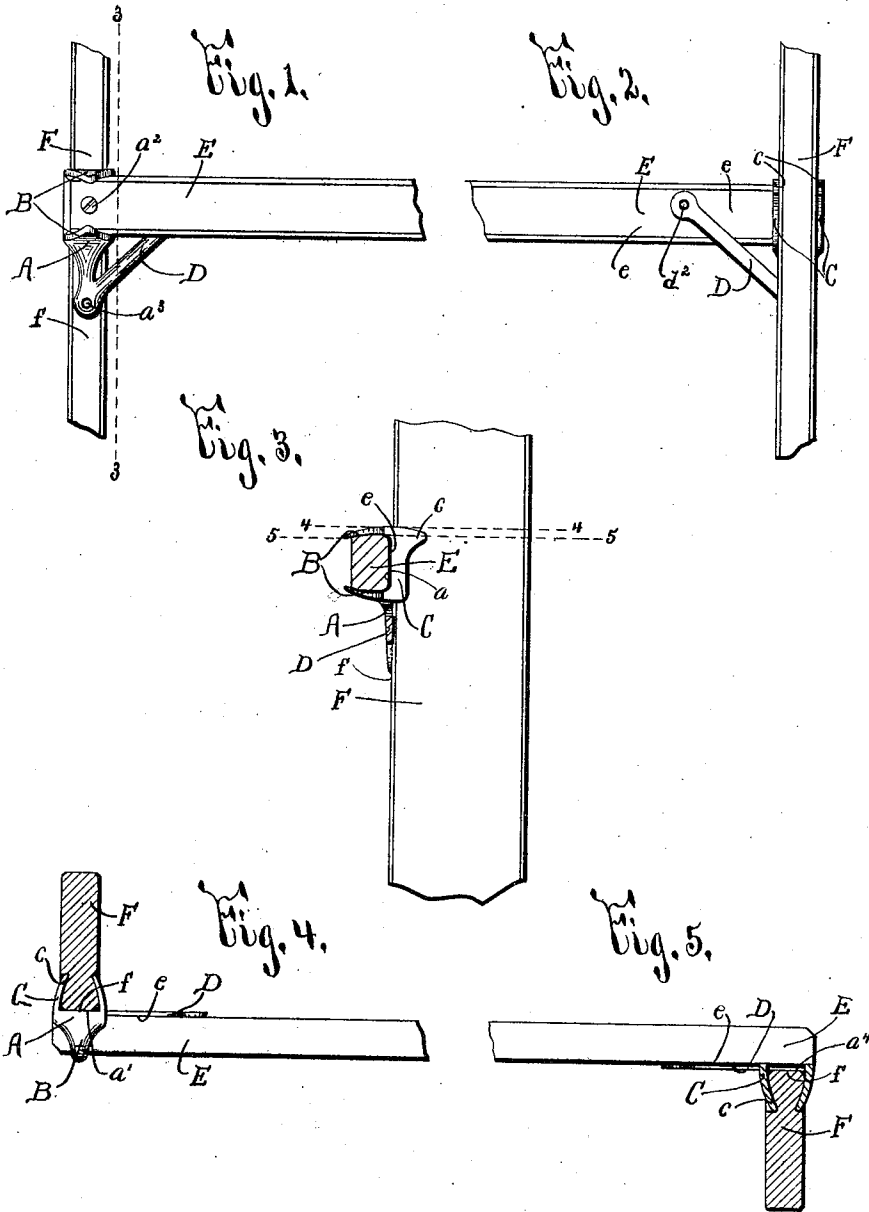
No. 828,049.

PATENTED AUG. 7, 1906.

F. B. PEASE.  
LADDER.

APPLICATION FILED MAR. 13, 1902.

2 SHEETS—SHEET 1.



WITNESSES:

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Chas. Young.

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2 SHEETS—SHEET 2.

Fig. 6.

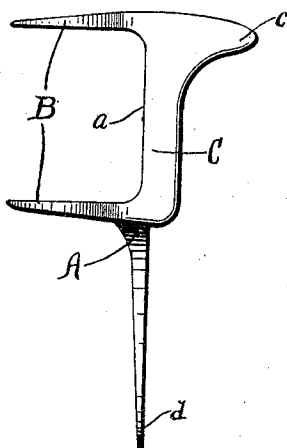


Fig. 7.

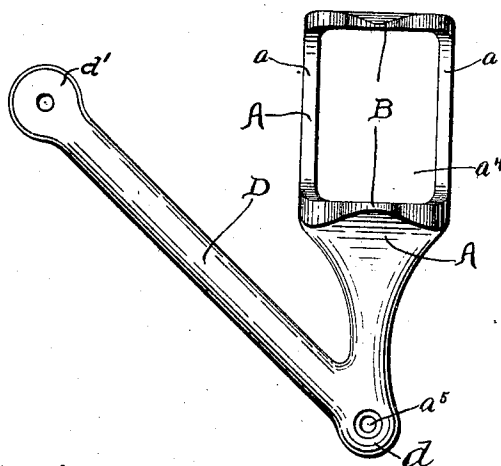


Fig. 9.

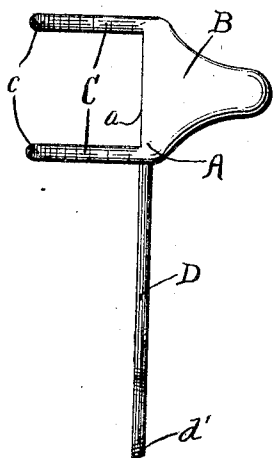
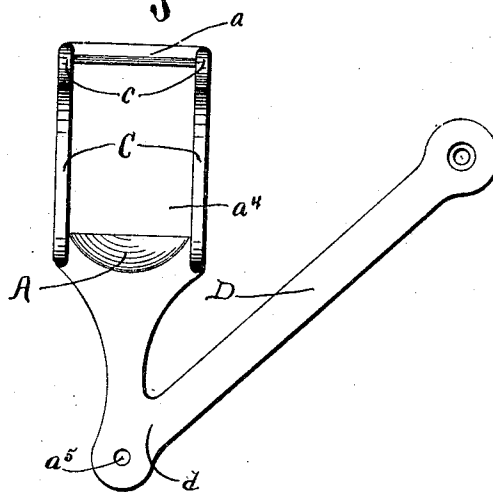


Fig. 8.



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# UNITED STATES PATENT OFFICE.

FRANKLIN B. PEASE, OF ROCHESTER, NEW YORK.

## LADDER.

No. 828,049.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed March 13, 1902. Serial No. 97,999.

*To all whom it may concern:*

Be it known that I, FRANKLIN B. PEASE, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Ladder, of which the following is a specification.

My invention relates to ladders, and has for its object the production of a rung-support which is particularly simple in construction and highly efficient and durable in use; and to this end it consists in the structures and combinations hereinafter set forth and claimed.

In describing this invention reference is had to the accompanying drawings, forming part of this specification, in which like letters refer to corresponding parts in all the views.

Figures 1 and 2 are respectively front and rear elevations of a rung-support embodying my invention and contiguous portions of a rung and a side bar operatively connected by said support. Figs. 3, 4, and 5 are sectional views taken, respectively, on lines 3-3, 4-4, and 5-5, Figs. 1 and 3. Figs. 6, 7, 8, and 9 are respectively side, front, and rear elevations and top plan of one of my detached rung-supports.

The rung-support of my ladder is particularly applicable for supporting rungs having their ends extended crosswise of the contiguous edges of the side bars of a ladder, and comprises, essentially, a main body A, arms B B, C C, and a brace D. Said main body A is usually formed with opposite substantially flat surfaces  $a$   $a'$ , engaged, respectively, with opposing upright faces  $e$   $f$  of the rung E, and the side bar F of the ladder being thus interposed between the planes of said opposing upright faces and is secured to said rung and side bar by fastening members  $a^2$   $a^3$  and the arms B B, C C. The lower portion of the main body A is extended beneath the rung E and is provided with a substantially flat surface which forms, essentially, a continuation of the surface  $a'$  of the upper portion of the body A and is engaged with the contiguous face or front edge of the side bar F. The fastening member  $a^2$  is passed through the rung E and an opening  $a^4$  in the upper portion of the main body A, extending through the surfaces  $a$   $a'$ , and is suitably engaged with the side bar F, and the fastening member  $a^3$  is passed through an opening  $a^5$  in the lower portion of the main body A and is engaged with the side bar F.

The arms B B project from the upper por-

tion of the surface  $a$ , one above the other and above and below the opening  $a^4$  at an angle to the surfaces  $a$   $a'$ , engage upper and lower surfaces or edges of the rung, are generally formed flexible, and their free ends are deflected toward each other, Figs. 1 and 3, for securing the rung in position. The arms C C project from the sides of the upper portion of the face  $a'$  of the main body A at an angle to the surfaces  $a$   $a'$ , engage contiguous surfaces of the inner and outer sides of the bar F, and are preferably formed flexible and provided at their upper portions with rearwardly-projecting extensions  $c$ , having their free ends deflected toward each other and embedded into opposite surfaces of the side bar F, Figs. 4 and 5, for facilitating the securing of the rung-support to said bar F.

It will be particularly noted that the main body A of my rung-support is formed with transverse parts above and below the opening  $a^4$ , having their separated rear surfaces engaged with the front face or edge of the side bar F, and is also formed with upright parts arranged directly in advance of the arms C C and forming, essentially, forward extensions of said arms, which project beyond the front face or edge of the side bar F and have their opposing faces separated and their outer or front edges separated and engaged with the longitudinal face or side of the rung E.

The brace D is arranged in an inclined plane, is united at its lower end to the lower portion of the main body A, and is provided with a lower surface  $d$ , which engages the face  $f$  of the side bar F, and with an upper surface  $d'$  for engaging the face  $e$  of the rung E at the inner side of the main body A of the rung-support and the side bar F. A suitable fastening member  $d^2$  secures the upper end of the brace D to the rung E.

The rung-support of my ladder consists of a single piece which is cheaply manufactured, is readily secured in position, and firmly and positively supports the rung engaged thereby and avoids weakening of the side bar, as when the rung and the side bar are united by a mortise and tenon. Said support is not limited in its use to ladders, and it is applicable for shelving, and, as will be obvious to those skilled in the art, any suitable number of supports may be used with a single rung or shelf, and, if desired, both the front and rear parts of the rungs or shelves may be engaged and supported by my rung-supports.

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

1. In a ladder, the combination of a side bar, and a rung having one end thereof extended crosswise of an edge of the side bar; with a rung-support comprising a part interposed between the planes of opposing faces of the side bar and the rung, a pair of arms projecting from said part and engaged with opposite surfaces of the side bar, a second pair of arms projecting from said part and engaged with upper and lower edges of the rung, and means for preventing movement of the rung relatively to the rung-support, substantially as and for the purpose described.

2. In a ladder, the combination of an upright side bar, and a rung having one end thereof extended crosswise of an edge of the side bar; with a rung-support comprising a part having opposite surfaces engaged respectively with said edge of the side bar and the contiguous side of the rung, said part having an opening extending through such opposite surfaces thereof, means engaged respectively with surfaces of the side bar and the rung arranged at an angle to said opposite surfaces, and a fastening member passed through the opening in said part and engaged with the side bar and the rung, substantially as and for the purpose specified.

3. In a ladder, the combination of a side bar, and a rung having one end thereof extended crosswise of an edge of the side bar; with a rung-support comprising parts having their opposing faces separated and engaged with opposite surfaces of the side bar, said parts being extended beyond said edge of the side bar and having their outer edges separated and engaged with the contiguous face of the rung, and means for preventing movement of the rung relatively to the rung-support, substantially as and for the purpose set forth.

4. In a ladder, the combination of a side bar, and a rung having one end thereof extended crosswise of an edge of the side bar; with a rung-support comprising parts having their opposing faces separated and engaged with opposite surfaces of the side bar; said parts being extended beyond said edge of the side bar and having their outer edges separated and engaged with the contiguous face of the rung, a pair of arms engaged with upper and lower edges of the rung, and a fastening member arranged between said opposing faces and engaged with the side bar and the rung, substantially as and for the purpose set forth.

5. In a ladder, the combination of a side bar, and a rung having one end thereof extended crosswise of an edge of the side bar, with a rung-support comprising a main body having its upper portion provided with an opening, upper and lower arms projecting

from one surface of the main body above and below the opening for engaging upper and lower surfaces of the rung, and side arms projecting from the opposite surface of the main body and fixed to contiguous surfaces of the inner and outer sides of the side bar, the lower portion of the main body being extended beneath the rung and engaged with the contiguous edge of the side bar, a fastening member passed through the opening and engaged with the side bar and the rung, and a second fastening member engaged with the lower portion of the main body and the side bar, substantially as and for the purpose described.

6. In a ladder, the combination of an upright side bar, and a rung having one end thereof extended crosswise of an edge of the side bar; with a rung-support comprising a main body having opposite substantially flat surfaces for engaging respectively, said edge of the side bar and the contiguous longitudinal side of the rung, the lower portion of the main body being extended beneath the rung and having a substantially flat surface engaged with said edge of the side bar, a pair of arms projecting from the main body above the lower portion thereof and engaged with opposite surfaces of the side bar, and a second pair of arms projecting from the upper portion of the main body and engaged with upper and lower edges of the rung, substantially as and for the purpose described.

7. In a ladder, the combination of an upright side bar, and a rung having one end thereof extended crosswise of an edge of the side bar; with a rung-support comprising a part having separated surfaces for engaging one edge of the side bar and separated surfaces for engaging the contiguous longitudinal side of the rung, a pair of arms engaged with opposite surfaces of the side bar and having their upper portions provided with yielding rearwardly-projecting extensions, a second pair of arms engaged with upper and lower edges of the rung, a downward extension engaged with said edge of the side bar, and a brace connected to the downward extension and engaged with the rung at one side of the side bar, substantially as and for the purpose specified.

8. The combination with the rung and the side bar of a ladder; of a rung-support comprising a main body having opposite surfaces for engaging, respectively, opposing upright faces of the rung and the side bar and having its upper portion provided with an opening, upper and lower flexible arms projecting from one of the opposite surfaces of the main body above and below the opening for engaging upper and lower surfaces of the rung, and flexible side arms projecting from the other of said opposite surfaces of the main body for engaging contiguous surfaces of the inner and outer sides of the side bar, a fastening mem-

ber passed through the rung and the opening in the upper portion of the main body and engaged with the side bar, and a second fastening member engaged with the lower portion of the main body and said side bar, substantially as and for the purpose set forth.

9. A rung-support for a ladder comprising a main body having a surface for engaging an upright face of the side bar of the ladder, and provided with a plurality of arms for engaging, respectively, contiguous surfaces of the rung and the side of said side bar, and with a brace having one end connected to the main body and its other end formed with a surface for engaging the contiguous face of the rung at the inner side of said main body, substantially as and for the purpose described.

10. In a ladder, the combination of a side bar, and a rung having one end thereof extended crosswise of an edge of the side bar, with a rung-support comprising a main body having its upper portion provided with an opening, upper and lower arms projecting from one surface of the main body above and below the opening for engaging upper and lower surfaces of the rung, and side arms projecting from the opposite surface of the main body and fixed to contiguous surfaces of the inner and outer sides of the side bar, the lower portion of the main body being extended beneath the rung and engaged with the contiguous edge of the side bar, and a brace having one end connected to the lower portion of the main body and its other end formed with a surface for engaging the contiguous face of the rung at the inner side of said main body,

and the rung, and a second fastening member engaged with the lower portion of the main body and the side bar, substantially as and for the purpose specified.

11. A rung-support for a ladder comprising a main body having opposite surfaces for engaging, respectively, opposing upright faces of the rung and the side bar of the ladder and having its upper portion provided with an opening, upper and lower flexible arms projecting from one of the opposite surfaces of the main body above and below the opening for engaging upper and lower surfaces of the rung, and flexible side arms projecting from the other of said opposite surfaces of the main body for engaging contiguous surfaces of the inner and outer sides of the side bar, and an inclined brace having its lower end united to the lower portion of the main body and formed with a surface for engaging the upright face of the side bar engaged by the main body of the rung-support and its upper portion formed with a surface for engaging the opposing upright face of the rung at the inner side of said main body, substantially as and for the purpose specified.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 30th day of January, 1902.

FRANKLIN B. PEASE.

Witnesses:

CHARLES J. TONER,  
F. G. BODELL.