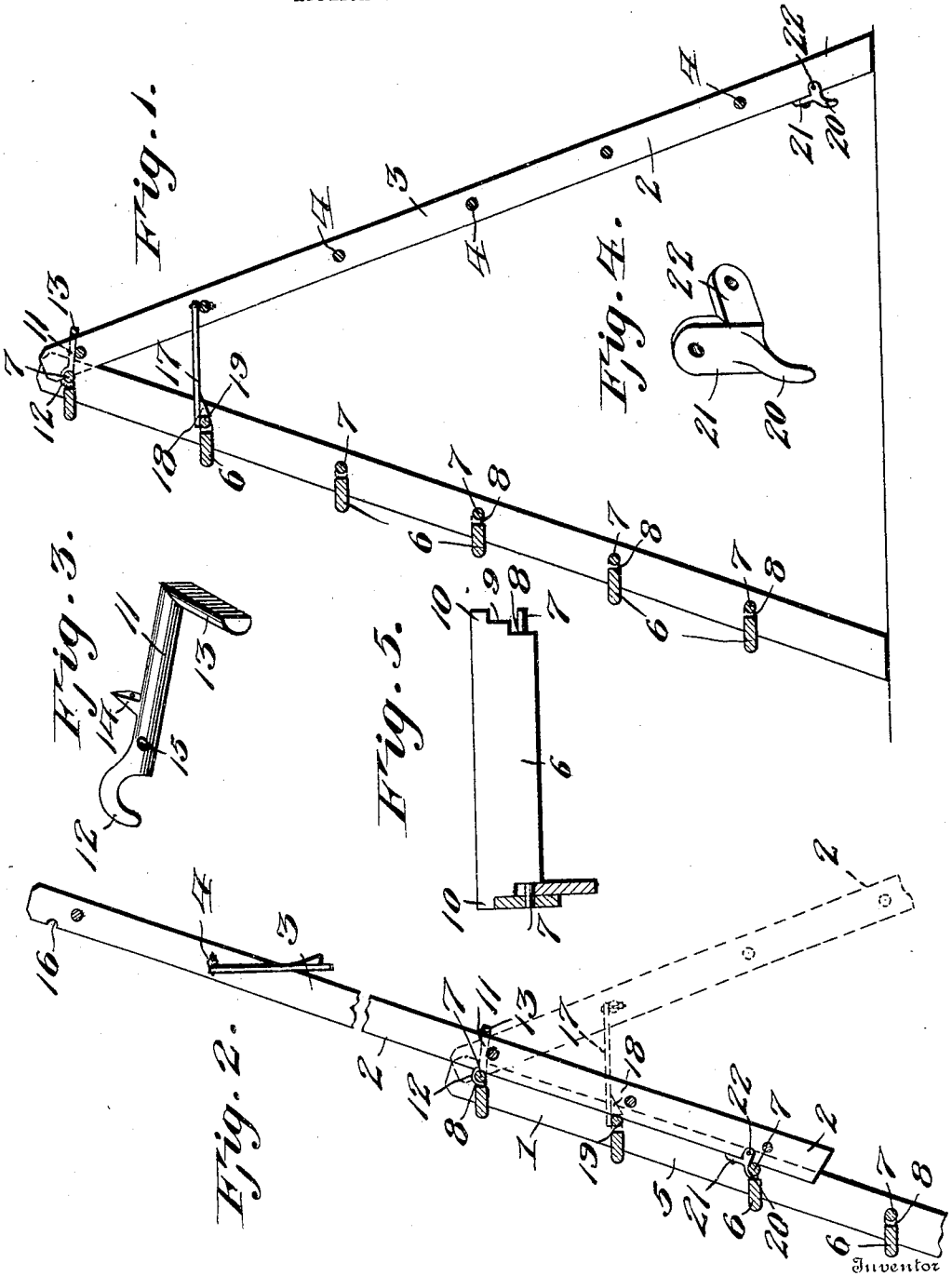


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R. C. LAYNOR.
LADDER.

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LADDER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROGER C. LAYNOR, a citizen of the United States, residing at Elkridge, in the county of Howard and State of Maryland, have invented new and useful Improvements in Ladders, of which the following is a specification.

This invention relates to ladders, and has for its objects to produce a comparatively simple inexpensive device of this character comprising a pair of sections which may be readily adjusted in the form of an extension-ladder, one wherein the sections when so adjusted will be securely locked against relative movement, one in which the sections may be quickly arranged in the form of a step-ladder, and one wherein the table or platform carried by one of the sections serves the further function of a locking device for holding the sections in open position when arranged as a step-ladder.

Further objects of the invention are to simplify and improve the manner of pivotally connecting the platform with the ladder, to provide an improved and inexpensive bearing member for slidably connecting the ladder-sections, and a simple efficient engaging member for securing the sections in extended relation.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, showing the sections arranged in position for use as a step-ladder. Fig. 2 is a similar view showing the sections adjusted in extended relation. Fig. 3 is a perspective view of the improved connecting member or cleat. Fig. 4 is a perspective view of the engaging member or hook. Fig. 5 is a plan view of one of the steps.

Referring to the drawings, it will be seen that the improved ladder as a whole comprises a pair of sections 1 and 2, of which the latter consists of a pair of spaced side bars 3 and connecting-rungs 4, while the section 1 comprises spaced side bars 5 and steps 6, each equipped with oppositely-disposed longitudinally-projecting pintles or trunnions 7, situated adjacent its rear edge and designed for engagement with the side bars 5, the ends of each step being recessed at 8 for a purpose which will hereinafter appear, and at 9 to produce engaging portions or extensions 10, designed to bear upon the front edges of the

rails 5 for maintaining the steps 6 fixedly in place.

Attached to each of the side bars 5 of section 1 and adjacent the upper end of the latter is a metal bearing member or cleat cast or otherwise formed in one piece and comprising a body portion or shank 11, having at one end a hook 12 and at its other end a right-angul- 60
arly-disposed inwardly-projecting bearing portion or arm 13 of substantially semicircular form in cross-section, thus to present a rounded surface toward the adjacent edge of the side bar 5 for a purpose which will hereinafter appear, there being formed between the 65
ends of the member 11 horizontal laterally-projecting perforated ear 14 and an opening or perforation 15. The members 11 are attached to their respective side bars which, by means of fastening members or screws, enter 75
through the perforation 15 and the perforated ear 14, which latter is formed to bear upon the normally rear edge of the side bar, the member 11 being further maintained securely in place by entrance of the hook 12 80
into one of the recesses 8 for engagement with the adjacent trunnion 7, it being noted in this connection that after positioning the members 11 the ladder-section 2 is arranged 85
in position with the curved faces of the bearing portions 13 bearing upon the outer longitudinal edges of the rails or bars 3, whereby the sections 1 and 2 are adapted for relative sliding movement in a longitudinal direction.

The side bars 3 of section 2 have their inner edges adjacent their upper ends notched or recessed, as at 16, constituting seats to receive the trunnions 7 of the uppermost step 6 when the sections are arranged in the form of a step-ladder, as illustrated in Fig. 1 and by dotted lines in Fig. 2, there being carried by 95
the second rung 4 of section 2 a table or platform 17, the rung to which the platform is attached being journaled for rotation in the side bars 3, whereby the platform may swing 100
freely on its axis for a purpose presently described. The platform 17 is provided adjacent its free end and on its normally lower face with a transversely-disposed cleat 18, constituting an engaging member and having 105
an outwardly and downwardly inclined face 19, said cleat being designed for engagement with the rear edge of the second step 6 on section 1 for maintaining the sections in open position when arranged as illustrated 110
in Fig. 1. It is to be noted in this connection that when the sections are so arranged the

outer edges of the side bars 3 will bear on the inner rounded face of the bearing portions 13, thus permitting the section 2 to move freely for adjusting the parts, as illustrated in Fig. 1, it being further observed that when the sections are to be brought together, as seen in Fig. 2, for longitudinal extension the free end of platform 17 will be raised sufficiently to permit the cleat 18 to ride over the step 6, with which it is engaged.

Attached to the side bars 3 on the section 2 and adjacent the lower end of the ladder are engaging members or hooks 20, each carried by a plate 21, designed to seat upon the forward edge of the bar and having a rearwardly-extending side plate or ear 22, designed to seat upon the inner face of the bar, the plates 21 22 being perforated to receive screws or other fastening members for attaching the device to the side bars of the ladder.

In practice when the sections 1 and 2 are arranged as illustrated by full lines in Fig. 2 the section 2 may be moved freely upward relative to section 1 for extending the ladder longitudinally as a whole, the section 2 being fixed in its adjusted positions by entering the members or hooks 20 into the recesses 8 for engagement with the trunnions 7, relative transverse movement of the sections being obviated through the engagement of the bearing portions 7 of the members 11 with the outer edges of the side bars 3. It is to be observed in this connection that owing to the inner faces of the bearing portions 7 being rounded the sections of the ladder will move

freely one upon the other, and, furthermore, that when the sections are brought to the position illustrated in Fig. 1 and by dotted lines in Fig. 2 the platform 17 will, owing to the lower face of cleat 18 being inclined, move automatically into position for locking the sections relatively.

From the foregoing it is apparent that I produce a simple inexpensive device admirably adapted for the attainment of the ends in view, it being understood that minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus described my invention, what I claim is—

In a device of the class described, a ladder-section comprising side bars, connecting members attached to said bars and each consisting of a shank having at one end, a rung-engaging hook, and at its other end, a right-angularly-disposed bearing portion, and a perforated laterally-projecting ear situated between the ends of the shank, and a second ladder-section adapted for relative movement longitudinally of the first-named section and having side bars, the side bars of the second section being engaged by the bearing portions of the connecting members.

In testimony whereof I affix my signature in presence of two witnesses.

ROGER C. LAYNOR.

Witnesses:

JOHN L. FLETCHER,
JOHN F. BYRNE.