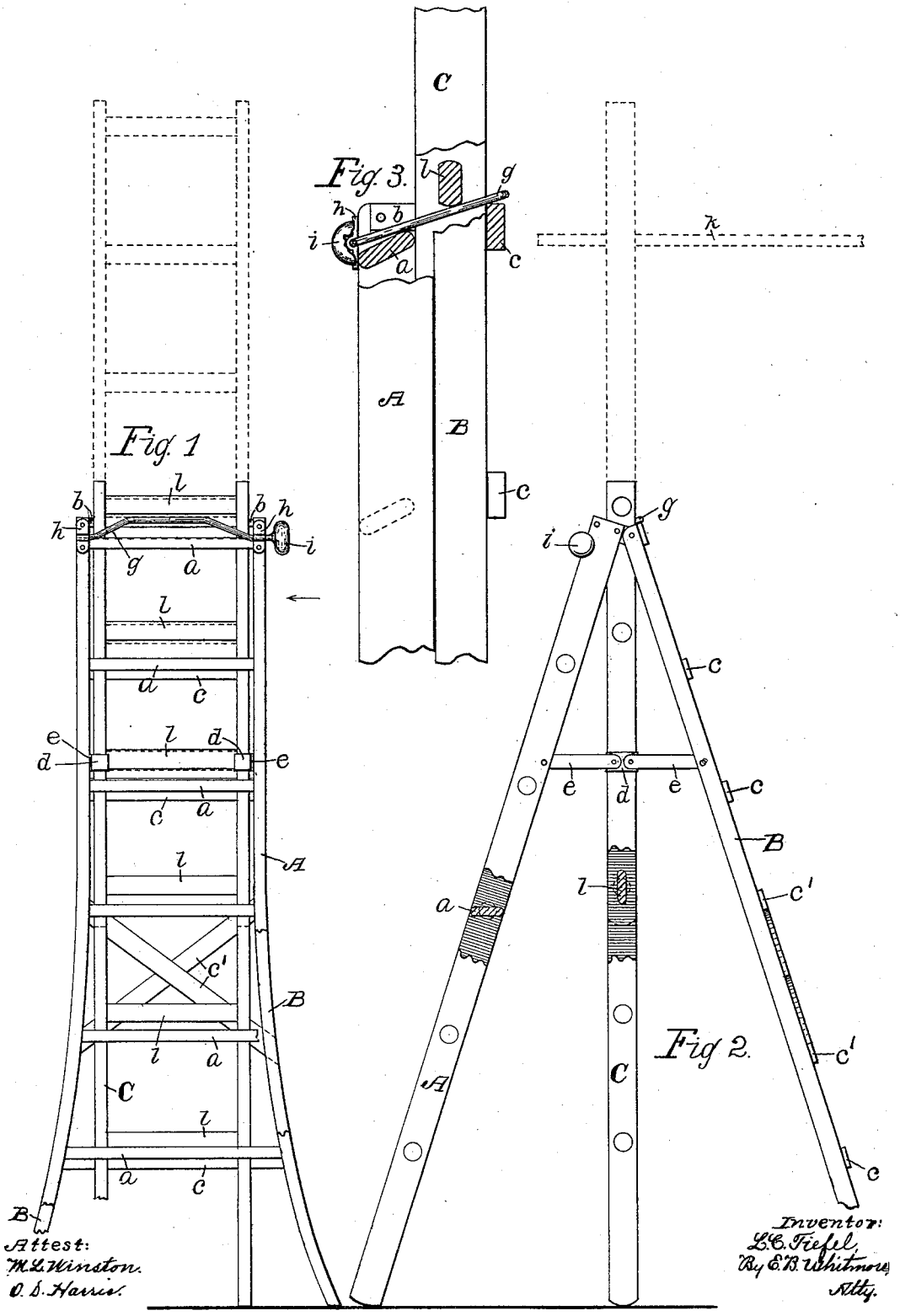
No. 607,808. Patented July 19, 1898.

L. C. TIEFEL.

LADDER.

(No Model.) (Application filed Mar. 26, 1898.) 2 Sheets—Sheet 1.



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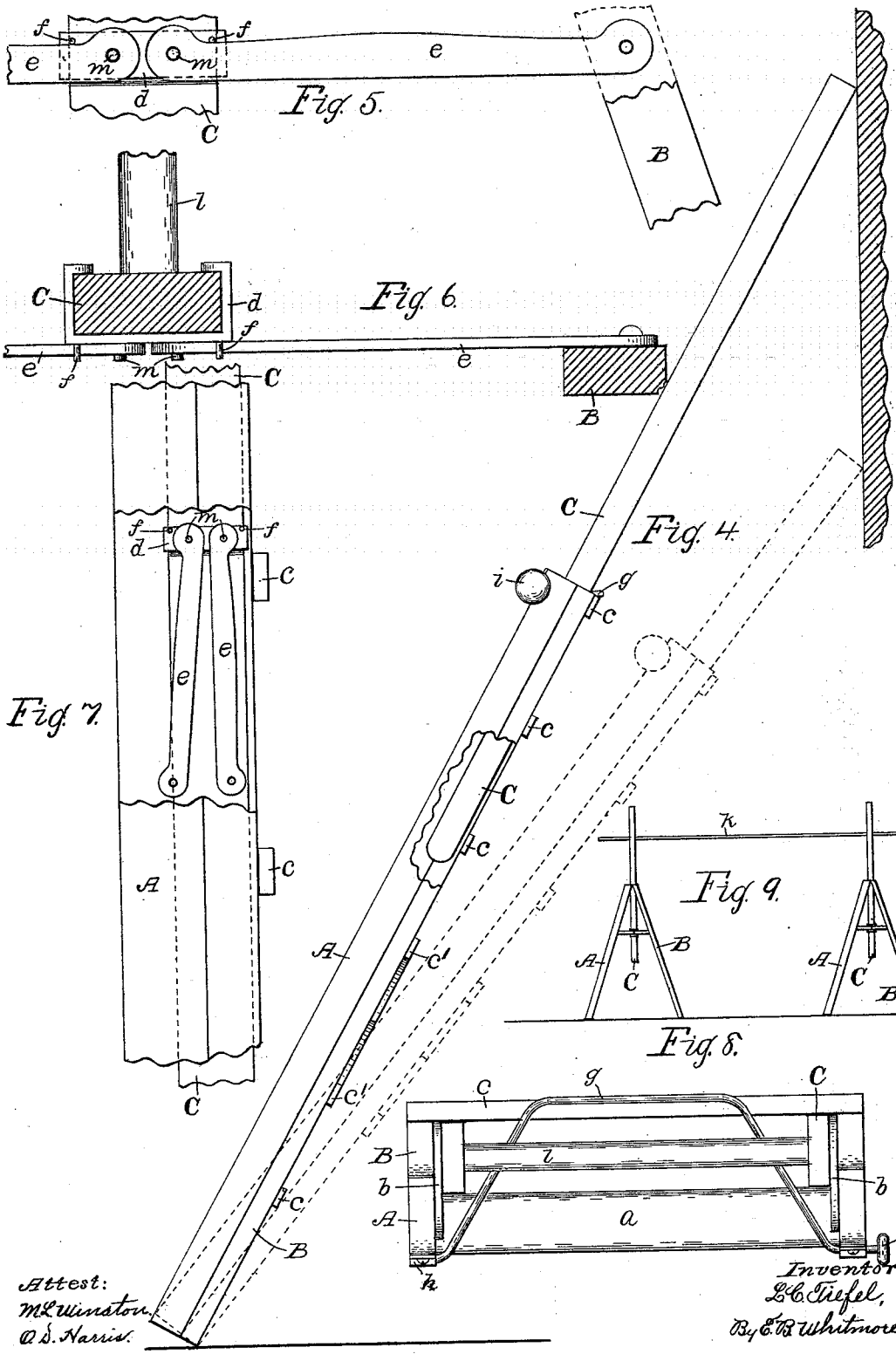
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LEONARD C. TIEFEL, OF ROCHESTER, NEW YORK, ASSIGNOR TO GERMAIN MATTISON, OF SAME PLACE.

LADDER.

SPECIFICATION forming part of Letters Patent No. 607,808, dated July 19, 1898.

Application filed March 26, 1898. Serial No. 675,277. (No model.)

To all whom it may concern:

Be it known that I, LEONARD C. TIEFEL, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Ladders, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention relates to ladders generally, the invention being a combined step and extension ladder and scaffold-support, the same consisting of the structure and parts hereinafter fully described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a front elevation of the device with parts broken away, the extension-section being shown in two positions by full and dotted lines. Fig. 2 is a side elevation seen as indicated by arrow in Fig. 1, parts being broken away and other parts shown in two positions by full and dotted lines. Fig. 3 is a side elevation of parts of the device, showing the catch-rod in action. Fig. 4 shows by full and dotted lines the device formed as an extension-ladder. Fig. 5 is a detail view showing two links and the connected slide-rest. Fig. 6 is a plan of the parts shown in Fig. 5, two rails of the ladder being horizontally sectioned. Fig. 7 is a side elevation of some of the parts, showing the links when folded. Fig. 8 is a view on top of the ladder. Fig. 9, drawn to a small scale, shows the device when used as a scaffold-support. Figs. 3 to 8, inclusive, excepting Fig. 4, are drawn to various scales larger than those of Figs. 1, 2, and 4.

Referring to the drawings, A is the front or step section of the device, provided with horizontal steps *a*. B is the rear or brace section, which, together with the step-section, constitutes a step-ladder. These sections are pivotally joined at their upper ends by tie-straps *b*, Figs. 1, 3, and 8, said sections being adapted to be spread at the bottom, as shown in Fig. 2, or closed, as shown in Fig. 4.

The sections A B correspond in width throughout, as appears in Fig. 1, they being flared or widened at the bottom to gain greater breadth of base. The rear section B is formed with horizontal bars or girths *c* and cross-ties *c'* to give it strength.

C is an extension-section held between the sections A B, said extension-section being a simple ladder standing vertical when the sections A B are spread for use, as shown in Fig. 2. The section C is confined between the upper cross-bar *c* of the brace-section B and the upper step *a* of the section A and adapted to slide longitudinally therebetween whether the sections A B are closed or spread at the bottom, as stated.

d d, Figs. 1, 2, and 6, are horizontal metal bands inclosing the two side rails of the ladder C, said bands constituting rests or bearings for the ladder. These rests are connected with the sections A B, respectively, by folding arms or links *e e*, said rests being at the same elevation and central between said sections at some distance below their upper ends. These links are pivotally connected at their outer ends to the sections A B, respectively, and at their inner ends with the rests *d d* upon pins *m m*, so as to swing in vertical planes on both the rests and the sections.

When the sections A B are spread at the bottom, as shown in Fig. 2, the rests slide downward along the ladder C until the links *e e* assume horizontal positions, and when said sections are closed or brought together at their lower ends the rests slide upward along the ladder C, the links then assuming the folded positions shown in Fig. 7.

The rests are provided with stop-pins *f f*, Figs. 5 and 6, which, encountering the links, constitute stops for the latter and prevent them from dropping at any time below horizontal positions. These rests, together with the upper step *a* and the upper bar *c*, confine and control the ladder-section C and hold it at all times from tipping or inclining laterally in its bearings between the sections A B, its only motion in its bearings being longitudinal. The tie-straps *b b* for the sections A B being close to the rails of the ladder C, which is narrower than said sections A B, also aid to confine said ladder and prevent it from tipping sidewise relative with the sections A B.

g is a bent bar or catch-rod for holding the

ladder-section C in its elevated positions. This rod rests in bearings *h h*, secured at the top of the section A, and bends backward across the upper step *a* and over the upper bar *c*, as clearly shown in Figs. 3 and 8. This catch-rod is adapted to turn in its bearings on the section A, and when turned backward to rest upon the bar *c* it intercepts a rung *l* of the ladder C, as shown, and so holds said ladder against a downward movement. This rod is provided with a knob or handle *i* of any convenient form, by means of which the workman may, while on the step-ladder or otherwise, operate the catch-rod to hold the ladder-section where desired.

For the purpose of indoor painting or paper-hanging two of these devices are employed, as shown in Fig. 9, for holding a plank or platform *k*, forming a scaffold, upon which the workman may stand. The plank rests near its ends upon rungs of the ladder-section and may be held at a relatively high or low elevation by raising or lowering the ladder-sections or by placing the plank upon higher or lower rungs of said sections.

What I claim as my invention is—

1. A structure of the kind described having a pivotally-connected step-section and brace-section, in combination with an extension-section between said step and brace sections, movable rests or bearings for said extension-section slidingly mounted on the extension-section and pivotally connected with said step and brace sections below their upper ends, said step and brace sections being provided at their upper ends respectively with a step and tie-bar to confine said extension-section, substantially as shown.

2. In a combined ladder a step-section and a brace-section pivotally connected, a pair of slide-rests independent of the step and brace sections and slidingly mounted on the extension-section and held centrally between said sections, pivotal connecting-links joined to said sections and the slide-rests, the latter being provided with projections *f f* to control the actions of said links, said sections being provided at their upper ends respectively with a step and a tie-bar, in combination with an extension section or ladder occupying said slide-rests and held between said step and tie-bar, substantially as described.

In witness whereof I have hereunto set my hand, this 23d day of March, 1898, in the presence of two subscribing witnesses.

LEONARD C. TIEFEL.

Witnesses:
E. B. WHITMORE,
M. L. WINSTON.