

(No Model.)

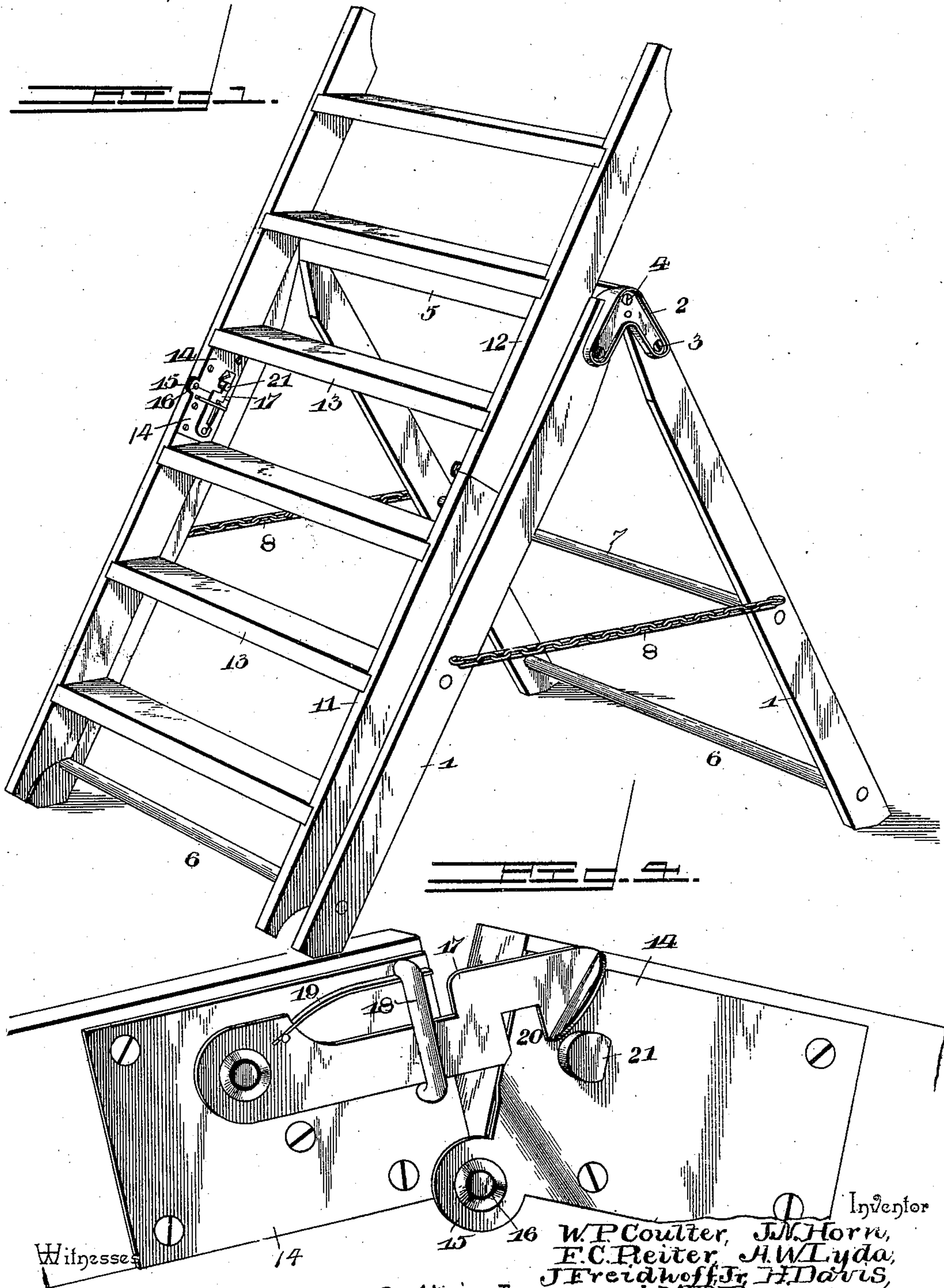
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W. P. COULTER, J. N. HORN, F. C. REITER, A. W. LYDA,
J. FREIDHOFF, Jr., H. DAVIS & H. B. BARNES

COMBINED STEP LADDER, WASHBENCH, &c.

No. 574,397.

Patented Jan. 5, 1897.



Witnesses
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(No Model.)

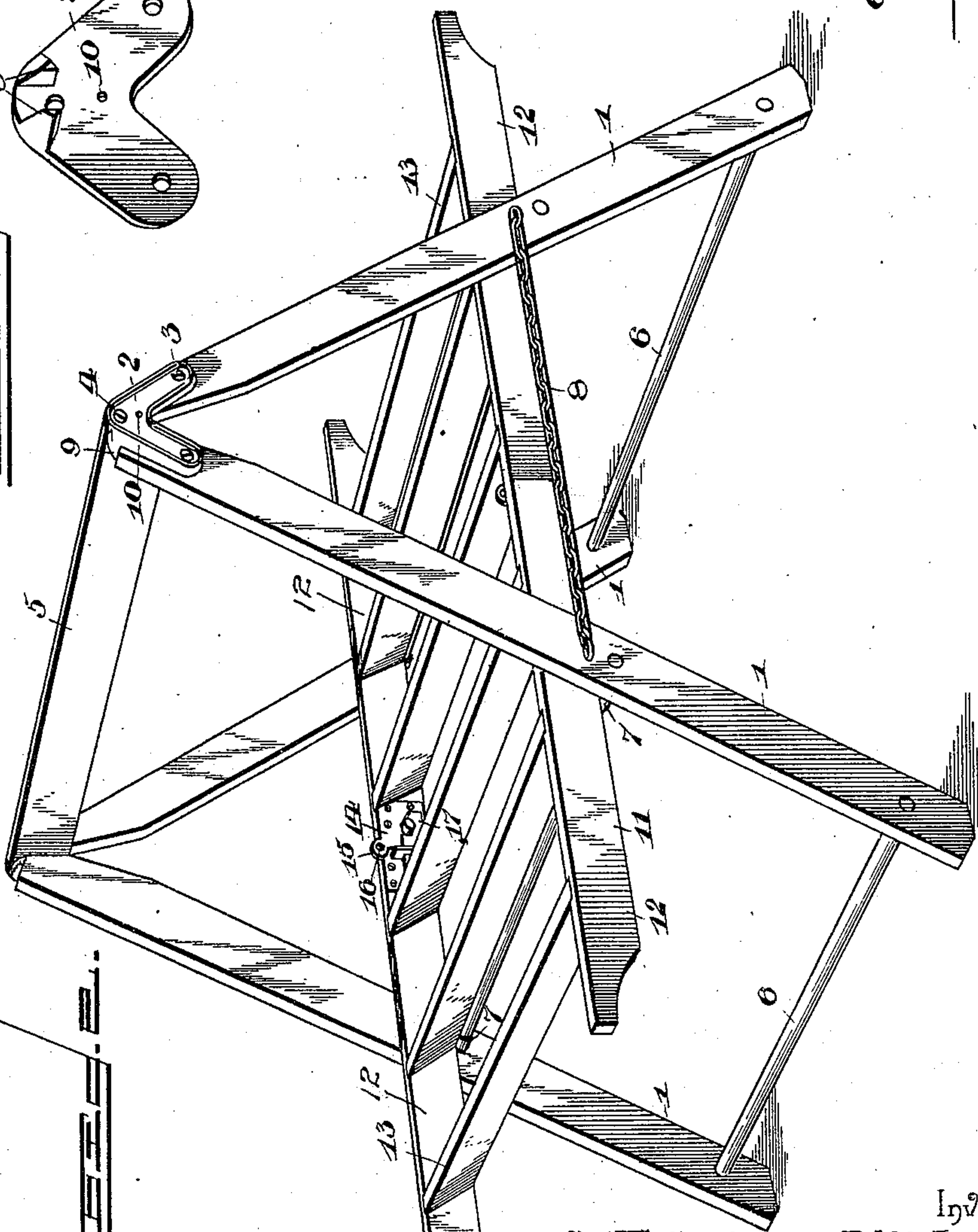
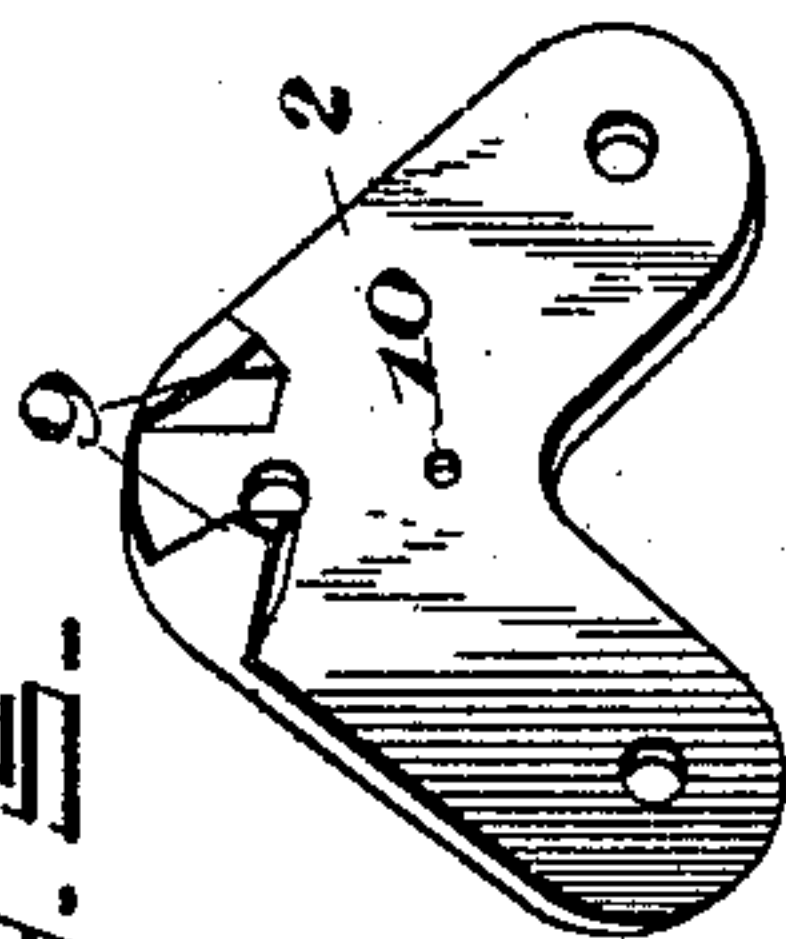
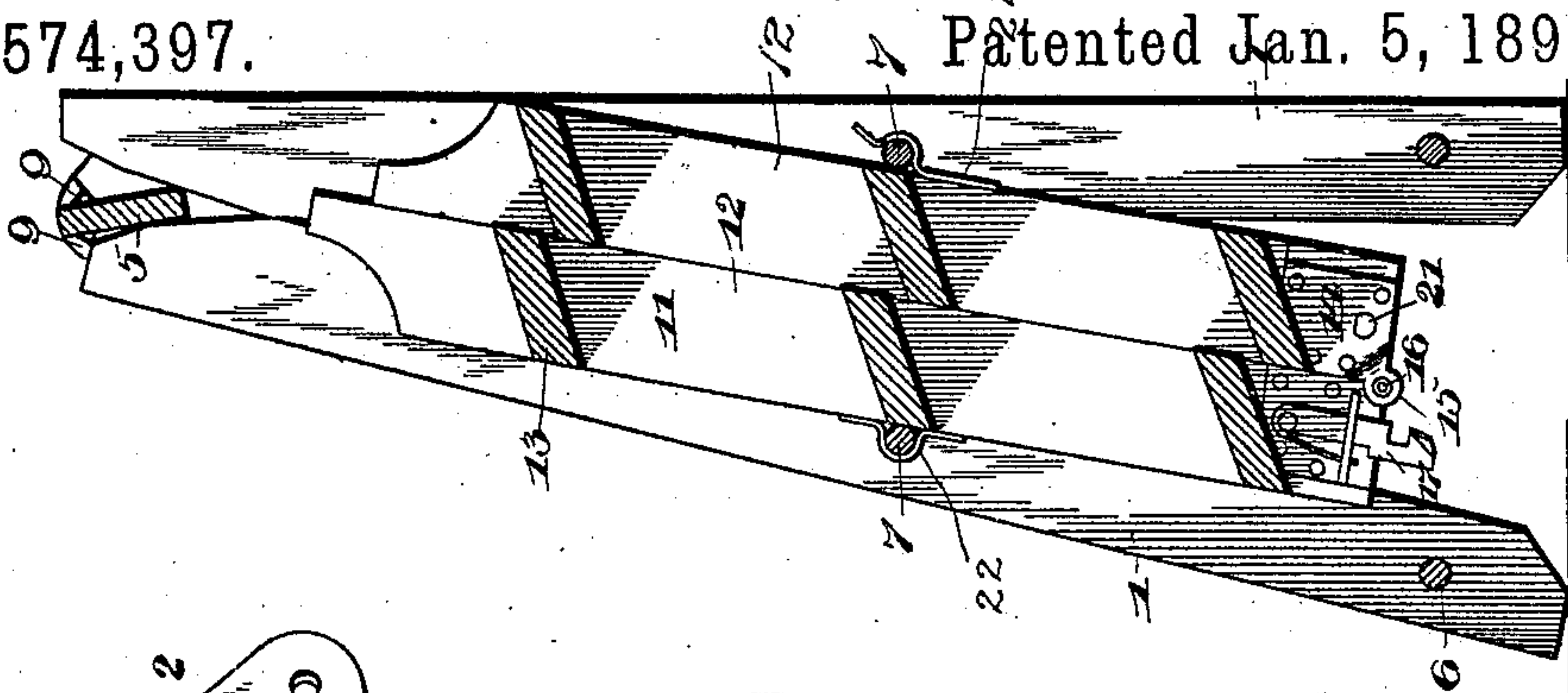
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UNITED STATES PATENT OFFICE.

WILLIAM P. COULTER, JOHN N. HORN, FRANCIS C. REITER, ARTHUR W. LYDA, JOHN FREIDHOFF, JR., HOWARD DAVIS, AND HENRY B. BARNES, OF JOHNSTOWN, PENNSYLVANIA.

COMBINED STEP-LADDER, WASHBENCH, &c.

SPECIFICATION forming part of Letters Patent No. 574,397, dated January 5, 1897.

Application filed January 16, 1896. Serial No. 575,813. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM P. COULTER, JOHN N. HORN, FRANCIS C. REITER, ARTHUR W. LYDA, JOHN FREIDHOFF, JR., HOWARD DAVIS, and HENRY B. BARNES, citizens of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Combination Step-Ladder, Washbench, &c., of which the following is a specification.

This invention relates to an improvement in step-ladders, &c., and has for its object to provide in one article a combined step-ladder, washbench or tub-support, child's crib, &c.

A further object of the invention is to construct such combination article in a manner that will admit of the same being folded into compact shape for the purpose of storage or transportation, and at the same time permit the several parts of the article to be quickly and easily adjusted into any desired relation.

Other objects and advantages of the invention will appear in the course of the subjoined description.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally embodied in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the improved article adapted for use as a step-ladder. Fig. 2 is a similar view showing the article adapted for use as a washbench, &c. Fig. 3 is a vertical section through the article folded. Fig. 4 is an enlarged detail perspective view of the hinged-lock joint between the step-ladder sections. Fig. 5 is a similar view of one of the angle-castings which join the upper ends of the diverging supports.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates four supporting legs or standards arranged in parallel pairs, the members of each pair converging upwardly toward the opposing pair and being connected thereto, pivotally, by means of angle or elbow castings 2. Each arm of each angle-casting is

perforated to admit of a pivotal bolt or screw 3 passing into or through the upper end of one of the legs or standards, and each casting is further provided at its elbow with a perforation through which a screw or other suitable fastening 4 passes into one end of a ridge-bar 5, extending across between the upper convergent ends of the legs or standards and forming, in connection with said legs or standards and a pair of bottom rounds 6 and intermediate rounds 7, an A-shaped frame, as shown. The legs or standards of each pair are connected by means of stay-chains 8, for limiting the spreading of the same, and such spreading is also arrested by reason of the upper extremities of said legs or standards abutting against the opposite side faces of the ridge-bar 5. Each of the angle-castings 2 is also provided with spaced lugs 9, embracing and steadying the ridge-bar, and may also be perforated, as at 10, to admit of an additional fastening being driven into the end of the ridge-bar for preventing the same from twisting.

11 designates a sectional frame which may constitute either the step-ladder proper or the horizontal support for a washtub. The sections of this frame are hinged together at their adjacent ends and each section comprises parallel side bars spaced a suitable distance apart to adapt them to be folded between the legs or standards 1, the said side bars (indicated at 12) being connected by a series of cross-bars constituting the steps or treads of the step-ladder. The side bars of each latter section are connected at their abutting ends by means of hinge-plates 14, secured, preferably, to the inner surfaces of such abutting ends, the said plates having interlapping perforated ears 15, connected by a pivot 16. Pivotaly connected with one of the plates of each pair is a swinging latch 17, which vibrates within a guide-eye 18, fast upon the same plate upon which the latch is pivoted. Connected permanently with the latch is a spring 19, which bears at its free end within the guide-eye 18 and serves to give the latch a normal tendency inward or toward the opposite end of the guide-eye. The pivoted latch projects beyond the end of its side bar

and is provided with a notch 20, adapted to take over and engage with a lateral pin or stud 21 on the opposite hinge-plate when the adjacent ends of the side bars are caused to abut. The extremity of the swinging latch is deflected substantially at right angles to form a lateral lip, by means of which the latch may be released from its engagement with the pin or stud, and also to form an inclined nose, whereby the latch will automatically ride over the pin or stud and into engagement therewith. This construction forms a very safe and reliable joint between the ladder-sections and holds the same perfectly rigid with relation to each other when brought into alinement. At the same time by pressing simultaneously upon the deflected extremities of the latches the joint may be readily broken between the ladder-sections, and the latter may then be folded side by side into the position indicated in Fig. 3.

The lower ladder-section is pivotally mounted at its proximal center upon the intermediate round 7 of one pair of legs or standards, and the other ladder-section is provided at a corresponding point or adjacent to its center with spring-clasps 22, which, when the device is used as a ladder, rest upon the upper edge of the ridge-bar 5 and at other times embrace the intermediate rounds 7 of the opposing pair of legs or standards 1 in the manner illustrated in Fig. 3. Under the latter adjustment and when the ladder-sections are brought into horizontal alinement, as indicated in Fig. 2, and locked by the self-acting latch above described the device is adapted to be used as a washbench, the ladder-sections serving to uphold one or more tubs, while the ridge-bar is well adapted to have a clothes-wringer applied thereto.

The device is also adapted, under the adjustment illustrated in Fig. 2, to serve as the support for a baby's crib, and may also in this position or in its folded position, as shown in Fig. 3, be utilized as a clothes-rack. Under the adjustment shown in Fig. 1 the article is well adapted for use as a step-ladder, in which the ladder-sections are supported upon the intermediate round 7, and the ridge-bar 5 and the inclined legs or standards are so disposed with relation to the ladder-sections that there will be no liability of the ladder tipping, even when a person is standing on the uppermost step or tread.

When the ladder-sections are arranged horizontally and in alinement with each other,

as shown in Fig. 2, a convenient elevated support is provided upon which a mattress and other bedclothing may be placed to adapt the device for use as a child's crib.

It will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. The combination with a supporting-frame having upwardly-converging side bars arranged in parallel pairs and joined to a connecting ridge-bar, of a ladder made in two sections hinged together and arranged to fold between the side bars of the supporting-frame, one of said sections being permanently and pivotally mounted on a cross-rung on the supporting-frame and the other section being provided with spring-clasps for engaging a cross-rung at the opposite side of the supporting-frame, and a spring-actuated latch for locking the ladder-sections rigidly together when brought into alinement, substantially as described.

2. A hinge consisting of two plates having interlapping ears at their contiguous corners, connected by a common pintle, a latch pivotally connected to one plate on an axis parallel with said pintle and projecting at its free end beyond said plate, a laterally-projecting stud on the opposing plate for engagement with said latch, an eye or staple on one plate embracing the latch intermediate its ends and forming a guard therefor, and a leaf-spring connected to said latch intermediate its ends and having its free end engaged in said eye or staple, substantially as described.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of witnesses.

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