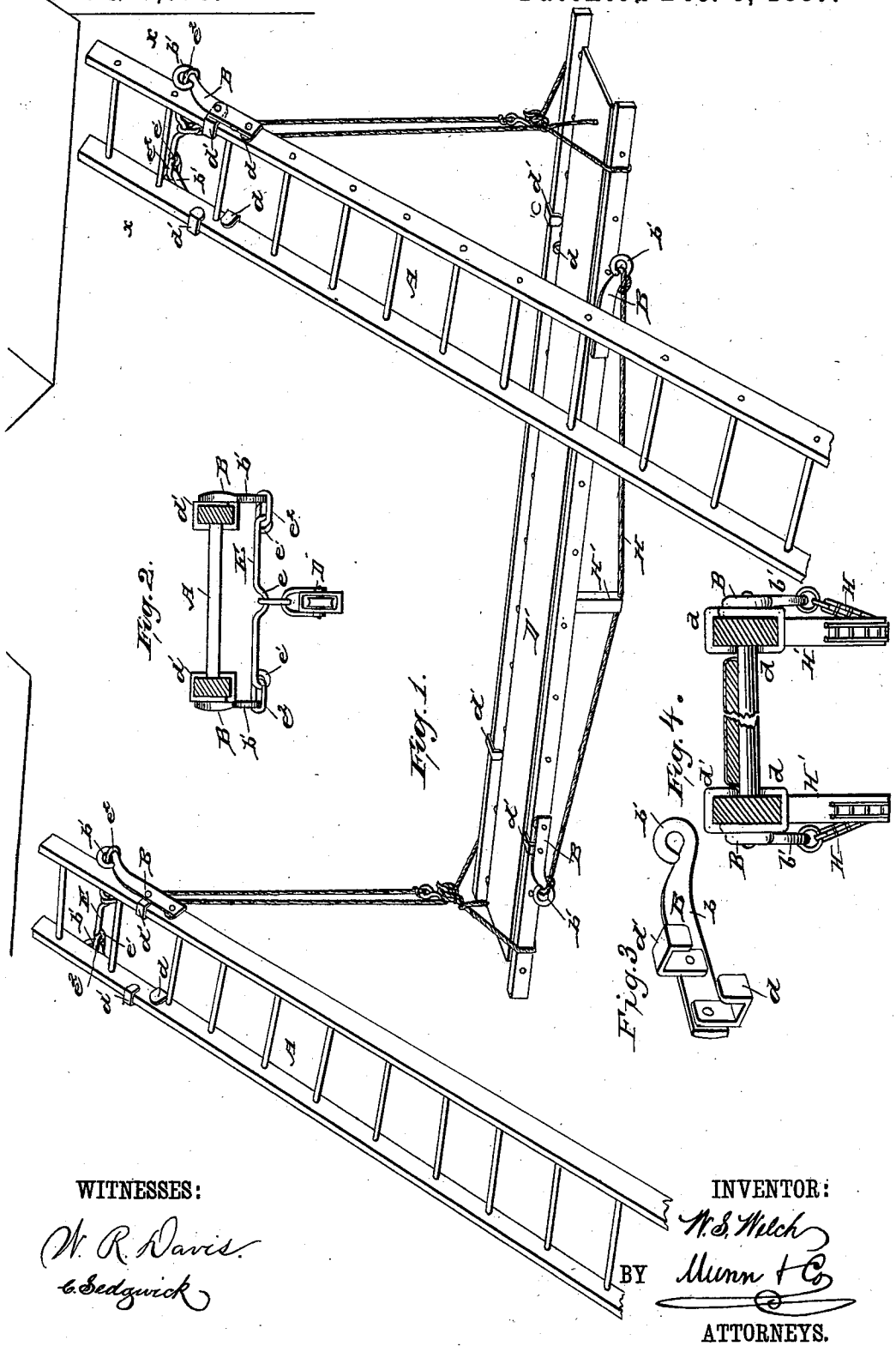
(No Model.)

W. S. WELCH.

SCAFFOLDING.

No. 374,510. Patented Dec. 6, 1887.



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WILLIAM S. WELCH, OF WESTFIELD, NEW JERSEY.

SCAFFOLDING.

SPECIFICATION forming part of Letters Patent No. 374,510, dated December 6, 1887.

Application filed July 30, 1887. Serial No. 245,713. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. WELCH, of Westfield, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Scaffolding, of which the following is a full, clear, and exact description.

My invention relates to an improvement in scaffolds, and has for its object to provide a means of scaffolding cottages and other buildings having sloping roofs and in which the gutter cannot be utilized as a support; and the further object of the invention is to utilize the ordinary ladders employed for house-painting as a support for a swinging scaffold, and, further, to so brace an ordinary ladder that the same may be stiffened for use as a swinging scaffold, and wherein the bracing may be readily removed when the ladder is used for ordinary purposes.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a swinging scaffold constructed in accordance with my improvement, and Fig. 2 is a transverse section of one of the ladders. Fig. 3 is a perspective view of one scaffold-clamp. Fig. 4 is a transverse section through the ladder-scaffold, illustrating a chain applied as a brace.

In carrying out the invention two ordinary ladders, A, are utilized as the supports, being made to rest upon the ground or other firm supports at one end and at an inclination against the house at the other or upper end.

Clamps B are provided for the sides of each ladder, consisting of a curved arm, *b*, provided at one end at which the curve is most decided with an eye, *b'*, and at the opposite end with a substantially U-shaped clutch-bar, *d*, having one member shorter than the other, which bar is pivoted to the said curved arm by its longer member, as shown in Fig. 3; and the said curved arm *b* is provided with a second similar clutch-bar, *d'*, pivoted upon the same side between the first clutch-bar and the eye, but being made to face in the opposite direction. One clamp B is provided for each side of the ladders near the top, and the clutch-bars are made to embrace the upper and lower edges of the side pieces between the rounds, the two clamps of each ladder being united by a transverse bar, E, provided with a central depression, *e*, an eye, *e'*, at each end, and a link, e^2, passing through each eye of the said bar and the eye formed upon the adjacent clamp. A block, D, is hooked over the bar E at its depressed portion, and the ropes adapted for attachment to the scaffold are run through said block, led downward, and secured to the scaffold D' in any approved manner. Thus, one ladder being placed near one end of the house and the other near the opposite end upon the same side, and each ladder being supplied with the attachments as above set forth, a painter may work upon the scaffold supported from the ladder the entire length of the building from top to bottom.

The attachment is obviously perfectly safe, as the more weight that is placed upon the scaffold the more firmly are the clutch-bars bound upon the sides of the ladder. When one side of the house has been painted, the ladders and scaffold are readily removed to another side.

In order to use a third ladder as a swinging scaffold, which ladder would in most instances be a long one, it becomes necessary to brace the ladder at the sides longitudinally, in order to take the spring from the center, so as to render the same straight. It is further desirable that the brace should be readily detachable, in order that the ladder may be left free for ordinary use. To that end I attach a clamp B to each side piece of the ladder at each side of the center, the eyes being made to face the ends, and attach to the eyes at each side a piece of rope, H, a linked bar, or its equivalent, such as a chain, as illustrated in Fig. 4, a cable, or a single straight strand of wire. The clamps are now carried away from each other until the rope or bar is tightly drawn, and a block, H', of wood or bar of iron is interposed between the rope and the central under face of each side piece, bearing upon the same, which block causes a tension upon the rope, thereby holding the clamps in close engagement with the ladder, the whole attachment forming, as it were, a truss for each side rail of the ladder.

I do not confine myself to a ladder as a sup-

port, as any form of upright capable of being grasped by the clutch may be employed. The ladders are, however, preferred, as a painter need only carry the attachment and the ladders ordinarily used, and by utilizing them as above set forth scaffold any ordinary building with ease and dispatch without danger or loss of life.

Instead of an eye being formed at the end of the clamps B, a hook may be provided or other equivalent means of engaging a link.

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

1. A clamp for scaffolding purposes, consisting of an arm or body provided with an aperture at one end and substantially U-shaped clutch-bars pivoted a distance apart at the other end and facing in opposite directions, substantially as and for the purpose herein set forth.

2. A clamp for scaffolding purposes, consisting of a curved arm or body provided with an eye at one end and substantially U-shaped clutch-bars pivoted a distance apart at the other end, adapted to face in opposite directions, substantially as and for the purpose herein set forth.

3. A device for suspending a scaffold from a vertical or inclined support, consisting of parallel curved arms provided with an eye at one end and substantially U-shaped clutch-bars pivoted at the other end a distance apart, facing in opposite directions, and a transverse bar connecting said arms at the eye, substantially as shown and described.

4. A device for suspending a scaffold from a vertical or inclined support, consisting of curved parallel arms provided with an eye at one end and substantially U-shaped clutch-bars pivoted at the other end a distance apart, facing in opposite directions, and a transverse bar united to said arms by links, substantially as shown and described.

5. The combination, with a ladder or other vertical or inclined support, of two curved arms provided with eyes at one end and substantially U-shaped clutch-bars pivoted at the other end a distance apart, facing in opposite directions, adapted to engage said supports, a transverse bar connecting said arms, and means for suspending a scaffold from said bar, substantially as shown and described.

6. The combination, with a ladder-scaffold, of curved arms provided with eyes at one end and having clutch-bars pivotally attached to the other end a distance apart and facing in opposite directions, said arms being adapted to engage the side rails of the ladder at each side of the center, a rope or its equivalent uniting the said arms upon each rail, and a block interposing said rails and rope centrally the same, substantially as herein shown and described.

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