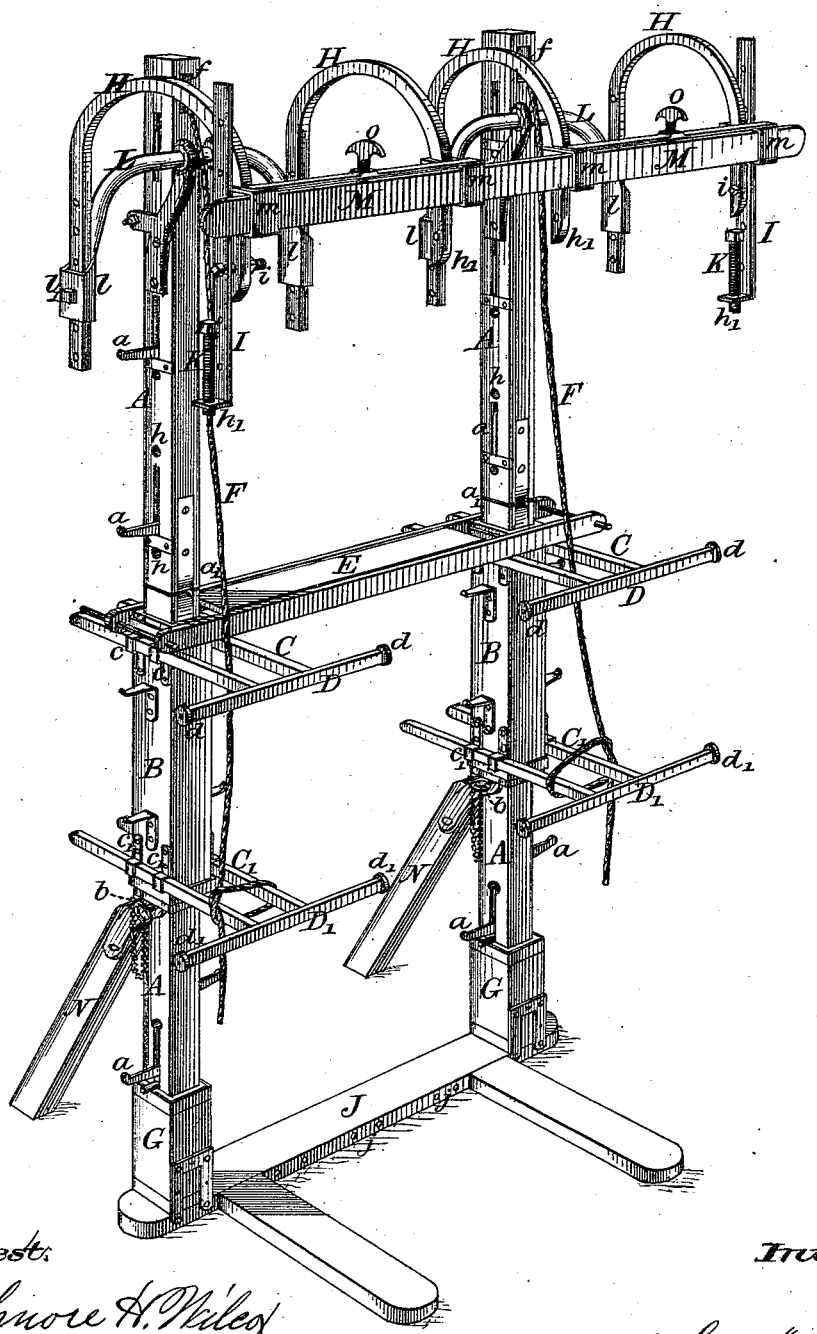
J. A. RUSSELL.
Scaffold.

No. 208,337. Patented Sept. 24, 1878.



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JOHN A. RUSSELL, OF ELIZABETH, ASSIGNOR OF ONE-HALF HIS RIGHT TO HARVEY WILCOX, OF UNION TOWNSHIP, NEW JERSEY.

IMPROVEMENT IN SCAFFOLDS.

Specification forming part of Letters Patent No. **208,337**, dated September 24, 1878; application filed August 18, 1877.

To all whom it may concern:

Be it known that I, JOHN A. RUSSELL, of Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Scaffolds; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a convenient portable scaffold, which I term an "improved combination scaffold," for the use of workmen engaged in the construction and repairing of buildings and other structures.

My improved scaffold is so constructed that it may be readily adapted to all the various conditions under which such appliances are ordinarily required to be employed, it being equally well adapted to be either supported from beneath or suspended from above, as circumstances may require. Furthermore, it is so constructed that it may be readily taken to pieces for convenience of transportation from place to place, and as readily put together for use in any desired situation.

To this end my invention consists in combining, with the upright upon which the movable platform of the scaffold slides up and down, suitable attachments by means of which the said uprights may be suspended from a parapet or cornice, whether the same is horizontal, inclined, or irregular in its outline; or in other cases the uprights may be made to rest upon the ground or other suitable place of support.

Under any conditions my improved scaffold forms a safe and convenient support for the use of the workmen, which may be adjusted with great facility to meet any necessary conditions under which such an apparatus is ordinarily required to be used.

The accompanying drawing is a perspective view of a portable scaffold embodying my improvements.

A A are two uprights or poles, which are preferably rectangular in cross-section, and may be of any required length. In cases where a considerable length is required these uprights may be made in two or more pieces, spliced or joined together in any suitable manner—as, for example, at a' a'. Each of the uprights A A is provided with a hollow box or sleeve, B B, of such dimensions as to be capable of sliding freely up and down upon the upright, which passes through it. The boxes B B should be strongly put together with screws and iron bands, and may be provided with rollers to relieve the friction against the upright, if desirable.

To the boxes B B are attached brackets C C and C′ C′, which are designed to sustain the platform of the scaffold. These brackets pass horizontally through iron loops or eyes c c c' c' upon the sliding boxes B B. A set-screw may be fixed in one of the loops, so that the bracket may be adjusted in any desired position and firmly secured. Upon the ends of the brackets C C C′ C′ are cross-bars D D D′ D′, the extremities of which are provided with rollers d d d' d'. These rollers are intended to bear against the perpendicular wall of the building. The platform E rests upon the brackets C C, and moves up and down with them. Additional planks may be placed upon the brackets C C or C′ C′, to form a convenient platform, as circumstances may require.

The boxes B B, together with the platform and its supporting-brackets, may be raised and lowered upon the uprights A A by means of ropes F F, which are secured thereto at any convenient point or points, and carried over pulleys f f inserted in the upper ends of the uprights A A. When the platform has thus been brought to any required position the pins b b are inserted in corresponding holes in the uprights at points just below the sliding boxes, and serve to support the latter after the rope F is released. Any required number of holes, h h, may be provided for this purpose, so that the sliding boxes may be stopped at any required point.

The hereinbefore-described scaffold proper is provided with attachments by means of which it may either be made to rest upon the ground or suspended from the cornice of a building or the parapet of a bridge, according to circumstances.

In order that the scaffold may be conveniently suspended from the cornice of a building or other similar projection, the uprights A A are provided with a pair of iron hooks, H H, which are attached to iron supports or brackets L L, these latter being firmly secured to the upper part of the uprights A A by bolts or otherwise. The position of each of the hooks H H is vertically adjustable with reference to its corresponding upright A by means of a bolt and nut, as seen at *l'*. The shank of the hook H passes through a socket, *l*, formed in the end of the support L, and is provided with a row of holes, through one of which the bolt *l'* is secured. All the hooks are arranged in the same manner.

The two outer hooks H H are provided with adjustable lengthening-bars I I, secured to them by means of bolts *i i*, and at the end of each lengthening-bar are adjustable screw-points K K.

When it is desired to suspend the scaffold from a building, the bar M is removed from the hooks H H H H. The horizontal bar J, the sockets G G, and the braces N N are also dispensed with. The uses of these several parts will be hereinafter explained.

If the line of the cornice or other projection from which the scaffold is to be suspended is horizontal, the hooks H H H H must be so adjusted that their several points *h' h' h' h'* will be in a horizontal line; but if the cornice is not horizontal, (as, for example, in the case of the gable end of a building,) the points *h' h' h' h'* are to be adjusted accordingly. In the case supposed, the points should be adjusted as shown in the drawing, the two inner ones being considerably higher than the two outer ones, to correspond with the pitch of the roof. An exact bearing may be finally secured by adjusting the screws K K after the several parts are approximately in position. When thus suspended the brackets C C' are adjusted so as to keep the uprights A A at the proper distance from the wall of the building.

In case it is desired to have the scaffold rest upon the ground, instead of being suspended in the manner hereinbefore described, the lower extremities of the uprights A A are inserted in boxes or sockets G G, which are horizontally adjustable upon a bar, J, (which rests upon the ground,) by means of bolts passing through holes *j j*, which are provided at suitable intervals throughout the whole length of the bar. The uprights are supported against the building by the brackets C C C' C', and are prevented from falling in the opposite direction by braces N N, which are provided with iron straps with suitable eyes, by means of which they are bolted to the uprights. Both the braces and the uprights are provided with spurs at their lower ends. When the scaffold is erected upon the ground in this manner, the hooks H H H H are passed through iron guides *m m m m*, which slide horizontally upon a light wooden tie-bar, M, and are stopped at any desired point by thumb-screws *o o*. By this arrangement the uprights A A are firmly fastened together at the top when the scaffold is supported from the ground.

For the convenience of the workmen in ascending and descending, the uprights A A are provided with hinged steps *a a*, which fold into suitable recesses, so as to allow the boxes B B to pass over them in sliding up and down, but can easily be opened out when required for use.

I claim as my invention—

1. In a portable scaffold, the combination of the uprights A A, the adjustable platform E, and the adjustable suspension-hooks H H.

2. The combination of the uprights A A, the adjustable platform E, the horizontal foot-bar J, provided with adjustable sockets, the braces N N, and the tie-bar M.

3. The combination of the suspension-hooks H with the vertically-adjustable lengthening-bar I.

4. The combination of the suspension-hook H with the adjustable lengthening-bar I and the adjusting-screw K.

JOHN A. RUSSELL.

Witnesses:

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T. FOSTER ROSS.