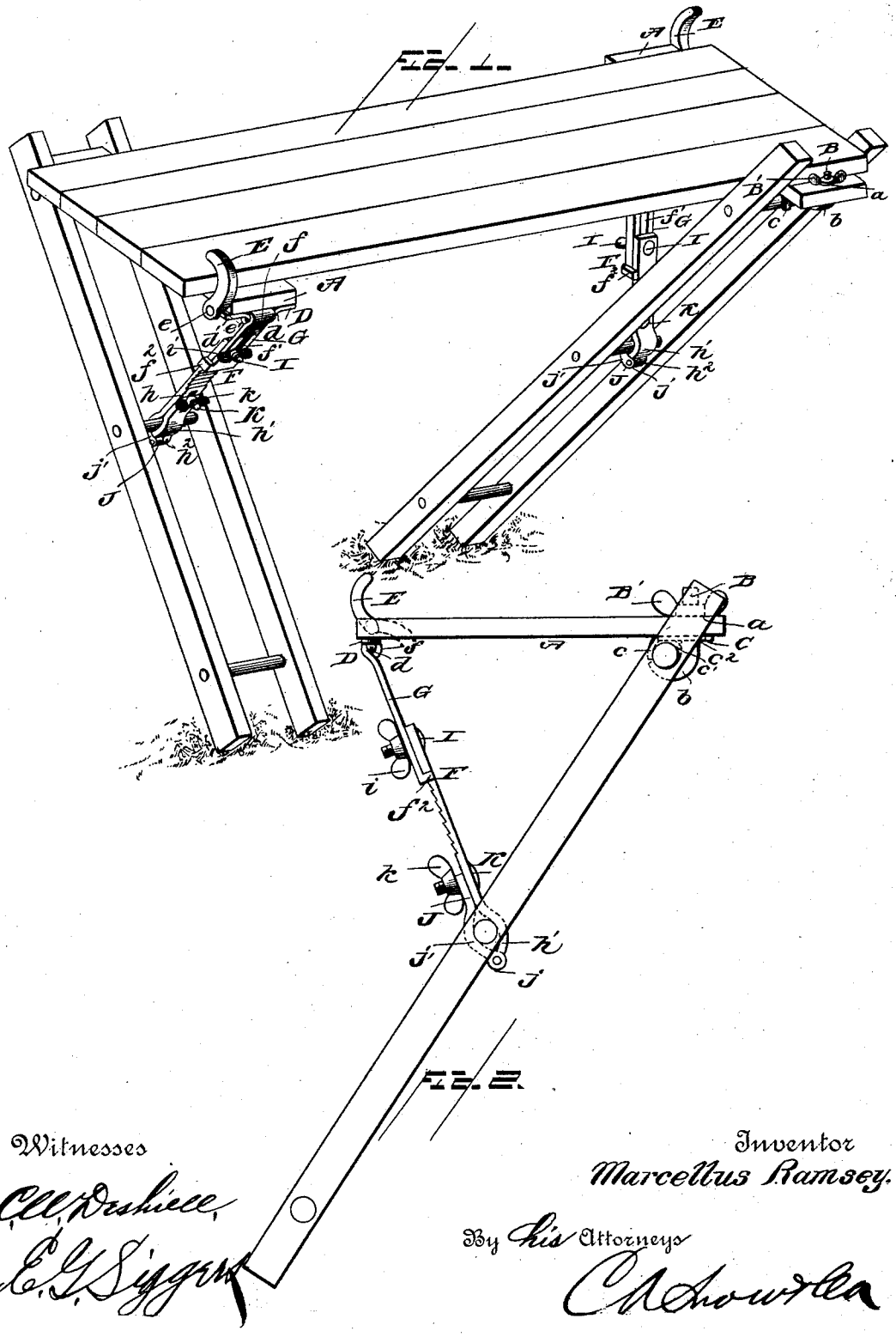
(No Model.) 2 Sheets—Sheet 1.

M. RAMSEY.

SCAFFOLD BRACKET.

No. 363,483. Patented May 24, 1887.



Witnesses
C. C. Dashiell
E. G. Siggers

Inventor
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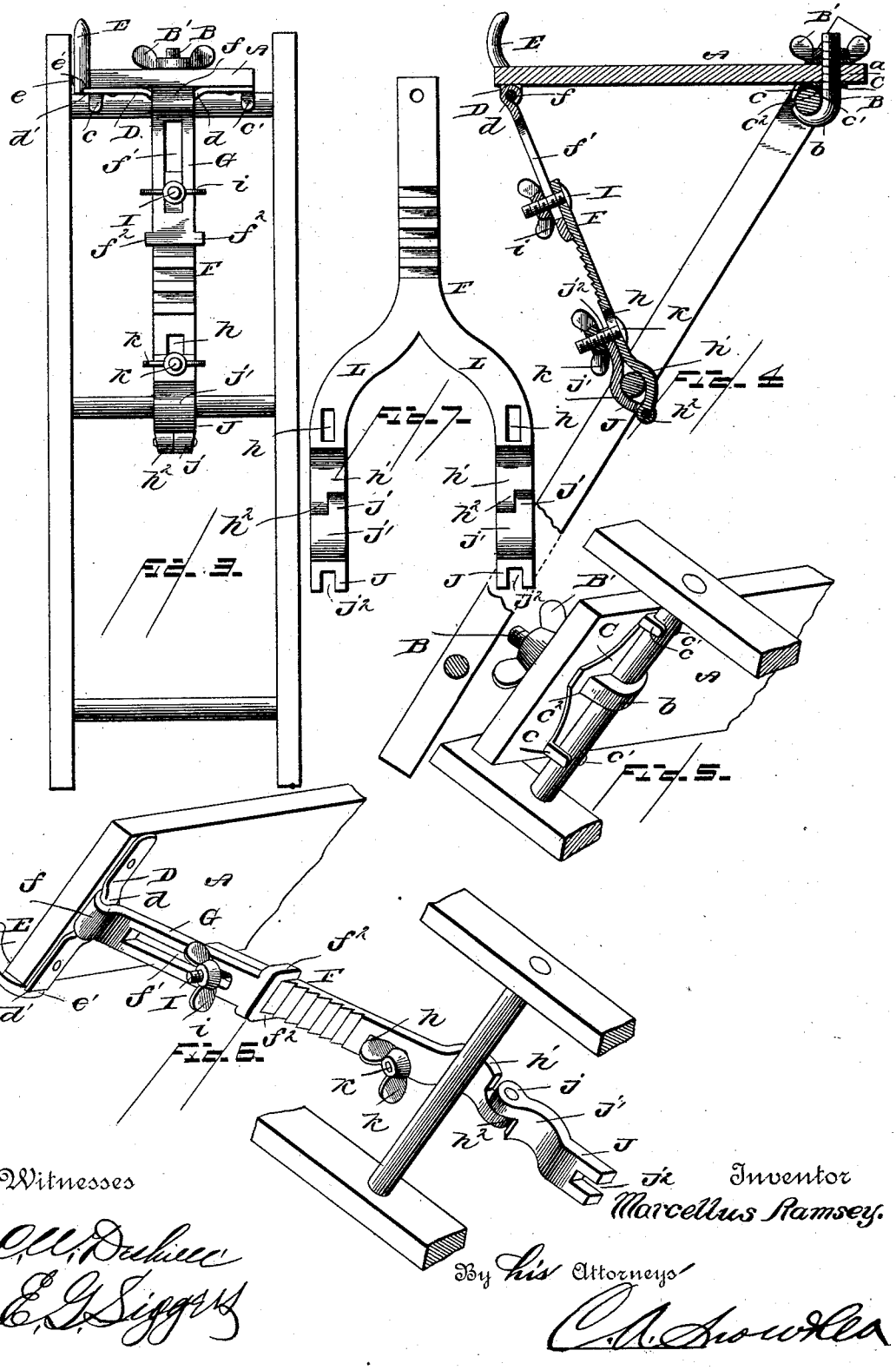
N. PETERS. Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

M. RAMSEY.

SCAFFOLD BRACKET.

No. 363,483. Patented May 24, 1887.



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UNITED STATES PATENT OFFICE.

MARCELLUS RAMSEY, OF MILES GROVE, PENNSYLVANIA.

SCAFFOLD-BRACKET.

SPECIFICATION forming part of Letters Patent No. 363,483, dated May 24, 1887.

Application filed December 27, 1886. Serial No. 222,680. (No model.)

To all whom it may concern:

Be it known that I, MARCELLUS RAMSEY, a citizen of the United States, residing at Miles Grove, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Scaffold-Brackets, of which the following is a specification.

My invention relates to improvements in scaffold-brackets; and it consists of the peculiar combination of devices and novel construction and arrangement of the various parts for service, substantially as hereinafter fully described, and particularly pointed out in the claims.

The primary object of my invention is to provide an improved bracket which can be readily and easily applied to any part of a ladder for use as a scaffold in connection with another bracket of like form, and intermediate planks which rest upon and are supported by the platforms of the brackets, so as to support one or more persons to enable him or them to perform work of different kinds at different heights from the floor or ground. A pair of brackets are employed in connection with one or more ladders and intermediate staging or planks for a scaffold, as contemplated by my invention; but the bracket can be used singly for the support of one person.

A further object of my invention is to provide the bracket with improved means for preventing the planks or staging from becoming displaced thereon when the device is used as a scaffold, and which means can be easily and readily adjusted or folded out of the way of the operator standing on the platform when the device is used singly.

A further object of my invention is to provide the bracket with improved means for securely and rigidly connecting the same to the rungs of a ladder, and which can be operated with ease and facility to quickly remove the bracket from or adjust it on the ladder, and without danger of the accidental detachment of the parts from one another, and the consequent liability of the loss of the said parts; and, finally, the object of my invention is to provide the bracket with improved means for supporting the platform in a horizontal position without reference to the inclined position of the ladder with relation to the ground, the device being readily and easily adjusted to compensate for the inclination of the ladder, all as will be more fully hereinafter described.

In the accompanying drawings, which illustrate a scaffold-bracket embodying my invention, Figure 1 is an elevation showing my invention adapted for service as a scaffold. Fig. 2 is a side elevation of the bracket adjusted upon a ladder. Fig. 3 is a front elevation of the device shown in Fig. 2. Fig. 4 is a vertical central sectional view thereof. Fig. 5 is a detached perspective view of the means for securing the inner end of the platform to the ladder. Fig. 6 is a like view of the inclined standard and the coupling devices for connecting the same with the ladder in order to support the outer end of the platform. Fig. 7 is a detached detail view of another form of the standard for supporting the outer end of the platform.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the platform of my improved scaffold-bracket, which is preferably made of a single flat piece of wood or metal, and this platform is provided at one end with a transverse opening, *a*, through which passes a draw iron or bolt, B, that connects the inner end of the platform to one of the rungs of the ladder.

C designates a bracket-plate, which is rigidly affixed to the under side of the platform A, and at the inner end thereof, as shown. This bracket-plate is arranged transversely across the platform, and at its ends it is provided with depending lugs *c c'*, which are cast or formed integral therewith, and which straddle or embrace the upper side of the rung of the ladder to which the platform is to be connected. A pair of these lugs *c c'* is provided at each end of the bracket-plate, and they serve to prevent longitudinal movement of the platform after the device has been connected to the ladder. The bracket-plate is further provided at its center with a transverse square opening, c^2, which aligns with the opening *a* in the inner end of the platform, and which is also made square in form.

The draw iron or bolt B is made square in cross-section, and it passes through the aligned square openings in the platform and the bracket-plate, and the lower end of this draw iron or bolt is provided with a curved or hook-

shaped portion, *b*, which takes over the lower side or edge of the rung of the ladder on which the lugs of the bracket-plate rest. The upper end of the draw iron or bolt is extended above the platform and exteriorly screw-threaded, as shown, and a binding-nut, B′, is fitted on this threaded end of the draw-iron, so that it will bear upon the upper side of the platform.

In adjusting my improved scaffold-bracket upon a ladder for use the depending pairs of lugs on the bracket-plate are first fitted over the proper rung of the ladder to which it is desired to connect the platform, and the hook-shaped lower end of the draw iron or bolt is also fitted beneath the lower side of the said rung. The binding-nut is now turned by hand to draw upon the bolt or iron and press the platform down upon the rung, and this movement of the platform forces the depending lugs on the bracket-plate into close engagement with the rung. The draw iron or bolt and its nut serve to prevent upward movement of the platform on the ladder and at the same time to press the platform and the lugs of the bracket-plate thereof into close engagement with the rung, and thereby securely connect the inner end of the platform to the ladder.

A swivel-plate, D, is rigidly affixed to the outer end of the platform and on the lower or under side thereof, as shown. This plate is provided at its middle with a rounded portion, *d*, which is depressed below the plane of the ends of the plate, which are made substantially rectangular or square in cross section. The ends of the plate are rigidly affixed to the platform by means of screws, which pass therethrough, and the central rounded portion, *d*, of the said plate is depressed beneath the under side of the platform to leave an intermediate space for the reception of the eye that is formed on the upper end of the inclined standard, in order to loosely connect the said standard to the swivel-plate, as will be more fully hereinafter described. One end of this swivel-plate is extended beyond one of the side edges of the platform, and this extended end of the plate is provided with an integral lug or shoulder, *d′*, which lies at right angles to the plate and bears against one of the side edges of the platform. A curved retaining-arm, E, is pivotally connected at one end to this lug or shoulder of the swivel-plate by means of a suitable pin or shaft, *e*, and the pivoted end of the said arm is cut away on the side adjoining the outer edge of the platform, so as to provide a shoulder, *e′*, that is located above the shaft or pivot of the arm. This arm is adapted to assume or be turned to an upright or vertical position, as shown in the drawings, so as to prevent the scaffold or planks that rest on the platform when the bracket is used for scaffolding purposes from falling off one side of the platform, and the said arm can also be turned or folded toward the opposite side of the platform, so as to lie flush with or beneath the plane of the upper side of the platform when the bracket is to be used for the support of a single person, as shown in dotted lines in Fig. 2. When the arm is turned to an upright position, the shoulder thereof comes in contact with the lug or shoulder of the swivel-plate, so as to prevent the further rearward movement of the arm.

F designates the inclined standard which connects the outer end of the platform with one of the rungs of the ladder, and thereby supports the same in place. This standard is made in two sections, an upper and lower section, which are adjustably connected together at their meeting ends, so as to lengthen or shorten the standard, and thereby vary the position of the platform. The upper section, G, of the said standard is bent or formed into an eye, *f*, which is fitted around the rounded central portion of the swivel-plate to loosely and securely connect the standard to the said plate and permit of the movement of the standard irrespective of any movement of the platform; and the said upper section is slotted longitudinally, as at *f′*, for a purpose presently described. The lower end of the upper section of the standard is further provided with projecting ears or lips f^2 on its side edges, which take over the corresponding side edges of the lower section of the standard, the said lower section being provided with a series of teeth or serrations on the side thereof which opposes the inner side of the upper section. The lower end of the upper section is adapted to fit or take into one of the series of teeth of the lower section, and the said sections are adjustably connected together in a very secure manner by a through-bolt, I, which has a square shank that passes through a square opening in the upper end of the lower section and the slot in the upper section, as is obvious. The diameter of the square shank of the bolt is slightly less than the width of the longitudinal slot in the upper section, so that the bolt can move freely in the slot, and at the same time is held from rotary movement in the slot; and the outer end of the bolt is threaded, as shown, to adapt a binding-nut, *i*, to work thereon and clamp the two meeting ends of the standard-sections together.

In order to lengthen the standard, and thus elevate the free end of the platform, the nut on the bolt is loosened and the lower end of the upper section is disengaged from the tooth on the lower section, after which the sections are moved in opposite directions away from one another to the required distance. The lower end of the upper section is again adjusted into one of the teeth on the lower section and the nut tightened to securely connect the sections together. The flanges or ears on the upper section serve to keep the upper and lower sections in line with each other, and the bolt is not removed or disconnected from the standard-sections, but merely rides in the longitudinal slot of the upper section, while the nut is loose on the said bolt. The reverse operation of the parts takes place in shorten-

ing the standard in order to lower the free end of the platform, the sections of the standard being drawn or adjusted together. The lower end of the lower section is provided with a longitudinal slot, *h*, a curved portion, *h'*, (which is formed by bending the metal of which the section is formed,) and an ear, h^2, which has a transverse opening to receive the pin or shaft of a coupling piece or plate, J. The latter has a lug, *j*, at its lower end, that fits against the ear h^2 and is movable on the pin or shaft, thereby pivotally connecting the coupling-plate with the lower end of the lower section of the standard. This coupling-plate is provided at its middle with a bent or curved portion, *j'*, which is similar to the portion *h'* of the lower section of the standard, and at its upper extremity the plate is further provided with a notch or recess, j^2, which aligns with the longitudinal slot *h* of the lower section of the standard to adapt a through-bolt, K, to pass through the same, and thereby connect the free end of the coupling-plate to the standard. The through-bolt has a square shank, the diameter of which is slightly less than the diameter or width of the slot and notch in the standard and coupling-plate, respectively, and the outer end of the said bolt is exteriorly threaded and provided with a nut, *k*, which binds on the coupling-plate and draws the through-bolt against the standard to securely connect the standard and coupling-plate together. A rung of the ladder is passed through the curved portions of the standard and the coupling-plate, which standard is thereby connected to and supported at its lower end upon one of the rungs of the ladder. In order to connect the lower end of the standard to the ladder, the binding-nut on the through-bolt is released, and the bolt is then moved toward the upper end of the slot to withdraw the same from the notch in the free end of the swinging pivoted coupling-plate. The coupling-plate is then thrown back or adjusted away from the standard, and the latter is passed in rear of the rung of the ladder to which it is desired to connect the lower end thereof. The curved portion *h'* of the standard is adjusted against the rear side of the rung of the ladder and the free end of the coupling-plate is swung around the said rung, so that the curved portion thereof fits on and over the front side of the rung to completely inclose the same. The through-bolt is now moved toward the lower end of the slot in the standard until it enters the notch in the free end of the coupling-plate, and finally the nut on the bolt is tightened to securely connect the coupling-plate and standard together and clamp them upon the rung of the ladder.

It will be seen that the adjustment of the coupling-plate is performed without removing the through-bolt from the standard or the nut from the bolt, and also that the bolt which connects the meeting ends of the standard-sections is not removed from the upper section, nor is the nut of the said bolt removed. The adjustments of the parts are thus performed without removing the bolts and their nuts, and the said parts are thereby prevented from becoming disconnected from each other and lost.

The operation of my invention is as follows: In using the device for scaffold purposes two ladders may be employed, as shown in Fig. 1 of the drawings, which are inclined in reverse directions, and on the rungs of these ladders are placed my improved brackets, one bracket being used for each of the ladders. The swinging retaining-arms of the brackets are adjusted above the platforms of the same, and the extensible standards of the brackets are adjusted so that the platforms lie in horizontal planes. The planks or staging that support the workmen and material are now placed upon the platforms, to be supported thereby, and the said planks are prevented from falling off the platforms by means of the upwardly-projeting folding arms. In lieu, however, of two ladders and their brackets, a single ladder and bracket may be used and the opposite end of the planks supported on a window-sill or other part of a house or other structure, one end of the planks being supported on the bracket and the ladder to which the bracket is connected.

In Fig. 2 I have shown my invention adapted to a ladder for the support of one man. The bracket-plate and draw-iron are connected to one of the upper rungs of the ladder in the manner hereinbefore described, and the lower end of the inclined standard is connected to the ladder by means of the coupling-plate and the through-bolt. In order to compensate for the inclined position of the ladder and maintain the platform of the bracket in a horizontal position, the standard is lengthened or shortened, as required, by merely loosening the nut and then adjusting the sections of the standard in the required direction, after which the nut is again tightened to clamp the meeting ends of the standard-sections together.

It will be seen that I provide an improved bracket which can be very easily and readily applied to a ladder and adjusted at any desired elevation thereon, which is simple and strong in construction, effective and reliable in operation, and cheap and inexpensive of manufacture.

I desire to state that while I have illustrated and described my preferred form of devices for carrying my invention into practice, still I reserve the right to make such changes and modifications in minor details of construction and arrangement of parts as fairly fall within the scope of my invention.

In Fig. 7 of the drawings I have shown another form of standard for supporting the outer end of the platform. The lower end of this standard is bifurcated, so as to provide two integral arms, L, which diverge laterally from each other, and the lower terminal ends of the said bifurcated arms are located near the sides of the ladder and the ends of the rung thereof to which the arms are connected, so

that the weight and strain of the bracket and the occupant thereof are brought upon the rung at the points where it is able to withstand the greatest strain—*i. e.*, at the ends of the same where they are connected to the side pieces of the ladder. The coupling-plates are connected to the lower terminal ends of the bifurcated arms of the standard in the manner hereinbefore described, and they are operated and adjusted in the same way, as will be very readily understood.

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

1. A scaffold-bracket having the platform, a bracket-plate rigidly affixed to the inner end of the platform and having the depending lugs arranged in pairs and adapted to take over the rung of a ladder, and thereby hold the platform from endwise movement in either direction, a draw iron or bolt having a square shank passing through an opening in the platform, and a hook-shaped lower end, and a nut fitted on the threaded end of the draw iron or bolt, as and for the purpose described.

2. A scaffold-bracket having a platform, a standard connected thereto and having a longitudinal slot, *h*, near its lower end, a coupling-plate pivotally connected to the lower end of the standard and having a notch in its upper edge adapted to align with the slot *h* when the said plate has been adjusted around the rung of a ladder, and a non-rotatable bolt normally fitted in the slot of the standard and adapted to fit in the notch of the plate to detachably connect the free end thereof to the standard, as and for the purpose described.

3. A scaffold-bracket having a platform, an extensible standard connected at its upper end to the platform and having the lower end bifurcated to provide the integral arms which diverge laterally from each other, the independent coupling-plates pivoted to the free ends of the diverging arms, and the bolts for detachably connecting the free ends of the plates to the arms of the standard, as and for the purpose described.

4. In a scaffold-bracket, the combination of a horizontal platform, a plate fixed to the outer end of the platform transversely of the same and having a lug, *d'*, at one side, which is extended beyond one side of the platform, and an arm, E, at the outer end on one side of the platform and pivoted to one end of the fixed plate, said arm having a stop-shoulder at its pivoted end which is adapted to come into contact with the lug *d'* when the arm is elevated, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

MARCELLUS RAMSEY.

Witnesses:
J. ROBT. HALL,
A. DENIO.