

E. H. PHELPS.

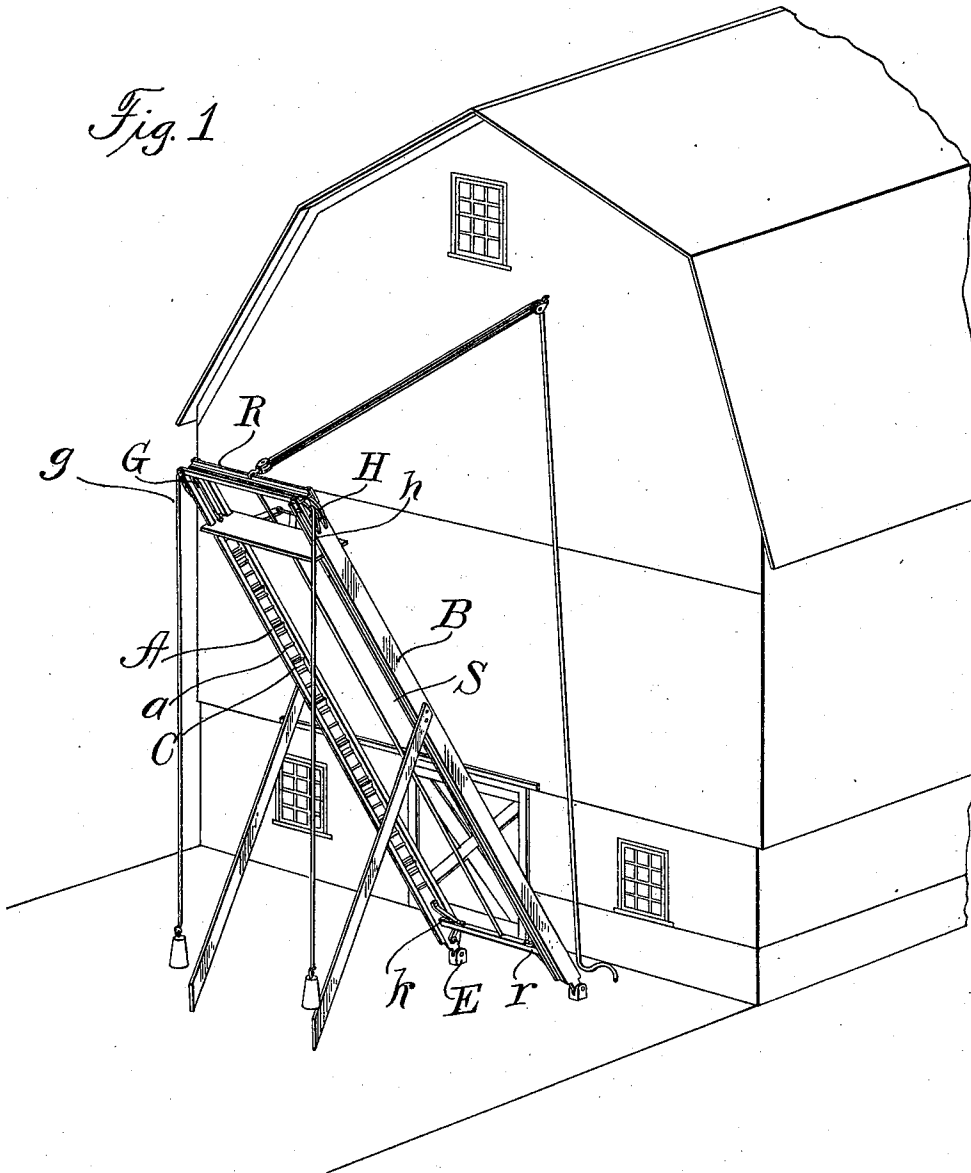
SCAFFOLD.

APPLICATION FILED MAR. 11, 1911.

1,000,842.

Patented Aug. 15, 1911.

3 SHEETS—SHEET 1.



Inventor

Witnesses
B. J. Crawford.
A. C. Balinger.

By *Eligah H. Phelps,*
Edwin Guthrie, Attorney

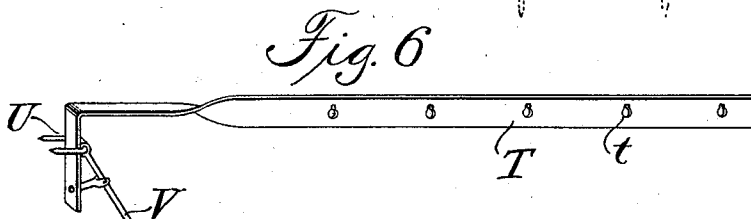
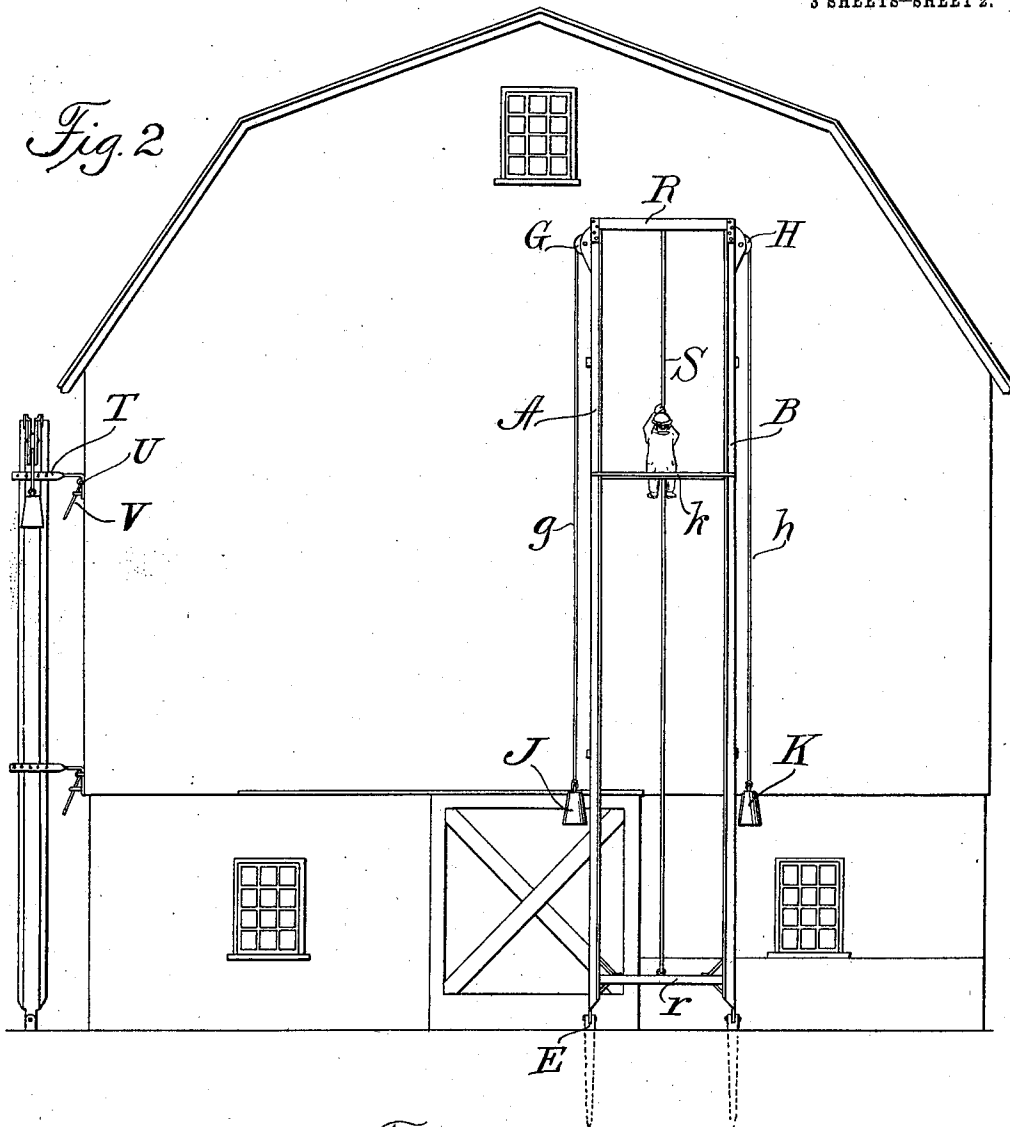
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3 SHEETS-SHEET 2.



Witnesses
J. H. Collins
B. S. Crawford

By

Eligah H. Phelps,
Edwin Guthrie,
Attorney

Inventor

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3 SHEETS-SHEET 3.

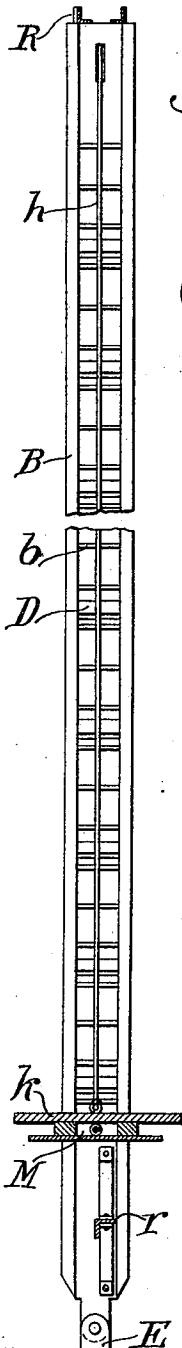


Fig. 3

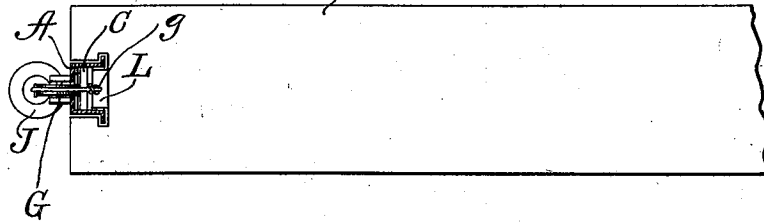


Fig. 4

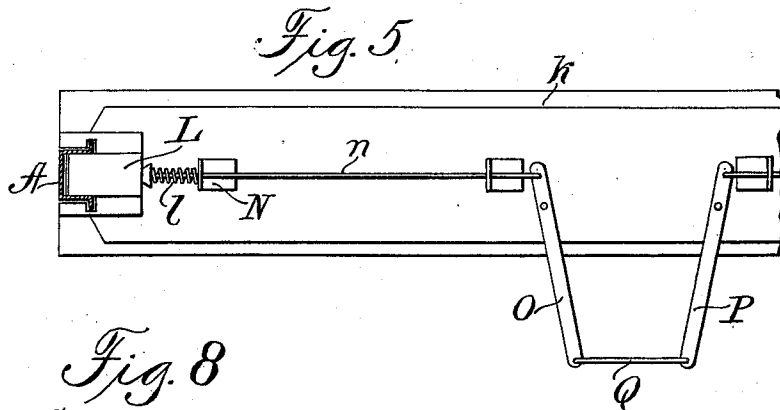


Fig. 5

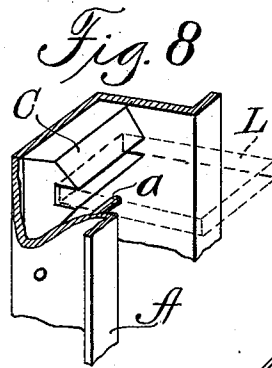


Fig. 8

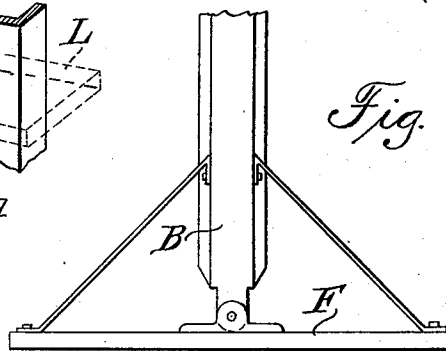


Fig. 7

Inventor

Witnesses
B. J. Crawford
R. C. Balinger

By

Eliah N. Phelps,
Edwin Guthrie,
Attorney

UNITED STATES PATENT OFFICE.

ELIGAH HARRIS PHELPS, OF NICHOLSON, PENNSYLVANIA.

SCAFFOLD.

1,000,842.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed March 11, 1911. Serial No. 613,696.

To all whom it may concern:

Be it known that I, ELIGAH H. PHELPS, citizen of the United States, residing at Nicholson, in the county of Wyoming and State of Pennsylvania, have invented certain new and useful Improvements in Scaffolds, of which the following is a specification.

This invention relates to scaffolds whereon workmen may be supported adjacent to any structure, for the erection, repair or painting thereof, and belongs to that class of scaffolds wherein the stage or platform upon which the workmen may stand, is arranged to be raised and lowered either by a workman when he is upon the stage, or when he is upon the ground.

This invention consists in the production of a scaffold having parts of special construction and particular arrangement with respect to each other, whereby a workman may raise or lower himself by drawing upon a cable suitably arranged, and, at the same time release or lock the stage of the scaffold with respect to the upright supports thereof, by using his legs or knees for such stated purpose, without taking his hands from the cable, thus avoiding any risk of letting the stage fall. In other words, the workman may by the operation of this invention fully lock the stage in any position wanted, and may make sure it is locked, before he leaves go of the cable by which he is raising or lowering himself, thereby reducing the danger of accidentally permitting the stage to descend too rapidly to a minimum.

The construction and arrangement of parts representing the embodiment of this invention, are illustrated in the accompanying drawings, of which—

Figure 1 shows the end of a building, and a scaffold constructed in accordance with this invention in the process of being raised into position adjacent to the building. Fig. 2 shows the end of the building, to which scaffolds have been applied in front of the end of the building, and at one side thereof, and illustrates the position of the workman when raising or lowering the stage, and, the figure also indicates about the relative distance from the building at which the uprights are usually placed. Fig. 3 shows an inside view of one of the upright supporting members, and shows the cross-pieces or projecting stops arranged to be engaged by the bolt of the stage. Fig. 4 is a top plan

view of one end portion of the stage. Fig. 5 is a bottom plan view of the same end portion of the stage shown in Fig. 4. Fig. 6 is a side view of one of the arms constructed to attach the uprights to a building, and to hold them at a desired distance from the building. There are also shown in Fig. 6 the staple and lever devices by which the arms are attached to the building and detached therefrom. Fig. 7 represents the side view of a shoe or base to which the uprights of this invention may be attached, when it is required to erect this invention on a pavement through which the customary end-pegs of the uprights could not conveniently be driven. Fig. 8 is a fragmentary perspective view of one of the uprights, having parts broken away to disclose one of the bolt stops or catches, and one of the rungs.

The same letter is employed throughout the drawings to refer to the same part.

The side members, or uprights when this invention has been erected are marked A and B, and they are interiorly provided with the rungs *a* and *b*, making each upright in fact a ladder should necessity arise therefor. The uprights A and B, are provided with stops or catches C and D, which will be mentioned hereinafter.

As shown in Figs. 1 and 2, it is usual in practice to equip the lower ends of the uprights with the pegs E, pivotally attached, and which may be driven into the earth to hold the feet of the uprights in place, or, the ends of the uprights may be pivotally secured to the bases, one of which is best shown in Fig. 7, and designated by the letter F. Bases F are for use upon pavements or very hard ground. The uprights A and B, have also the pulleys G and H over which run cables *g* and *h*, having their ends attached to balance weights J and K, and both cables are secured to the stage or platform of the scaffold. In practice it is customary to make the weights of sufficient size to raise the stage *k*. It may be noted here that the catches C and D can be so formed as to prevent the stage from either rising when there is no load upon it, or from descending as previously explained. The stage *k*, from above, is substantially as represented in Fig. 4.

The mechanism for operating the bolts is best illustrated in Fig. 5, which is a bottom view of the stage. A description of one of

the bolts, for example, bolt L, shown in Figs. 4 and 5, will answer for both bolts L and M. The bolt L has arranged against it one end of a spring Z. The other end of the spring Z bears against the angle plate N, and the effort of the spring is to press the bolt outwardly, from the stage. A movement of the bolt L in that direction, draws upon the connecting rod n and pulls the inner end of the lever O also in the same direction. But, as will be understood from Fig. 5, the outer end of lever O is moved in the opposite direction, and a similar arrangement of parts relating to bolt M at the other end of the stage, not shown, tends to move the outer end of lever P to meet the outer end of lever O. In practice, and as shown in Fig. 5, it is usual to couple the two outer ends of the levers by means of a hook bar Q, thus holding them against movement toward each other, and allowing the stage k to be raised or lowered by hand. It often occurs that workmen are engaged on upper floors of buildings against which this invention has been erected, and it is a convenient means of raising paint or other materials to them. To do so, it is required that levers O and P be joined together by the hook bar Q as explained.

The uprights A and B are connected at the top by the top cross-piece R, and near the bottom by another cross-piece r. Extending between those cross-pieces, and passing between the outer ends of the levers O and P, is the hand cable S.

In Fig. 2, at the side of the representation of a building, the uprights are illustrated as spaced from the wall of the building by means of a bar T provided at intervals with holes t of any desired form through which a nail or screw projecting from the upright may be passed to engage the bar, and enabling the upright to be held at any one of a number of distances from the wall of the building. When this invention is applied to a wooden wall, the bent end of bar T may be secured by a staple U, and, in practice there is usually provided a lever V attached to the staple, and arranged to withdraw it when desired.

The operation of this invention will now, it is thought, be understood. When the workman wishes to change the position of the stage, he seats himself as indicated in Fig. 2, with his legs between the outer ends of the levers O and P. He removes the hook bar Q, and presses with his knees against the levers to counterbalance the force of the springs on the bolts L and M. He then draws upon the hand cable S, if he seeks to rise, or lets himself down thereby.

When he arrives at the desired altitude, he releases the levers O and P, thus shooting the bolts L and M outwardly into engagement with stops C and D, but, without taking his hands from the hand cable S until he is assured that the stage is properly supported by the bolts and stops.

Having now described this invention, and explained its mode of operation, what I claim and desire to secure by Letters-Patent of the United States is:—

1. In a scaffold, the combination with uprights provided with spaced stops or catches, of a movable stage, bolts movably attached to said stage and arranged to engage the catches, a hand cable whereby said stage may be raised or lowered, the said cable being arranged longitudinally between the uprights and disposed to pass near the edge of said stage, and bolt-operating means including levers arranged near the point where said hand cable passes the stage and constructed to be operated by sidewise movement of the legs of the operator.

2. In a scaffold, the combination with uprights provided with spaced stops or catches, of pulleys borne by the uprights, a movable stage, bolts movably attached to said stage and arranged to engage the catches, weights arranged adjacent to the uprights, cables connecting the weights and the said stage and passing over the said pulleys, a hand cable whereby said stage may be raised and lowered, the said cable passing longitudinally between the uprights and disposed to pass near the edge of said stage, and bolt-operating means including levers arranged near the point where said hand cable passes the stage and constructed to be operated by a sidewise movement of the legs of the operator.

3. In a scaffold, the combination with uprights provided with spaced stops or catches, of a movable stage, bolts movably attached to said stage and arranged to engage the catches, bolt-operating means including levers arranged with their outer ends near each other and projecting beyond the edge of said stage, and a hand cable whereby the stage may be raised or lowered, the said cable passing longitudinally between the uprights and between the projecting ends of the said levers of said bolt-operating means.

In testimony whereof I affix my signature in presence of two witnesses.

ELIGAH HARRIS PHELPS.

Witnesses:

E. C. AMERMAN,
G. W. MAXEY.