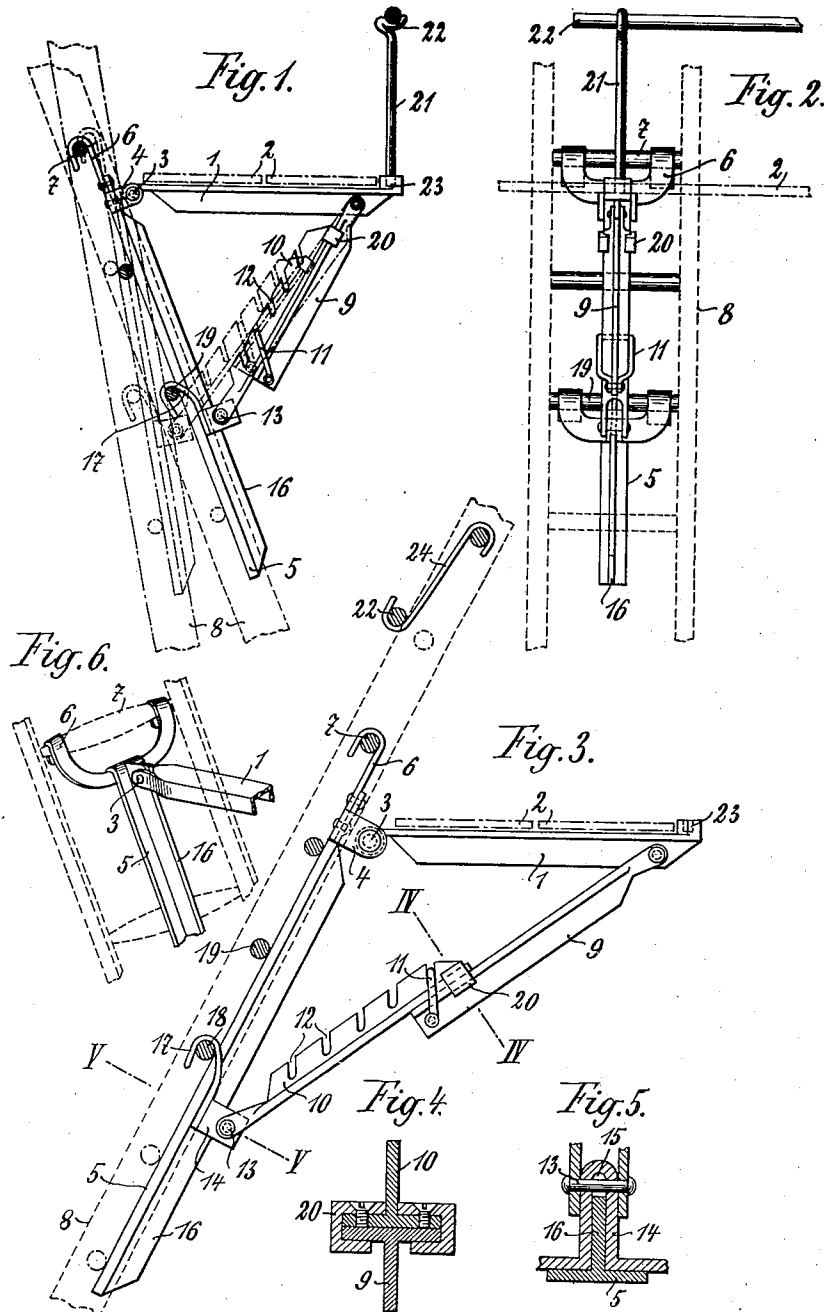


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PORTABLE SCAFFOLD.
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UNITED STATES PATENT OFFICE.

THEOPHILE VICTOR LOUIS BOILOT, OF CLERMONT-FERRAND, FRANCE.

PORTABLE SCAFFOLD.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THEOPHILE VICTOR LOUIS BOILOT, manufacturer, a citizen of France, residing at Avenue du Puy-de-Dôme, Clermont-Ferrand, France, have invented new and useful Improvements Relating to Portable Scaffolds, of which the following is a specification.

This invention relates to portable scaffolds constituted essentially by two or several ladders and plank supporting brackets and it has for its object more particularly to improve the said brackets.

The brackets heretofore employed are costly and complicated and their supporting arms are inextensible so that it is not possible to adjust such brackets to different inclinations in relation to the ladders and consequently the brackets are not always suitable, because of course, as they are required to support the planks they should always be horizontal whatever may be the inclination of the ladders. Moreover, the distribution of the load is defective and for this reason it is inadvisable to construct wide scaffolds with these brackets. Again the fixing of the different members, such as the supporting arms and the safety arms, is usually effected by keys and pins which are to be avoided as far as possible for the purpose, because not only are they easily lost although frequently secured by chains, but they become disengaged under the action of the various strains put upon the structure. The brackets according to the present invention do not possess any of the defects aforesaid chiefly owing to the fact that the supporting arms or struts are extensible and also comprise wide movable hooks similar to the fixed hooks of the brackets. The improved brackets therefore permit of adjustments to suit any desired inclination and at the same time distribute and support the load in the most advantageous manner possible.

The improvements are hereinafter described with reference to the accompanying drawing in which:—

Figure 1 is an elevation of a bracket, shown in two different positions, mounted upon the outer side of a ladder. Fig. 2 is a front view of Fig. 1. Fig. 3 is an elevation, to a larger scale, showing a bracket mounted upon the inner side of a ladder. Figs. 4 and 5 are detail sections upon the lines IV—IV and V—V respectively of Fig. 1,

and Fig. 6 shows a modified connection between the plank support and the device suspended from the rungs or steps of the ladder.

The bracket comprises a wrought iron support 1 for the planks 2 which is preferably of T section, pivotally connected at 3 either to lugs or ears 4 fixed to or integral with an upright 5, or directly to the said upright. The latter terminates at its upper end in a wide or double hook 6 by means of which the bracket is supported upon a rung or step 7 of a ladder 8. Near to the free end of the horizontal member 1, a strut member or arm 9 is pivotally connected and is preferably of T-section. This member 9 slides upon the back of a rack 10 of similar section. The rack 10 and member 9 constitute the extensible supporting arm or strut of the bracket and in order to adjust or fix the position of the supporting member 1 it is only necessary to engage the loop or ring 11 of the member 9 with one or other of the recesses or teeth of the rack 10. The rack is pivotally connected at 13 with a slider 14 of T-section, the web of which is grooved as seen at 15, Fig. 5, and slides freely by means of the groove, on the web 16 of the T-iron which constitutes the upright 5. The second pair of hooks 17 is fixed on or carried by this slider or shoe and is engaged, according to the inclination of the ladder, with a rung 18 (Fig. 3), or with a rung 19 (Fig. 1). A guide 20 is fixed or formed on the end of the rack 10 for the reception of the member 9 of the extensible supporting arm.

The advantages above set forth will now be apparent without further explanations of Figs. 1 and 3. The extensible supporting arm 9, 10, permits of maintaining the horizontality of the bracket whenever the inclination of the ladder is changed, as will be seen for example by comparing the position of the bracket seen in chain lines in Fig. 1 with that seen in full lines. This can be done in the majority of cases without disengaging the hooks 6 and 17 from the steps or rungs. The load is supported in an advantageous manner, for it is not only suspended by the upper pair of hooks 6 but also by the lower pair of hooks 17, and the load is also supported by the intermediate steps or rungs against which the upright 5 bears.

As a guard or safety rail, wooden bars or

rails 22 may be employed in the ordinary way supported by hooks 24, Fig. 3, when the bracket is employed on the inner side of the ladder and by special supports 21 which support the bar or rail 22 in the plane of their axis when the bracket is used outside of the ladder, as seen in Figs. 1 and 2. In the latter case the upper part of the bracket is provided with a socket 23 in which is removably fixed, by any convenient means, the support 21, which may, if desired, have the form of an elongated S in order to serve as a support for the bars or rails 22 and for the planks or flooring 2 when the scaffold is being raised or lowered by a distance separating one or several steps or rungs, so that the dropping of parts is avoided; these S-shaped supports hook on to the steps or rungs in the same manner as the hooks 24.

It is to be understood that, without departing from the invention, it is possible to introduce modifications which do not affect the principle and to employ any suitable materials for carrying out the invention. Also the different pivotal joints such as 3, 13, and so on, can be made in any convenient manner and the fixing of the supports 21 in the sockets 23 may be performed in any suitable manner so long as they are removable. The brackets known up to the present were necessarily of such small dimensions that they were only suitable for work in workshops, studios, and the like, whereas the improved brackets answer all the requirements of builders and may be employed even with vertical ladders. Owing to the absence of all keys and pins much time is saved in the mounting and dismounting of the scaffold.

Fig. 6 shows in perspective a special pivotal connection between the support 1 and the upright 5, the lug in which the pivot is mounted being in this case integrally formed on the bar 5 and the end of the support 1 being forked to take over the lug.

I claim:—

1. Portable scaffold comprising an upright, means thereon adapted to suspend said upright from the rung of a ladder, a horizontal support pivotally connected with said upright, an extensible strut pivotally connected at its upper end with the outer end of said support, a slide movable upon said upright, a pivotal connection between the lower end of said strut and said slide, and means for suspending said slide from a lower rung of the ladder.

2. Portable scaffold comprising an upright, means thereon adapted to suspend said upright from the rung of a ladder, a horizontal support pivotally connected with said upright, a depending bar pivotally con-

nected with the outer end of said support, a slide on said upright, an upwardly extending rack pivotally connected with said slide, guiding means for coupling said bar and said rack together in sliding engagement, means on said bar adapted to engage any desired tooth of said rack, and a hook on said slide for suspending the latter from a lower rung of the ladder.

3. Portable scaffolding bracket adapted to be suspended from the rungs of a ladder and comprising upright, horizontal, and strut members, the last named being adjustable in length and having a foot adjustable up and down the upright and fitted with means adapted to engage the rung of a ladder substantially as set forth.

4. Portable scaffolding bracket comprising a T-iron upright adapted to be suspended from a rung of a ladder and to lie along a plurality of rungs, a platform support fixedly pivoted on said upright, a slide on said upright, an extensible strut pivotally connected between said slide and said support, fastening means on said strut for preserving the length to which the strut is adjusted, and hooks on said slide for engaging a lower rung of said ladder substantially as set forth.

5. Portable scaffolding bracket comprising a T-iron upright, a suspension hook thereon, a horizontal bar pivotally connected at one end with said upright, a strut pivotally connected with the outer end of said bar, said strut being in two portions adapted to slide one upon the other and to be fastened together in any desired position, a shoe slidable on the web of said T-iron upright, a suspension hook on said shoe, and a pivotal connection between the lower end of said strut and said shoe substantially as set forth.

6. Portable scaffolding bracket comprising a T-iron upright, a suspension hook thereon, a shoe slidable on the web of said T-iron, a hook on said shoe, a platform support pivotally connected with the upper end of said upright, a T-iron bar pivotally suspended from said support, a toothed rack pivotally erected on said shoe, a guide operative to hold said rack and said depending bar together in sliding engagement, and a pivotal loop on said bar adapted to engage any desired tooth of said rack substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THEOPHILE VICTOR LOUIS BOILLOT.

Witnesses:

MAURICE EMANAU, BENJAMIN BLOCHE.