

A. H. DANFORTH.
 BUILDER'S BRACKET.
 APPLICATION FILED MAY 17, 1910.

968,836.

Patented Aug. 30, 1910.

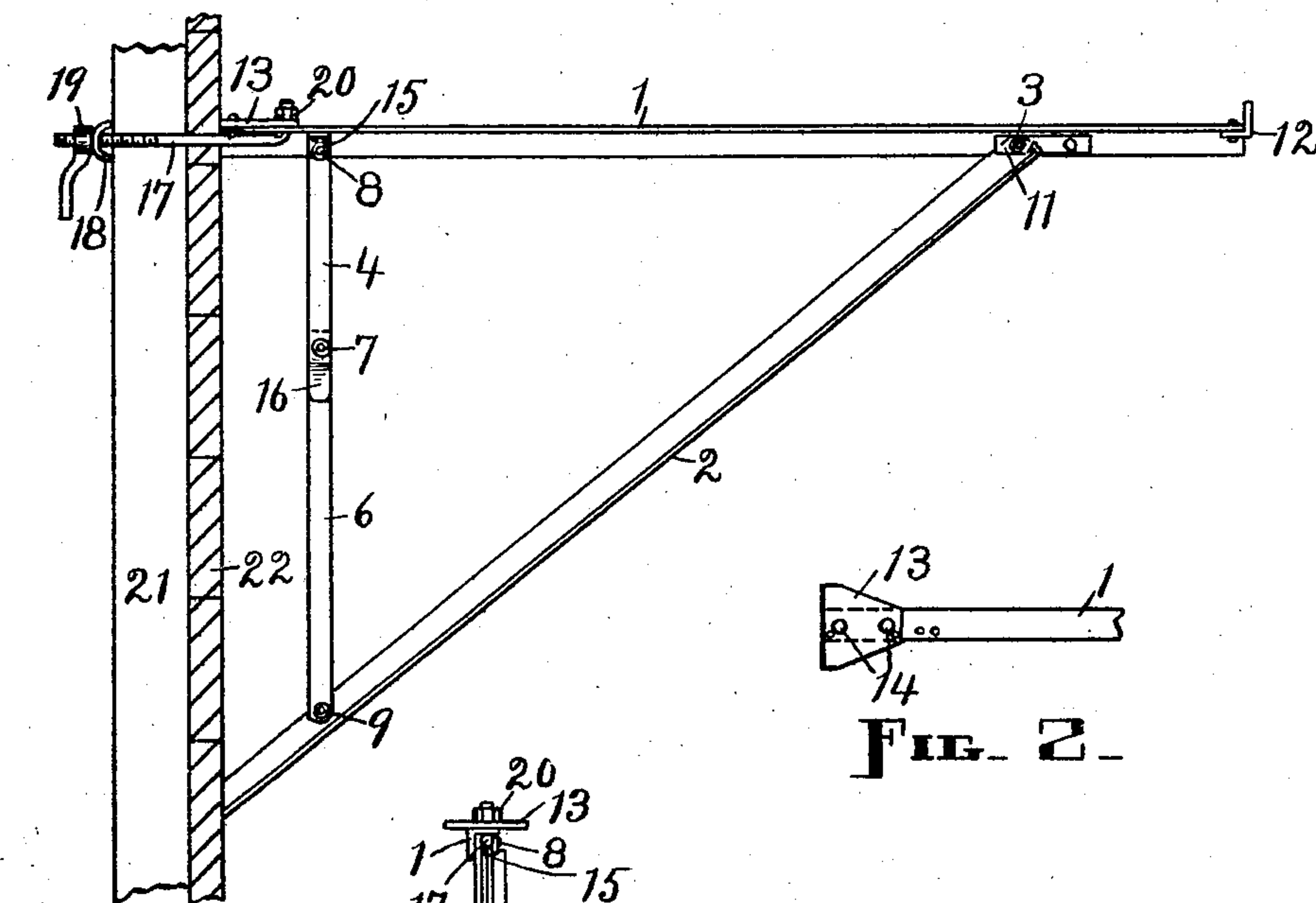


FIG. 1.

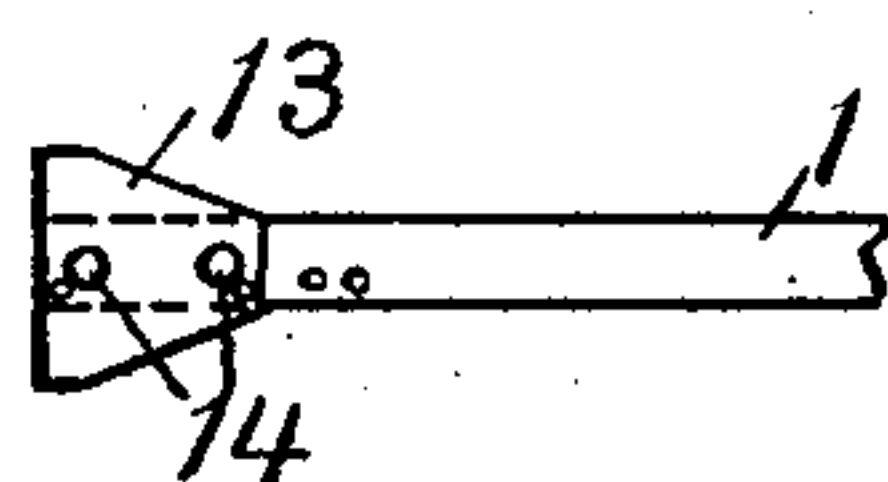


FIG. 2.

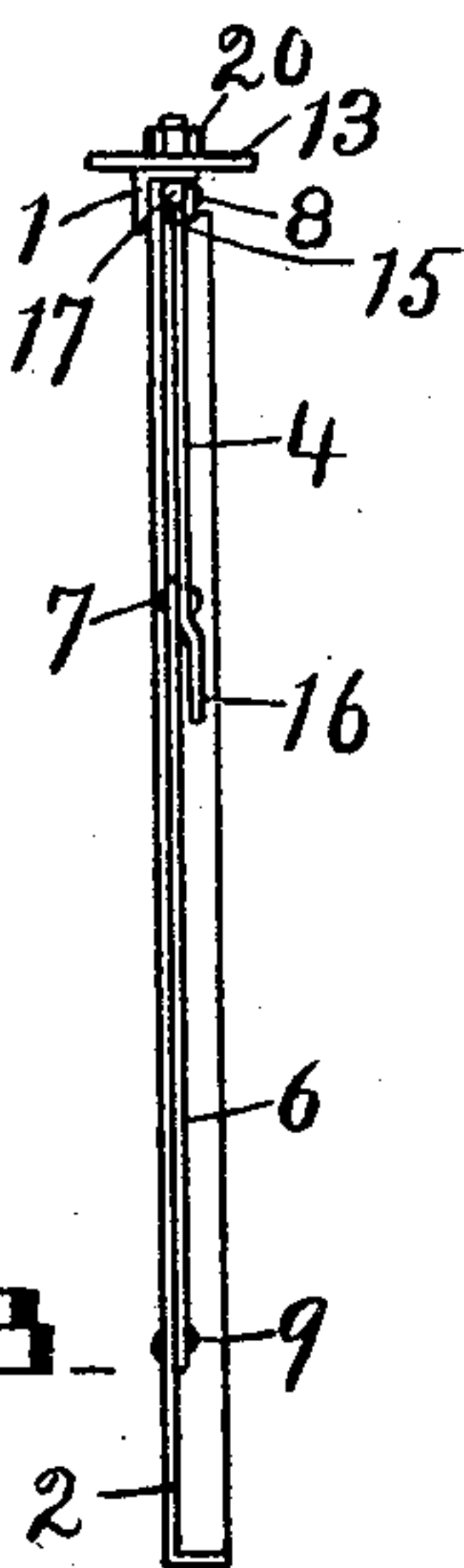


FIG. 3.

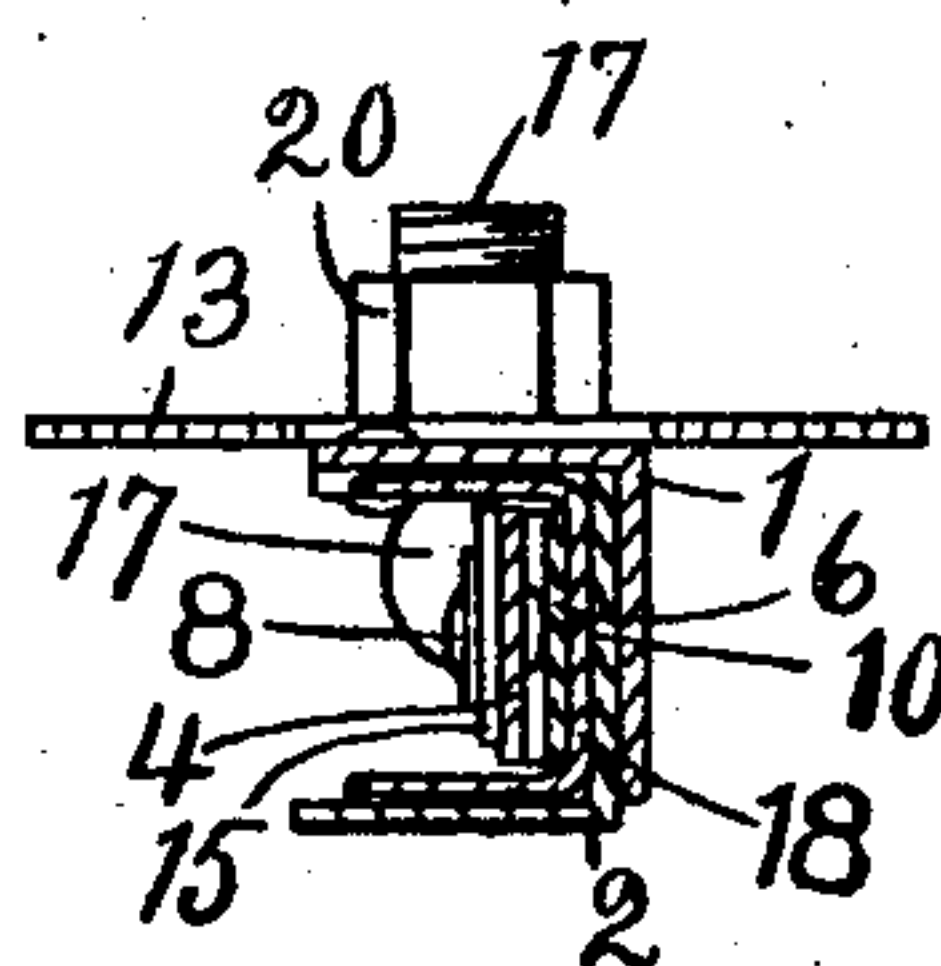


FIG. 5.

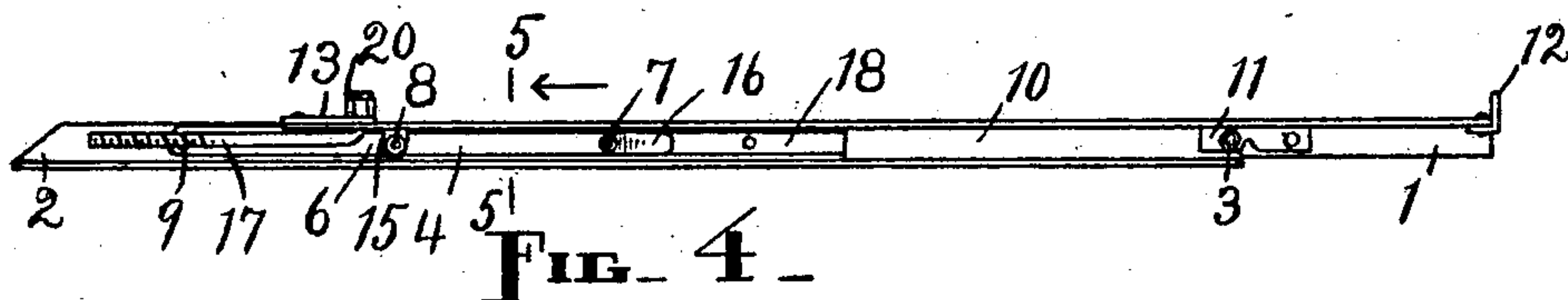


FIG. 4.

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BUILDER'S BRACKET.

968,836.

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To all whom it may concern:

Be it known that I, ALBERT H. DANFORTH, a citizen of the United States of America, residing at Monson, in the county of Hampden and State of Massachusetts, have invented a new and useful Builder's Bracket, of which the following is a specification.

My invention relates to improvements in folding brackets or supports for scaffold boards or planks, in which are employed pivotally-connected angle-irons arranged to form a channel when brought into parallelism, and a folding brace pivotally connected with said angle-irons, together with a channel-iron supporting piece adapted to fit into such channel and receive into it parts of said brace when folded, for the purpose of securely retaining the bracket in its closed or collapsed condition, and with certain other auxiliary parts and members, all as hereinafter set forth.

The primary object of my invention is to produce a strong, safe, durable and serviceable builder's bracket of metal, which can be folded together so compactly that the parts are practically in close parallel relation with each other, and can be securely locked in this condition, such bracket being simple and comparatively cheap in construction.

Other objects are to provide means, in a bracket of this kind, for preventing the same from swaying, and for affording the necessary amount of adjustment on the part of the retaining bolt.

I attain these objects by the means illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a bracket which embodies a practical form of my invention, the same being open or expanded and represented as attached to the side of a building ready for use; Fig. 2, a top plan of the back end portion of said bracket; Fig. 3, a rear end elevation of the expanded bracket; Fig. 4, a side elevation of the bracket showing the same in its folded and locked condition, and, Fig. 5, an enlarged cross-section on lines 5—5, looking in the direction of the arrow, in Fig. 4.

Similar figures refer to similar parts throughout the several views.

The bracket proper consists of a platform-bar or arm 1, a strut 2 having one end pivoted at 3 to said arm some distance from the front end of the latter, and brace-pieces

4 and 6 which are pivoted together at 7 and respectively pivotally connected at 8 and 9 with said arm and strut. The arm 1 and the strut 2 are made of angle-iron, and what in cross-section is the vertical portion of the latter is pivoted to the corresponding portion of the former, so that when the two members are closed together with the two vertical portions lying parallel, as shown in Figs. 4 and 5, a channel 10 is formed, of which said vertical portions constitute the side and the horizontal portions of said arm and strut constitute the top and bottom, respectively. The aforesaid side of the channel 10 is double, of course, the vertical portion of the arm 1 being outside and the vertical portion of the strut 2 being inside. A strap 11 may be provided to strengthen the pivotal connection at 3, such strap being riveted to the arm 1. An angular lug 12 is riveted to the front end of the arm 1 in such a way that it projects above said arm, and is for the purpose of preventing boards or planks on the arm from sliding off of the same.

A plate 13 is securely riveted to the arm 1 on the top and at the rear end thereof. The plate 13 is arranged with its rear edge flush with the rear edge of the horizontal portion of the arm 1, and the rear edge of the former is wider than that of the latter. One or more holes 14 are made in the plate 13 and the supporting part of the arm 1 below. The object of this plate is to prevent lateral movement on the part of the bracket, as will be more fully explained hereinafter.

An angular lug 15 is riveted to the horizontal portion of the arm 1 on the underside and in front of the position of the plate 13. The depending part of the lug 15 is spaced apart from the vertical portion of the arm 1, and it is to this part that the brace-piece 4 is pivoted at 8.

The brace-piece 4 has an off-set extension 16 below or beyond the pivot 7, which may be grasped to facilitate folding initially and the final act of straightening.

The brace-piece 6 is pivoted at 9 directly to the vertical portion of the strut 2.

An L-shaped retaining bolt 17, a perforated channel-iron supporting piece 18, and a clamping-nut 19 are employed in connection with this bracket. The bolt 17 is screw-threaded at one end for a nut 20 and at the other end for the clamping-nut 19. The short arm of the bolt 17 passes up through

either of the holes 14 in the arm 1 and the plate 13, and the nut 20 is screwed on to said short arm of the bolt tight against said plate.

5 The bracket may be used with a coach-screw, in which event the nut 20, the clamping-nut 19 and the supporting piece 18 are not required.

10 In the first view a stud 21 with boarding 22 thereon is represented, and the extended bracket is shown supported therefrom by the bolt 17 with the supporting piece 18 and the clamping-nut 19 on its inner terminal, and with the back ends of the arm 1 and plate 13 and the strut 2 bearing against said boarding on the front side. The bolt passes through the boarding 22 and extends far enough back of the inner plane of the stud 21 to enable the supporting piece 18 to be placed on said bolt and the clamping-nut 19 to be screwed on behind said supporting piece. The supporting piece is of sufficient length to extend across and bear on two adjacent studs, and the clamping-nut is screwed tightly against the back side of said supporting piece. Thus the bracket is securely clamped to the stud and boarding, is supported below by the strut 2, and is prevented from swaying by the plate 13 which projects both sides of the arm 1 against the boarding.

25 The supporting-piece 18 might be turned to stand in a vertical position, and then the bracket is clamped directly to the boarding. This manner of securing the bracket is safe in many if not most cases, owing to the length of the supporting piece and the fact that it would consequently bear against an area of boarding sufficiently large to hold the weight of said bracket and its load without pulling away from the studding.

40 If the bolt 17 does not project far enough, it can be readily changed from the front to the rear hole 14, by simply removing the nut 20, relocating said bolt, and replacing said nut.

50 Upon removing the clamping-nut 19, the bracket is drawn forward until the bolt 17 clears the boarding 22, and then said bracket is folded by bending the jointed brace (4 and 6) on the pivots 7, and 8 and 9, into the triangle formed by the arm 1, the strut 2 and said brace, and swinging said arm and strut together on the pivot 3 until they are parallel with each other. The channel 10 is thus produced and in it are the now folded brace-pieces 4 and 6—see Fig. 4. Now the supporting piece 18 is placed in the channel 10 and forced behind the folded brace-pieces 4 and 6 into the position substantially as shown in Fig. 4, said brace-piece 6, which it will be remembered is pivoted at 9 to the strut 2, yielding sufficiently for this purpose and at the same time pressing said supporting piece against the ver-

tical portion of said strut and so holding it from endwise dislodgment toward the pivot 3 without the exercise of some little force. The folded brace-pieces are thus held at their jointed terminals between the top and bottom portions of the supporting piece, as clearly shown in the last two views, and since said brace-pieces are connected at their other terminals with the arm and strut, the two latter cannot be swung apart on their pivot 3, hence the bracket is securely locked in its closed condition, and, furthermore, said supporting piece is safely stored out of the way so that it is not liable to get lost. The structure when thus folded occupies very little space and can be handled very easily, as will be readily perceived.

75 To prepare the bracket for use, first draw out the supporting piece 18 from engagement with the brace-pieces 4 and 6, then separate the rear terminals of the arm 1 and the strut 2 and finally straighten said brace pieces.

80 The several operations incident to the placing of my bracket in actual use and to the taking down and folding of the same are simple and can be performed without difficulty.

85 It is obvious to one skilled in the art that some modification may be made in the construction of this bracket without departing from the spirit of my invention, therefore I do not desire to be too closely limited to what is herein shown and described in detail, nevertheless I am aware that folding brackets with bolt and supporting-piece means of attachment to a building, for builders' use, are old, and for this reason do not seek to claim such a bracket broadly.

90 What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a builder's bracket, of an angle-iron arm and a bolt connectible therewith at its rear terminal, an angle-iron strut pivotally connected with said arm, the two angle-iron members being arranged to form a channel when bolted together, a jointed brace pivotally connected with said members and adapted to fold into such channel, and a channeled bolt-supporting and-supported piece receivable in said channel in engaging relation with the folded brace therein, whereby said brace may be retained in its folded condition and the angle-iron members prevented from swinging open.

115 2. The combination, in a builder's bracket, of an angle-iron arm provided with a laterally-extending perforated plate at one terminal and with an angular lug having an upwardly-projecting part at the other terminal, and further provided with a lug which depends from the horizontal part of said arm and is parallel with but remote from the vertical portion of said arm, a re-

5 taining bolt for engagement with said arm and plate, an angle-iron strut pivotally connected with said arm and forming with the latter a channel when the two angle-iron members are folded together, a jointed brace pivotally connected with said depending lug and said strut and adapted to fold into such channel, and a member receivable in such channel to engage said brace when folded

and lock the parts in their collapsed condition, such last-mentioned member being adaptable for use on and as a supporting piece for said bolt.

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Witnesses:

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