

March 26, 1935.

C. S. CLARK

1,995,668

KNOCKDOWN SCAFFOLD

Filed Sept. 24, 1934

3 Sheets-Sheet 1

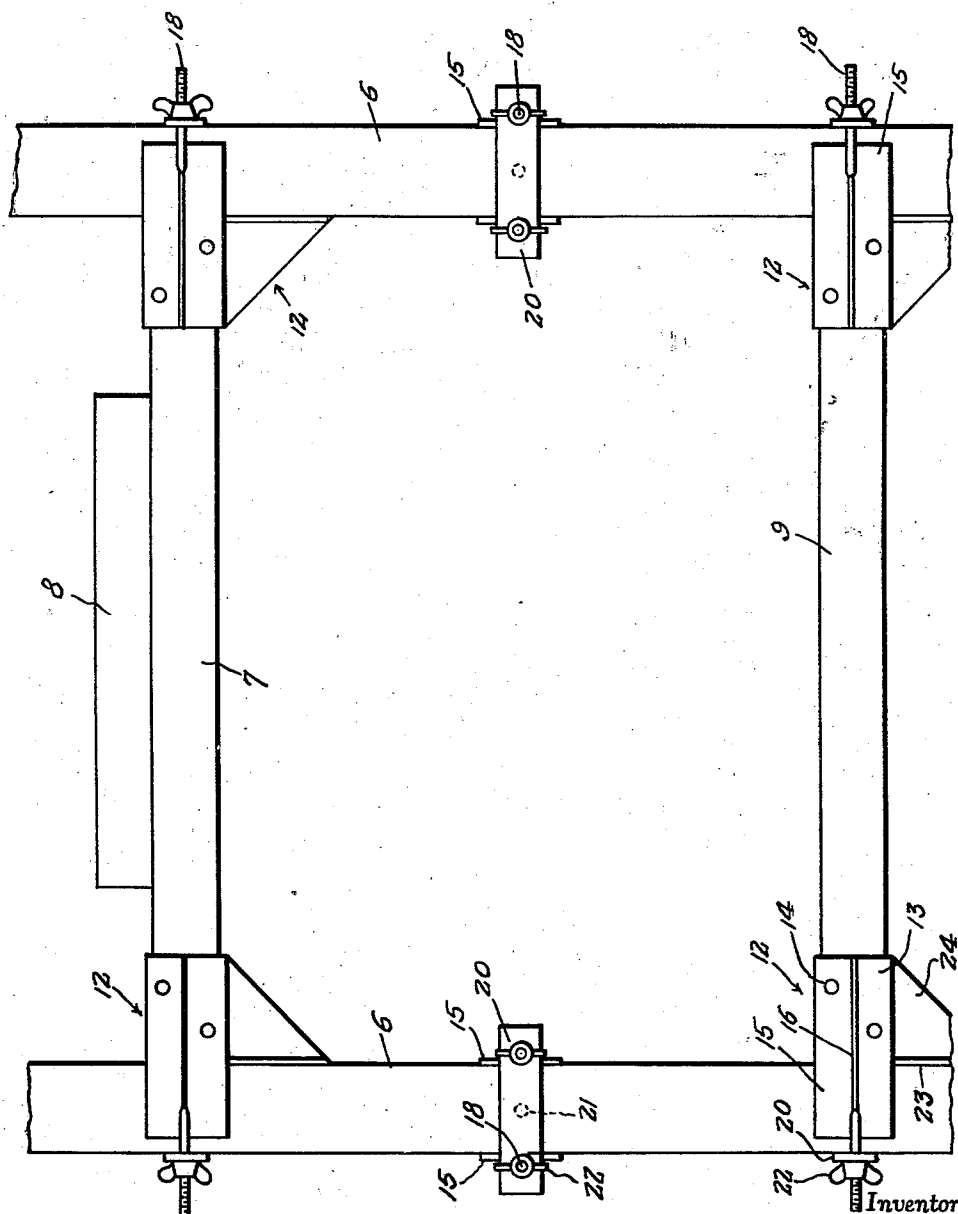


Fig. 1.

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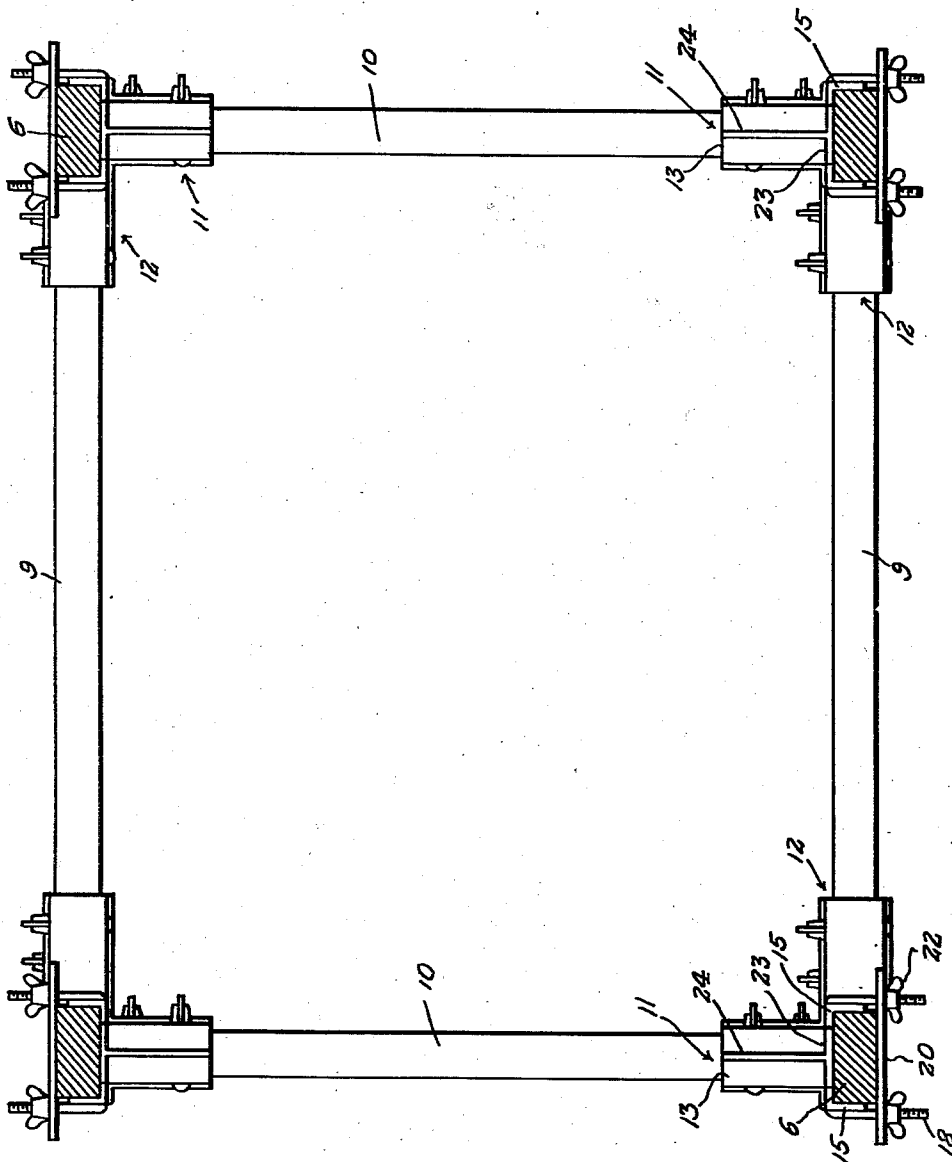
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3 Sheets-Sheet 3

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KNOCKDOWN SCAFFOLD

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5 Claims. (Cl. 304—40)

This invention relates to an improved scaffold of a portable knockdown type susceptible of expeditious and reliable usage by workmen such as carpenters, plasterers, painters, and the like.

5 The invention has to do with a structure which is capable of use in building and construction work either on the interior or exterior as conditions may require. It has been conceived and reduced to practice with a view toward providing 10 the user with a scientifically and uniformly balanced support such as will obviate the necessity of building a scaffold on the job from makeshift and unreliable materials.

In carrying the principles of the invention into 15 actual practice, I have evolved and produced a structural arrangement which is characterized by well directed and appropriate structural features of a noteworthy type, the complete structure being such as to fulfill the expectations of the 20 workmen in a highly practicable and satisfactory manner.

In addition to providing a structure which is simple and economical, I have evolved and produced an arrangement which can be expeditiously 25 erected and thereafter dismantled and properly adjusted with facility for the purpose of elevating or lowering the planks or platforms as the case may be.

An outstanding feature of the preferred embodiment of the invention is the bracket or 30 brackets expressly designed to serve as an appropriate expediency to prompt and ready erection, and to make for portability in order to facilitate transportation from place to place for dependable usage.

Other features and advantages will become more readily apparent from the following description and drawings.

In the drawings:

40 Figure 1 is a fragmentary side elevational view of the complete scaffold illustrating the trestle, the walking plank, and the various fixtures or brackets utilized for rendering the assemblage satisfactorily operable.

45 Figure 2 is a top plan view of the arrangement depicted in Figure 1 with the plank or board removed.

Figures 3, 4 and 5 are detail perspective views illustrating the features or parts employed in 50 the construction of the timber jointing devices or brackets.

In Figures 1 and 2 I have illustrated the parts utilized for constructing the complete knockdown portable scaffold. In Figures 3 to 5 I have 55 disclosed the distinguishable embodiments of

brackets employed as timber connecting or jointing units.

Referring now to Figures 1 and 2, it will be observed that the vertical uprights, generally wooden beams, are denoted by the numerals 6. 5 These are of appropriate proportions for easy transportation and handling. They must, of necessity, be sufficiently sturdy to promote strength and durability. These posts or uprights are assembled into an open framework which 10 forms the trestle and this framework includes horizontal supporting rails 7 for the planks or boards 8 and connecting timbers 9 and 10. The timbers 9 may be designated as the longitudinal spaced parallel frame members while those de- 15 noted by the numerals 10 may, for the sake of distinction, be differentiated as the cross pieces or transverse frame members. All of the timbers 7, 9 and 10 are preferably of uniform type 20 so as to be interchangeable for satisfactory cooperation with the jointing units or brackets, that is, the devices which serve to connect the timbers with the posts. In order to insure balance and uniformity of distribution of stress and strain, it will be observed that the lower rails or timbers 9 25 are disposed on an elevation below the timbers 10, the timbers 10 being at right angles to the timbers 9 and sufficient to assemble and maintain the uprights in appropriate frame forming relation to satisfactorily support the top rails or 30 frame members 7. Incidentally, as will be evident from the following claims, the terms "timbers" and "frame members" are used alternatively in an equivalent sense to designate any one or all of the parts 7, 9, and 10.

Although the brackets or devices illustrated in 35 Figures 3 and 4 are substantially the same, they are, for the sake of distinction, differentiated by the numerals 11 and 12, respectively. The bracket 12 may be said to be of the single brace type 40 while the bracket 11 may be distinguished as the duplex brace type. The brackets 11 are used for connecting the cross pieces or frame members 10 with the uprights. Basically, however, these brackets are somewhat the same in construction; 45 that is to say, each bracket is constructed of sheet metal and fashioned to provide a rectangular box-like socket or receptacle 13 having holes 14 to accommodate fasteners such as bolts, nails or the like. In addition the side walls of these receptacles are formed with extensions or flanges 50 disposed in spaced parallelism to embrace the adjacent or complementary timber. The flanges employed in the type of brackets denoted by the numeral 11 are offset or of right angular forma- 55

tion to engage over the posts as illustrated in Figure 2. The receptacles are formed with reinforcing ribs 16 and these ribs terminate in studs 17 whose outer ends are screw threaded as at 18. The threaded studs are adapted to extend through apertures 19 formed in a clamping plate 20. This clamping plate is provided with a pointed spur 21 which is adapted to be embedded in the wood of the timber to facilitate placement and maintain anchorage. The clamping plates, which slip over the studs 17 are held against the adjacent timbers by way of wing nuts 22. In the single brace type bracket shown in Figure 4, I provide a right angularly disposed abutment 23 joined integrally to the receptacle 13 by a connective web 24. These features 23 and 24 provide a suitable brace which rests against the posts for effective maintenance and rigidity. These features 23 and 24 may be referred to collectively as stabilizing means. In the bracket 11 shown in Figure 3 I provide upper and lower stabilizing members or means while in the bracket 12 shown in Figure 4 I provide a single stabilizer. Generically then, each bracket or coupling device comprises a receptacle 13 to accommodate the adjacent end of the rail or frame member, this being provided with clamping flanges 15 carrying nut accommodating studs cooperable with clamping plates 20. In addition, each bracket embodies at least one stabilizing member comprising a suitably arranged properly proportioned abutment 23 and the connective web 24. Hence, with these sets of brackets, it is possible to expeditiously erect and place in position the parts forming the trestle or framework and to just as easily dismantle the parts when it is desired to disassemble the structure for compact and convenient storage or transportation as the case may be.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in shape, size, and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

What is claimed is:

1. A coupling bracket for use in the construction of a scaffold of the class described comprising a receptacle adapted to receive one end of a timber, the side walls of said receptacle being extended in parallelism to provide post embracing and clamping flanges, said flanges being provided with screw-threaded connecting studs, and an apertured clamping plate cooperable with said studs, together with retaining nuts adapted to be mounted on said studs for holding the plate in position.

2. A timber attaching and adjusting bracket of the class described comprising a sheet metal

structure including a receptacle portion for reception of one end of the timber, the sides of said receptacle portion being formed with extension flanges to embrace the posts, said flanges being provided with screw threaded retaining studs, a stabilizing member carried by said receptacle and including a depending abutment to rest against a post, and a bracing web between the abutment and bottom of said receptacle.

3. A timber attaching and adjusting bracket of the class described comprising a sheet metal structure including a receptacle portion for reception of one end of the timber, the sides of said receptacle portion being formed with extension flanges to embrace a post, said flanges being provided with screw threaded retaining studs, a stabilizing member carried by said receptacle and including a depending abutment to rest against said post, a bracing web between the abutment and bottom of said receptacle, and a detachable clamping plate adapted for association with said studs, said plate having apertures to accommodate the studs and being formed intermediate its ends with a pointed spur designed to embed itself in the complementary post.

4. As a new article of manufacture, a component part of a coupling bracket of the type described comprising a receptacle adapted for horizontal disposition, said receptacle being of rectangular cross sectional shape and including spaced parallel side walls and adjoining top and bottom walls, said receptacle being adapted to receive one end of a timber, the side walls of said receptacle being formed at their outer ends with extended portions constituting post embracing and clamping flanges, and the free end portions of said flanges being provided with means to facilitate adjustable connection of said flanges with the complementary post, and a depending brace unit attached to the bottom of said receptacle and including a portion adapted to bear against the aforesaid post.

5. A timber attaching and adjusting bracket of the type described comprising a substantially rectangular box-like receptacle adapted for reception of one end of a timber, said receptacle being open at its opposite ends, and including spaced parallel side walls and adjoining top and bottom walls, the rear ends of the side walls being formed into extended flanges to embrace the adjacent post, means carried by said flanges to facilitate attachment thereof with the post, and upper and lower stabilizing and bracing members, said members being connected with the top and bottom walls of the receptacle in an integral manner and each member including a vertical abutment to bear against the adjacent post, and a connecting web between said abutment and companion wall of the receptacle.

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