Feb. 14, 1928. 1,659,113

C. E. MARKS

AUTOMATICALLY FOLDING TRESTLE OR HORSE

Filed May 25, 1926 2 Sheets-Sheet 1

Fig. 1.

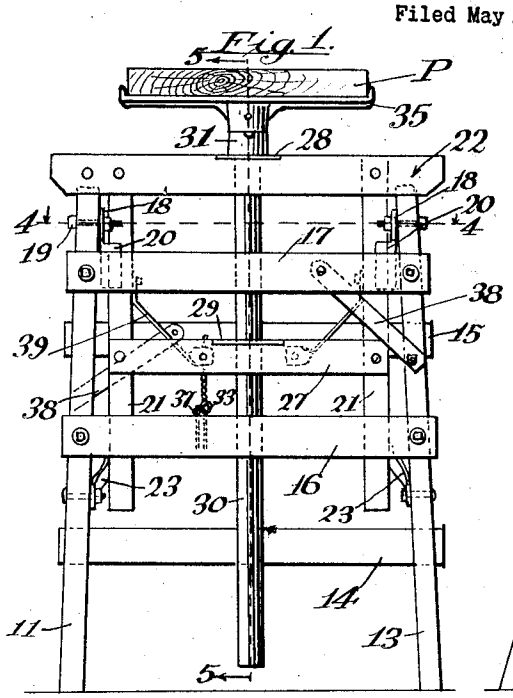


Fig. 2.

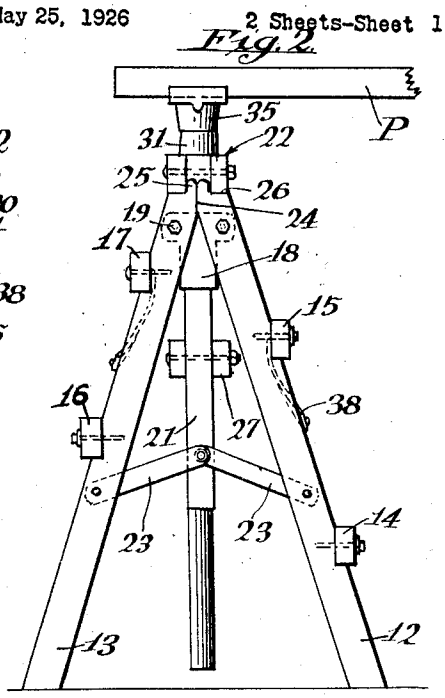


Fig. 3.

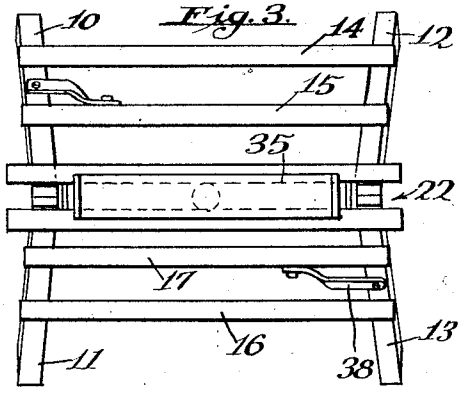


Fig. 4.

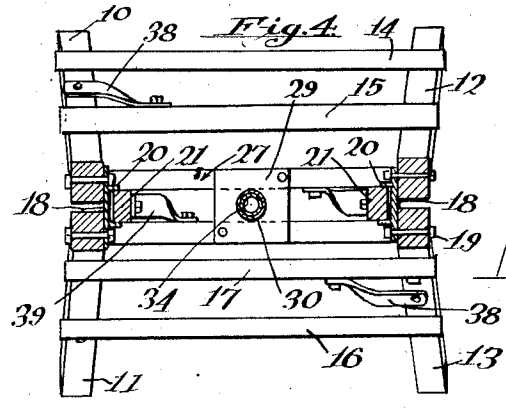
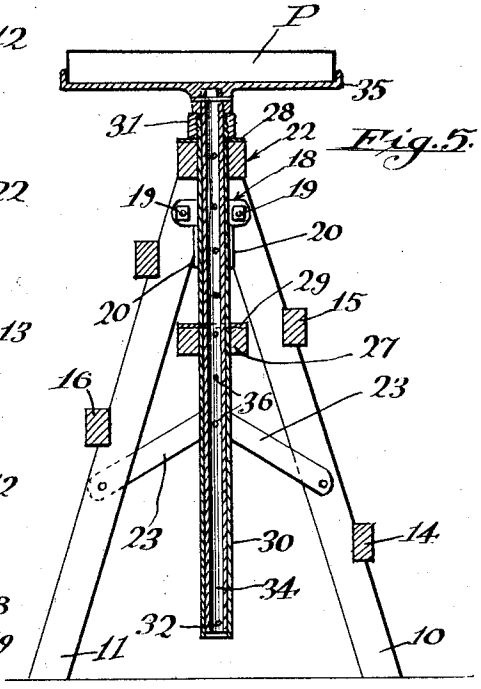


Fig. 5.



Inventor
Charles E. Marks.
by Hazard and Miller
Attorneys

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Fig. 6.

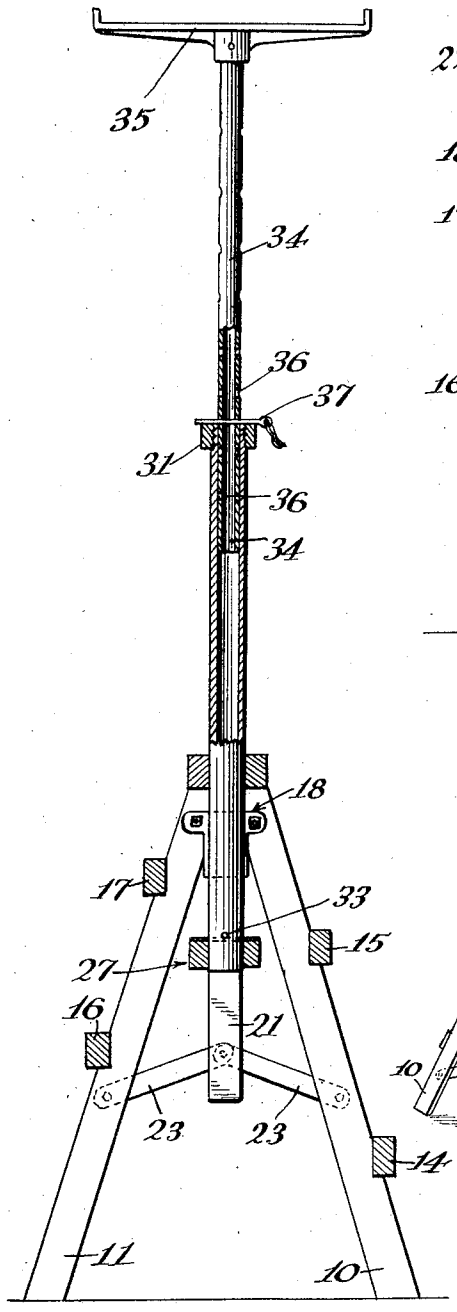


Fig. 7.

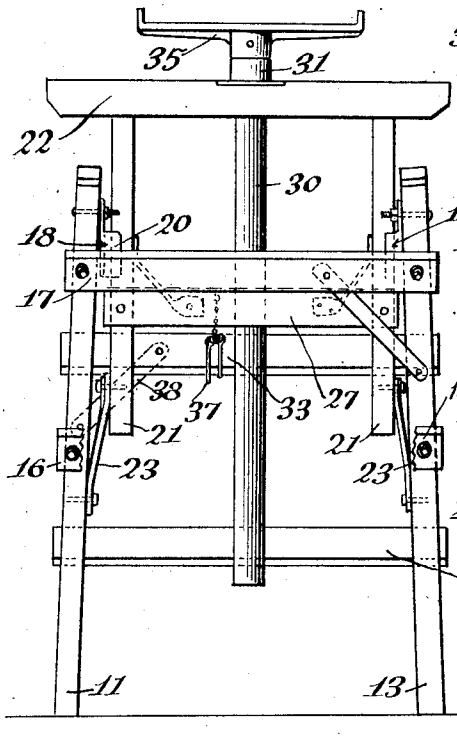


Fig. 8.

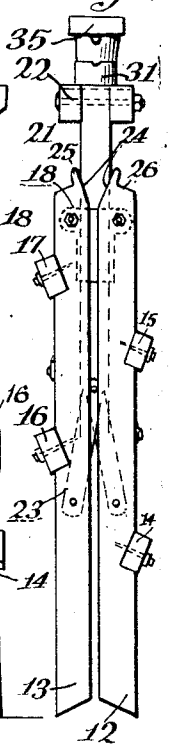
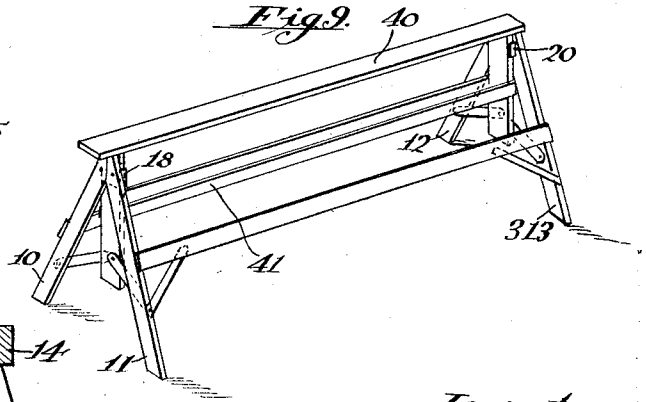


Fig. 9.



Witness:

Inventor:
Charles E. Marks.
by Hazard and Miller
Attorneys.

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UNITED STATES PATENT OFFICE.

CHARLES E. MARKS, OF HOLLYWOOD, CALIFORNIA.

AUTOMATICALLY-FOLDING TRESTLE OR HORSE.

Application filed May 25, 1926. Serial No. 111,574.

This invention relates to improvements in trestles or horses and the like.

An object of this invention is to provide an improved support which may be easily and quickly collapsed and which will assume a flat position when collapsed so that a plurality of the supports can be stacked one above the other very easily for storage and shipping purposes.

Another object of this invention is to provide a support in the form of a horse or trestle wherein the supporting beam on being lifted will automatically cause the complete device to become collapsed, enabling it to be easily carried from place to place.

A further object of this invention is to provide a device which when in its set-up position will be rigid and quite strong.

A still further object of this invention is to provide a type of horse or trestle which provides for supporting planks or the like constituting a scaffolding in a plurality of positions at various heights from the floor, so that the level of the scaffolding can be easily and quickly varied for various conditions.

With the foregoing and other objects in view which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a side elevation of the improved horse or trestle in its set-up position,

Fig. 2 is an end elevation of the same,

Fig. 3 is a top plan view of the horse or trestle shown in Fig. 1,

Fig. 4 is a horizontal section taken substantially on the line 4—4 of Fig. 1,

Fig. 5 is a vertical section taken upon the line 5—5 of Fig. 1,

Fig. 6 is a sectional view similar to Fig. 5 illustrating the manner in which the height of the support may be increased,

Fig. 7 is a side elevation of the device when in its collapsed position,

Fig. 8 is an end elevation of the device in collapsed position, and

Fig. 9 is a perspective view illustrating a slightly modified form of construction.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, the improved horse or trestle consists of two pairs of legs, the legs being indicated at 10, 11, 12 and 13 respectively. Corresponding legs of each pair are connected together as by cross bars 14, 15, 16 and 17. The upper ends of the legs of each pair are joined together by means of hinges which are formed of sections of sheet metal, as indicated at 18. Bolts 19 pass through the sections of sheet metal 18 and serve to pivotally fasten the legs to their respective hinges. The lower portions of the sections of sheet metal 18 are bent to provide wings or guides 20, in which uprights 21 are slidable. The uprights 21 are rigidly secured to and depend from a horizontal supporting beam, generally indicated at 22, which in the modification shown in Figs. 1 to 8 is formed of two cross bars. Four links 23 are provided and one end of each link is pivotally fastened to the lower end of an upright 21. The other end of the link is pivotally fastened to one of the legs. As clearly shown upon the drawing at the upper ends of the legs of each pair there are formed opposed faces 24 which abut each other when the legs are spread into their outermost position. There are also formed small fingers 25 which are adapted to enter between the cross bars which form the supporting beam 22.

The operation of the above described construction is as follows: If the supporting beam 22 is lifted, it will cause the uprights 21 to slide upwardly within the guides 20, thus drawing the links 23 into a more nearly vertical position and cause the legs to swing toward each other, as clearly shown in Fig. 8. In this manner it will be appreciated that it is merely necessary to lift the supporting beam 22 and this will cause the complete horse or trestle to collapse. Conversely, if the supporting beam is forced downwardly, it will cause the legs to swing apart and to assume a set-up position. Usually if the horse or trestle is merely placed on a smooth floor, the weight of the supporting beam alone is sufficient to cause the legs to slide apart, so that the device will automatically set itself up. When in its set-up position the faces 24 abut each other and the fingers 25 enter between the cross bars forming the upper supporting beam. Furthermore, the supporting beam rests directly upon the top faces 26 which are formed on

the legs. From this construction it will be noted that when the trestle or horse is in its set-up position, it will be firm and rigid. The links 23 which serve to spread the legs or to draw them together also serve to brace them and assist in making the device very rigid.

If the device is to be used for scaffold purposes, a cross beam 27 is provided which joins the two uprights 21 adjacent their lower ends. On the two cross beams 22 and 27 there are positioned plates 28 and 29 respectively, in the centers of which there are formed apertures. A tubular member fits in these apertures and is indicated at 30, and on the upper end of the tubular member there is threaded a collar 31 adapted to engage upon the plate 28 to prevent downward movement of the tubular member through the beams 22 and 27 in one position. In the bottom of the tubular member there is also provided an aperture 32 adapted to receive a pin 33, so that the tubular member can be lifted and the pin inserted, the pin being engageable upon the plate 29 to limit the downward movement of the tubular member in another position, as clearly shown in Fig. 6. A supporting member 34 is slidable within the tubular member 30 and may carry a suitable bracket 35, on which a plank P may be supported. The supporting member 34 has a plurality of apertures 36 formed therein, each of which is adapted to receive a pin 37, which will engage and rest upon the collar 31, and in this manner the supporting member can be supported on the tubular member in either of a plurality of positions. From this construction it will be appreciated that the plank P can be supported in a plurality of positions, each of which is at a different height above the floor. If for any reason it should be desirable to support the plank P at a height above the floor which is below the beam 22, the plank can be permitted to rest on any of the cross bars 14, 15, 16 or 17, and as these cross bars are at different heights, as shown upon the drawing, the plank can be supported in whatever position it is desirable. Suitable braces 38 may be employed to connect the cross bars to the legs and thus assist in forming a rigid substantial horse or trestle. Also, braces 39 may be used to connect the cross bars 27 which forms the lower horizontal beam to the uprights 21.

It will be readily understood that various modifications of this invention may be made, such as is illustrated in Fig. 9. In this modification the upper horizontal beam may be formed of a single flat board 40, thus forming a carpenter's bench, and the lower horizontal beam may be formed in a similar manner. If desired, the lower horizontal beam may be provided with sides 41, forming a shelf within which tools may be kept.

From the above described construction it will be readily appreciated that an improved horse or trestle is provided, which when set up is of a very rigid construction. Furthermore, the device can be easily collapsed by merely lifting on the upper horizontal beam and while in this position it can be carried from place to place, or a plurality of devices may be stacked one upon the other very easily, occupying a minimum amount of space. It will also be noted that the device is very easily set up, as it is merely necessary to allow the lower ends of the legs to rest upon the floor, and usually the weight of the device is sufficient to cause the legs to spread and to cause the horse or trestle to automatically assume its set-up position.

It will be understood that various changes in the detail of construction may be made without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. A device of the class described comprising two pairs of legs, hinges pivotally connecting the legs of each pair together, cross bars connecting the legs of one pair to the corresponding legs of the other pair, a pair of cross bars providing a beam having depending uprights, said hinges providing guides between which the uprights are slidable, and links, each link having one end pivotally connected to an upright and the other pivotally connected to one of the legs of each pair, the legs of each pair having opposed surfaces at their upper ends adapted to contact when the legs of each pair are spread, thereby preventing further spreading, a finger on the upper end of each leg, said cross bars being provided with spaced extensions adapted to rest upon the upper ends of the legs, with the fingers of the legs extending between said spaced extensions to lock the legs in extended position.

2. In a trestle or horse, two parallel horizontal beams arranged one above the other, a tubular member slidably extending through both of said beams, means for preventing downward movement of the tubular member relatively to the beams in a plurality of positions, a supporting member slidable within the tubular member, and means preventing downward movement of the supporting member relatively to the tubular member in a plurality of positions.

3. In a trestle or horse, two parallel horizontal beams arranged one above the other, a tubular member slidable thereon, there being a shoulder on the tubular member engageable upon the upper beam to prevent downward movement of the tubular member relatively thereto in one position, there being an aperture in the tubular member, a

pin receivable therein engageable upon the lower beam to prevent downward movement of the tubular member in another position, a supporting member slidable within the tubular member, said supporting member having a plurality of apertures therein, and a pin receivable in any of said apertures engageable upon the top of said tubular member to prevent downward movement of the supporting member relatively to the tubular member in either of a plurality of positions.

In testimony whereof I have signed my name to this specification.

CHARLES E. MARKS.