June 5, 1934. E. O. HAMREN 1,961,760

FOLDING BARRICADE

Filed Feb. 6, 1932

Fig. 1.

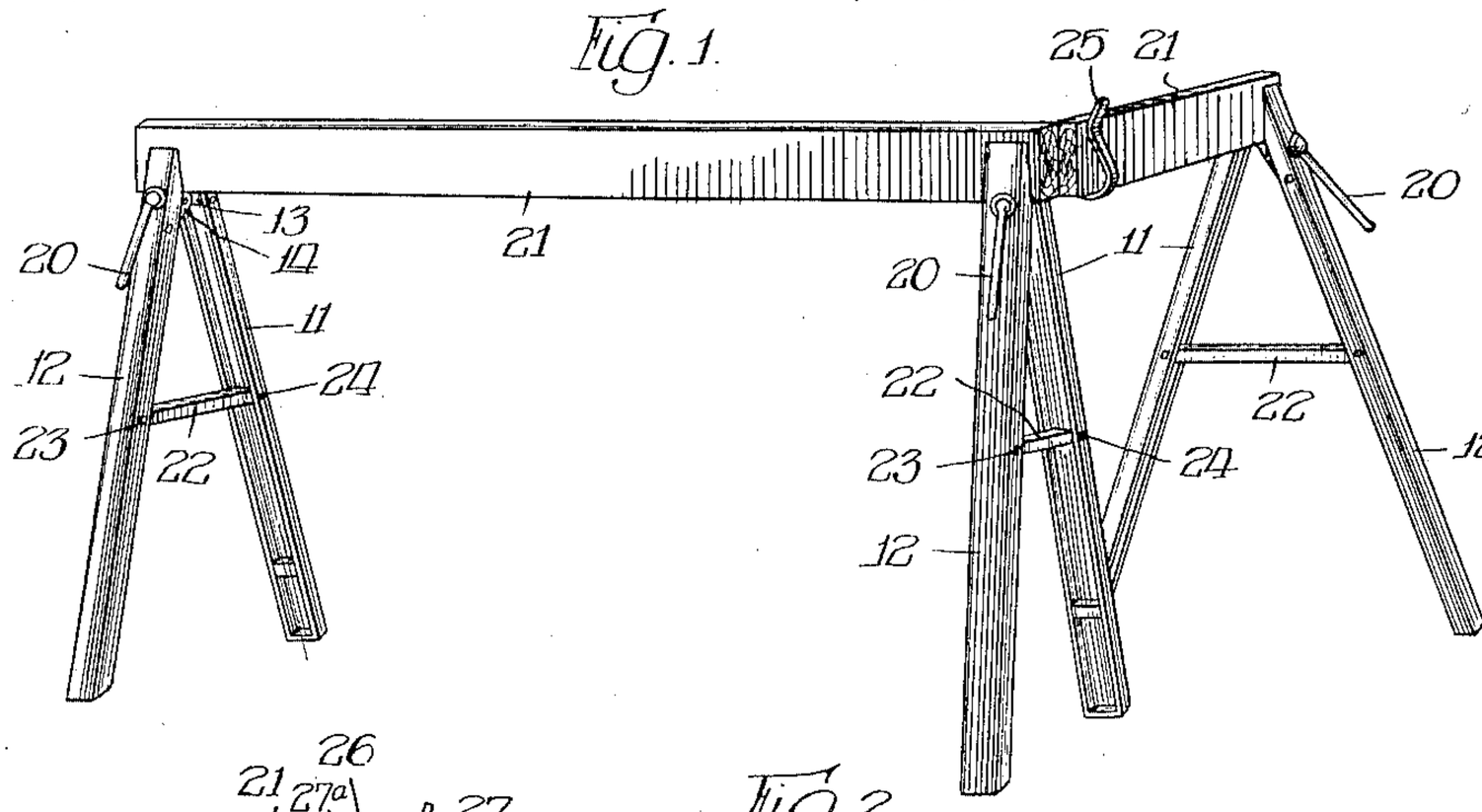


Fig. 3.

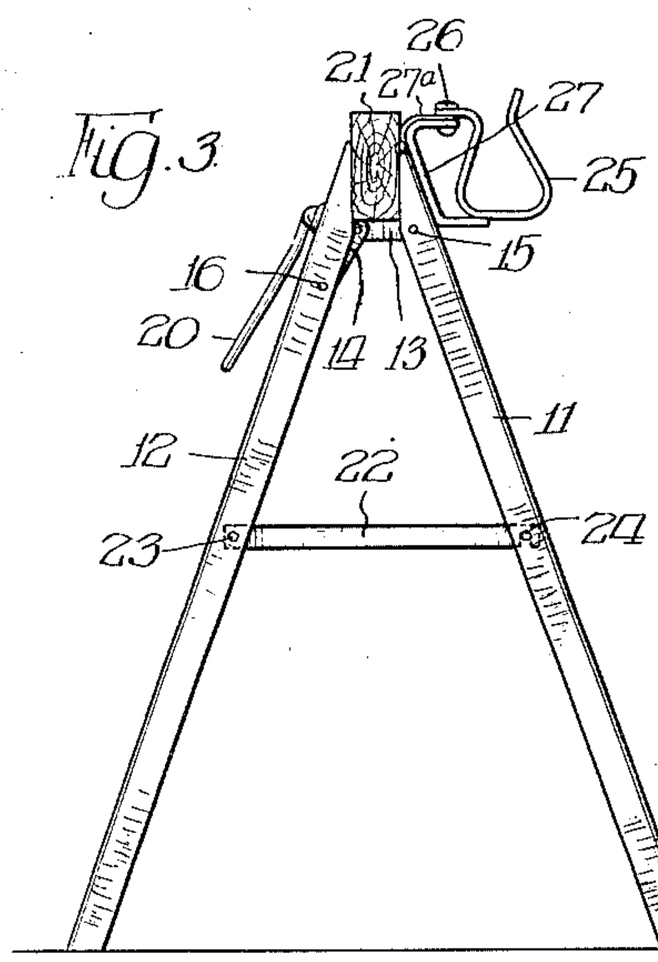


Fig. 2.

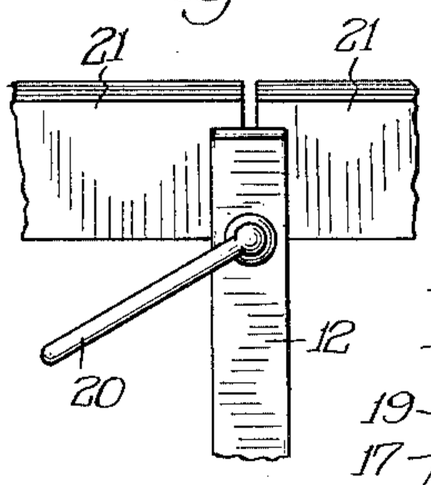


Fig. 4.

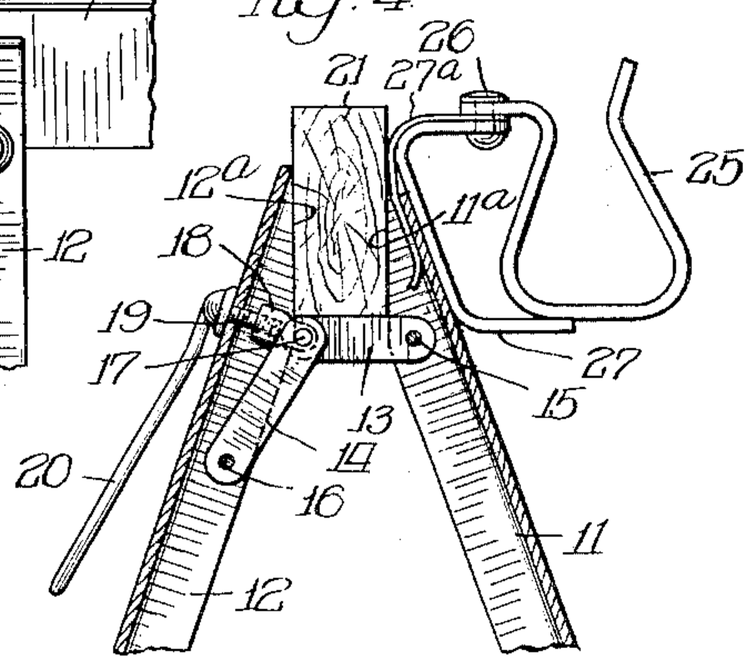


Fig. 5.

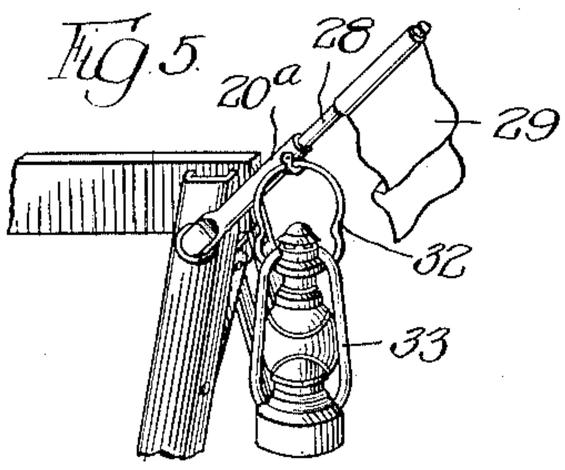


Fig. 6.

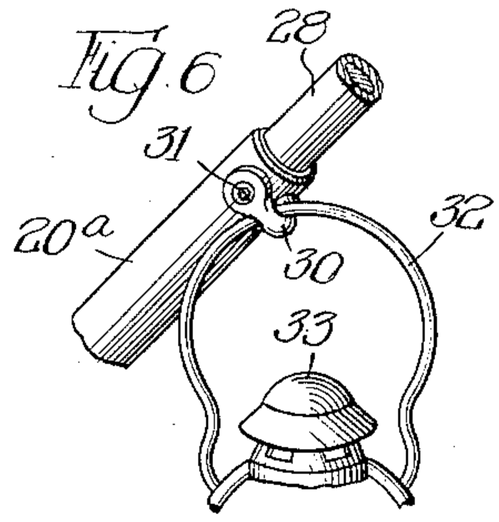
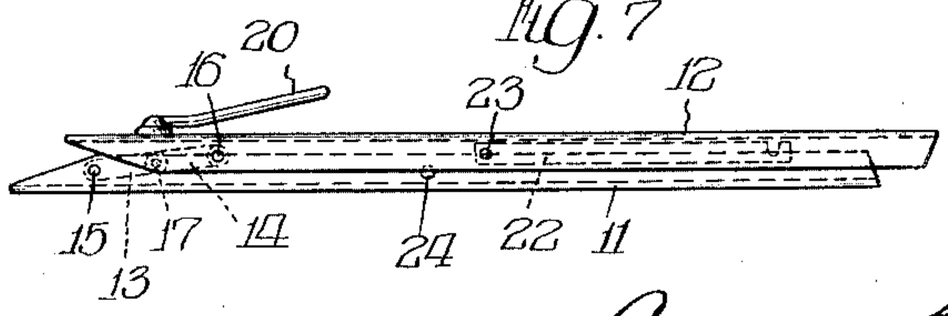


Fig. 7.



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FOLDING BARRICADE

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9 Claims. (Cl. 304—5)

This invention relates to units of barricade construction for safeguarding the public from dangers incident to excavations and the like; and likewise adapted to be employed as workmen's horses or trestles for supporting materials being worked upon; as also in many other connections.

A primary object is the attainment of simplicity, portability, flexibility in use to serve varying needs and adaptability to the utilization therewith of a wide range of materials found on the job without special selection of sizes and shapes.

Necessity often arises in construction work for protectively enclosing an excavation or other dangerous area of large or small size and of irregular shape which requires the erection of a barrier or barricade of suitable outline and extend varying with the particular attendant circumstances. It becomes important in the interests of economy and convenience to be able to build up such barricade from units, and that such units shall lend themselves to incorporation in a complete structure of varying and sometimes complicated outline.

Lanterns, flags and similar warning devices are required to be associated with barricades in such convenient manner as to be secure against accidental displacement and theft.

The present invention is calculated to meet these conditions and to serve such purposes in a peculiarly efficient way. Carpenters and other mechanics and artisans require trestles for the support of their work, sometimes short and sometimes long. The ordinary unitary trestle is exceedingly inconvenient for transportation and storage due to its bulk and shape. Units, according to the present invention, may be folded compactly for storage and transportation and quickly erected and assembled in multiple with a supporting cross timber without particular regard to its dimensions.

Although defined herein as a barricade unit, it will be understood that the provision and use of the same to perform the function of a trestle in any connection is to be included.

In order that the invention may be readily understood the same is illustrated and described herein with reference to barricade construction and a preferred embodiment is disclosed without intending thereby to limit the invention other than as defined in the subjoined claims.

In the drawing,

Fig. 1 illustrates in perspective a plurality of assembled barricade units with cross bars;

Fig. 2 is a fragmentary detail of another assembly;

Fig. 3 is an end view of a unit;

Fig. 4 is a fragmentary vertical section of such unit with extension bracket;

Fig. 5 is a fragmentary detail illustrating a convenient adaptation of the unit to support a flag and lantern;

Fig. 6 is an enlarged detail of a portion of Fig. 5; and

Fig. 7 is a detail of the constituent elements of the unit in folded or collapsed position.

Having reference to the drawing, a unit comprises legs 11 and 12 flexibly connected adjacent but at unequal distances from an end of each by linkage comprising links 13 and 14, the former pivoted to the leg 11 at 15 and the latter pivoted to the leg 12 at 16, the links also being pivotally connected to each other at 17. An interiorly threaded screw socket 18 is pivotally connected with the links 13 and 14 at 17. The socket 18 cooperates with a shank of a screw 19 which is journaled in the leg 12 and is provided with an operating handle 20. The adjacent ends of the legs 11 and 12 are beveled as indicated at 11*a* and 12*a* whereby, when the legs 11 and 12 are spread as represented in the drawing, the opposed surfaces of the bevels 11*a* and 12*a* occupy a substantially parallel vertical spaced relation for the reception and clamping therebetween of a bar 21 which may be of metal or a piece of timber, the ends of the legs acting as the jaws of a vise.

A spreader member 22 is pivoted to one of the legs at 23 and notched at its opposite end to latch over a stud 24 carried by the other leg.

It will be observed by reference to the drawing that the pivoting of the links 13 and 14 to the legs 11 and 12 at unequal distances from the end enables the legs 11 and 12, which are of inwardly facing channel section, to be folded as shown in Fig. 7 into nested parallel relation for compactness in transportation and storage, the links 13 and 14 lying in substantially parallel relation with their ends connected by the pivot 17 extending towards the adjacent ends of the legs and the spreader bar 22 inside the space formed by the two channels. It will also be noted that as the legs are spread into operative open relation the linkage elements are brought into angular relation to the legs and to each other, the link 13 occupying a substantially horizontal position and the link 14 a position at an oblique angle to the horizontal, whereby the link 13 is made to serve as a lower support for the bar 21. More-

over, in this operative position a toggle linkage is attained which, by manipulating the handle 20, is flattened by the action of the screw 19 upon the toggle whereby, using the bearing of the legs upon the ground as fulcrum points, the upper ends of the legs are caused to approach each other and clamp the bar 21 therebetween.

A number of units and cross bars may be assembled to form a straight line barricade by utilizing intermediate units to receive and clamp together adjacent ends of cross bars 21 as illustrated in Fig. 2; also successive bars 21 making up a barricade may be disposed in angular relation as represented in Fig. 1 by the employment of an intermediate unit equipped as illustrated in Figs. 3 and 4.

For this purpose a U-shaped bracket 25 is swiveled at 26 to a bracket 27 which is detachably secured, by a spring 27*a* on the bracket, to one of the legs of the unit, whereby it may swing in a horizontal plane. As will be seen by reference to Fig. 1 this bracket is adapted to receive a cross bar 21 and to support the same at any desired angle to the adjacent cross bar 21.

The handle 20 of the clamping screw 19 may well be of hollow construction as illustrated in Figs. 5 and 6 at 20*a* and thus serve as a socket to receive the staff 28 of a signal flag 29. This handle 20 or 20*a* may also carry a keeper 30 having one end pivoted at 31 to the handle and the other end unattached to swing to an open or closed position about the pivot 31 beyond the end of the handle. The pivot 31 may well be provided with a polygonal operating head seated in a recess of the keeper 30 whereby to render it difficult to operate the same without a special tool. The bail 32 of a lantern 33 may be received within the keeper 30 to serve as a night-time warning.

I claim:

1. A trestle unit comprising a pair of legs, links connecting the legs together at points adjacent their upper ends, and means acting thereon to change the angle of the links to draw the ends of the legs together as a vise upon an inserted bar.

2. A trestle unit comprising a pair of legs having their upper ends beveled, toggle links connecting the legs together at points adjacent their upper ends, and means acting thereon to move the toggle to draw the beveled ends of the legs together as a vise upon an inserted bar.

3. A trestle unit comprising a pair of legs, links connecting the legs together at points adjacent their upper ends, and means acting thereon to change the angle of the links to draw the ends of the legs together as a vise upon an inserted bar, said means comprising a screw socket carried by one of the links and a manually operable screw connected with the socket.

4. A trestle unit comprising a pair of legs, links connecting the legs together at points adjacent their upper ends, and means acting thereon to change the angle of the links to draw the ends of the legs together as a vise upon an inserted bar, said means comprising a screw socket carried by one of the links and a manually operable handle carrying a screw cooperating with the socket.

5. A trestle unit comprising a pair of legs, links connecting the legs together at points adjacent their upper ends, and means acting thereon to change the angle of the links to draw the ends of the legs together as a vise upon an inserted bar, the pair of legs provided with a releasable spreader bar intermediate their length and substantially spaced from their pivotal connection.

6. A trestle unit comprising a pair of legs, links connecting the legs together at points adjacent their upper ends, and means acting thereon to change the angle of the links to draw the ends of the legs together as a vise upon an inserted bar, said means comprising a screw socket carried by one of the links and a manually operable screw connected with the socket, and a U-shaped bracket adjustably mounted on one of the legs to swing in a horizontal plane corresponding to that of the vise to receive an extension bar.

7. A trestle unit comprising a pair of legs, links connecting the legs together at points adjacent their upper ends, and means acting thereon to change the angle of the links to draw the ends of the legs together as a vise upon an inserted bar, the pair of legs provided with a releasable spreader bar intermediate their length and substantially spaced from their pivotal connection, and a U-shaped bracket adjustably mounted on one of the legs to swing in a horizontal plane corresponding to that of the vise to receive an extension bar.

8. A trestle unit comprising a pair of channel iron legs disposed with their channels in opposition to each other, toggle links connecting the legs together at points adjacent their upper ends, and means acting thereon to move the toggle to draw the ends of the legs together as a vise upon an inserted bar, said means comprising a screw socket carried by one of the links and a manually operable handle carrying a screw cooperating with the socket, a pair of legs provided with a releasable spreader bar intermediate their ends and substantially spaced from the linkage, said unit foldable with the legs in nested relation and with the linkage and spreader bar housed by the channels.

9. A collapsible trestle unit which comprises a pair of upwardly converging legs, a rigid cross brace connected with the legs for maintaining the lower portions of the latter in spaced apart relation, toggle links connected with the legs above the cross brace, and means for moving the toggle links in such a way as to draw the upper portions of the legs together on an inserted bar.

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