Oct. 16, 1928. 1,687,706

M. BAUER

REENFORCED SCAFFOLD PLANK

Filed May 11, 1927

Fig. 1.

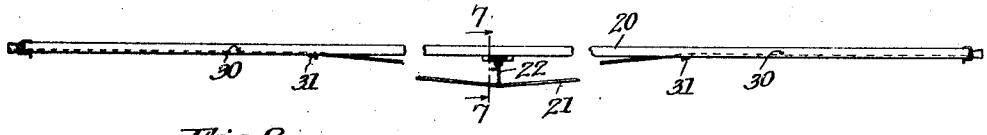


Fig. 2.

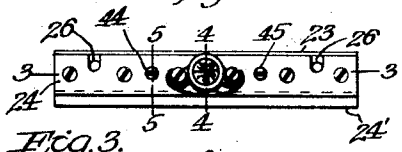


Fig. 4.

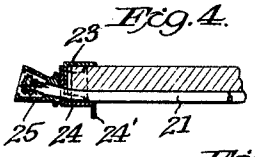


Fig. 5.

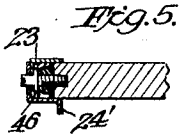


Fig. 3.

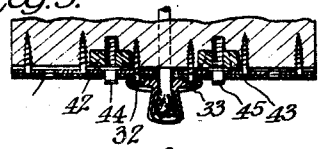


Fig. 6.

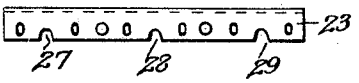


Fig. 7.

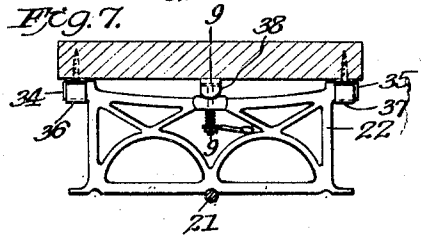


Fig. 8.

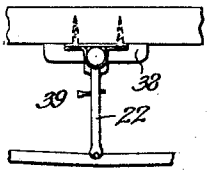


Fig. 9.

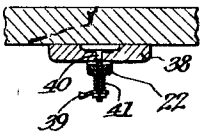


Fig. 10.

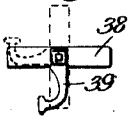


Fig. 11.

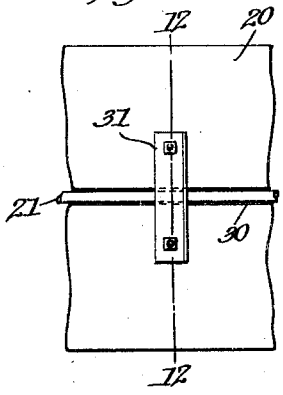
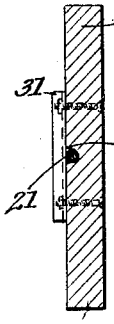


Fig. 12.



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UNITED STATES PATENT OFFICE.

MARTIN BAUER, OF CLEVELAND, OHIO.

REENFORCED SCAFFOLD PLANK.

Application filed May 11, 1927. Serial No. 190,455.

The particular object of the present invention is to provide reenforcing means for a scaffold strip or plank, so that the latter may be made of considerably less thickness relative to its length, and yet have an even greater supporting strength. My improved scaffold plank is thus considerably cheaper length for length than those ordinarily used, and is much more easily handled.

I shall describe a particular embodiment of my invention in connection with the accompanying drawings, wherein

Figure 1 is a side elevation of a plank provided with my improved reenforcing means.

Figure 2 is an end view of Figure 1.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is a section on the line 4—4 of Figure 2.

Figure 5 is a section on the line 5—5 of Figure 2.

Figure 6 is a detail in plan view.

Figure 7 is a section on the line 7—7 of Figure 1.

Figure 8 is a side view of Figure 7.

Figure 9 is a section on the line 9—9 of Figure 7.

Figure 10 is a bottom view of Figure 9.

Figure 11 is a bottom view, in part of Figure 1, and

Figure 12 is a section on the line 12—12 of Figure 11.

Referring to Figure 1 my invention consists broadly, as there indicated, in providing a strip or plank 20 at its underside with a tension member 21, preferably in the form of a steel cable, anchored at the ends of the plank, and adapted to be tensioned by means of a pivoted bridge or cam element 22 intermediate the ends of the plank. A metal binding consisting of two overlapping angle bars 23 and 24 is provided for each end of the plank, and anchoring means 25 abutting the outer element 24 are provided for each end of the cable. In the case of planks from twelve to eighteen feet in length, and which need be no more than an inch and an eighth in thickness, I provide a single cable running along the central line of the plank, but in the case of planks from eighteen to twenty-two feet in length and which should be an inch and one-half in thickness, I provide two cables 21 disposed adjacent the edges of the plank. In the first case, a single bridge or cam element 22 is sufficient, but in the longer lengths two may be used, each of which is spaced between the center and an end of the plank.

Since the binders are of standard construction, for all lengths I provide their overlapping edges with three registering recesses, those in the outer member being indicated at 26 and 27 (Fig. 2), the third being concealed by the anchor element or head 25, and those in the inner element being indicated as 27, 28 and 29 Figure 6. Likewise, as shown particularly in Figure 7, bridge 22 is provided with three recesses for the reception of the cable or cables.

Assuming, in accordance with the specific showing, that a single cable is to be used, this will be provided at its ends with anchors 25 in which the ends are babbitted. A single bridge 22 is disposed at the center of the plank and for some distance from each end of the plank bottom longitudinally extending grooves 30 are formed of sufficient depth to receive the end portions of the cables. The cable is now laid over the bridge with its end portions in the grooves and secured in the latter by means of clips 31, the anchor heads extending slightly beyond each end of the plank. Members 23 and 24 are now brought together in operative relation with the cable disposed in their central recesses. The binder elements are then secured to the ends of the plank by screws passing through registering apertures of the two into the plank ends. Two of these screws 32 and 33 engage wings extending from the anchor element or head, so as to prevent relative movement of the latter.

Up to this point, the bridge 22 whose trunnions 34 and 35 are engaged in bearings 36 and 37 secured in transverse alignment on the bottom of the plank has remained in collapsed position. In this position, the plank is readily transportable. When the plank is to be used, the bridge is swung out to the position shown in Figure 7, and retained in this position by means of a latch or locking means 38 vertically pivoted to the bridge. The longitudinal axis of the latch 38 is normally in the axis of trunnions 34 and 35, but upon manipulation of arm 39, rigidly connected therewith, it may be swung at right angles to the axis of the trunnions so as to engage the plank at each side of the bridge and retain the latter in operative position. The spindle 40 which connects latch 38 and arm 39 is surrounded between the latter and the supporting element of the bridge by a compres-

sion spring 41 so that its movements are frictionally controlled.

When the plank, so adjusted, is put into use, due to the readjustment of the parts resulting from the tension placed upon them, and due also to a slight stretching of the cable itself, a certain slackness of the latter will be induced. To overcome this condition, one of the binding units is made longitudinally adjustable of the plank so that upon its adjustment, the original relation of the members may be restored. Referring to Figures 2, 3 and 5, it will be noted that one end of the plank is provided with inset nuts 42 and 43, these nuts being provided with wings or otherwise so shaped as to be non-rotatable. Screws 44 and 45 engage these nuts, and as shown, are provided with integral collars, as at 46 (Fig. 5), bearing against the inner surface of member 23, and the circular heads of these screws extend through registering apertures in members 23 and 24. Thus, by loosening the screws which secure the binding plates to the end of the plank, screws 44 and 45 may be adjusted outwardly to restore the tension to cable 21.

As mentioned above, the end portions of the cable are laid in grooves in the surface of the plank, and it will be understood that this is for the purpose of permitting the plank to be laid on jacks or trestles spaced apart at varied distances. If the cable were exposed, there would be a certain rocking of the plank, which would, of course, be undesirable. It may be also noted that plate 24 has a downwardly extending flange 24′ adapted to prevent the end of the plank from sliding from its support.

While I have used the word cable above, and in the following claims as denoting tension element 21, it is to be understood that this term is not intended to be restrictive.

Having thus described my invention, I claim:

1. In combination with a scaffold plank, a cable element extending throughout the length of the plank at its under-side, a binding plate at each end of the plank, means for anchoring the ends of the cable on said plates, means to space an intermediate portion of the cable from the plank, and means to displace one of said plates longitudinally of the plank to tension said cable.

2. In combination with a scaffold plank, a cable element extending throughout the length of the plank at its under-side, a binding plate at each end of the plank, means for anchoring the ends of the cable on said plates, means to space an intermediate portion of the cable from the plank, and screw actuated means to displace one of said plates longitudinally of the plank to tension said cable.

3. In combination with a scaffold plank, a cable element extending throughout the length of the plank at its under-side, anchor heads at the ends of said cable, binding means for each end of said plank, each of said binding means comprising a pair of overlapping plates having registering recesses to receive the cable immediately behind the respective anchor head, and collapsible means to space an intermediate portion of the cable from the plank.

4. In combination with a scaffold plank, a cable element extending throughout the length of the plank at its under-side, anchor heads at the ends of said cable, binding means for each end of said plank, each of said binding means comprising a pair of overlapping plates having registering recesses to receive the cable immediately behind the respective anchor head, collapsible means to space an intermediate portion of the cable from the plank, and means to displace one of said binding means longitudinally of the plank to tension said cable.

5. In combination with a scaffold plank, a cable element extending throughout the length of the plank at its under-side, anchor heads at the ends of said cable, binding means for each end of said plank, each of said binding means comprising a pair of overlapping plates having registering recesses to receive the cable immediately behind the respective anchor head, collapsible means to space an intermediate portion of the cable from the plank, and screw actuated means to displace one of said binding means longitudinally of the plank to tension said cable.

6. In combination with a scaffold plank, a cable element extending throughout the length of the plank at its under-side, means for anchoring the ends of the cable at the ends of the plank, a bridge pivoted to the plank and adapted when swung outwardly relative thereto, to space an intermediate portion of the cable from the plank, and a latch pivoted to said bridge and adapted to be swung across the pivotal axis thereof into engagement with the plank at each side of the bridge to prevent said bridge from swinging in either direction out of such spacing position.

In testimony whereof I have hereunto set my hand.

MARTIN BAUER.