Feb. 3, 1931. E. A. SPRAGUE 1,791,330

COMBINATION LADDER, SKID, AND BRIDGE

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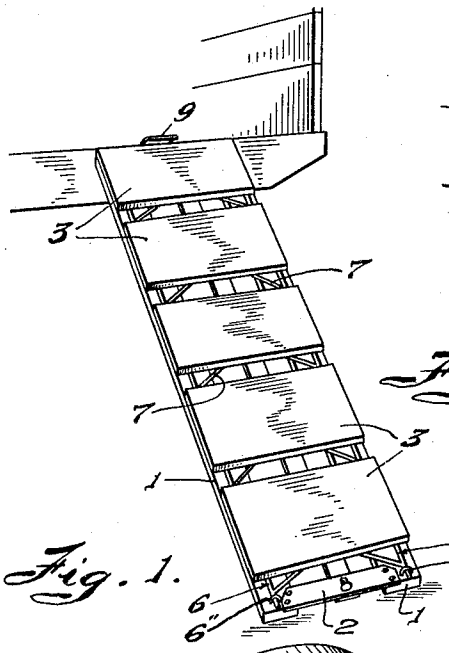

Fig. 1.

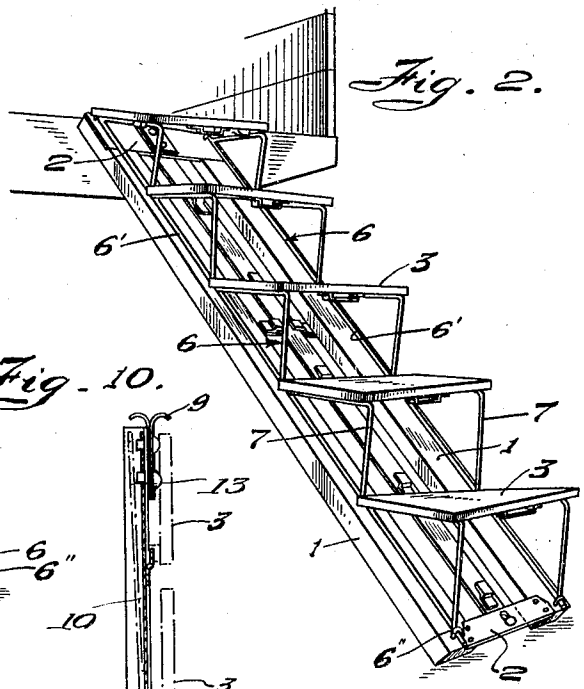

Fig. 2.

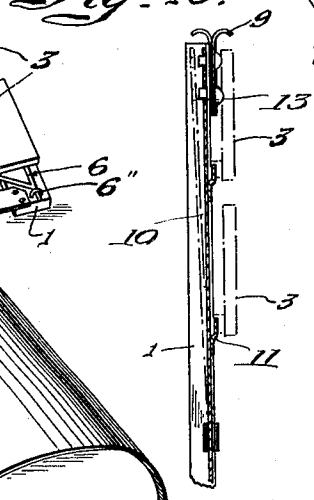

Fig. 10.

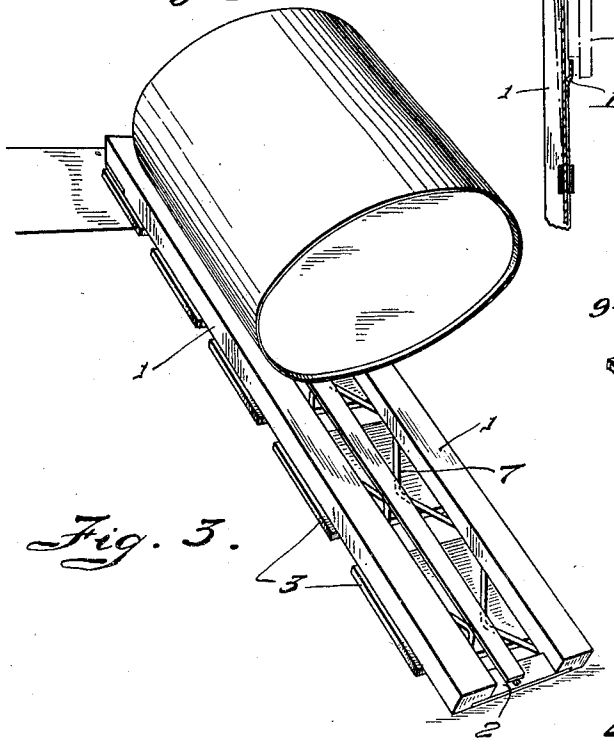

Fig. 3.

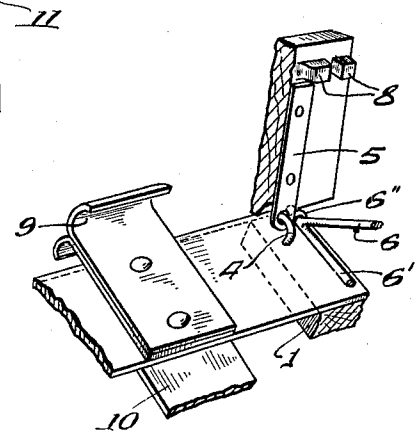

Fig. 9.

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Fig. 4.

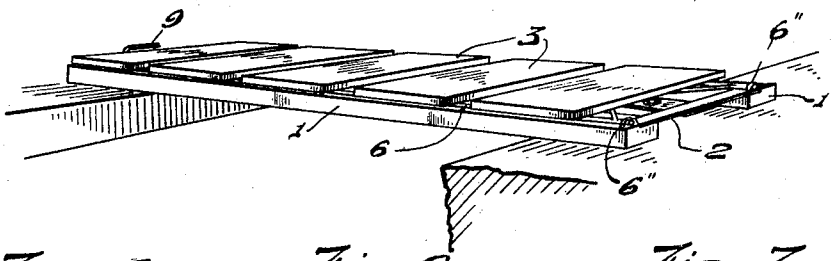


Fig. 5.

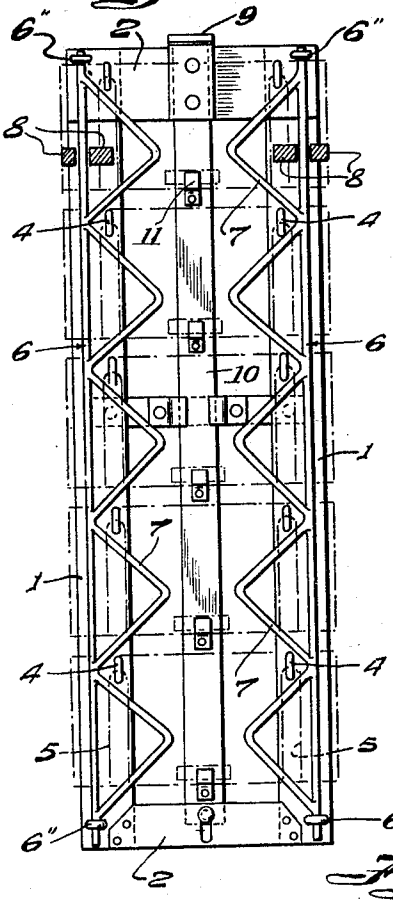


Fig. 6.

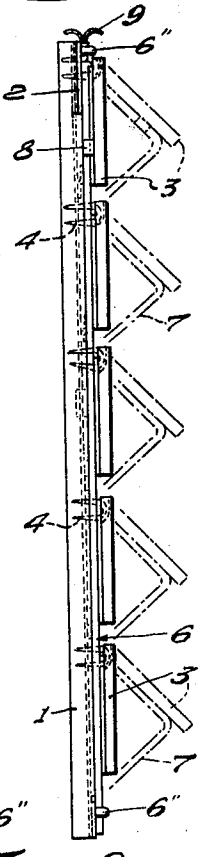


Fig. 7.

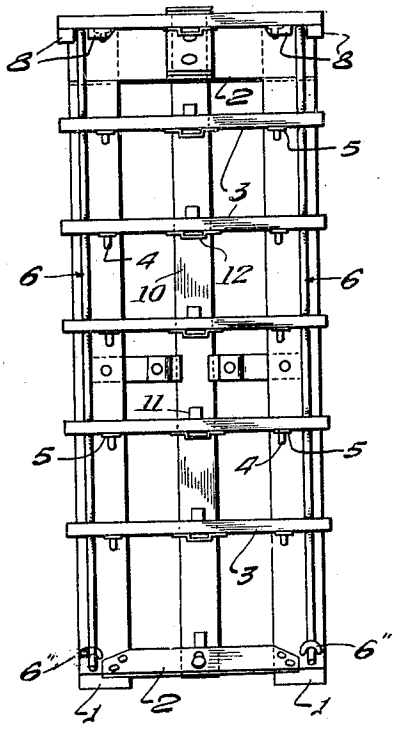
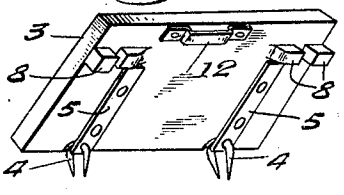


Fig. 8.



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UNITED STATES PATENT OFFICE

ELMER A. SPRAGUE, OF CALDWELL, IDAHO

COMBINATION LADDER, SKID, AND BRIDGE

Application filed July 19, 1929. Serial No. 379,483.

This invention relates to a combined ladder, bridge and skid, the general object of the invention being to provide a frame with step forming plates swiveled thereto so that when the plates are in lowered position, the device will form a bridge or a skid and by supporting the plates in a raised position by riser members pivoted to the frame, the device can be used as a ladder. The device can also be reversed and used as a skid for round or other objects.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a view showing the device used as a skid, with the plates uppermost.

Figure 2 is a view showing the device used as a ladder or steps.

Figure 3 is a view of the device used as a skid with the plates lowermost, this position of the device being more particularly adapted for round objects.

Figure 4 is a view showing the device used as a bridge.

Figure 5 is a front view of the device, with the step forming plates shown in dotted lines.

Figure 6 is an edge view, with the plates in lowered position in full lines and in raised position in dotted lines.

Figure 7 is a front view of Figure 2.

Figure 8 is a perspective view of the top plate.

Figure 9 is a perspective view of portion of the top of the device.

Figure 10 is a longitudinal sectional view showing the means for locking the step plates in lowered position.

As shown in these views, the device comprises a pair of beams 1 connected in spaced and parallel relation by the cross pieces 2 and a plurality of plates 3, each plate being hingedly connected with the beams by the staples 4 which pass through holes in a pair of straps 5 connected with the bottom of each plate and the staples being driven into the beams. The device also comprises a pair of riser members 6, each consisting of a straight rod 6′ fastened to each beam adjacent the outer side thereof by the staples 6″ and the substantially triangular-shaped parts 7 connected with the rod 6′. By swinging these members 6 outwardly, the upper portions of the parts 7 will form supports for the plates and hold them in a position where said plates will form steps, as shown in Figure 2. By swinging the members 6 inwardly, where the parts 7 will rest against the beams, the plates can be lowered upon the beams, as shown in Figures 1 and 4, so that the device can be used as a skid, as in Figure 1, or as a bridge, as in Figure 6. By reversing the device, as in Figure 3, the device can be used as a skid for round objects, as shown in said figure.

The top plate is provided with two pairs of lugs 8 on its under face, each pair receiving a part of the upper member 7 of each riser member so that these members are locked in raised position and there is no danger of the plates collapsing when the device is used as a ladder. A double hook 9 is fastened to the top cross piece and is adapted to hook over a part of a truck platform or the like, as shown in Figure 1, to hold the device in position when used as a skid or as a ladder.

A sliding locking strip 10 is arranged at the longitudinal center of the device and has hooks 11 thereon for engaging the keepers 12 on the lower faces of the step plates to hold such plates in lowered position. By sliding the strip 10 downwardly, the hooks will be moved out of the keepers and then the plates can be raised. The strip is held in either one of its two positions by the pin 13 engaging either one of two holes formed in the top of the strip.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the com-

bination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

1. A device of the class described comprising an elongated frame, a plurality of plates hingedly connected with the frame, said plates resting upon the frames and forming a covering therefor when in lowered position and riser members pivotally connected with the frame and adapted to be swung outwardly to hold the plates in raised position whereby the device can be used as a ladder, the device being used as a skid or bridge when the plates are in flat position.

2. A device of the class described comprising an elongated frame, a plurality of plates hingedly connected with the frame, said plates resting upon the frames and forming a covering therefor when in lowered position and riser members pivotally connected with the frame and adapted to be swung outwardly to hold the plates in raised position whereby the device can be used as a ladder, the device being used as a skid or bridge when the plates are in flat position and means for locking the riser members in raised position.

3. A device of the class described comprising an elongated frame, a plurality of plates hingedly connected with the frame, said plates resting upon the frames and forming a covering therefor when in lowered position and riser members pivotally connected with the frame and adapted to be swung outwardly to hold the plates in raised position whereby the device can be used as a ladder, the device being used as a skid or bridge when the plates are in flat position, means for locking the riser members in raised position, such means comprising spaced lugs on the bottom part of one of the plates engaging parts of the riser members.

4. A device of the class described comprising an elongated frame, a plurality of plates hingedly connected with the frame, said plates resting upon the frames and forming a covering therefor when in lowered position and riser members pivotally connected with the frame and adapted to be swung outwardly to hold the plates in raised position whereby the device can be used as a ladder, the device being used as a skid or bridge when the plates are in flat position, means for locking the riser members in raised position, such means comprising ears on the bottom part of one of the plates engaging parts of the riser members and a double hook on the upper end of the frame.

5. A device of the class described comprising an elongated frame, a plurality of plates hingedly connected with the frame, said plates resting upon the frames and forming a covering therefor when in lowered position and riser members pivotally connected with the frame and adapted to be swung outwardly to hold the plates in raised position whereby the device can be used as a ladder, the device being used as a skid or bridge when the plates are in flat position, means for holding the riser members in raised position and means for holding the plates in lowered position.

In testimony whereof I affix my signature.

ELMER A. SPRAGUE.