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2,646,285

SKID FOR PORTABLE BUILDINGS

Filed April 23, 1951

2 Sheets-Sheet 1

Fig. 1

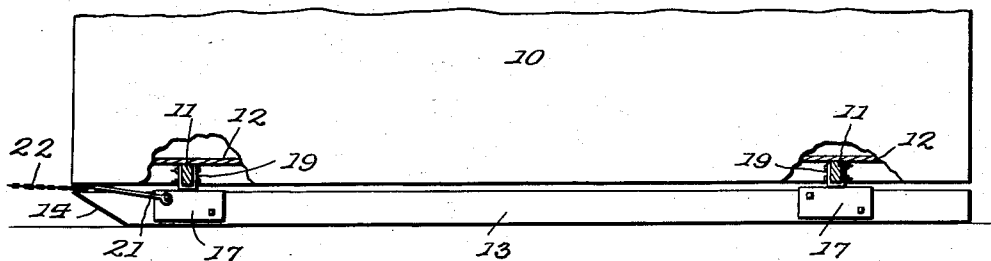


Fig. 2

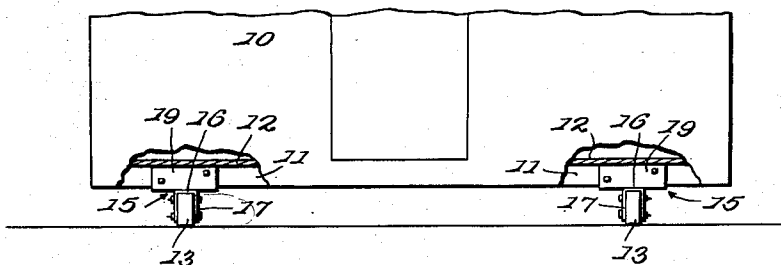
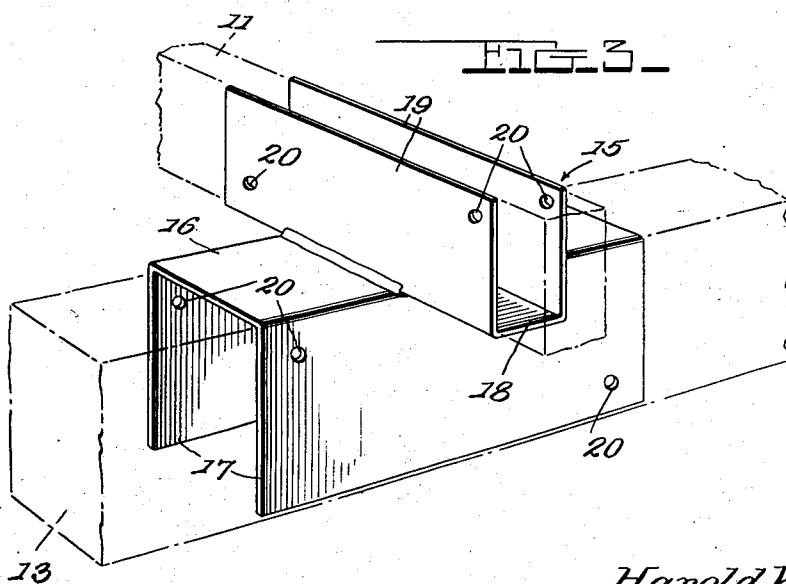


Fig. 3



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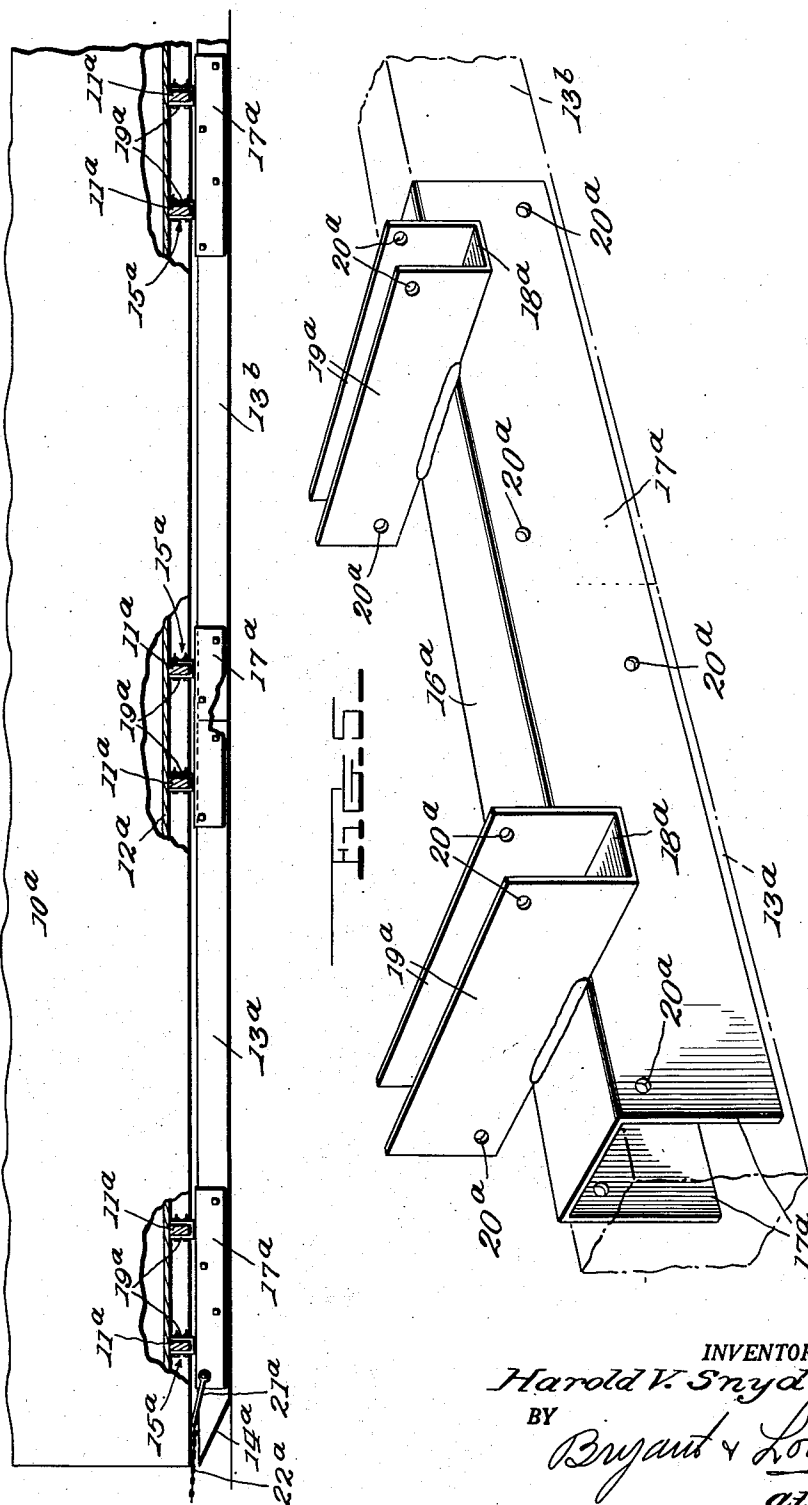
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Fig. 4--



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UNITED STATES PATENT OFFICE

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SKID FOR PORTABLE BUILDINGS

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Application April 23, 1951, Serial No. 222,361

1 Claim. (Cl. 280—27)

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This invention relates to an improvement in skids for portable buildings and to an improved means for attaching such skids to a building.

Many farmers purchase or construct portable brooder houses, hog houses, cribs, granaries and other types of small portable buildings. It is customary to place these portable buildings upon skid timbers or runners both for the purpose of keeping the building a few inches off the ground and also for the purpose of providing a means by which the building may be moved from one location to another. These skids are usually formed of 4 x 6 timbers which are fastened to the 2 x 4 floor joists of the building by means of nails toed into the joists and extending down into the skid timbers. These skids are beveled at the front end so that they will not dig into the ground, and they serve the same purpose as runners do on a sled. A chain or cable is usually attached to the front end of each skid, a hole being drilled for this purpose, and these chains attached to a tractor or team by means of which the building may be pulled to a desired location.

These portable buildings may weigh from one thousand to two thousand pounds and after they have been in place for some time, particularly when filled with grain, hogs or the like, this weight causes the structure and its skids to sink into the ground a varying amount. To dislodge the building from this sunken position requires a pulling force of considerable magnitude, and the strain generally causes the toe-nailing to pull out, severely damaging the building. Further, if a building is pulled in a circle or around a corner, severe twisting strain often dislodges the skids with damage to the building. Since these buildings are generally moved from two to three times a year, damage and breakage caused by movement becomes a major problem.

In the case of the larger portable buildings, for example those twenty to thirty feet in length, the average lumber yard will not carry skid timbers longer than twelve or fourteen feet and each skid must be made of timbers laid end to end. However, in movement of the building over uneven ground, these timbers placed end to end provide no unitary longitudinal stiffness and fail to properly support the building structure. The result is severe distortion and "working" of the building frame with a tendency to the loosening and weakening of the nailed joints.

It is an object of the present invention to provide an improved and inexpensive skid for portable buildings which may utilize the standard 4 x 6 timbers available in stock sizes.

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It is still another object of the invention to provide an inexpensive skid for portable buildings having improved means for attachment of the skid to the floor joists of a building and adapted to cooperate with the standard joist spacing prescribed by structural standards.

Still another object of the invention is to provide a skid having reinforced means for attaching a pull chain or cable and so formed that the concentrated stresses developed at the point of attachment of such pull chains will be partly absorbed by the skid timber and partly by the building floor joists.

A further object of the invention is to provide an improved brace unit which will permit the use of stock timbers placed end to end in forming a skid runner, and which at the same time will provide a longitudinally stiffened skid for buildings of extra length, and reduce twisting of the frame during movement.

With the above and other objects in view, as will be presently apparent, the invention consists in general of certain novel details of construction and combination of parts hereinafter fully described, illustrated in the accompanying drawings and particularly claimed.

In the accompanying drawings, like characters of reference indicate like parts in the several views, and:

Fig. 1 is a partial side elevational view showing one form of skid of the present invention as applied to a portable building, and partly broken away to show the manner in which the skid is attached to the building floor joists.

Fig. 2 is a partial end elevational view showing the manner of attaching a pair of skids and partly broken away to show the manner in which the skids are attached to the building floor joists.

Fig. 3 is an enlarged perspective view of the basic connecting element or brace which is combined with the longitudinal runner to form the skid structure, and showing the runner and floor joist in broken lines.

Fig. 4 is a partial side elevational view, partly broken away, showing a modification of the invention to provide a skid for buildings of extra length and weight.

Fig. 5 is an enlarged perspective view of the basic connecting element of the modified skid for long buildings.

In the form of the invention of Figs. 1 to 3, the reference numeral 13 represents a portable building which has the standard spaced floor joists 11 and the floor 12. The skid runner 13, which may be of any suitable material but is

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preferably a heavy timber as carried in the average lumber yard, runs the length of the building and is sloped at the leading end as at 14. At least two of these skids are used per building.

The skid runner 13 carries the special connecting members 15 shown in the enlarged view of Fig. 3. This connecting unit is formed of a lower channel 16 having the legs 17 which depend and grip the sides of the runner 13. Back to back and at right angles to the channel 11 and secured to it in any suitable manner, as by welding, is a second channel 18 having legs 19 which are spaced apart a distance equal to the exact thickness of a joist of nominal two inch thickness.

Each of the channels 16 and 18 is provided with two sets of aligned holes 20, so that bolts may be passed through the joists and skid runner to securely anchor the connecting members thereto.

A clevis 21 is also secured by the leading bolt of the leading connecting member, to which clevis a drag chain or cable 22 is attached.

In the modification of Figs. 4 and 5, the lower channel 16a is relatively longer than that of the first form and has at least four sets of aligned holes 20a therein.

Spaced inwardly a short distance from either end of this longitudinally positioned channel 16a and placed back to back and at right angles thereto are the channel sections 18a. These are securely attached in any desired manner, such as by welding.

The skid runner is formed of at least two sections 13a and 13b, and as many more as may be necessary to cover the length of the building. The runners are cut to a length which will permit the cross channels 18a to engage adjacent floor joists with the juncture falling at the midpoint of the lower channel 16a. When the bolts are inserted it is seen that the channels form a skid member that is stiffened longitudinally and with the runner sections being held in absolute alignment. The double channels 18a serve to give double purchase to the connecting element

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at a balanced position relative to the ends of the runner sections. It will also be noted that the double channel distributes the stresses developed in pulling to two joists rather than one which is essential in moving the heavier buildings.

It is seen that the skids so easily formed may be permanently attached to the portable buildings and movement made with a minimum of damage, with the concentrated stresses being taken by the metal parts of the skid. As many of the connecting units may be used as necessary to handle a building of a given weight, thus distributing the stresses incurred in movement to a greater or less number of floor joists.

While there is herein shown and described the preferred embodiments of the invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

What is claimed is:

In a skid for portable buildings wherein a runner is formed of a plurality of units placed end to end, a plurality of downwardly opening channel sections astride said runner units whereby the depending flanges thereof engage the sides of the runner units, each joint of the runner having one of said plurality of channel sections centered thereover, and each of said channel sections further having a plurality of transverse channel sections fixedly secured to the back face thereof in spaced relation and opening upwardly whereby the transverse channel sections may engage adjacent floor joists of a portable building to which the skid is applied.

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