April 30, 1935. A. L. FRANK 1,999,963

PACK BOARD

Filed April 18, 1933

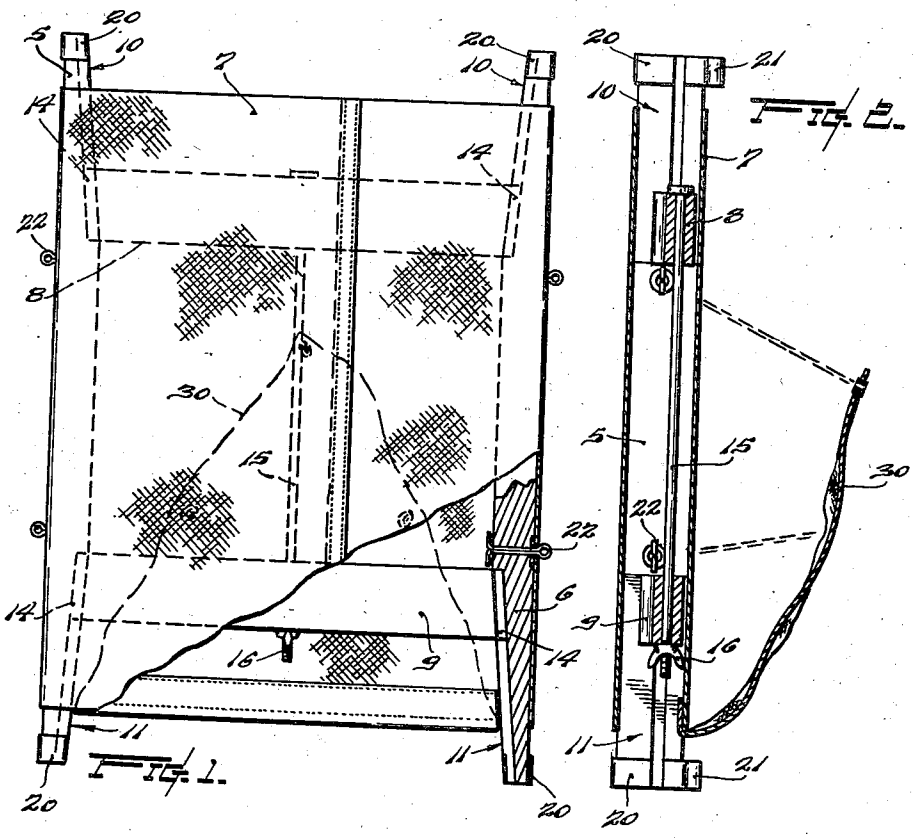


FIG. 1.

FIG. 2.

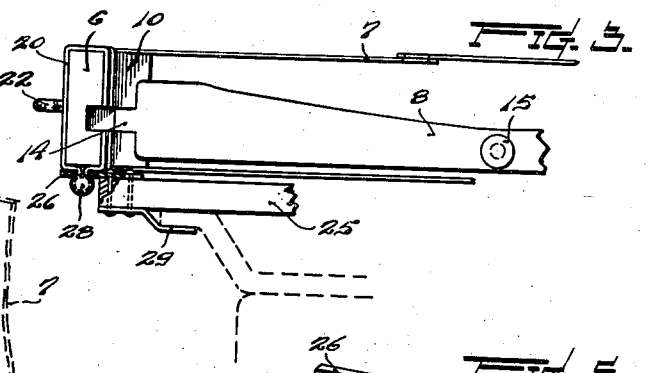


FIG. 3.

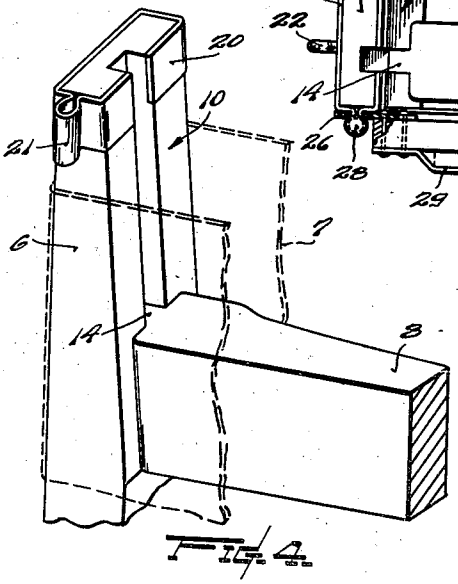


FIG. 4.

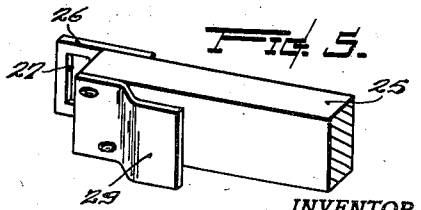


FIG. 5.

INVENTOR
Albert L. Frank
BY
Edward E. Parmee
ATTORNEY

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PACK-BOARD

Albert L. Frank, Seattle, Wash., assignor to Seattle Tent & Awning Company, a corporation of Washington

Application April 18, 1933, Serial No. 666,682

10 Claims. (Cl. 224—25)

This invention relates to collapsible pack-boards, a primary object being the provision of a simplified, light weight, and especially efficient pack-board and particularly one in which, for storing or shipping the same collapsed, requires little space.

A further and particular object lies in the provision of improved means affording more rapid assembly.

A still further object, accommodating the pack-board to efficient use for transporting portable motors or the like used in forestry and other field services, is the provision of most advantageous mechanism adapted for selective coupling or detachment from the pack-board and the motor for connecting the latter to the pack-board.

Further and more particular objects and advantages, together with the foregoing, will become apparent in the course of the following detailed description and claims, the invention consisting in the novel construction, adaptation and combination of parts hereinafter described and claimed.

In the drawing:—

Figure 1 is a front elevation of the preferred embodiment of the invention, the flexible jacket and one side bar being broken away and shown in section; Fig. 2 is a vertical transverse section thereof; Fig. 3 is a fragmentary top plan view taken to an enlarged scale and representing the motor-coupling mechanism attached, the motor being shown in dotted lines; Fig. 4 is a detail perspective of the frame construction; and Fig. 5 is a detail perspective of the motor-coupling bar shown in Fig. 3.

Reference being had thereto, the numerals 5, 6 indicate the upright side bars of a pack-board frame constructed in accord with the preferred embodiment of the present invention, said side bars being adapted for introduction within a jacket such as 7 of canvas or other fabric or flexible, non-extensible material and spread laterally of one another therein to draw the jacket taut over the same.

Said lateral action I obtain through the use of transversely extending vertically movable spreader arms 8, 9 introduced between the side bars to wedge the same outwardly, the side bars being formed to provide, at the upper and lower portions 10, 11 of their respective inner surfaces, inwardly inclined planes which act conjunctively with vertical grooves cut in the same for receiving the spreader arms. More especially, each opposite end of the spreader arms are formed with a projecting tongue 14 of a length approximately the depth of the grooves, said tongues as with adjacent end portions of the spreader arms being inclined parallel to the surface of the side bar upon which the same tracks.

15 indicates a bolt received through vertically aligned apertures of the spreader arms. A wing-nut 16 threaded on the lower end of the bolt forces the spreader arms into abutting engagement with shoulder portions terminating each groove at inner ends of the same.

Over each side bar at the upper and lower extremity of the same, I attach metal straps 20 which are formed to present rearwardly projecting eye-forming loops 21. For ordinary packing, a ring is received through the eye of these loops and serves, co-operatively with vertically-spaced pins 22 extending through openings therefor in the jacket, to receive suitable rope or the like for cinching the pack on the board. Said metal straps, however, are particularly designed to accommodate the attachment of a load-supporting cross-arm indicated by 25 which is provided at each end with an extending plate 26 apertured as at 27. The strap loop is adapted to be inserted through the aperture and a key 28 passed through the exposed eye of the loop to secure the attached cross-arm against dislodgement.

An especially efficient manner of connecting the cross-arm with the portable motor such as indicated by dotted lines in Fig. 3 comprises cleat elements 29 which act to engage over flanges provided on the bed plate of the motor. The flange provides a lug at its upper end against which the cleat element abuts, the cross-arms being readily slid over the flange from the lower end of the motor.

I represent in Fig. 2 a triangular flap 30 having its lower end sewed to the jacket. The free end is or may be connected by rope (indicated by dotted lines) with the pins 22 at opposite sides of the pack-board to accommodate the reception of loose blankets or the like. When not in use, the flap may be concealed within the jacket.

The pack-board is assembled by inserting the side bars in the jacket and locating the pins 22 through openings therefor in the jacket. The spreader arms are introduced with the tongues sliding in respective grooves, being forced inwardly to the limits of their travel after which the bolt 15 is inserted to clamp the arms.

The invention is believed clear from the foregoing. The preferred showing, however, is illustrative only and I confine myself only as limited by the scope of the hereto annexed claims.

What I claim, is:—

1. In a pack-board, a flexible jacket providing apertures in the two opposite end walls, a pair of upright side bars received in said jacket and presenting eyes projecting from outer faces of the same adapted for reception through said jacket apertures, each of the inner face portions of said side bars at upper and lower ends of the same being provided with inwardly sloping grooves, arms supported between said side bars and operative in the sloping grooves of the inner faces thereof for spreading the side bars to draw the jacket taut over the side bars, and means comprising a rod having a head adapted to engage over the upper of said spreader arms and a nut threaded on the lower end of said rod adapted to engage under the lower spreader arm for forcing the arms toward one another, said means serving to prevent retractive movement of the arms for maintaining the jacket taut.

2. The structure as defined in claim 1, said arms providing tongues projecting from opposite ends engageable in the grooves, the groove-seating ends of the tongues being inclined parallel with the plane of the respective groove.

3. In combination with a pack-board providing a frame including a pair of side bars having a metal strap surrounding each of the same at their upper ends, said metal straps providing rearwardly projecting eye-forming loops, a detachable load-supporting cross-arm for said frame apertured at each end for reception over the strap loops, and means engageable through the eye of said loops for locking the cross-arm against dislodgment.

4. In a collapsible pack-board, a flexible jacket, upright side bars received therein in laterally spaced dispositions, the inner face portions of each of said side bars being provided with vertical grooves sloping inwardly from the upper and lower ends of the same, transversely extending spreader arms between said side bars providing tongue elements arranged for slide reception in said grooves for wedging the side bars outwardly to draw the jacket taut over the side bars, each of said tongue elements being inclined parallel with the plane of the respective groove, and means for securing said spreader arms against dislodgment.

5. In a collapsible pack-board, a jacket, upright laterally spaced side bars received in said jacket for extending the jacket, the inner face portions of each of said side bars at upper and lower ends of the same being inclined from the vertical oppositionally of the companion side bar, transversely extending spreader arms received between said side bars for sliding movement over the inclined surfaces to wedge the side bars outwardly in drawing the jacket taut over the side bars, and means for securing the spreader arms against dislodgment.

6. A pack-board providing a collapsible frame comprising a pair of laterally spaced upright side bars, a pair of transversely-extending wedge arms received between said side bars and movable longitudinally as respects the side bars for spreading the latter outwardly from one another, a jacket encasing the side bars to confine the spreading action of the wedge arms, and means for securing the wedge arms against dislodgment.

7. A pack-board comprising a collapsible frame consisting in a pair of laterally movable side bars, longitudinally-movable arms received between said side bars affording said lateral movement, and a jacket encasing the side bars and confining the same in opposition to the lateral movement of the side bars.

8. A pack-board comprising a collapsible frame consisting in a pair of laterally movable side bars, means received between said side bars for movement longitudinally as respects the side bars for wedging the side bars laterally from one another, and means arranged in opposition to the spreading action of said wedge means for confining the side bar movement.

9. A pack-board comprising a collapsible frame consisting in a pair of laterally movable side bars, means between said side bars movable longitudinally with respect thereto for imparting transverse pressure upon the side bars to spread the side bars laterally, and means for limiting said lateral movement.

10. In a pack-board structure including a flexible jacket and side bars received therein in laterally spaced-apart dispositions, said side bars being adapted to draw the jacket taut responsive to movement of the side bars laterally from one another, means provided at the two opposite ends of the pack-board arranged for movement toward one another for spreading the side bars laterally.

ALBERT L. FRANK.