A. J. FORWARD.

KNOCKDOWN SUITCASE.

APPLICATION FILED APR. 9, 1915.

1,160,871. Patented Nov. 16, 1915.

Fig. 1.

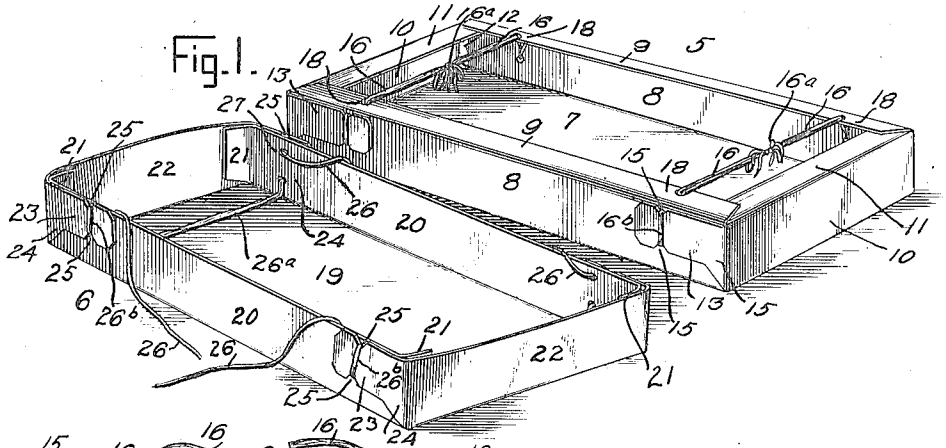


Fig. 2.

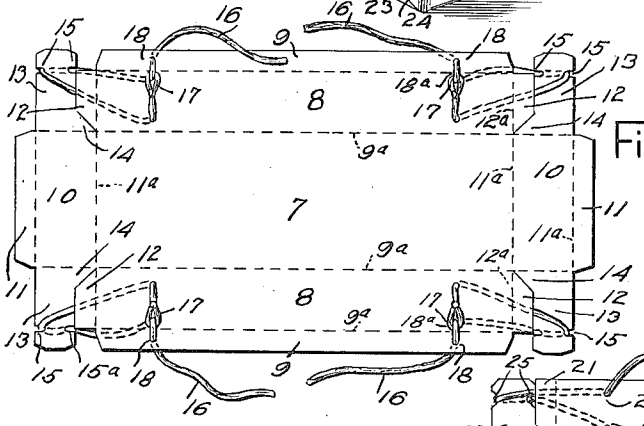


Fig. 3.

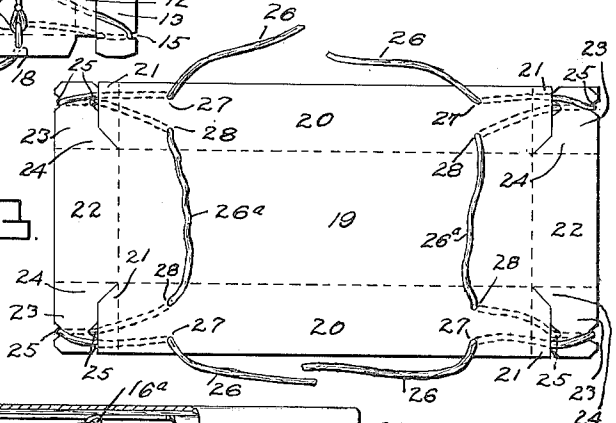
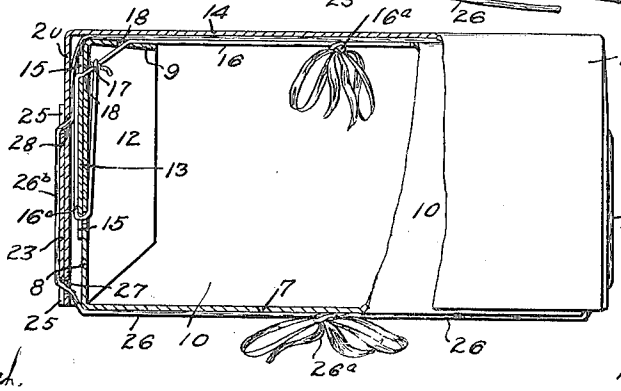


Fig. 4.



WITNESSES

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KNOCKDOWN SUITCASE.

1,160,871. Specification of Letters Patent. Patented Nov. 16, 1915.

Application filed April 9, 1915. Serial No. 20,153.

To all whom it may concern:

Be it known that I, ARTHUR J. FORWARD, a citizen of the United States, and resident of Madison, in the county of Madison and State of New York, have invented a new and Improved Knockdown Suitcase, of which the following is a full, clear, and exact description.

My invention relates to knockdown suit cases; that is, to boxes especially adapted for use as suit cases and made up of flexible materials so arranged that when the suit case or box is not in active use as a container, it may readily be packed within a small space and so arranged as to be shipped with comparative ease and safety.

My invention further comprehends a suit case made of light and comparatively cheap material, the number of separate parts as employed being reduced to a minimum, and these parts being so cut, folded and arranged as to secure a maximum of resisting strength coupled with a maximum of lightness.

By my invention I have produced a knockdown suit case of comparatively simple construction, made essentially of two single pieces of cardboard, pasteboard, tarboard, leather, imitation leather, or the like, so arranged that when in use they virtually form a box-like container, the separate members of each of which is provided with double corners, turned edges and tape bindings. The parts here under discussion when used together as a suit case possess a surprising degree of strength and durability.

I have found from actual trial that my improved suit case, whether empty or filled, may be subjected to very rough usage, and abused in many different ways, yet without destroying its shape or causing it to break down.

The two parts of the suit case, when not in active use, are readily folded in flat form, and while thus folded may be shipped either singly or collectively, according to the purpose in view, and under such conditions as to occupy little or no more space than would necessarily be occupied by the same materials arranged in any other manner.

Reference is made to the accompanying drawings forming a part of this specification, in which like letters indicate like parts.

Figure 1 is a perspective showing both the body portion and the cover of my improved suit case. Fig. 2 is a plan view of the body portion showing the same as spread out in its so-called knockdown form, this view also indicating the form of blank employed in making the said body portion. Fig. 3 is a plan view of the cover, shown also in its knockdown form, this view also indicating the form of blank used for said cover. Fig. 4 is an end view partly in section and partly in elevation, showing my improved suit case complete, the cover now being fitted upon the body portion.

The body portion of the suit case is shown as a whole at 5 and the cover thereof at 6, in Fig. 1. In making the body portion I employ the blank shown in Fig. 2. This blank has a portion 7 which I designate as the bottom panel. Integral with this bottom panel are two side panels 8 and a pair of edge portions 9. The bottom panel, side panels and edge portions are separated or marked off by score lines 9^a to facilitate the bending of the material, or at least to indicate the lines upon which the material is to be bent.

The material employed may be cardboard, pasteboard, leather, imitation leather, or practically any other substance suitable for making suit cases or for forming boxes or containers analogous to suit cases. Integral with the bottom panel 7 are also a pair of end panels 10 and extending integral from the outer edges of the latter are a pair of end strips 11. Score lines 11^a are used for marking of the end panels 10 and end strips 11.

Integral with the side panels 8 and extending from the ends of the same are tongues 12, the same being marked off by score lines 12^a, which may be understood from Fig. 2. Integral with the end panels 10 and extending in opposite directions therefrom are tongues 13 each provided with a widened portion 14. Each tongue 13 is provided with two notches 15 disposed opposite each other. At 16 are cords or tapes, hereinafter conveniently designated as tapes, and used for securing various parts of the blank in predetermined positions, in order that the blank may be held in proper form to serve as the body portion of the suit case. Each tape 16 is provided at one of its ends with an eye 17 and is threaded through holes 18, 18^a, the portion of the tape between these two holes being passed directly through the eye 17 in such manner as to form a loop 16^b, this loop encircling the

adjacent tongue 13, and for this purpose extending through the notches 15.

Supposing the bottom panel 7 to be resting flatly upon a table or the like, the side panels 8 and end panels 10 are bent upwardly, and the side strips 9 and end strips 11 are bent inwardly, as indicated in Fig. 1. The tapes 16 are next drawn tight, so as to contract the loops 16^b and are then tied together in pairs, so as to form knots 16^a, as will be understood from Fig. 1. This completes the body portion of the suit case.

In order to make the cover or top portion of the suit case, I use the blank shown in Fig. 3. The top panel appears at 19, and integral with it are two side panels 20 and two end panels 22. Extending from each side panel 20 are two small end portions 21. Extending from each end panel 22 are a pair of tongues 23, each having a widened portion 24 and a pair of notches 25. Tapes 26, in this instance two in number, are threaded through holes 27, 28 in the side panels 20 and brought through the notches 25. The side panels 20 and end panels 22 are bent upwardly. The end portions 21 are bent relatively to the side panels 20, and the tongues 23 are bent so as to overlap the adjacent outer portions of the side panels 20. The tapes 26 are next drawn tight so as to hold the various panels together in box-like form. The cover is now slipped over the body portion and the tapes 26 brought together and tied in a knot 26^a, as indicated in Fig. 4. The loops 26^b very effectively serve to hold the tongues 23 firm against the adjacent outer portions of the side panels 20.

By reference to Fig. 1, it will be noted that the small portions 12 are parallel with the end panels 10, against which they rest directly; also that the tongues 13 rest flatly against adjacent portions of the side panels 8. Hence both at the ends and at the sides of the body portion 5, there are two thicknesses of the material; the corners are thus rendered double, and that too with the expenditure of a relatively small quantity of material. Again, the side strips 9, while overlapping the adjacent end strips 11 at the ends thereof, give a peculiar bracing effect to the corners, and this greatly strengthens the box-like structure constituting the body portion of the suit case.

The tapes 16, by holding the various panels and reinforced parts firmly in position, greatly contribute to the strength of the body portion. These tapes are strong, and their action is firm, yet they have a certain amount of flexibility whereby the strains of various kinds, when thrown upon the body portion of the suit case, are distributed equally, or, at least, to better advantage than would ordinarily be the case.

Regarding the cover 6, it will be observed that the end panels 22 overlap the adjacent end portions 21 of the side panels 20, and also that the tongues 23 overlap adjacent portions of the end panels 20. Here again I have double corners,—that is, corners in which the material is of double thickness. The action of the tapes 26, and particularly of the loops 26^b, is such as to hold the parts firmly together and yet to distribute all strains, as above explained with reference to the tapes 16.

When the cover 6 is placed upon the body portion 5 and the tapes 26 are tied with knots 26^a, as shown in Fig. 4, the suit case is in condition to be carried as a suit case, and when in this condition may be subjected to considerable abuse, as above explained, without breaking down or giving way at any point.

If desired, my invention may be employed in connection with relatively cheap material, such, for instance, as inferior pasteboard,—the reinforcing or bracing action of the various parts being more than sufficient to compensate for the weakness of the material used owing to its inferiority. The point is that, other factors being equal, this particular form for the material employed gives it comparatively great strength.

I do not limit myself to the precise construction shown, as variations may be made therefrom without departing from the spirit of my invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A knockdown suit case comprising a pair of box-like members, one of which is made of sheet material and comprising a main panel, a pair of end panels and pair of side panels, said side panels being provided with portions extending beyond the ends of said main panel and adapted to be bent, said end panels being adapted to fit against the bent portions of the side panels and provided with reduced tongues for engaging the adjacent outer surfaces of said side panels when said side and end panels are folded, each of said tongues having a pair of alined guides, one guide at each side of the longitudinal center of the tongue, and tapes extending through holes in the side panels and when drawn taut engaging the alined guides in the reduced tongues to hold the adjacent parts of the box member together.

2. A device of the character described, comprising a bottom panel, a pair of side panels integral therewith and a pair of side strips extending from said side panels, a pair of end panels integral with said bottom panel, a pair of end strips extending from said end panel and adapted to overlap the adjacent end portion of said side strips when all of said panels are folded, a pair of tongues carried by said end panels and integral therewith, said tongues being adapted to

overlap the adjacent outer surfaces of said side panels when all of said panels are folded, and a pair of tapes encircling said tongues and extending through holes in said side panels and also through holes in said side strips, said tapes being located in suitable position to be tied together.

In testimony whereof I have signed my name to the specification in the presence of two subscribing witnesses.

ARTHUR J. FORWARD.

Witnesses:
GEO. E. GROVES,
J. D. HOPKINS.