July 29, 1941. A. E. CHANDLER 2,250,888

BOX COVERING AND METHOD OF MANUFACTURE THEREO

Filed Feb. 24, 1940

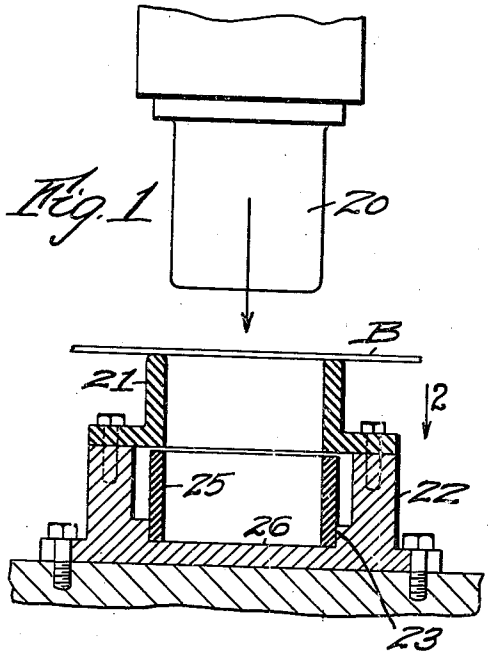


Fig. 1

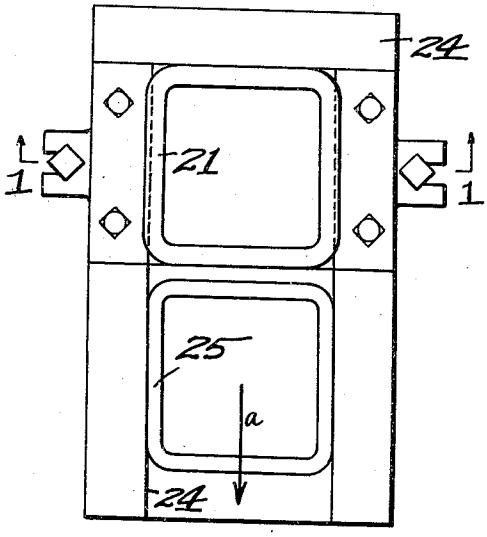


Fig. 2.

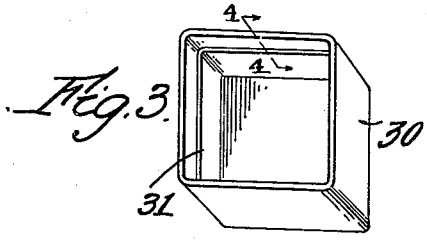


Fig. 3.

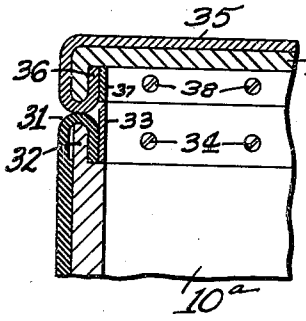


Fig. 5.

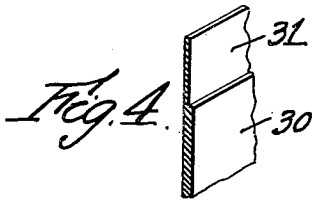


Fig. 4.

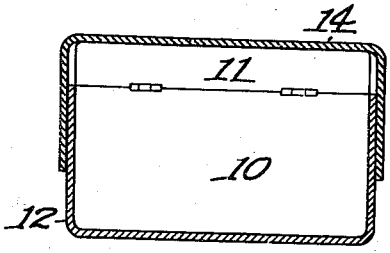


Fig. 6.

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BOX COVERING AND METHOD OF MANUFACTURE THEREOF

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Application February 24, 1940, Serial No. 320,727

3 Claims. (Cl. 69—21)

This invention relates to covering boxes or cases, such as portable watchman's clocks. It is customary to provide such boxes with a covering of leather formed of separate pieces, which are stitched together along a plurality of seams to produce the desired shape. This method of covering is slow and expensive and the result obtained is not particularly satisfactory.

It is the object of my present invention to manufacture leather coverings for boxes or cases by an improved method, which will produce each covering member from a single piece of leather by a new and economical method involving a simple but effective drawing operation. I also provide improved means for securing the prepared covering members on a box or the cover thereof.

My invention further relates to certain ordered procedure which will be hereinafter described and more particularly set forth in the appended claims.

Preferred forms of my invention are disclosed in the drawing in which

Fig. 1 is a side elevation, partly in section, of a set of drawing dies;

Fig. 2 is a plan view of the lower die, looking in the direction of the arrow 2 in Fig. 1;

Fig. 3 is a perspective view of a covering member;

Fig. 4 is a partial perspective view of said covering member, partly in section, and taken along the line 4—4 in Fig. 3;

Fig. 5 is a detail sectional view, showing a preferred manner of securing my improved covering on a metal box or case; and

Fig. 6 is a sectional view showing a different manner of covering a box.

While coverings of many different shapes may be produced by my improved method, I have illustrated in the drawing the production of covering members for a portable watchman's clock, such as is shown in Fig. 6 and which comprises a body 10 and a hinged top 11. The box is substantially square in cross-section but all of its corners and edges are substantially rounded. The leather covering for this box may comprise a body covering member 12 and a top covering member 14, each having the general section indicated in Fig. 6.

In order to produce a covering member of this general shape and cross-section, I provide a male die 20 and a lower or female die 21, as shown in Fig. 1. The lower die 21 is shown mounted on a base 22 having guideways 23 and an abutment 24 for locating a removable form ring 25. When the ring 25 is in operative position, it is accurately aligned with the opening in the die 21.

In producing a covering member, I first take a flat leather blank B which is substantially rectangular in shape and substantially larger than the cross-section of the box to be covered. This leather blank is soaked for a considerable period in a warm leather softening liquid, which may consist in part of neats-foot oil. After the leather is thoroughly soaked in the warm softening liquid, I remove the blank from the liquid and allow it to stand or mull for a considerable period, until the softener has thoroughly penetrated all parts of the leather.

While the periods for soaking and standing will vary with conditions and with different types and thicknesses of leather, it may be said that soaking from one to two hours or more and standing for a similar period commonly produces satisfactory results.

After the leather is thoroughly soaked and thoroughly impregnated with the leather softener, I place the blank on the lower die 21, as shown in Fig. 1, and move the upper die 20 downward, thus forcing and drawing the leather through the die 21 and into the form ring 25. Preferably I also firmly compress the middle portion of the blank against the bottom surface 26 of the base 22.

I then raise the die 20 and remove the form ring 25, with the shaped covering member therein, by sliding it forward, as indicated by the arrow *a* in Fig. 2. The covering member may be left in the form ring until it has dried and set, or it may be immediately removed from the form ring and allowed to dry on the part to be covered.

If the box is to have removable covering members, as shown in Fig. 6, the covering members 12 and 14 will be formed as above described but of slightly different diameters and may be allowed to dry and set before removal from the form rings. The members 12 and 14 are then simply slipped over the box from the bottom and top and may be secured together by suitable fastening devices, such as snap fasteners, or straps and buckles.

If the covering members are to be permanently secured to the body 10*a* and top 11*a* of a box of the slightly different construction shown in Fig. 5, the upper edge of the covering member 30 is preferably skived on the inside to uniform thickness for a substantial width, as indicated at 31. The covering member 30 is then placed on the body 10*a* and the skived upper edge 31 is folded in over the thin edge portion 32 of the box and

may be secured thereto by a metal lining strip or band **33** and screws **34**. This gives a nicely finished upper edge to the body **10***a* and also firmly secures the leather covering in place.

The top **11***a* may be similarly provided with a covering member **35** having its edge portion **36** secured by a band **37** and screws **38**. Preferably the band **33** projects above the joint between the body and top covering members and engages the lower edge of the band **37**, thus forming a tight joint and preventing wear of the inturned edges of the leather coverings.

When a covering member is allowed to dry on either the body or the top portion of a box or casing, it will shrink slightly in the drying and setting process and will vary firmly and snugly engage the associated surfaces.

By producing and securing leather covering members in the manners described, I obtain leather covered boxes or casings of very attractive surface and finish and wholly without cracks or seams. Not only the appearance, but also the durability of the covering is much increased. Obviously, the invention may be applied to boxes of different shapes by providing corresponding dies.

Having described my invention and the manner in which it is to be practiced, I do not wish to be limited to the ordered procedure herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. The method of making a leather covering member which comprises soaking a leather blank in a warm leather softening liquid for a considerable period, removing the blank from the softening liquid, allowing the blank to stand for a further considerable period until the softener has thoroughly permeated the leather, drawing the leather between dies to form a covering member of deeply recessed section, forcing said covering member entirely through the female die into a rigid form ring, removing said ring from said dies, and thereafter removing said covering member from said ring and placing said member on a part to be covered.

2. The method of making a leather covering member which comprises soaking a leather blank in a warm leather softening liquid for a considerable period, removing the blank from the softening liquid, allowing the blank to stand for a further considerable period until the softener has thoroughly permeated the leather, drawing the leather between dies to form a covering member of deeply recessed section, forcing said covering member into a rigid form ring, removing said ring and separating said ring and member, placing said member on a part to be covered, and allowing said member to set and shrink on said part.

3. The method of making a leather covered container which comprises soaking a leather blank in a warm leather softening liquid for a considerable period, removing the blank from the softening liquid, allowing the blank to stand for a further considerable period until the softener has thoroughly permeated the leather, drawing the leather between dies to form a covering member of deeply recessed section, forcing said covering member into a rigid form ring, removing said ring and separating said ring and member, skiving the inner surface of the free edge of said covering member, placing said covering member on a part to be covered, folding the skived edges of said member about the edges of said part, and securing said skived edges by a clamping band.

ALFRED E. CHANDLER.