Nov. 19, 1940. W. F. NEWHOUSE 2,222,117

COVER FASTENER

Original Filed Nov. 18, 1935

FIG. 1.

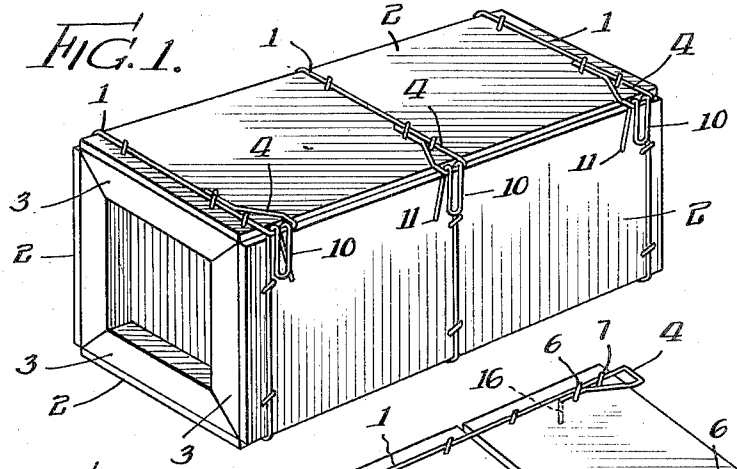


FIG. 2.

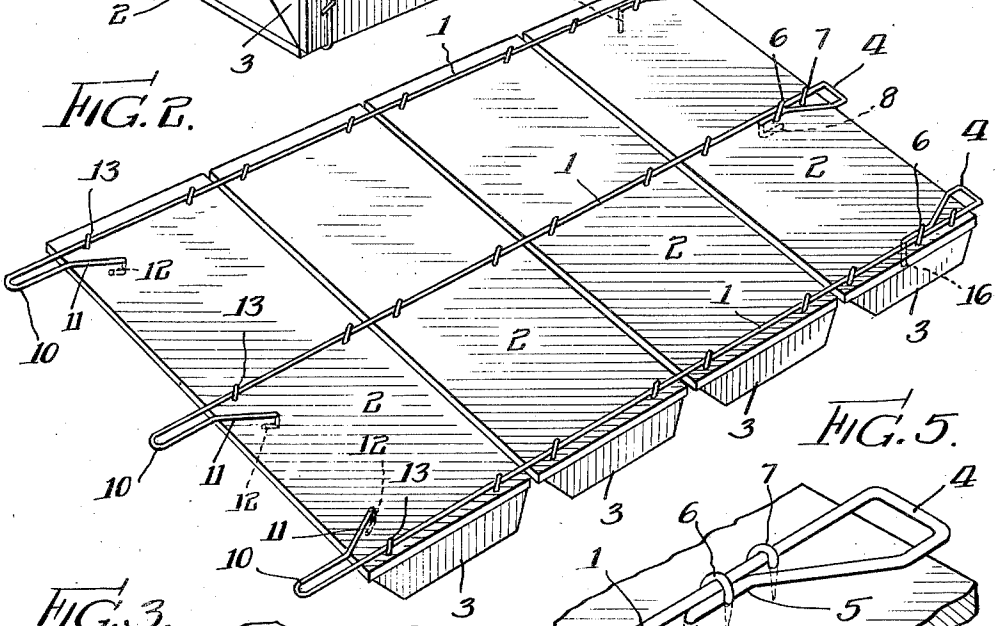


FIG. 5.

FIG. 3.

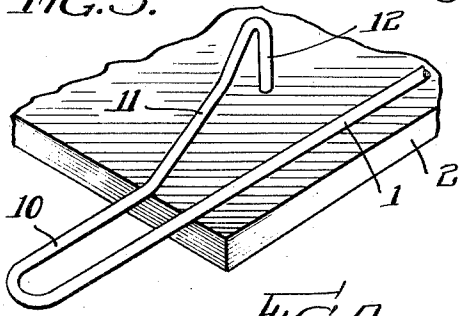
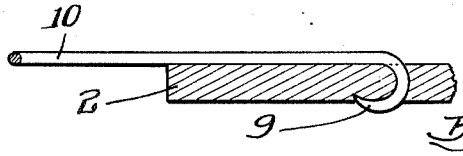


FIG. 4.



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2,222,117

COVER FASTENER

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Original application November 18, 1935, Serial No. 50,278. Divided and this application October 20, 1937, Serial No. 170,050

4 Claims. (Cl. 217—71)

This application is a division of my copending application, Serial No. 50,278, filed Nov. 18, 1935, now matured into Patent No. 2,115,869.

This invention relates to cover fasteners for boxes, baskets and other containers having covers which are desirably held closed in such condition that they are safe for shipping commodities of one kind or another, but are at the same time easily opened for inspection.

Generally stated, the object of the invention is to provide a novel and improved construction and arrangement of wire fasteners, for a container cover, of loop formation, and of such character that the ends of the wire, from which the inter-engaging loops are made, are stapled or otherwise held in place, in a more satisfactory manner than heretofore, not only to prevent the fasteners from pulling out or becoming weakened, but also to prevent the ends of the wire from injuring the hands of workers who are required to handle boxes or baskets having cover fasteners of this general character.

To the foregoing and other useful ends, the invention consists in matters hereinafter set forth and claimed and shown in the accompanying drawing, in which—

Fig. 1 is a perspective of a wirebound box provided with cover fasteners embodying the principles of the invention.

Fig. 2 is a perspective of the blank from which the said box is made.

Fig. 3 is an enlarged perspective of one of the loops forming the cover fasteners.

Fig. 4 is a detail sectional view showing another form of the invention.

Fig. 5 is a perspective view of one of the loops appearing at the right-hand end of the blank shown in Fig. 2 of the drawing.

As thus illustrated, the invention comprises the binding wires 1 secured to the blank sections 2, which latter are shown as being four in number and having ordinary cleats 3 at opposite side edges of the blank, to form a box such as the one shown in Fig. 1 of the drawing.

Looking at Fig. 2 of the drawing, it will be seen that the said binding wires are formed at one end with relatively wide loops 4 that project a distance beyond the end of the blank. Looking at Fig. 5 of the drawing, it will be seen that each loop 4 has one leg 5 thereof bent around against a side of the body portion of the wire, and held in place by a staple 6 inserted through the blank and clinched on the under side thereof. Another staple 7 is preferably inserted over the body of the wire close to the two parallel portions of the wire and clinched on the under side of the blank. In addition, the sharp end portion 8 of the leg 5 is inserted downwardly through the blank and clinched on the under side thereof, and such clinch may either be a straight, flat one, or it may be curved as shown in Fig. 4, to provide a sharp point 9 which extends upwardly into the flat material of the blank.

At the other end of the blank, the said binding wires have relatively narrow loops 10 adapted to be inserted through the loops 4 and then bent down to hold the top or cover of the box in closed position, as shown in Fig. 1 of the drawing. Looking at Fig. 3 of the drawing, it will be seen that each loop 10 has one leg thereof formed with an oblique or angle portion 11, that extends away from the body of the wire, and that has its end portion 12 inserted downwardly through the blank and clinched on the under side thereof. In Fig. 3, the end portion 12 has not as yet been inserted downwardly through the blank, but is shown in raised position for downward insertion, so that, when finished, the oblique leg portions 11 rest flatwise upon the top of the blank, as shown in Fig. 2 of the drawing. Thus, the inserted portion 12 is a substantial distance from the adjacent staples 13 by which the wires are stapled to the top of the blank, which tends to insure better anchorage of the wire in the blank, and a more satisfactory inter-engagement of the tongues 10 with the eyes 4, when the cover is closed.

Thus, in each form of the invention, the end portions of the loops 4 are bent around and stapled to the top of the blank, to provide better anchorage for these loops. Also, in each form of the invention, the loops 10 have the end portions of the wire bent around and inserted downwardly through the blank, with oblique leg portions that rest flatwise on the top of the blank, thus in effect providing a tongue with a relatively broad base and a relatively narrow outer end portion that projects a desired distance beyond the end of the blank. Thus, inter-engaging loop or tongue and eye portions are formed in a manner that tends to prevent the weakening of the anchorage of the wire in or on the blank.

Preferably, the end portions 16 are inserted downwardly through the veneer and into the cleats 3, but the end portions 8 are inserted through the veneer and clinched on the under side thereof, just as are the portions 12 previously mentioned. As shown in Fig. 2 of the drawing, the end portions 12 are preferably in-

serted a little back of the line on which the staples 13 are driven, so that danger of splitting of the veneer is reduced by not having the portions 12 in line with the staples 13, it being understood that the grain of the wood or veneer extends transversely of the wires 1 and the cleats 3 of the blank. And, of course, by using the oblique portions 11, the portions 12 are more remote from the staples 3, as well as being out of line therewith. Similarly, it will be seen that the inserted portions 8 and 16 are not on the line upon which the staples 6 are inserted, so that this also reduces danger of splitting.

Thus, looking at Fig. 5, for example, it will be seen that the wire 1 extends straight beyond the edge of the veneer 2, and then extends around and back to a point at the side of the wire, so that the loop thus formed is entirely at one side of the straight line of the wire. Also, looking at Fig. 3 of the drawing, it will be seen that the wire 1 extends straight beyond the edge of the veneer sheet 2, then back a distance parallel, then obliquely at 11 to a point where it is then inserted through the veneer, so that this point of insertion is a distance from the straight line of the wire greater than the width of the loop or tongue thus formed. The tongue 10 and the loop 4 thus formed interengage in an advantageous manner to hold the cover tightly closed, and in a manner tending to prevent loosening of the wire cover fastening thus provided. Obviously, when the cover is closed, as shown in Fig. 1, the portions 11 pull obliquely downward, and not parallel with the straight body portions of the wire, and this tends to exert a tightening action that is more effective to hold the cover firmly closed.

What I claim as my invention is:

1. A wirebound foldable box blank, a pair of wires stapled to sheets and cleats thereof, with each wire extending integrally a distance straight beyond the opposite end edges of the blank, having a closed loop of desired width formed at the inside of each straight wire at one end of the blank, and having an open loop formed at the inner side of each wire, at the other end of the blank, the neck or stem of each closed loop being straddled by a staple, the outer side of each closed loop being fastened in place by a staple, and the end of the wire of each open loop being fastened in place, whereby all staples of each wire are on a single straight line length of wire, with the latter forming one side of each loop thereof, and each open loop forming a two sided tongue of less width than and shaped for insertion in the closed loop of the same wire.

2. A structure as specified in claim 1, said wire end being bent obliquely away from the straight body of the wire and inserted in the blank.

3. A structure as specified in claim 1, the end of the wire of each closed loop being inserted in the blank at the inner side of the straight body of the wire.

4. A wirebound foldable box blank comprising a plurality of sheets, cleats therefor, a plurality of single parallel lengths of wire, and a plurality of staples driven along a single straight line into said sheets and cleats and securing each wire thereto, each wire projecting integrally straight beyond the opposite end edges of the blank, one terminal portion of the wire being reversely bent to provide a short portion parallel to the straight line of the wire to form a relatively narrow tongue projecting beyond the adjacent end of the blank and the remainder of said portion extending angularly away from said tongue and fastened to the sheet, and the other terminal portion of the wire being bent right angularly to one side, thence back toward the blank and thence toward the straight line of the wire and terminating in a straight length engaged therewith, to form a closed loop adapted to receive said tongue when the blank is disposed into box shape, one of said aligned staples straddling the engaged wire portion of the closed loop and another staple straddling a single length of wire in said closed loop in alinement with the rest of said staples.

WALTER F. NEWHOUSE.