

Jan. 13, 1925.

1,523,116

A. H. GOODWIN

WOODEN SHIPPING CASE

Filed Oct. 1, 1923

Fig. 1.

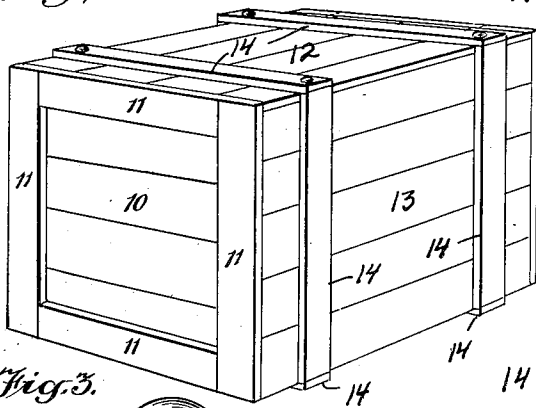


Fig. 2.

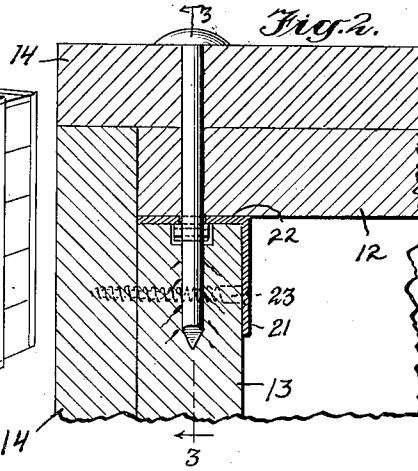


Fig. 3.

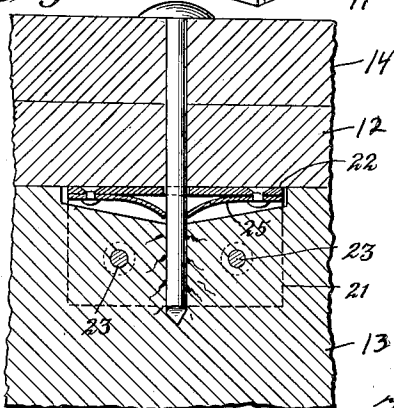


Fig. 4.

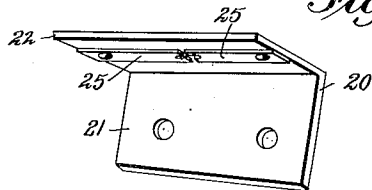


Fig. 5.

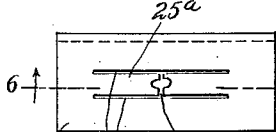


Fig. 9.

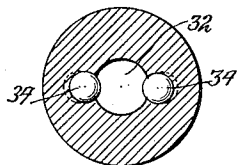


Fig. 7.

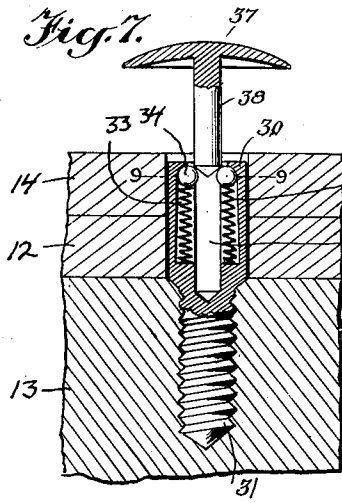


Fig. 6.

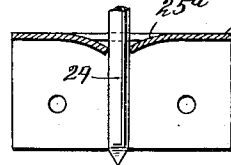
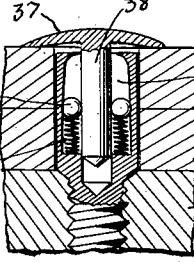


Fig. 8.



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1,523,116

UNITED STATES PATENT OFFICE.

ABRAHAM H. GOODWIN, OF NEW YORK, N. Y.

WOODEN SHIPPING CASE.

Application filed October 1, 1923. Serial No. 685,860.

To all whom it may concern:

Be it known that I, ABRAHAM H. GOODWIN, a citizen of the United States, and resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Wooden Shipping Cases, of which the following is a specification.

10 The main object or purpose of my invention is to provide a simple, inexpensive and easily applied sealing device for attachment to or incorporation in a wooden shipping case whereby when the case is closed for shipment or storage it cannot be opened without breaking or marring the boards or other parts, and thus leaving tell-tale evidence that the case has been tampered with.

20 More specifically, the object of my present invention is to provide a sealing device of such a character and construction that it may be substantially completely embedded or concealed within the wall of the case. This construction does not reduce the total space within the case which is available for the goods, and has no parts projecting into the case which might scratch, mar, or otherwise injure the goods or the packages or wrappers containing the same.

30 My improved construction includes two parts or members one adapted to be secured to the wall of the case and the other secured to or engaging with the cover, and a further object of my invention is to so construct these parts that they may be easily and quickly applied in the proper relative positions for cooperation when the case is closed and sealed.

In the accompanying drawings:

40 Fig. 1 is a perspective view of one form of case to which my invention may be applied.

Fig. 2 is a sectional detail through the corner of the case and the sealing device.

Fig. 3 is a section on the line 3—3 of Fig. 2.

Fig. 4 is a perspective view of the member shown in Figs. 2 and 3, which is connected to the wall of the case.

50 Fig. 5 is a top plan view of a modified form of the member shown in Fig. 4.

Fig. 6 is a sectional detail on the line 6—6 of Fig. 5, showing the interlocking engagement with the member carried by the cover.

Fig. 7 is a section similar to Fig. 3, but showing a further form of sealing device,

the parts being shown in the position they occupy before the upper member is driven into place.

Fig. 8 is a section similar to Fig. 7, 60 but showing the parts in final locking position, and

Fig. 9 is a sectional detail on the line 9—9 of Fig. 7, but on a slightly larger scale.

My improved sealing devices are adapted 65 for use with various forms of shipping cases made of wooden boards. The construction of shipping case may be of the form shown in my prior Patent 1,391,470 in which there are bars or cleats extending across the top, 70 bottom and sides of the case at right angles to the boards of these walls.

Another form of case to which the invention is applicable is that shown in my prior Patent 1,423,317, in which there are two 75 sets of cleats or bars which extend around the case adjacent to each end thereof. In either construction the sealing device may serve to connect together the cleats at their 80 ends.

A further form of case is shown in Fig. 1 of the accompanying drawings, in which each end wall 10 is provided with a frame made up of cleats 11 projecting beyond the outer edges of the body portion of the end 85 wall to a distance equal to the thickness of the top, bottom and side walls. The top wall or cover 12 rests upon the upper edges of the two end walls with its upper surface flush with the upper edges of the upper 90 cleats 11, the bottom wall is secured to the lower edges of the end walls with the under surface flush with the lower edge of the lower cleats 11, and the side walls 13 are secured to the vertical edges of the end walls 95 and with their outer surface flush with the outer edges of the vertical cleats 11. Thus all of the boards of the top, bottom and side walls are prevented from any end-wise movement by cleats 11 which form the 100 frames on the ends. The boards of the top, bottom and side walls are held in place not only by being nailed directly to the end walls, but also by having the outwardly projecting edge portions of the cleats 11 105 nailed thereto by nails extending into the ends of said boards. The cleats 11 may be secured to the body portion of the end wall by screws inserted from the inner surface. 110

The entire case may have a single band of cleats extending around at right angles

to the boards of the top, bottom and sides, as shown in my Patent 1,391,470, or two bands of such cleats, one at each end of the case, as shown in my Patent 1,423,317, or there may be a larger number for long boxes. As shown, there are two bands of cleats or bars 14 spaced a short distance from the ends. The ends of the cleats forming these peripheral band or bands are secured together by my improved sealing devices.

In the construction shown in Figs. 2, 3 and 4, the sealing device includes an angle member 20 adapted to be secured to the wall of the case, and having a flange 21 which may be secured flush against the inner surface with the other flange 22 lying upon or set in a slight recess in the upper edge of the wall. The member may be rigidly secured in position by screws 23 extending through the flange 21 and wall 13 into the side cleats 14. The horizontal flange 22 has an aperture therethrough adapted to receive the cooperating member which extends through the cover. This member is shown as a simple nail or spike 24 adapted to be driven through the top wall and through the aperture in the flange or plate 22. It is provided with suitable head and shank portions. The flange or plate 22 is provided with means which will grip the member 24 and positively prevent withdrawal thereof. This gripping means is shown as a pair of springs 25 having their ends partially overlapping the hole in the flange 22, and having their outer ends secured to the flange by suitable rivets. The distance between the ends of the springs is less than the diameter of the member 24, so that as the member 24 is driven through the hole in the flange 22 and between the ends of the springs the latter will be deflected downwardly as illustrated in Fig. 3. The ends of these springs will grip the member 24 between them, and any attempt to withdraw the member will cause the ends of the springs to bite into the member 24 and will more effectively grip it. The ends of the springs 25 may be such that they will not slip on the member 24, and therefore the more pull that is exerted on the member 24 the greater will be the gripping action. It will be noted that the upward movement of the flange 22 with the cover is positively prevented by the screws 23 which extend into the side wall at right angles to the direction of pull on the member 24. It will also be noted that the point or terminal portion of the shank of the member 24 becomes embedded within the wall of the case and cannot contact with the goods within the case. Thus the elements of the box which are connected by the members 20 and 24 are locked against any possible separation without breakage. If desired, the member 24 may be slightly roughened or knurled

to further insure the gripping action of the springs thereon, but ordinarily this will not be necessary if the member 24 be of soft or untempered steel.

Preferably the springs 25 are made separate from the member 20, so that the member 20 may, if desired, be made of a casting or heavy stock, and the springs of the desired resiliency. In some cases I may make the springs integral with the top flange, as shown in Fig. 5. Here the top flange 22^a is provided with a pair of parallel slits 26 which are connected by a transverse slit or opening 27 forming the two spring tongues 25^a which have their abutting ends so positioned that they are forced down and resiliently grip the member 24 when the latter is driven into place as shown in Fig. 6.

One advantage of the construction illustrated is the ease with which the members may be properly positioned. When it is desired to apply and seal the cover it may be placed in position and the spikes or other members 24 driven in until the points emerge from the under side of the cover only a slight extent and mark indentations in the edges of the case walls. The cover may then be removed and the members 20 secured in position with the apertures of the flanges 22 directly over the indentations formed by the points of the nails or spikes 24. After these members 20 have been secured in position the cover may be replaced and the spikes driven home.

In Figs. 7, 8 and 9 I have shown another construction of sealing device which may be completely embedded within the walls of the case so as not to project into the interior thereof. This form includes a stud 30 having a threaded end 31 which may be screwed into the edge of the wall of the case. The upper portion of the stud has a central passage 32 extending lengthwise thereof and opening at the upper or outer end of the stud. The peripheral wall of this passage 32 may be provided with one or more longitudinal grooves 33 which are preferably tapered so that they intersect the passage to a greater extent at the upper end than at the lower. Within each groove is mounted a locking ball 34 normally pressed upwardly by a spring 35 and of such diameter that when in the upper limiting position the ball surface intersects the surface of the passage, as indicated in Fig. 9. The upper ends of the passages may be swaged over to prevent the escape of the balls. The grooves diverge to such an extent that as the balls are forced down they separate to a distance which may equal the diameter of the passage 32. The cover has a hole bored therethrough to receive the head part of the stud 30, and a coacting locking member 36 is provided which has a head portion 37 of a diameter greater than that in the

hole of the cover, and a shank portion 38 of such diameter as will permit it to slip into the passage 32. In operation the stud 30 is secured in position to the wall of the case, and the cover is provided with holes which permit it to slip on over the head portions of the stud. Preferably the height of the head portion is less than the thickness of the cover. When the cover is in position the member 36 is placed in position as shown in Fig. 7, and then driven home as shown in Fig. 8. The balls move downwardly until they permit the passage of the shank 38 therebetween, and any attempt to withdraw the shank will be frustrated by the wedging action of the locking balls 34. The cover cannot be removed as the head 37 is larger than the hole through the cover.

It will of course be evident that I may employ as many of my locking devices as necessary in making up a case. As an extreme, each board might be secured at each end by one or more of the locking or sealing devices, but preferably the case is so constructed that it is not necessary to use this sealing device except in connection with the cover. For an ordinary case with a single peripheral band formed of cleats, as shown in my Patent 1,391,470, only four of the locking devices will be necessary, that is at the intersections of the four cleats forming the peripheral band.

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

1. A shipping case having a member adapted to be secured to the inner surface of the wall of a case, and having a flange or plate extending over the edge of said wall, and a coacting member adapted to extend through the cover of the case and through said flange or plate and enter said wall, and means for preventing the withdrawal of said last mentioned member.

2. A shipping case having a member adapted to be secured to the inner surface of the wall of a case, and having a flange or plate extending transversely across an edge of said wall and a coacting member adapted to extend through the cover of the case and through said flange or plate and into said wall, said plate or flange having movable members adapted to grip said last mentioned device and prevent its removal.

3. A device adapted for use in sealing shipping cases, including a member adapted to be secured to the upper edge surface of the wall of a case, and having an aperture

intermediate of the inner and outer surfaces of said wall and yielding members upon opposite sides of said aperture, and a member having a head portion adapted to engage with the outer surface of the cover, and a shank portion adapted to extend through said aperture and be gripped between said members.

4. A device adapted for use in sealing shipping cases, including a member having a flange portion adapted to be secured to the inner surface of the wall of the case and a flange adapted to engage with the upper edge of said wall, said last mentioned flange having an aperture therethrough and spring tongues upon opposite sides of the aperture and a member adapted to extend through the cover of the case and through said aperture and be held by said spring tongues.

5. A device adapted for use in sealing shipping cases, including a plate adapted to be secured to the upper edge of the wall of the case, and having an aperture and a pair of members upon opposite sides of said aperture and yieldingly held in position to intersect said aperture, and a member adapted to project down from the cover of the case into said aperture and be held between said pair of members.

6. A device adapted for use in sealing shipping cases, including a plate adapted to be secured to the upper surface of the wall of a case, and having an aperture therethrough and a pair of spring tongues riveted thereto, and each extending part way across said aperture, and a fastening member adapted to extend downwardly from the cover through said aperture to bend the adjacent ends of said spring tongues downwardly so as to be gripped therebetween, the terminal portion of said fastening member extending into the wall of the case beneath said plate.

7. A device adapted for use in sealing shipping cases, including a member adapted to be secured to the upper surface of the wall of a case, and having an aperture intermediate of the inner and outer surfaces of said wall and resilient members upon opposite sides of said aperture, and a member adapted to project down from the cover of the case into said aperture to be held between said pair of members.

Signed at New York, in the county of New York and State of New York, this 27th day of September, A. D. 1923.

ABRAHAM H. GOODWIN.