

(No Model.)

F. E. HEYWOOD.
BOX FASTENER.

No. 489,740.

Patented Jan. 10, 1893.

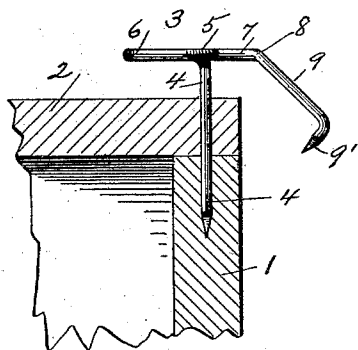


Fig. 1.

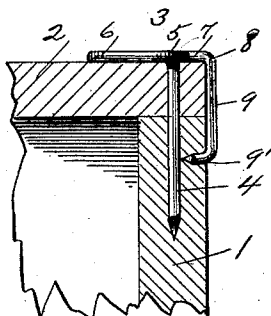


Fig. 2.

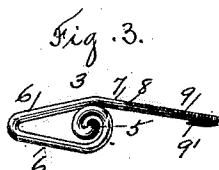


Fig. 3.

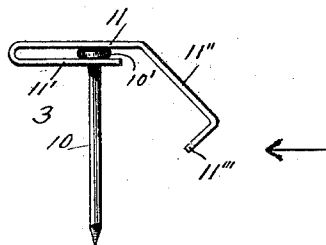


Fig. 4.

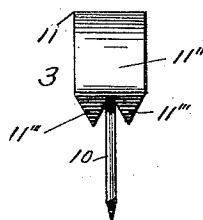


Fig. 5.

Witnesses
Chas. F. Johnson
John J. Rivers

Inventor
Frank E. Heywood,
By his Attorney
John C. Dewey

UNITED STATES PATENT OFFICE.

FRANK E. HEYWOOD, OF WORCESTER, MASSACHUSETTS.

BOX-FASTENER.

SPECIFICATION forming part of Letters Patent No. 489,740, dated January 10, 1893.

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To all whom it may concern:

Be it known that I, FRANK E. HEYWOOD, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Box-Fasteners; and I do hereby declare that the following is a full, clear, and exact description thereof, which, in connection with the drawings making a part of this specification, will enable others skilled in the art to which my invention belongs to make and use the same.

My invention relates to a fastening device, designed to be used on wooden packing cases, and boxes, in which merchandise, &c., is packed for transportation.

Heretofore wire, or cut nails have ordinarily been used to secure the top or bottom on the packing case or box, and this is particularly so in cases in which boots and shoes are packed for transportation, on which cases my fastening device is especially designed to be used. In order to get at the contents of the case during transportation, it has only been necessary to pry up the top or bottom of the case, by inserting an ordinary chisel, or screw driver, or other tool, on the sides of the case, between the ends, and draw the nails, either in the top or bottom of the case, and remove the contents, or part of the contents, and then drive the nails in again; this can be done very quickly and easily without defacing the case, or altering the outward appearance thereof, so that the loss or theft is not discovered until the case reaches its destination.

In view of the frequent complaints that boot and shoe packing cases are tampered with, and their contents, or part of their contents stolen during transportation, my attention has been called to getting up some simple and inexpensive fastening device to be used on said cases, and which may be substituted for some of the wire or cut nails, ordinarily used to secure the top and bottom of the case to the sides and ends thereof, so that the top or bottom of the case cannot be pried off, without first withdrawing the fastening device, and this cannot be done without marring or defacing the case, and altering the external appearance thereof.

The object of my invention is to provide a simple and inexpensive fastening device, to

be used on boot and shoe packing cases, and other cases or boxes in which merchandise &c., is transported, which is preferably made out of one piece of metal, preferably round wire, and combines in itself a wire nail, to be driven in with a hammer, and to take the place of the wire or cut nail ordinarily used, to secure the top and bottom of the case to the sides and ends, and a locking or fastening arm, made integral with the wire nail, and adapted to secure the nail in the case, so that the top or bottom of the case cannot be pried off, or the nail withdrawn, without first prying out, and withdrawing the fastening arm, which is secured in the body of the case.

My invention consists in certain novel features of construction and operation of my box fastener, and more particularly in making a fastening device, preferably out of one piece of round wire, combining in itself a wire nail, provided with a flat driving head or surface, on one end of the device, which extends in a plane at right angles to the nail portion and a locking or fastening arm to secure the nail in the box and prevent the withdrawal of the same, on the other end of the device, as will be hereinafter fully described, and the nature thereof indicated by the claims.

Referring to the drawings:—Figure 1 is a sectional view of a portion of a box, with my fastener applied thereto, showing the nail partially driven into the box. Fig. 2 corresponds to Fig. 1, but shows the nail driven home, and the fastening arm secured in the body of the box. Fig. 3 is a plan view of the fastener, shown in Figs. 1 and 2. Fig. 4 is a side view of a modified construction of the fastener, shown in Figs. 1, 2, and 3, and, Fig. 5 is an end view of the fastener shown in Fig. 4, looking in the direction of the arrow, same figure.

In the accompanying drawings, 1 is the side or end of a wooden box and 2 the top of the box, to which my fastening device 3 is applied.

The fastening device 3, is preferably made of one piece of round wire, and is substantially of the shape shown in Figs. 1 and 3, before it is used.

One end of the wire from which the fastening device 3 is made, forms the nail 4, of any desired length, and of a size corresponding to

the size of the wire used, and provided with a sharpened point. The nail 4 corresponds to the ordinary wire nail used in packing cases and boxes, and is adapted to secure the top 2, to the side or end 1, of the box, by extending through the top into the body of the box. The upper end, or driving head of the nail 4 is preferably formed by bending the wire around the upper end of the straight portion of the nail 4, in a plane at right angles to the straight portion, so as to form a coil, or flat surface 5, as shown in Fig. 3, which preferably has a loop 6 extending to one side, to serve as a brace and bearing surface to rest on the upper surface of the top 2, as shown in Fig. 2. The coil or flat surface on the upper end of the straight portion of the nail 4, serves as the driving head of the nail 4, upon which the hammer strikes to drive the nail into the box. The end of the wire forming the locking or fastening arm, extends beyond the coil 5, upon the opposite side from the loop 6, and in the same horizontal plane as the loop 6 and coil 5, for a short distance beyond the nail 4. The length of the part 7, from the nail 4 to the bend 8 in the wire, preferably corresponds to the distance from the outer edge of the box, to the point where the nail 4 is to be driven into the box.

The end of the wire forming the locking arm 9 is bent downwardly from the straight portion 7, and forms an obtuse angle with said straight portion, as shown in Fig. 1, and the extreme end 9' is sharpened, and bent inwardly at right angles to the main portion 9 of the locking arm, so as to extend toward the nail 4. The main portion 9 of the locking arm furnishes a striking surface, upon which the hammer strikes to bend down the locking arm 9, over the edge of the box, and drive the point 9' into the body of the box, as shown in Fig. 2. When the point 9' of the locking arm 9 is driven into the body of the box, it will extend substantially at right angles to the nail 4, see Fig. 2, and it will be impossible to pry up the top 2, or withdraw the nail 4, without first prying out and withdrawing the point 9' of the locking arm 9, which is firmly embedded in the body of the box.

It will be understood that the length of the straight portion 9 of the locking arm 9 is greater than the thickness of the top 2, so that the point 9' will extend below the top 2 and be driven into the body 1 of the box.

The operation of my fastening device will be readily understood from the above description in connection with the drawings.

The fastening device is made of substantially the shape shown in the drawings, with the locking arm 9 extending out at an obtuse angle to the head or driving surface of the nail 4 so as not to interfere with the driving of the nail 4 into the box; the nail 4 is driven into the box, through the top or bottom thereof into the sides or ends, until the coil

5, and loop 6, and straight portion 7 bear on the outer surface of the box, as shown in Fig. 2, then the straight portion 9 of the locking arm 9 is bent over the edge of the box, by striking said portion 9, causing the point 9' to enter the side or end of the box, and lock or fasten the nail 4 in the box, as shown in Fig. 2.

In Figs. 4 and 5, I have shown a modified construction of my fastening device. The nail is made separate from that part of the device, which bears on the outer surface of the box and is provided with the locking arm. In this instance I combine an ordinary wire nail 10, with a sheet metal strip 11; the nail is preferably secured to the strip, as shown in Fig. 4, the end 11' of the strip being bent back on itself, after the pointed end of the nail 10 is inserted through a hole in said end, so as to hold the head 10' of the nail between the two surfaces of the strip 11. The other end 11'' of the strip 11 is bent downwardly, and is provided with points or prongs 11''' at its extreme end, extending inwardly, to form the locking arm 11'', corresponding to the locking arm 9 of the fastening device shown in Figs. 1, 2, and 3.

The operation of the fastening device shown in Figs. 4 and 5, is the same as the operation of the device shown in Figs. 1, 2, and 3.

The advantages of my fastening device will be readily appreciated by those skilled in the art. It is of very simple construction and operation, and of very small cost, and answers the purpose of an ordinary nail, and also serves to lock or fasten the nail in the box, so that the top or bottom of the box cannot be pried off, and the nail withdrawn, without first prying out and withdrawing the point or prong on the locking arm.

I have described my fastening device as used in connection with packing cases, and boxes, but it may also be used in connection with crates, and baskets, &c. If preferred, the nail end may be made short enough, so that it will not extend through the top or cover, the locking arm of the fastening device being long enough so that the point or prong thereon will extend into the body of the case or box, and thus secure the top or cover thereon.

It will be understood that I do not limit myself to the exact form of the coil or loop, forming the driving surface of the nail portion, and shown in Fig. 3, of the drawings.

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

1. As an improved article of manufacture, a wire fastening device for wooden boxes, cases, &c., made in one piece, and having the nail portion at one end, adapted to be driven into the top or bottom of the box, and the locking arm at the other end, adapted to extend over the edge of the box, and provided with a point or prong to be driven into the body of the

box, and having the intermediate portion, between the nail end and the locking arm end, bent to form a coil or loop, extending in a horizontal plane, and furnishing a flat head or driving surface for the nail end, substantially as set forth.

2. As an improved article of manufacture, a fastening device for wooden boxes, &c., made out of one piece of wire, and having the nail portion at one end, the coiled portion forming the flat head or driving surface of the nail, and a loop forming a bearing surface and extending in a plane at right angles to the nail portion, the straight portion, extending out from the coiled portion, in an opposite direction from the loop, and the locking arm extending at an obtuse angle to the straight portion, and having an inwardly projecting point or prong extending substantially at

right angles thereto, for the purpose stated, substantially as shown and described.

3. As an improved article of manufacture, a fastening device for wooden boxes, cases, &c., made out of one piece of wire, and having the nail portion at one end, a coiled or looped portion extending in a horizontal plane at right angles to the nail portion, and forming the flat head or driving surface of the nail, and the locking arm portion at the other end, adapted to extend over the edge of the box, and provided with a point or prong, to be driven into the body of the box, substantially as set forth.

FRANK E. HEYWOOD.

Witnesses:

KATIE FARRELL,
JOHN C. DEWEY.