(No Model.)

O. J. F. EGELSTON.

BOX FASTENER.

No. 451,616. Patented May 5, 1891.

Fig. 1.

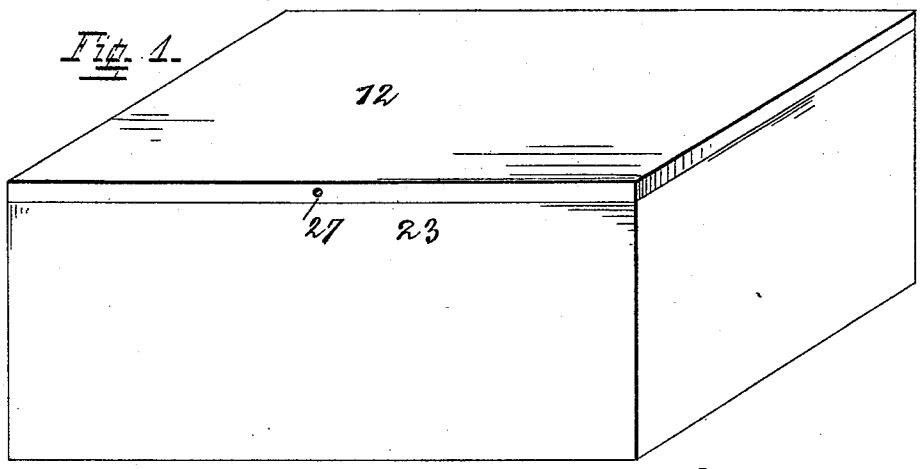
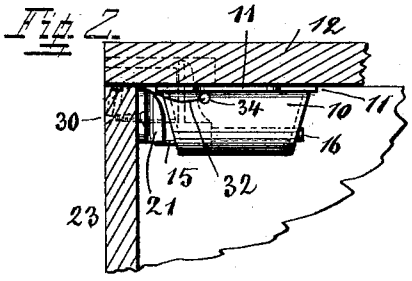


Fig. 2.



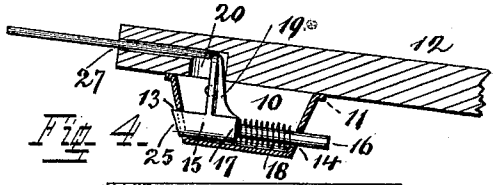


Fig. 4.

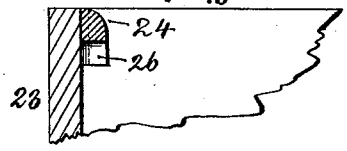


Fig. 3.

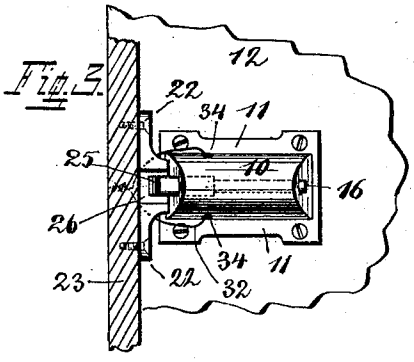


Fig. 5.

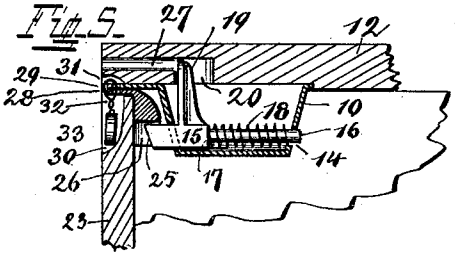


Fig. 6.

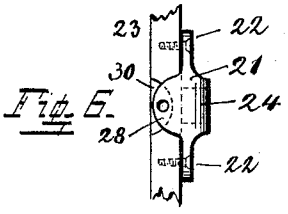


Fig. 7.

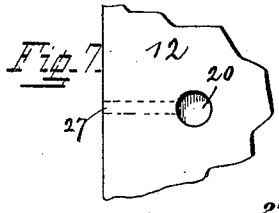


Fig. 8.

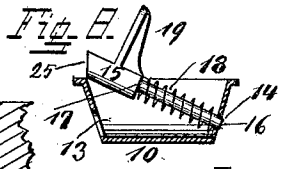
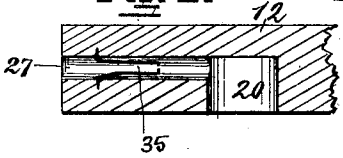


Fig. 9.



Attest
Edgar Wilson.
John Brenner.

Inventor
Oscar J. F. Egelston
by Carl Spengel Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

OSCAR J. F. EGELSTON, OF COVINGTON, KENTUCKY.

BOX-FASTENER.

SPECIFICATION forming part of Letters Patent No. 451,616, dated May 5, 1891.

Application filed December 22, 1890. Serial No. 375,450. (No model.)

To all whom it may concern:

Be it known that I, OSCAR J. F. EGELSTON, a citizen of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Box-Fasteners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a fastener for packing boxes or cases—such as, for instance, are used for shipping bottled beverages, eggs, or similar merchandise. Its principal protection is intended to keep the boxes closed while in transit and to prevent the inclosed goods from being spilled and lost or broken.

Boxes of the kind mentioned are specially fitted inside by partitions to hold bottles or eggs, and are generally returned to the shipper when empty. After refilled they are sent out promiscuously to different persons in different places, and therefore these fasteners must be so constructed that they may be opened without a key, it being impracticable to provide keys for every chance user in distant places. Owing to the fact that such cases are used in large numbers and that many of them are broken, lost, or stolen while in transit, or while awaiting shipment, especially when empty, it is essential that the fasteners thereon be as cheap as possible to lessen the loss, yet of course not so cheap as to interfere with their practical utility. They should be so arranged as to be fully protected against injuries by rough usage and none of their parts should project beyond the outside of the box at any point, so as not to interfere with the close packing of the latter.

This invention is fully explained in the following description and illustrated in the accompanying drawings, in which—

Figure 1 shows how a box locked in this way appears on the outside. Fig. 2 is a vertical section through the box near the fastener, showing the latter in side elevation. Fig. 3 is an under side view of the fastener as it appears when secured to the inside of the box-lid. Fig. 4 is a vertical central section through the fastener and adjacent parts of the box as they appear when open. Fig. 5 is a view similar to the preceding one, but showing lid closed and some modification added to the fastener. Fig. 6 is a top view of the front of the case, showing bolt-catch in position. Fig. 7 is an under side view of that part of the lid where the fastener is to be placed. Fig. 8 is a section of the case of the fastener, showing manner of inserting bolt. Fig. 9 is a section through the lid, showing a modified construction of the access-opening therein.

10 is the case of the fastener, having a flange 11, by which it is secured to the inside of the box-lid 12 by means of screws. The two ends of this case are perforated at 13 and 14 for the passage of the bolt. This latter consists of the square part 15, passing through the opening 13, and of a round extension 16, passing through the opening 14. The difference in the dimensions between parts 15 and 16 forms a shoulder at 17, which serves as an abutment for a coil-spring 18, encircling part 16 of the bolt. This spring serves as a means to hold the bolt in its locked position, its other end resting against the rear end of the case of the fastener.

19 is a push forming a part of the bolt and projecting above the case of the fastener. It reaches into a recess 20 in the inside of the box-lid, which recess is of sufficient length to allow the push to move back far enough to permit the bolt to become disengaged from catch 21. This latter has two flanges 22 22, through which screws pass for the purpose of securing it to the inside of the box-front 23, and near the upper edge thereof. This catch is beveled at 24, so as to permit the beveled end 25 of the bolt to pass easily over it when the box-lid is closed down. When the end of the bolt has passed over the beveled part, it snaps into a recess 26 below, being propelled by the expansion of spring 18, which was compressed while the bolt end passed over the beveled edge 24 of the catch.

In order to open the fastener, the bolt is pushed back by means of a pencil, nail, or similar object, which is introduced through an opening 27, running in from the edge of the lid toward the push 19, which is pressed back until the bolt becomes free from the

catch. The object used to push the bolt back may be left in place, and serve thus as a convenient means to lift up the lid. (See Fig. 4.) As will be seen, there is nothing on the outside to betray the presence of a fastener, and while the latter is not absolutely safe against opening by unauthorized persons, yet it offers some security in addition to its prime object, (to keep the lid down,) as few persons, if not familiar with the arrangement, would notice the small hole in the edge of the lid, and if noticing it few would guess its true object.

Where it is desired to seal the fasteners by means of a leaden seal, I provide two lips 28 and 29 on catch and fastener, reaching out over the upper edge of the box-front, but not projecting beyond the outer surface of it. Below and above these lips the wood-work of the box is cut away, forming two recesses at 30 and 31 to permit the wire 32 to be passed through the openings in the lips. The recess below the lips is large enough to receive and hold the seal 33, which is thus brought below the surface of the box and protected. The box may be sealed in another way by passing wire 32 through two openings 34 in the case of the fastener immediately behind the push 19 of the bolt. The ends of the wire are brought out and over the upper edge of the box and sealed, the seal occupying, as before, recess 30 in the outer and upper edge of the box-front. In this mode the bolt cannot be pushed back without separating the wire from the seal. (See Figs. 2 and 3.)

The cheapness of this fastener lies, principally, in its simplicity, it consisting of three pieces only—namely, of case, bolt, and spring—and these parts require no special fitting or finishing, and after being cast are put together in a manner as illustrated in Fig. 8, the push 19 forming a part of the bolt. The ends of the case are tapering or running in to facilitate the introduction of the bolt. The castings are preferably malleable iron.

To make the fastener as safe as possible by its simple construction, its opening is rendered more difficult by the provision of two springs 35, bent at their free ends, as shown in Fig. 9, and secured in passage 27. They approach each other and prevent any implement from reaching the push of the bolt unless the same is pointed, so as to be able to enter the small opening between the bent ends of the springs, and thus forcing them apart.

One of the characteristic features of this invention is the fact that there is nothing on the outside of the box to indicate the presence of a fastener, and the only opening which gives access to the former is located in such an uncustomary place—namely, the edge of the lid—with the parts of the fastener (push) located so remote from its anterior end that their discovery is practically impossible.

I am aware that there are boxes having a similar opening for the purpose of reaching the bolt, but located in a position where ordinarily the key-hole is found, and for this reason the degree of security is not as large as in my case, where the opening is located in the edge of the lid, which is such an unusual position as to greatly deceive the uninitiated.

Having described my invention, I claim as new—

1. A packing-box fastener when applied to the inside of the lid of a packing-box and when said lid contains parts of the elements, consisting of the combination, with a spring-actuated bolt working in a case and having a push extending upwardly out and above the said case, of the adjacent parts of the lid provided with a recess on its inside to receive the extending parts of the push, which latter is secured from observation by the remaining portion of the thickness of the lid at the bottom of said recess, a narrow passage penetrating the lid edgewise and leading from this recess to the front edge of it and being so located as to permit the push to be operated by a suitable implement inserted therein, and a catch secured to the inside of the front of the box near its upper edge, all as fully shown and described.

2. In combination with a packing-box or similar article, a fastener secured to its inside for the purpose of keeping the lid down, parts of the bolt reaching into a recess in the lid, which recess communicates with an opening cut in the edge of the lid, giving access to the bolt for its operation, a catch secured at the upper inner edge of the front of the box, perforated lips 28 and 29, reaching out from fastener and catch for the purpose of receiving a sealing-wire, and recesses above and below said lips to permit passage of the sealing-wire through them and also serve as a protection for the seal, all as substantially shown and described.

3. In combination with the lid of a packing-box, a fastener secured to its inside for the purpose of keeping the lid down, parts of the bolt reaching into a recess in the inside of the lid, an opening cut in the edge of the lid communicating with the recess for the purpose of giving access to the bolt, and springs 35, located within said opening and bent inwardly at their inner free ends and approaching each other, for the purpose explained, all as substantially shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

OSCAR J. F. EGELSTON.

Witnesses:
CARL SPENGEL,
SAMUEL M. QUINN.