

(No Model.)

C. L. FEINBERG.
BOX LID RAISER AND FASTENER.

No. 545,277.

Patented Aug. 27, 1895.

Fig. 1.

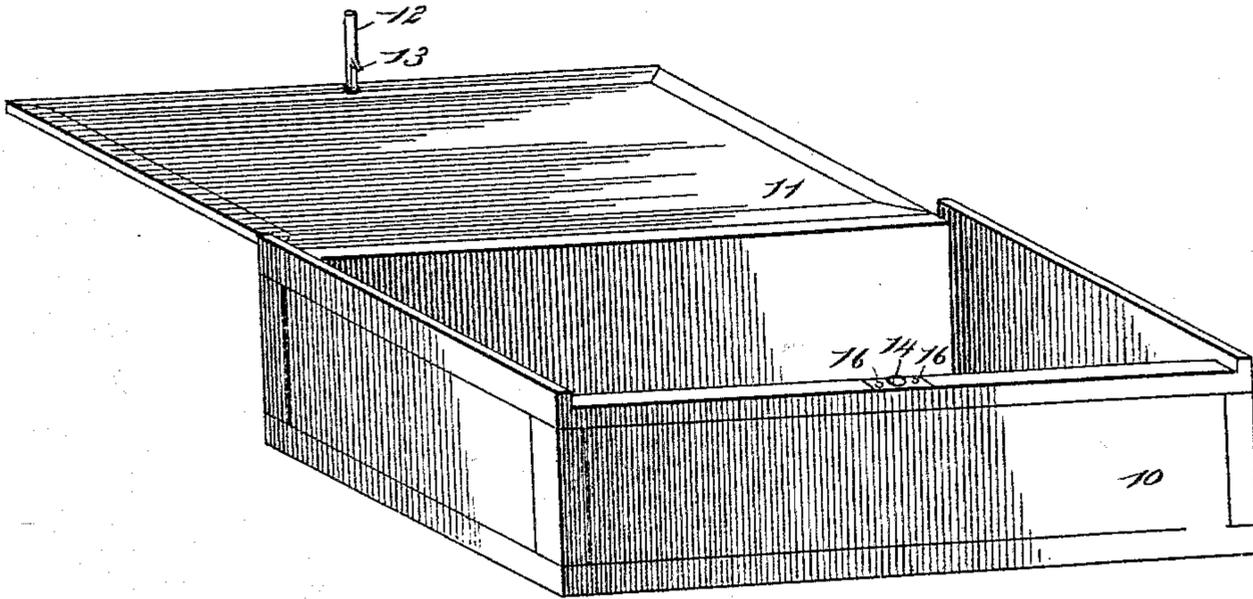


Fig. 2.

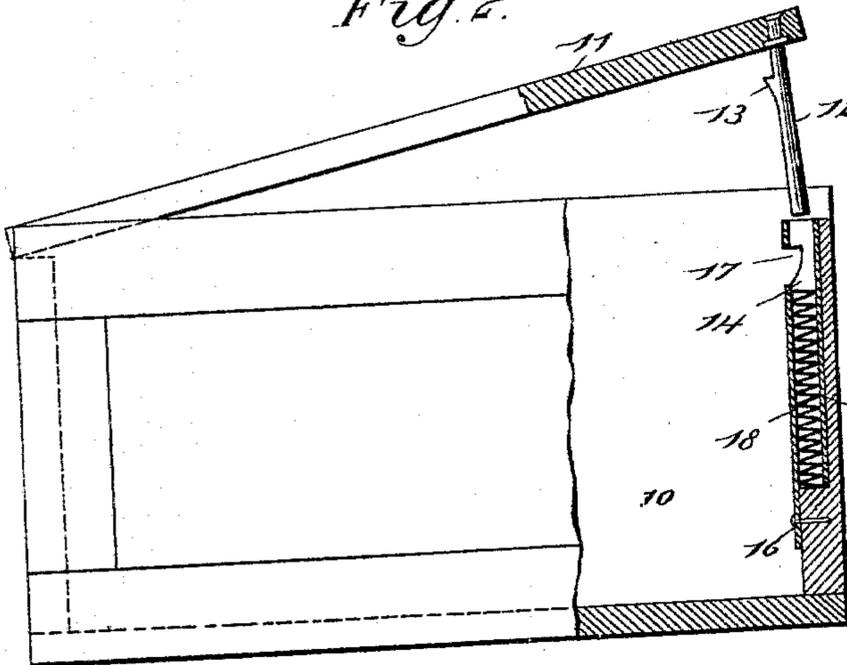


Fig. 3.

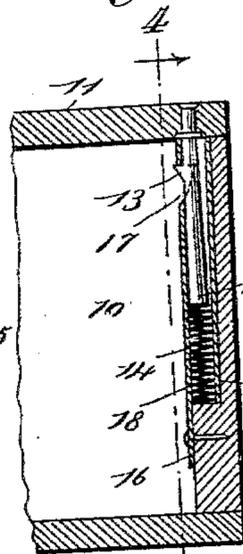


Fig. 4.

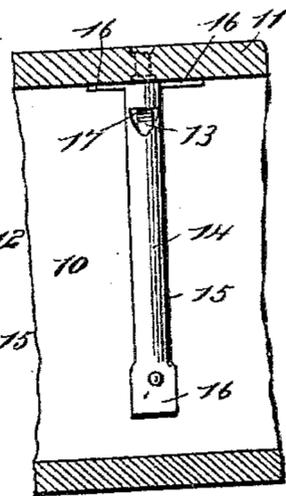


Fig. 6.

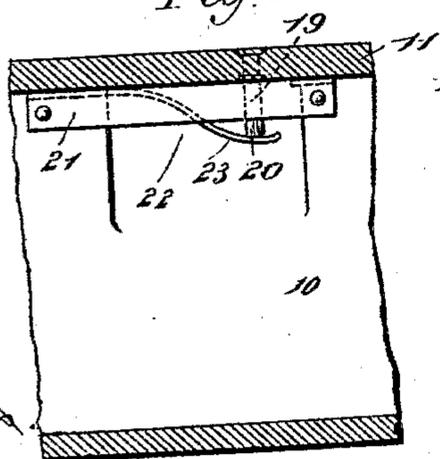


Fig. 7.

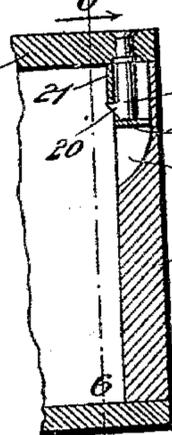


Fig. 5.



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BOX-LID RAISER AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 545,277, dated August 27, 1895.

Application filed May 21, 1895. Serial No. 550,079. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. FEINBERG, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Spring-Acting Box-Lid Raiser and Fastener, of which the following is a full, clear, and exact description.

The invention relates to spring-acting box-lid raisers and fasteners, wherein means are provided for automatically raising the lid of the box upon the release of the fastening device; and the object of the invention is to combine with the fastening device spring-acting mechanism, whereby the said automatic raising of the lid will be effected by the release of the fastening device and simultaneously therewith.

To these ends the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully described hereinafter, and finally embodied in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a cigar or other box equipped with my improvements and showing the lid raised. Fig. 2 is an end elevation of the box, partly in section, and showing the lid slightly raised. Fig. 3 is a detail sectional view similar to the sectional part of Fig. 2 and showing the lid closed and secured by my improvement. Fig. 4 is a sectional view on the line 4 4 of Fig. 3. Fig. 5 is a detail perspective view of the spring in a modified form of my invention. Fig. 6 is a sectional view on the line 6 6 of Fig. 7, also illustrating the said modified form; and Fig. 7 is a detail section taken at right angles to the line 6 6 and further illustrating the modification.

The reference-numeral 10 indicates the body of the box, which is here shown to be of that class generally used for cigars, and 11 the lid thereof. The lid 11 is hinged to the back portion of the body 10, as usual, and is capable of swinging over the top of the box to close the same. Fixed to the free end of the lid 11 and at the middle thereof is the catch 12, which is secured to the lid, as shown in the drawings, and which projects down-

wardly therefrom for a distance equal to about one-half the height of the box. Formed on the catch 12 and near the upper end thereof, is a shoulder 13 which has its upper side extended at right angles to the catch, while its lower side is inclined, so as to form a means for snapping the catch into engagement with a keeper, which will be described hereinafter. It will be seen that the catch 12 does not project perpendicularly from the lid 11, but that it projects therefrom at a slightly acute angle, and the purpose of this is to permit the catch to operate with the keeper-tube 14, which is located on the inner side of the box. The tube 14 is disposed vertically at the inner portion of the front side of the box and midway the same, it being located within a slot 15 formed in the box and having its lower extremity formed with a tongue 16 which lies flat against the inner side of the box and is secured thereto by means of a pin or other fastening device. The upper end of the tube 14 is also provided with ears which project out horizontally from the tube and on each side thereof, and which are adapted to be secured to the upper edge of the side to which the tube is fastened. By these means the tube is securely fastened in place, and by reason of its being countersunk in the side of the box its presence does not reduce the interior side thereof.

Formed in the upper portion of the tube 14 and at the inner side thereof is a recess which has a horizontal upper edge adapted to engage with the square portion of the projection 13. This engagement is effected as the catch 12 is received into the tube, and as the inclined face of the projection 13 engages with the upper inner edge of the tube 14 the side of the box to which said tube is fastened will be caused to move slightly inwardly, so that the projection may pass the upper edge of the tube and snap into the recess.

18 indicates an expansive spring, which is located within the tube 14, and which has its lower end permanently secured therein by any approved means. This spring, when extended, projects to a point equal to the opening 17, as may be seen by reference to Fig. 2 of the drawings, and when engaged with the lower end of the catch 12 will be compressed into the lower portion of the tube 14. The spring 18 is also

capable of quick expansion, and by this means, when the opening 17 and projection 13 are disengaged, the spring will act upon the catch and throw the lid 11 open, as shown in Fig. 1.

5 When it is desired to close the lid it should be swung on its hinges, so that the catch 12 will be projected into the tube 17, whereupon the lower end of the catch will engage with the spring 18 and compress the same. Simultane-
10 ously with this operation the inclined face of the projection 13 will engage with the upper end of the tube 14 and force the side of the box to which said tube is fastened inwardly to a degree sufficient to permit the projection
15 to spring past the upper end of the tube and finally snap into the opening 17. The fastening of the box lid will now be effected. It will be observed that by reason of the acute dis-
20 position of the catch 12 and the enlarged size of the tube 14 the catch may move freely into the tube and without binding against any part thereof, notwithstanding the arc in which the outer end of the lid 11 must move.

When it is desired to open the box-lid, all
25 that will be necessary is to press the side of the box-body which carries the tube 14 inwardly to a degree sufficient to disengage the shoulder of the projection 13 from the upper portion of the opening 17. When this has
30 been effected the spring 18 will be permitted to expand and will, acting upon the catch 12, throw the lid open, as shown in Fig. 1.

The modified form of my invention, illus-
35 trated in Figs. 5, 6, and 7, consists of a catch 19 secured to the lid 11 and operating similarly to the catch 12 of the preferred form. The catch 19 is, however, much shorter than the catch 12, and has a projection 20 at its
40 lower end, which comprises a shoulder and an inclined portion similar to those of the projection 13.

21 indicates a sheet-metal plate, which is bent to form two parts, disposed at right angles to each other, and this angular plate
45 is made to embrace the upper and inner edge of the front side of the box, its ends being provided with openings, through which screws or other fastening devices may pass, as is illustrated in Figs. 5 and 6. Formed in the in-
50 ner side of the box-body is the recess 22, which receives a spring-tongue 23 of the plate 21. This tongue 23 is formed integral with the plate and by stamping or cutting therefrom, it constituting a part of the horizontal por-
55 tion of the plate 21 and being located outward from the vertical portion of the plate and within the recess 22. It will be seen that

as the lid 11 is lowered, so that the catch 19 will project through the opening formed in the horizontal portion of the plate 21 and en-
60 gage with the tongue 23, the inclined face of the projection 20 will engage with the vertical portion of the plate and spring the side of the box inwardly to permit the projection
65 to pass outward of said vertical portion and snap under the lower edge of the same. This position is illustrated in Figs. 6 and 7 of the drawings. When it is desired to disconnect
70 the lid from the body of the box the side carrying the plate 21 should be sprung inwardly, as has been explained in connection with Figs. 1, 2, 3, and 4, so that the vertical portion of the plate 21 will be disengaged from the shoulder on the projection 20, and the spring-tongue
75 25 will then act upon the catch 19 and cause the lid of the box to be thrown open.

It will be observed that my invention em-
80 ploys a spring to effect the automatic raising of the lid, and that the disconnection of the catch device is effected by springing inwardly the yielding front side of the box. The es-
85 sence of the invention lies, therefore, in providing a peculiarly-constructed keeper and in securing the same to the inner side of a yielding box front, so that it may be engaged
90 or disengaged with or from a rigid catch by reason of the yielding character of the box side.

Having thus described my invention, I claim as new and desire to secure by Letters
95 Patent—

1. A spring acting box lid raiser and fastener, consisting of a catch fixed to the box lid, a keeper fixed to the adjacent portion of the box body, and a spring combined with the
95 keeper and capable of raising the lid upon the disengagement of the catch and keeper, that portion of the body which carries the keeper being yielding so that it may be moved to engage or disengage the catch and keeper,
100 substantially as described.

2. A box, having secured to its lid a catch, the same consisting of a rod formed with a projection thereon, the body portion of the box having secured thereto and adjacent to
105 the catch a tube receiving the catch and formed with an opening therein, and an expansive spring located within the tube, substantially as described.

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Witnesses:

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