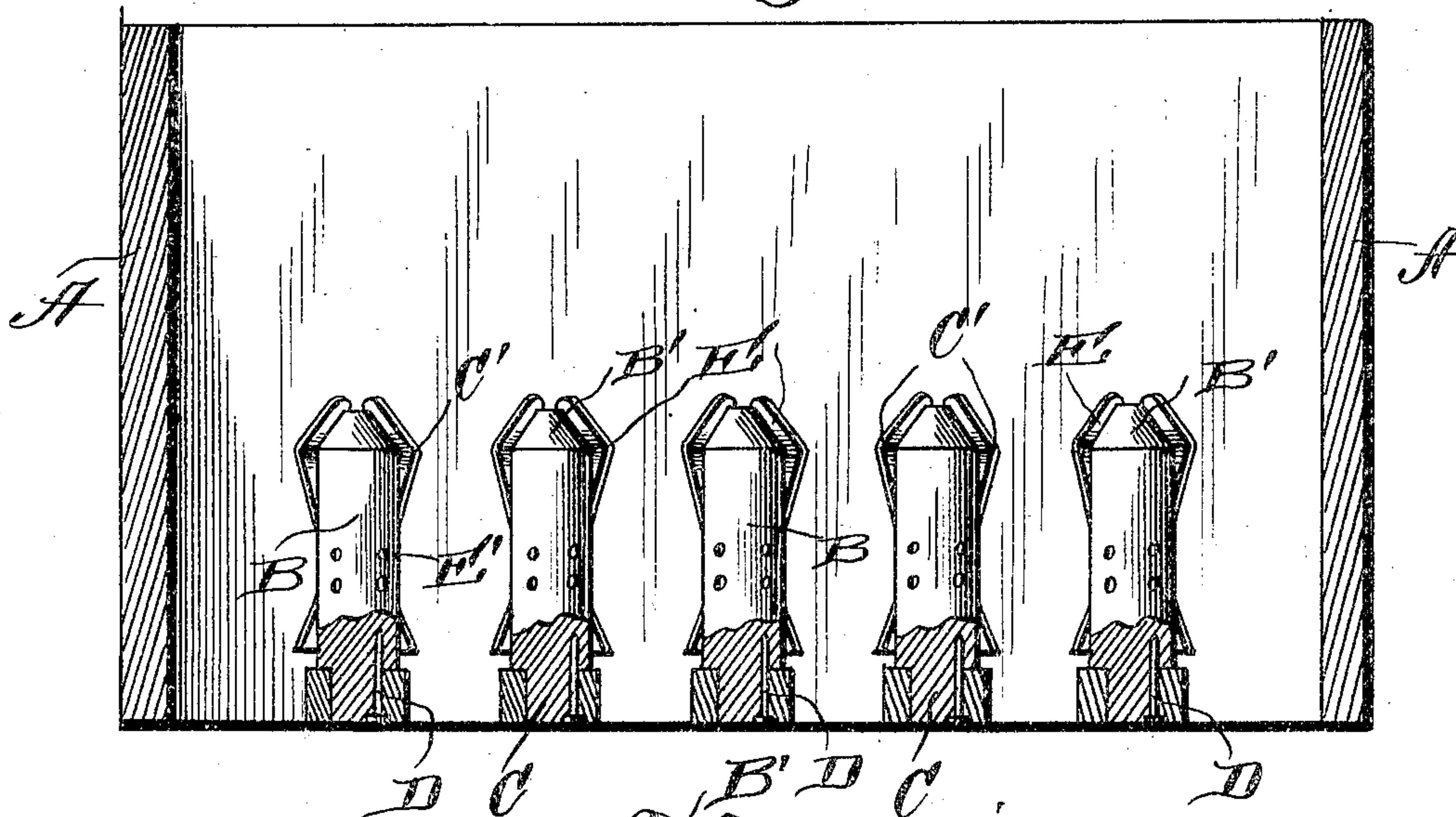
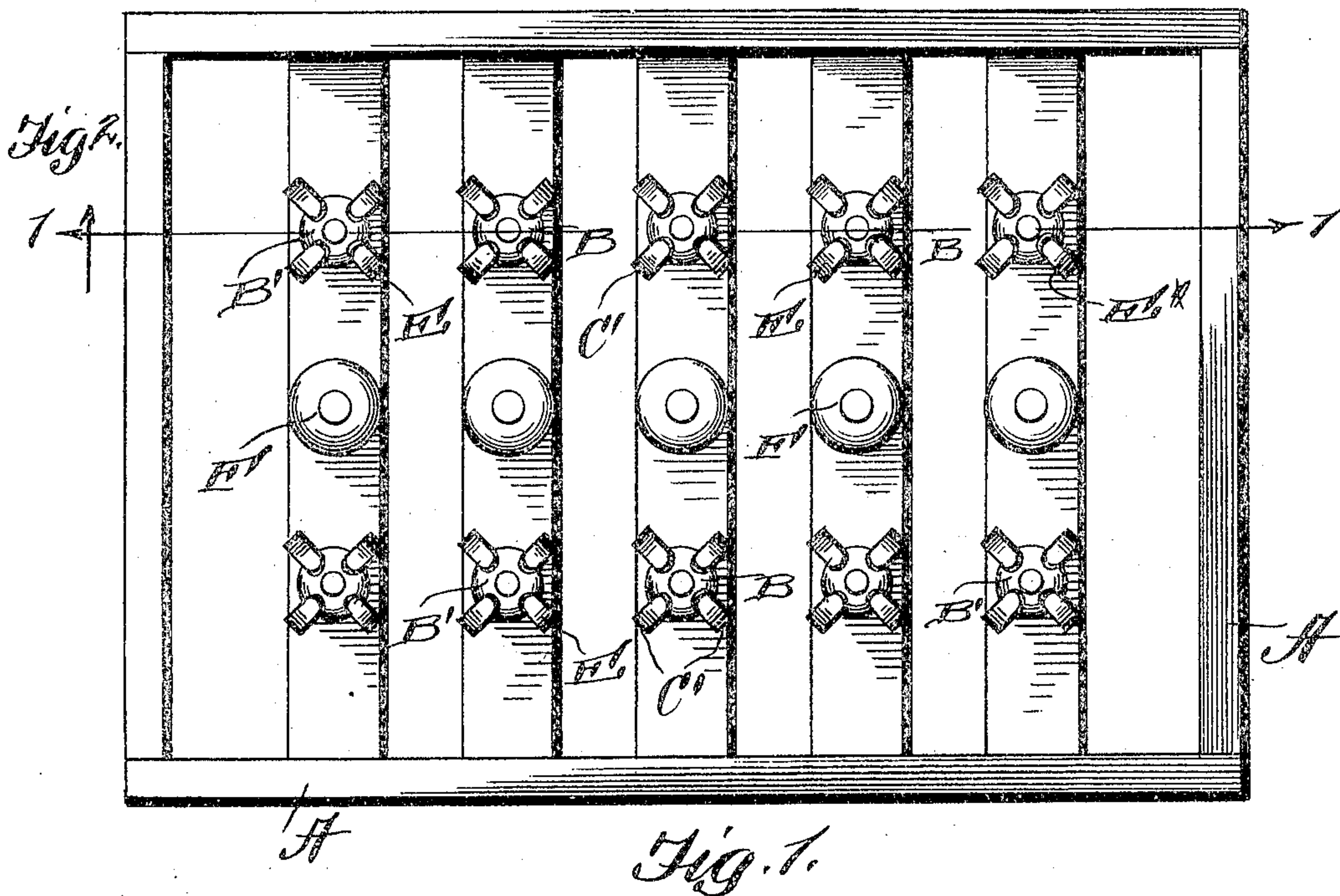


No. 794,558.

PATENTED JULY 11, 1905.

C. W. SMITH.
SHIPPING CRATE FOR BOTTLES.
APPLICATION FILED FEB. 10, 1905.



WITNESSES:

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CHARLES W. SMITH, OF NORWALK, OHIO.

SHIPPING-CRATE FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 794,558, dated July 11, 1905.

Application filed February 10, 1905. Serial No. 245,126.

To all whom it may concern:

Be it known that I, CHARLES W. SMITH, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Shipping-Crates for Bottles; 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 letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in shipping cases or boxes for bottles; and the object of the invention is to produce a simple and efficient means whereby the bottles may be held firmly from contact with one another and so arranged that the means for holding the bottles is allowed to yield slightly to take up vibration.

The invention consists, further and more specifically, in a series of stationary pins having dowels which fit the bottom of the box and in the provision of spring-bars which have angled portions for contact with the bottles and also in the provision of keys for holding the pins against a rotary movement.

The invention consists, further, in various details of construction and in combinations and arrangements of parts, which will be hereinafter fully described and then specifically defined in the appended claim.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view through a box, showing the means for holding the bottles. Fig. 2 is a top plan view looking at the ends of the pins and springs for holding the bottles, and Fig. 3 is an enlarged detail view of one of the springs.

Reference now being had to the details of the drawings by letter, A designates a box or casing, which may have a closed bottom or a slatted one. Fixed to the bottom of the box or slats and spaced apart is a series of pins B, which have their upper ends preferably tapering, as at B', and each pin has a dowel C fitted in the bottom of the box. In order to

prevent the pin from rotation, I insert a key D through the bottom of the box or casing and into the enlarged part of the pin, as is clearly shown in the sectional view of the drawings. E E designate spring-bars, which are fastened at E' in pairs diametrically opposite each other to said pins, and the upper ends of the springs are angled, as seen at C', extend over the tapering tops of the pins, and are adapted to yield under pressure. Intermediate each row of pins carrying the said springs is a series of pins F, which are of larger diameter than the pins carrying the said springs. Said pins F are fastened to the bottom of the box or casing by dowels and locking-keys, as described, and are adapted to form means whereby a bottle may be held upon one portion thereof, while a portion of the bottle opposite the part engaged by the pins F is held yieldingly against two of said springs in such a manner that the bottle will be held firmly in place and prevented from coming in contact with adjacent bottles. The springs, as shown, it will be observed, will yield slightly, so as to take up any jar that may come upon the bottles incident to the box being handled in transportation.

By the provision of the apparatus shown and described it will be observed that the pins in the event of their becoming broken may be easily removed by first extracting the key, after which the same may be driven into the new pin and hold the same securely in place.

While I have shown a particular form of casing or crate in which my invention is applied, it will be understood that I may vary the details of the apparatus, if desired, without in any way departing from the spirit of the invention.

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

An apparatus for shipping bottles, comprising a casing, a series of apertured slats forming the bottom of the casing, pins having their lower ends contracted and seated in the apertures of said slats, with the shoulders of the pins resting upon the upper surfaces of the slats, fastening means passing through

said slats and engaging the pins, a series of
spring-arms fastened lengthwise of said pins
to the circumference thereof, the lower ends
of the springs outwardly flaring and their
5 upper ends angled and extending over the
tapering free ends of the pins, as shown and
described.

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

CHARLES W. SMITH.

Witnesses:

J. C. HAUSER,
CLAUDE B. DE WITT.