

No. 654,405.

Patented July 24, 1900.

G. LAUTERBACK.

REINFORCING DEVICE FOR PACKING AND STORING VESSELS.

(Application filed Apr. 30, 1900.)

(No Model.)

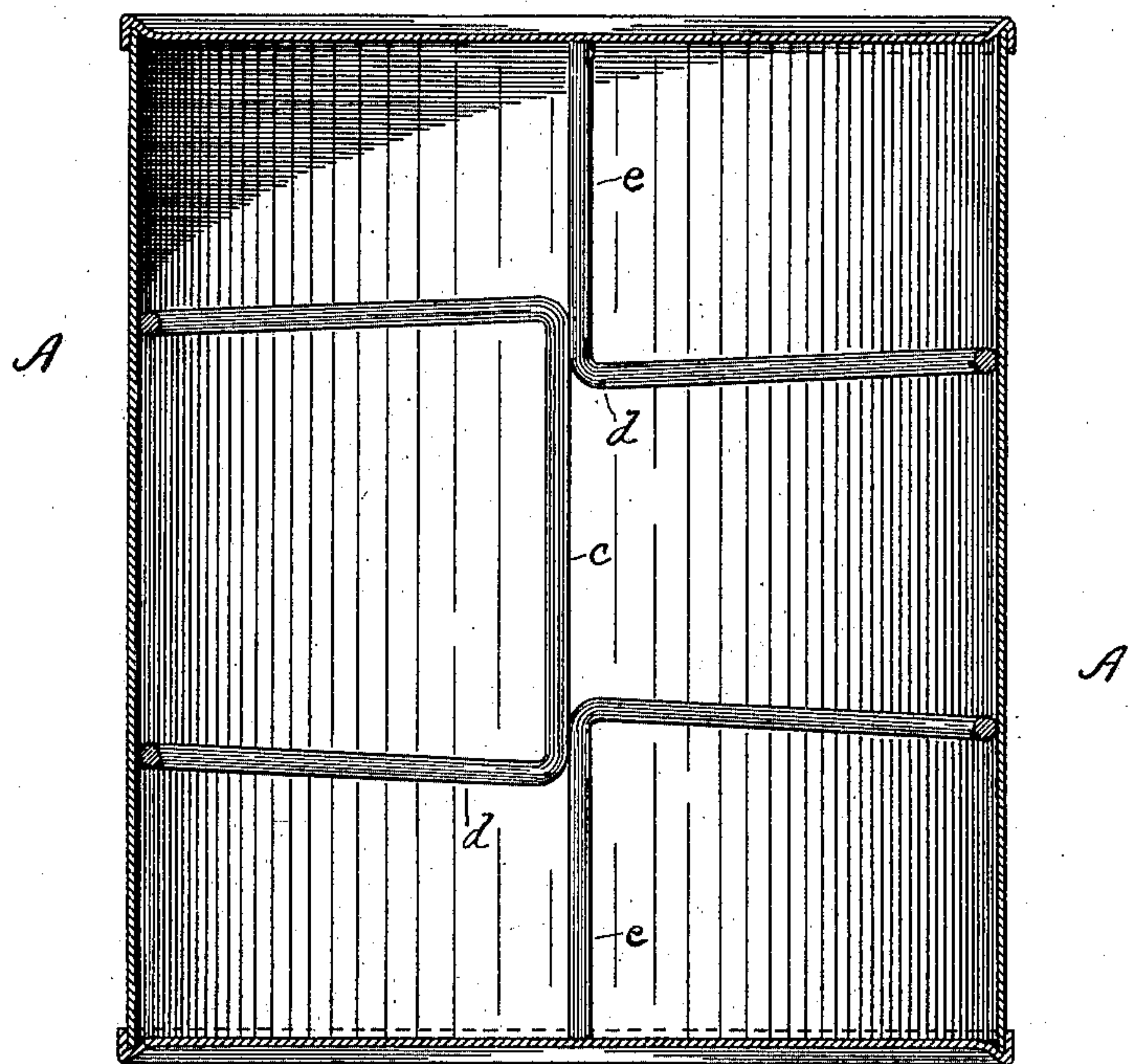


Fig. 1.

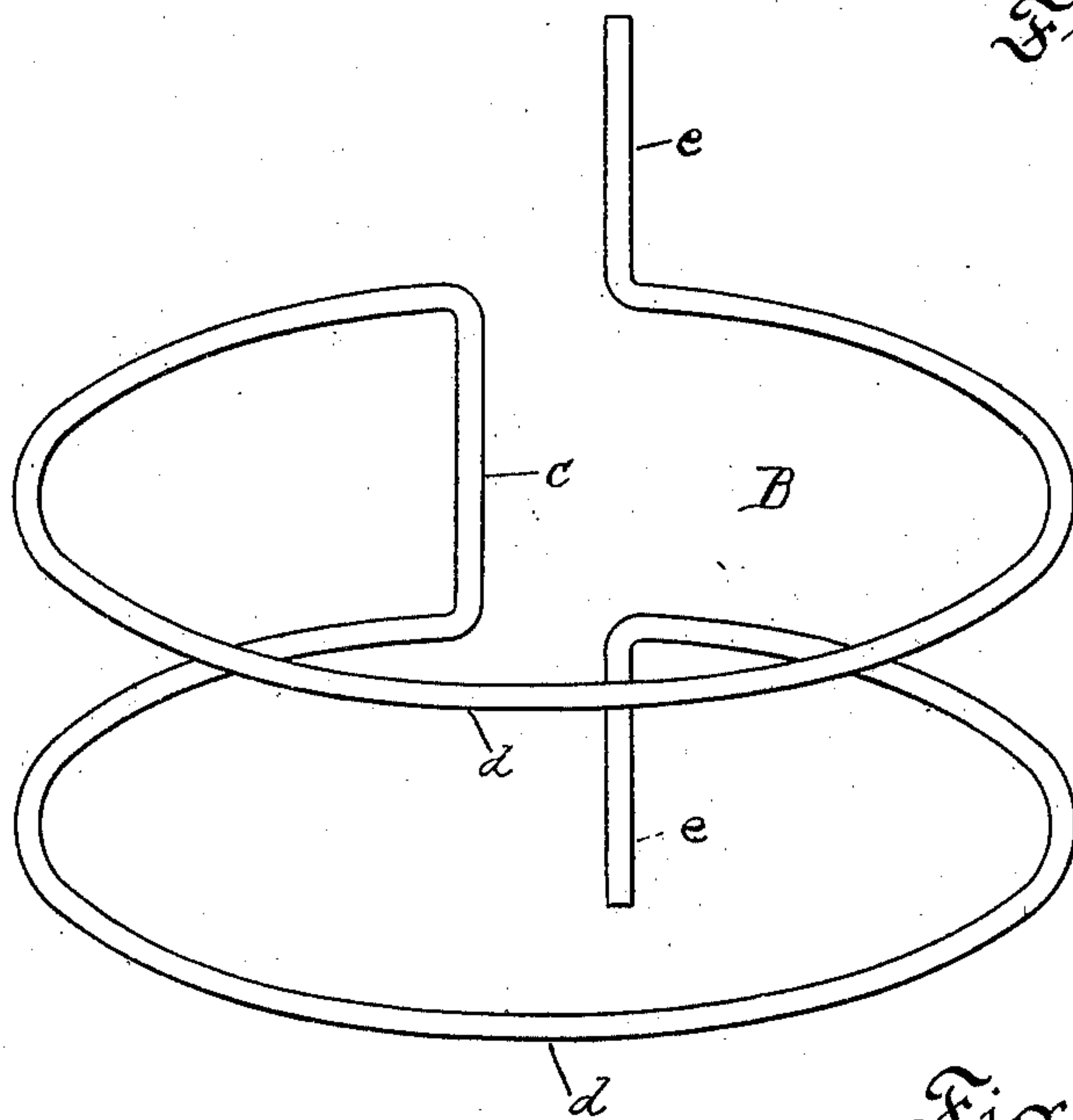


Fig. 2.

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# UNITED STATES PATENT OFFICE.

GEORGE LAUTERBACK, OF BALTIMORE, MARYLAND.

## REINFORCING DEVICE FOR PACKING AND STORING VESSELS.

SPECIFICATION forming part of Letters Patent No. 654,405, dated July 24, 1900.

Application filed April 30, 1900. Serial No. 14,838. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE LAUTERBACK, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Reinforcing Devices for Packing and Storing Vessels, of which the following is a specification.

Packers of canned goods and manufacturers of metallic storing and packing vessels have long experienced great inconvenience and loss by reason of the fact that the metallic vessels, usually made of thin sheet-tin, are extremely liable to collapse. Especially is this the case when the vessels are shipped in bulk, when the weight of one vessel either on top of or alongside of another will dent in the sides of the vessels or cause the vessels to collapse, thus rendering them unfit for use. It has also often happened that the cans collapse when being sealed and by contraction after their contents, put in in a heated condition, have become cool, and this not only occasions a loss as to the can, but also in the contents of the can. These difficulties have heretofore made impracticable the use of large cans in packing fruit, vegetables, or the like—say cans holding about a gallon—and have added to the cost of canned goods by making necessary a large number of small cans where one can could otherwise contain a large quantity of goods.

It is the object of my invention to provide a very cheap and simple reinforcing device for a tin can or similar vessel which will add very little to the cost of the can and will effectually prevent the collapsing which would otherwise be so liable to occur, thereby adding greatly to the life or usefulness of the cans and enabling large cans to be used.

With this object in view the invention consists in certain constructions and arrangements of the parts, which I shall hereinafter fully describe and claim, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of a thin sheet-tin can in which my reinforcing device is placed, and Fig. 2 is a perspective view of the reinforcing device removed from the can.

Referring to the drawings, A designates a can, which may be of very cheap and thin tin, and B designates the reinforcing device, which

consists of a single piece of wire of suitable thickness and stiffness having a straight middle portion *c*, two offset portions *d*, bent laterally into a plane at right angles to the length of the straight middle portion *c*, and two straight end portions *e*, bent again at right angles to the offset portions *d* and extending in opposite directions substantially parallel with the straight middle portion *c*. It is to be understood in this connection that the offset portions *d* may be circular, as shown, rectangular, or of other shape, this depending entirely upon the cross-sectional shape of the can in which the reinforcing device B is to be placed, and it is manifest that the length or height of the reinforcing device B also depends upon the length or height of the can, because the device is designed to extend the full length of the can and the extremities of the straight end portions *e* are to bear against the top and bottom of the can.

The wire of which the reinforcing device is made possesses a certain amount of spring tension, and, as shown in Fig. 2, the offset portions *d* where they terminate to form the end portions *e* are slightly separated from the straight middle portion, so that the said offset portions may be sprung together and reduce the cross-sectional area of the reinforcing device sufficiently to enable it to be inserted in the can, and as soon as it is in place the spring tension of the offset portions *d* will frictionally hold the device in place, so that no fastening means whatever are necessary. Again, when the reinforcing device B is in place the straight end portions *e* at their basis abut against the straight middle portion *c*, and thus prevent any farther inward movement of the offset portions and render the device perfectly rigid.

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

1. A sheet-metal can provided on its interior with a reinforcing device extending around and exerting an outward pressure upon the sides of the can whereby to retain itself in place independent of fastening means.

2. The combination with a packing or storing vessel, of a reinforcing device arranged inside the vessel and provided with a middle portion and end portions extending longitu-



dinally of the vessel and offset portions extending in a plane transverse to the length of the vessel.

3. The combination with a packing or storing vessel, of a reinforcing device arranged inside the vessel and formed with middle and end portions extending longitudinally of the vessel and against the sides of the same, and intermediate offset portions conforming to the cross-sectional shape of the vessel and bearing laterally against the sides thereof.

4. As a new article of manufacture, a reinforcing device for packing or storing vessels, consisting of a single piece of wire having a middle portion *c*, laterally-offset spring portions *d*, and oppositely-extending end portions *e*, as and for the purpose set forth.

5. The combination with a packing or storing vessel, of a reinforcing device arranged on the inside thereof and provided with a

longitudinally-extending middle portion, offset spring portions, and oppositely-extending end portions adapted to abut against the middle portion.

6. The combination with a cylindric packing-can, of a reinforcing device inside the can and concentric and in contact with the cylindric walls thereof.

7. A packing-can for hermetically-sealed goods cylindric in shape and provided on its interior with a reinforcing-ring bearing against the cylindric wall of the can whereby the wall of the can will not be collapsed or dented.

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

GEORGE LAUTERBACK.

Witnesses:

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