J. L. RIEGER.

SHIPPING BOX.

APPLICATION FILED JULY 1, 1915.

1,179,651.

Patented Apr. 18, 1916.

3 SHEETS—SHEET 1.

Fig. 1.

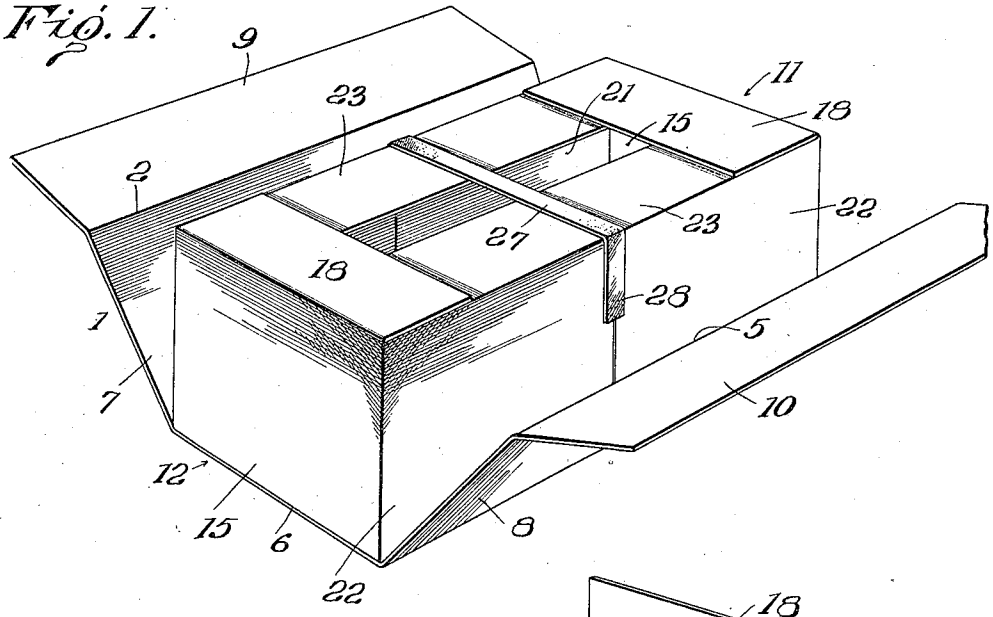
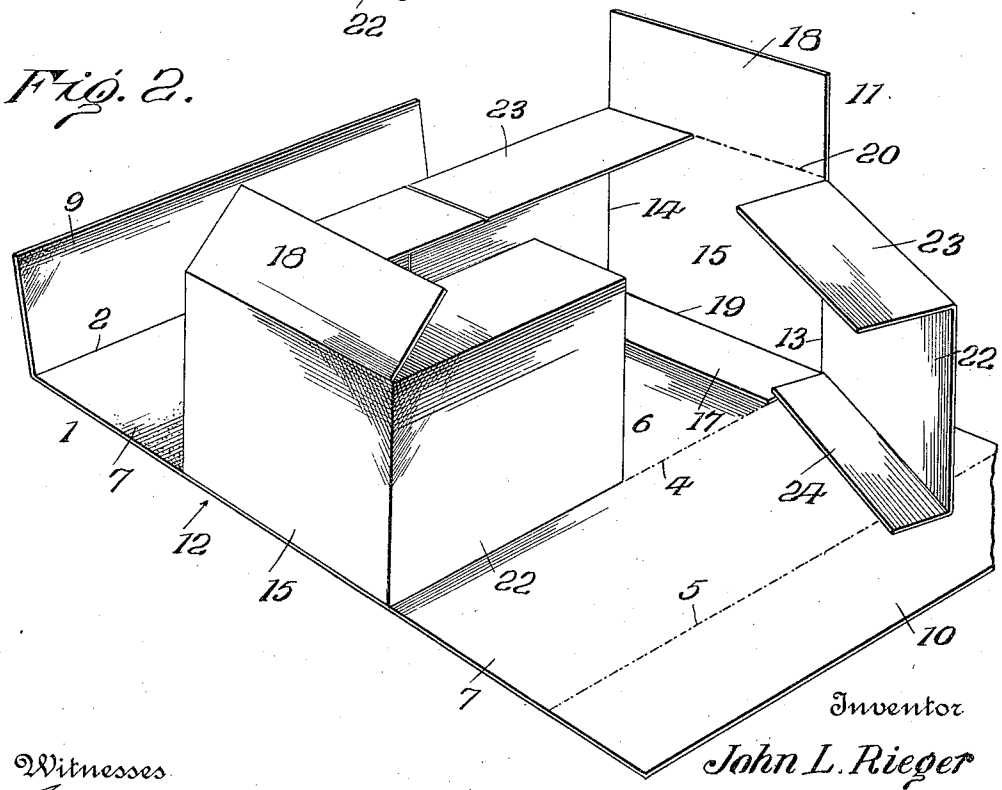


Fig. 2.



Witnesses

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3 SHEETS—SHEET 2.

Fig. 3.

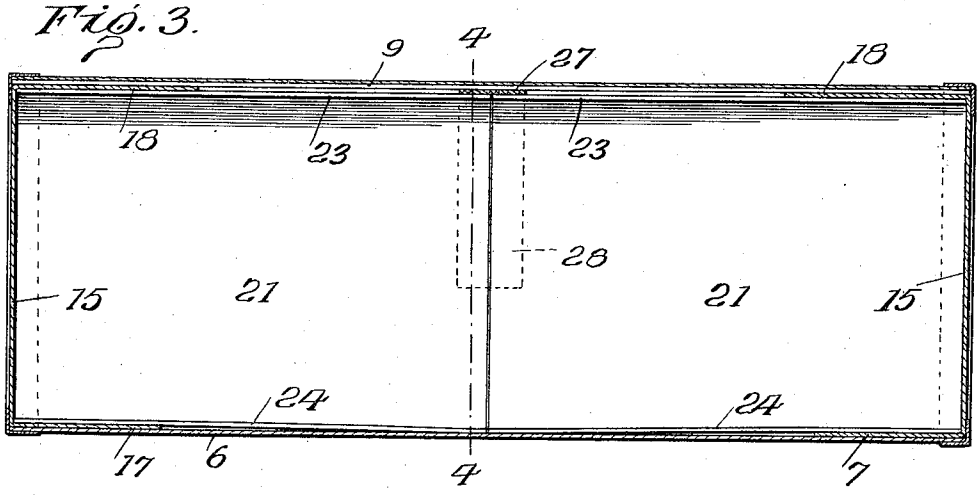


Fig. 4.

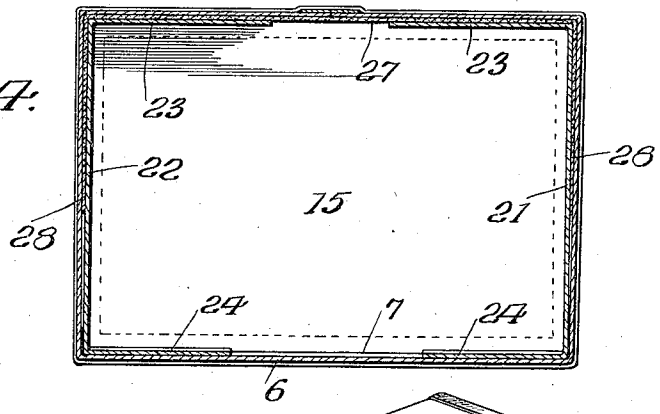
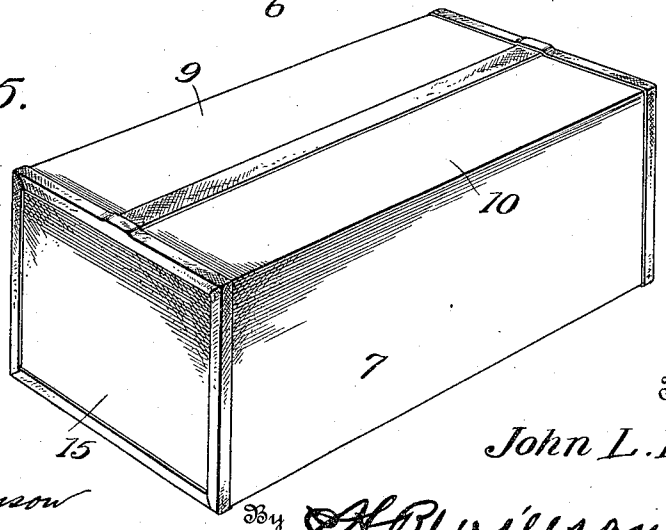


Fig. 5.



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3 SHEETS—SHEET 3.

Fig. 6.

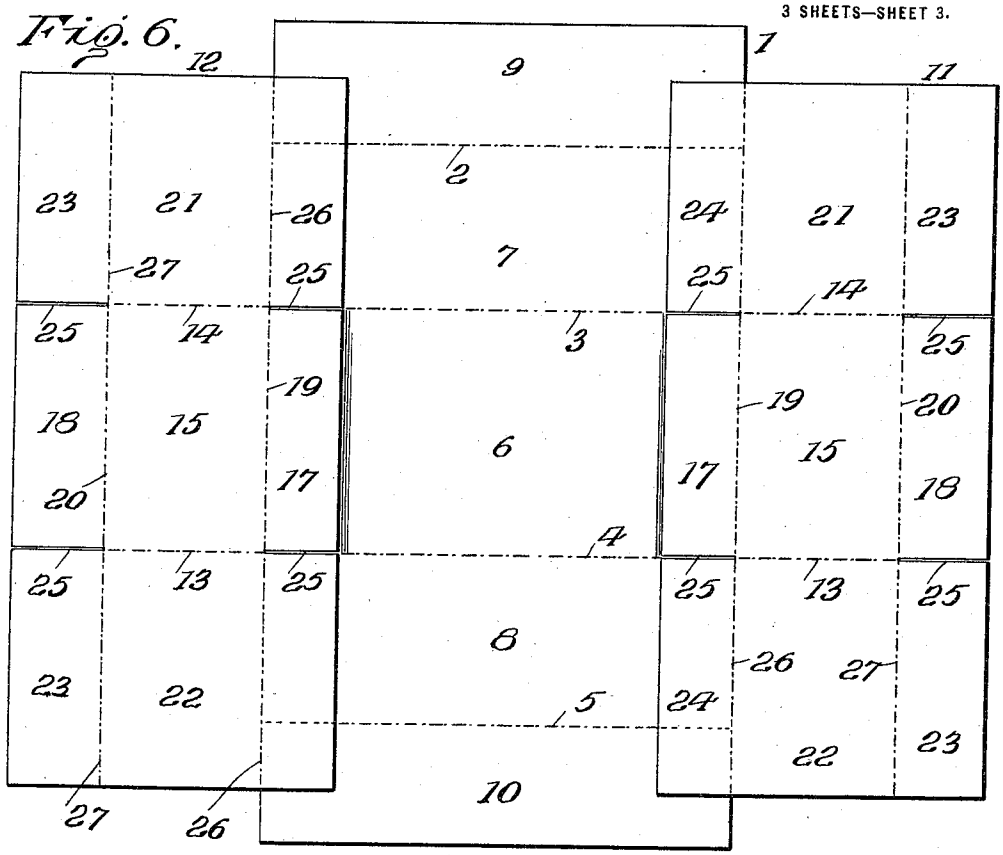
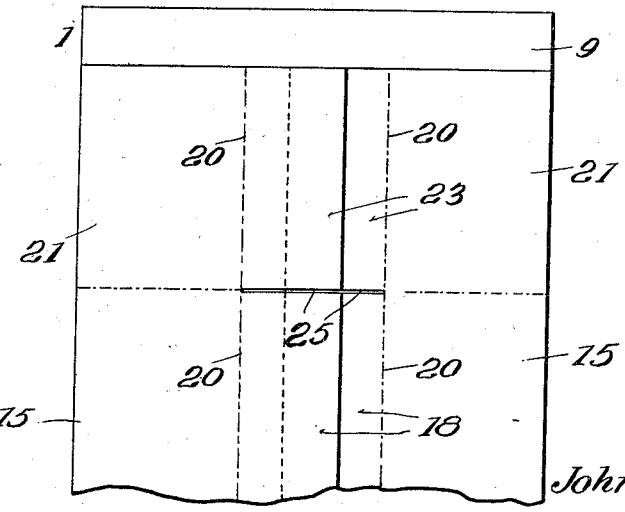


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN L. RIEGER, OF SANDUSKY, OHIO.

SHIPPING-BOX.

1,179,651. Specification of Letters Patent. Patented Apr. 18, 1916.

Application filed July 1, 1915. Serial No. 37,472.

To all whom it may concern:

Be it known that I, JOHN L. RIEGER, a citizen of the United States, residing at Sandusky, in the county of Erie and State of Ohio, have invented certain new and useful Improvements in Shipping-Boxes; 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.

This invention relates to shipping and packing cases and more particularly to cases or containers of this class constructed of fiber or paper board, but not necessarily so, and which are designed to be shipped or stored in knocked-down or collapsed condition.

The object of the invention is the provision of an improved case or box of this character which is strong and durable in its construction and capable of being easily and quickly set up and sealed and of opening at one side only thereof, thus insuring the placing of the case in upright position before opening, which in itself is quite an important feature in shipping cases, as it frequently occurs that the shipping address is placed on the bottom instead of the top of the case so that when opened on the addressed side, the package or individual containers therein are in inverted position.

Another object of the invention is the provision of a blank of this character which is capable of being easily and quickly set up or knocked down and secured in folded or set up form to facilitate shipping and to enable a compact packing of the cases when not in use.

Another object of the invention is to provide a case of this character so constructed that it will be thoroughly and reliably reinforced during the manufacture and setting up thereof and which may be produced without waste.

Another object is to so construct a box or case of this character that when assembled ready for use, every edge at both the sides and ends will be strongly reinforced on the interior, the reinforcing means constituting a part of the box itself so that they cannot be inadvertently omitted.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings: Figure 1 represents a perspective view of a box constructed in accordance with this invention, partially open; Fig. 2 is a similar view showing the box in partially assembled position; Fig. 3 is a longitudinal vertical section showing the box in closed position; Fig. 4 is a transverse section thereof; Fig. 5 is a perspective view of the box in set up sealed position ready for shipping; Fig. 6 is a plan view of the box in open position ready for packing before it is set up; and Fig. 7 is a plan view showing the box partially folded.

In the embodiment illustrated, a body section 1 is shown rectangular in form which is scored transversely on the lines 2, 3, 4, and 5, to form a bottom member 6, sides 7 and 8, and top members or flaps 9 and 10, all of which are hingedly connected on these lines of score, the top members 9 and 10 being preferably of equal width and adapted to open midway the width of the top of the box when assembled. Two end sections 11 and 12 are here shown rectangular in form and scored transversely on lines 13 and 14 to provide end members 15, said end sections being exactly alike and hence one only will be described in detail. This end member 15 between the score lines 13 and 14 is of a length corresponding to the width of the bottom 6 of the box and of a width equal to the width of the side members 7 and 8. These end members 15 are each provided at their upper and lower edges with flaps 17 and 18 of any suitable or desired width and which extend from end to end of the members 15, the flap 17 being adapted to overlap the inner face of one end of the bottom 6 and to be secured thereto by gluing or otherwise, said flap being hingedly connected with the member 15 by a score line 19, and the flap 18 similarly connected by a score line 20 which extends longitudinally of the end section. The flap 18 is designed to form a reinforcing member for the top of the box as will be hereinafter more fully described. Wings or extensions 21 and 22 are hingedly connected to the opposite ends of the end member 15 by the score lines 13 and 14, and these extensions 21 and 22 with their flaps 23 and 24 are of a width equal to the

combined width of the end member 15 and its two flaps 17 and 18 and they are provided at their opposite upper and lower edges respectively with the flaps 23 and 24 corresponding in width to the width of the flaps 17 and 18 and which are separated from said flaps by slits 25 to provide for the proper folding of the extensions and their flaps to form the reinforcing members of the box, as will be presently described. These flaps 23 and 24 are hingedly connected with the extensions 21 and 22 by lines of fold or score lines 26 and 27 arranged in longitudinal alinement with the score lines 19 and 20 of the end member 15. The extensions 21 and 22 are of a length equal to one-half of the length of the bottom 6 and top sections 9 and 10, so that when said end sections are assembled ready for use the free ends of said extensions on the opposite ends of the box will abut and form auxiliary side members extending the full length of the box. The flaps 17 of the end sections are glued to the inner face of the opposite ends of the bottom 6 when the box is manufactured, and it is then ready for shipment to the consumer, and to adapt it to occupy as little space as possible, the end sections are folded inwardly flat against the inner face of the body section so that these blanks may be disposed one on the other in piles and thereby occupy a comparatively small space for shipping or storing purposes.

In assembling the box ready for use, the end sections are opened up with the ends 15 disposed upright in a plane at right angles to the bottom 6 and the extensions 21 and 22 thereof are then swung inwardly on the hinged connections 13 and 14 with their flaps 24 resting on the inner face of the bottom 6, the hinged connections of said flaps with the extensions being arranged to register with the score lines or hinges 3 and 4 which connect the side members 7 and 8 with the bottom 6 and glue is placed on the lower faces of these flaps or the upper face of the bottom so that the flanges are reliably secured to the bottom. When so disposed, the flanges 23 at the upper edges of the extensions are folded inwardly at right angles and coated on their outer faces with glue. The flaps 18 are then folded down over the glue-coated flaps 23 and thereby secured to said flaps and operatively holding them in adjusted set up position. When so arranged a complete inner box will be formed having an opening in its top. A connecting cross band 27 is shown arranged over the abutting ends of the extensions 21 and 22 and provided with right angularly depending arms 29 which engage the outer faces of the opposite sides of the box-like structure formed by the extensions, said band being preferably composed of heavy paper tape and which is secured to said reinforcing box member by glue or in any other desired manner. When this reinforcing inner box has been completed, the side members 7 and 8 of the body section 1 are folded up against the sides of the inner box and the top members 9 and 10 are folded downwardly over the outer faces of the reinforcing flaps of the inner box structure, said top members 9 and 10 being preferably glue coated on their inner faces to adapt them to adhere to the inner faces of the inner box to adapt them to be connected thereto when in closed position. When the box has been so assembled it is sealed by paper tape which is placed over the abutting edges of the top members 9 and 10 and around the edges of the box at the ends thereof, and it is then ready for shipment, the material to be shipped having first been placed in the box as is well understood.

From the above description, it will be obvious that when the box is assembled or set up ready for use all edges thereof will be strongly reinforced by the interiorly disposed box-like structure formed by the overlapping of the flaps on the ends and extensions thereof, and the ends will thus be reliably held against collapsing stresses.

By forming this case or box from three rectangular sections, it will be obvious that they may be struck out without any waste whatsoever, thereby providing a case which is inexpensive to manufacture, and by the peculiar arrangement and assembling of parts is rendered strong and durable in its construction and capable of being easily and quickly set up for use.

I claim as my invention:

1. A case of the class described composed of a rectangular body and end sections, the body being divided by transversely extending score lines into a bottom, sides and two top members hingedly connected by said score lines, the end sections having upper and lower flaps, the lower flaps overlapping the inner face of the bottom member at opposite ends thereof and secured thereto, the upper flaps extending inwardly in a plane at right angles to the ends proper, said ends having extensions at their opposite sides hingedly connected therewith and each of a length equal to one half the length of the box body, the free edges of the extensions at one end of the box meeting those at the other end when the parts are assembled, whereby the sides of the box are doubled throughout their length, said extensions being provided with inturned flanges at their upper and lower ends to form reinforcing members adapted to engage the inner faces

of the bottom and top members when the box is assembled, thereby reinforcing the side edges of the box at both the top and bottom thereof and in connection with the flaps on the end members forming reinforced edges around the entire top and bottom of the box.

2. A case of the class described composed of three parts, a rectangular body and two rectangular end sections, the body being divided by transversely extending score lines into a bottom, sides and top members hingedly connected by said score lines, the end sections having upper and lower flaps, the lower flaps overlapping the inner face of the bottom member at opposite ends thereof and secured thereto, the upper flaps extending inwardly at a plane at right angles to the ends proper, said ends having extensions at their opposite sides hingedly connected therewith, and said extensions being provided with inturned flanges at their upper and lower ends to form reinforcing members adapted to engage the inner faces of the bottom and top members when the box is assembled, the upper flaps of the end members being adapted to lap the upper flanges of the extensions of said end members.

3. A case of the class described composed of a body and end sections, the body section comprising hingedly connected bottom, sides and top members and the end sections having flaps hingedly connected with the ends of the bottom member of the body section, said end sections having inturned side extensions hingedly and integrally connected therewith and provided with reinforcing hinged flanges at their upper and lower ends, whereby the top and bottom of the hinge members are reinforced around the edges thereof on the interior of the case by parts formed integral with the box.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN L. RIEGER.

Witnesses:
CONRAD J. RHODE,
FLORENCE M. GILBERT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."