

No. 678,257.

Patented July 9, 1901.

R. H. KERR.
KNOCKDOWN BARREL.

(Application filed Jan. 22, 1901.)

(No Model.)

2 Sheets—Sheet 1.

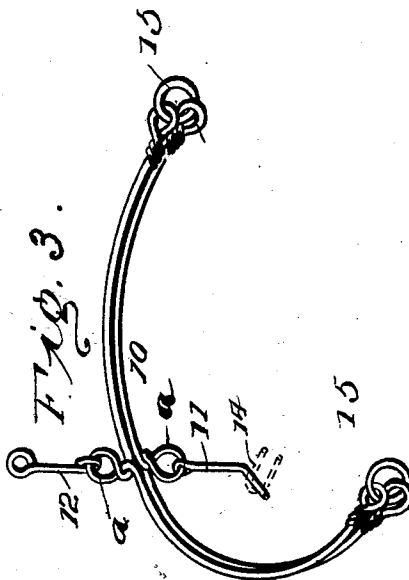
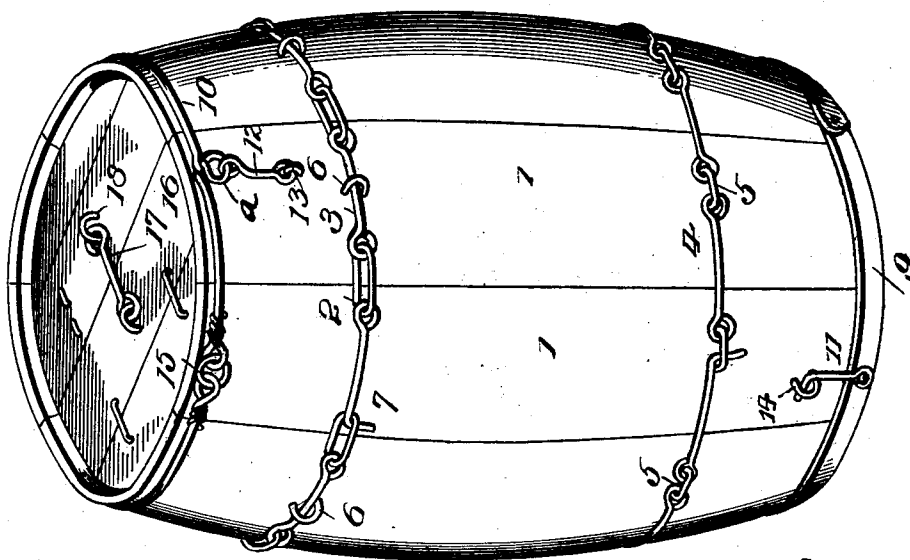


Fig. 1.



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Fig. 2

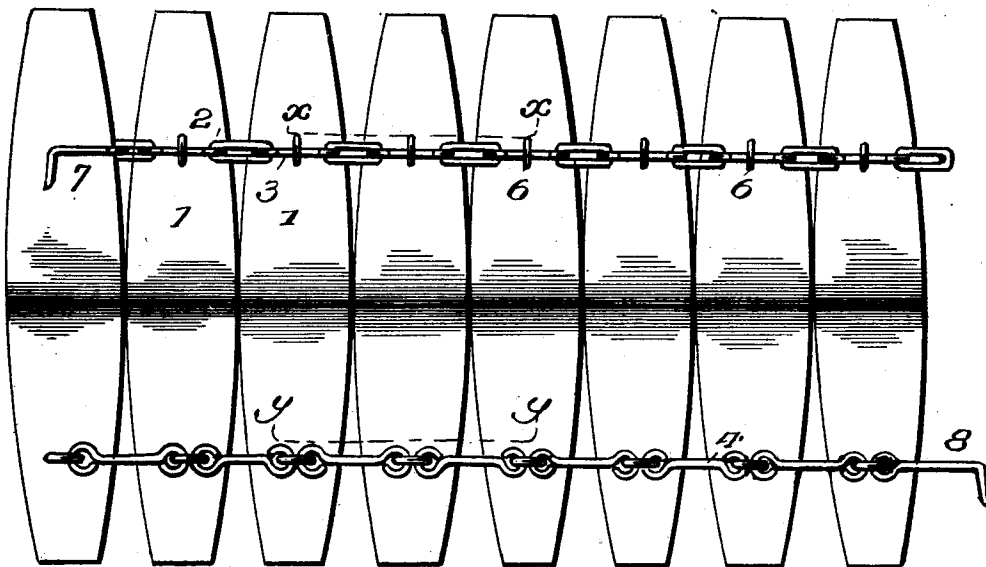
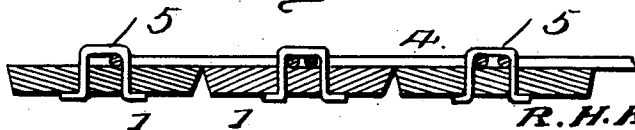


Fig. 4.



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UNITED STATES PATENT OFFICE.

ROBERT H. KERR, OF WEST SALEM, OHIO.

KNOCKDOWN BARREL.

SPECIFICATION forming part of Letters Patent No. 678,257, dated July 9, 1901.

Application filed January 22, 1901. Serial No. 44,315. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. KERR, a citizen of the United States, residing at West Salem, in the State of Ohio, have invented certain new and useful Improvements in Knockdown Barrels; and I do hereby 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 has relation to shipping-crates, such as barrels or analogous packages, in which goods and commodities are transported and which are returned by the consignee in a compact form, so as to occupy a minimum amount of room and reduce the cost to the smallest possible figure.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are necessarily susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a knockdown barrel embodying the invention. Fig. 2 is a plan view of the body of the barrel extended. Fig. 3 is a detail view of a folding hoop, showing the parts closed. Fig. 4 is a detail section about on the line Y Y of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

As illustrated, the shipping case or crate is of the form of a barrel, being of circular outline and having heads or ends of corresponding shape; but within the purview of the invention the crate or package may have any desired form, so long as it is constructed to admit of the parts being folded into a compact form for storage and transportation.

The term "barrel" is used in a general sense and comprehends a package for shipping commodities and products of any nature and composed of staves or kindred elements connected in such a manner as to admit of the receptacle being quickly set up for use

and as readily dismembered and folded into a compact and comparatively small bundle.

The staves 1 comprising the body of the barrel are preferably of uniform width, although this is not essential, and are flexibly connected by chains or links which prevent the loss or accidental displacement of the elements when the barrel is in a knockdown condition. The flexible connections between the staves may consist either of open links 2 and bar-links 3, alternately arranged, or solely of bar-links 4 and staple connections 5 between adjacent bar-links 4 and the staves 1. The links 2 and 3 are joined and form, in effect, a chain which is connected to each of the staves 1 by staples 6, driven over the bar-links 3 and into the respective staves. The links 3 are free to slide through the staples 6. Hence provision is had for drawing the chain or binder tightly about the body of the barrel or package. A hook 7 is provided at one end of the chain and is adapted to engage with an open link 2 at the opposite end of the said chain, whereby the latter is joined after the barrel has been set up.

The bar-links 4 connecting the staves are formed at their ends with eyes which receive the legs of the staples 5, by means of which adjacent links 4 are connected and secured to the staves by being driven therein. The staples 5 are arranged parallel with the circumference of the barrel, whereas the staples 6 are disposed at a right angle to the circumferential length of the barrel. The last link 4 of the series terminates in a hook 8, which is adapted to engage with the first staple 5 of the series, so as to connect the staves when the barrel is properly assembled.

The end hoops may be constructed either of a strip or ribbon of metal, as shown at 9, or of wire, as shown at 10, and in either case the hoops are secured to the body of the barrel either by means of hooks 11 or eye-bars 12, the latter being formed of lengths of wire of suitable gage having their end portions bent to provide eyes, one of which is secured to the hoop by a rivet or in any desired manner and the other secured to the body of the barrel by a nail 13 or analogous fastening. The hooks 11 are pivotally connected at one end to the hoops and are adapted to engage with pins or eyes 14, attached to the body of

the barrel. The construction just referred to obviates the necessity for securing the hoops to the barrel by nails, as commonly practiced and which would be highly objectionable in a knockdown barrel or package of the character aforesaid. The wire hoop 10 is composed of similar parts or sections connected by rings or links 15, looped into terminal eyes thereof. By constructing the hoops of wire the parts can be folded upon each other, as shown most clearly in Fig. 3, and by having the parts 11 or 12 attached to the rings or links 15 said parts are held in proper position and cannot slip upon the hoop.

The end pieces or heads 16 of the barrel are composed of sections connected by links 17 and staples 18, the latter being driven into the parts and through the eyes formed at the ends of the links 17. By having the parts of the heads 16 linked together they cannot become separated or lost and require valuable time in fitting and assembling when setting up the barrel.

The barrel is set up by bringing the ends of the body together and securing them by means of the hooks 7 and 8 in the manner stated. The heads or ends 16 are placed in position in the ordinary manner and are secured from displacement by driving on the end hoops, which latter in turn are secured by the parts 11 and 12 in the manner stated. After the contents have been removed from a barrel or package the latter is reduced to a compact form by removing the end hoops and disconnecting the terminals of the flexible connections joining the staves of the body, and the latter is extended, as shown in Fig. 2, or may be folded as required. By extending the body a number may be piled one upon the other in the smallest amount of space possible. The connections between the staves or elements being of wire, the weight of the package is not materially increased, and the original cost of the package is very little in

advance of the ordinary barrel or package permanently constructed and designed to be destroyed after being used, because the cost of reshipment is about equal to the cost of a new package.

The hoops 9 and 10 are formed of pivotally-connected sections, and the hooks 11 or eyes 12 are connected with the sections intermediate of their joints, so as to secure the best results. As shown in Fig. 4, the sections of the hoop are bent to form eyes midway of the joints into which the parts 11 and 12 are looped.

Having thus described the invention, what is claimed as new is—

1. In a knockdown shipping-case, a series of staves, staples applied to the staves intermediate of their edges, links connecting the staves and looped around the legs of the staples and extending across the spaces or joints between the staves, and a hook applied to the staple of an end stave and adapted to engage with the staple of the other end stave to hold the staves when set up and admit of their ready separation, substantially as described.

2. In a barrel, a hoop having portions bent to provide eyes, and hook-and-eye fastenings looped into the said eyes and adapted to cooperate with fastenings applied to the barrel to secure the hoop in place, substantially as described.

3. In combination with a barrel, a hoop composed of pivoted sections having eyes, and fastenings of the hook-and-eye type looped into the said eyes and adapted to cooperate with the fastenings applied to the body of the barrel to retain them in place, substantially as set forth.

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

ROBERT H. KERR. [L. S.]

Witnesses:

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F. T. TRASTER.