(No Model.) 2 Sheets—Sheet 1.

W. H. CADWELL.

SHIPPING PACKAGE.

No. 435,203. Patented Aug. 26, 1890.

Fig. 1

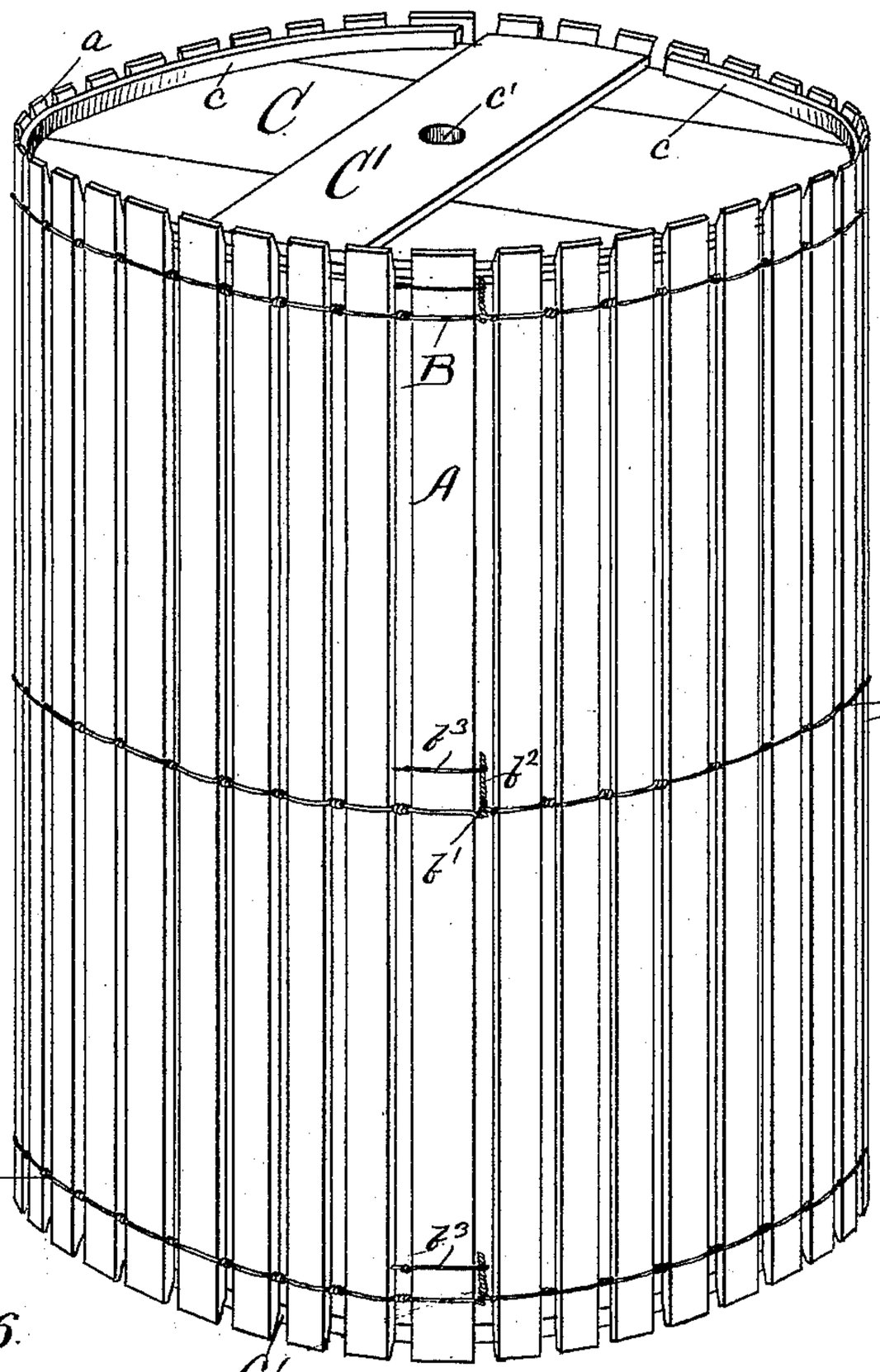


Fig. 6.

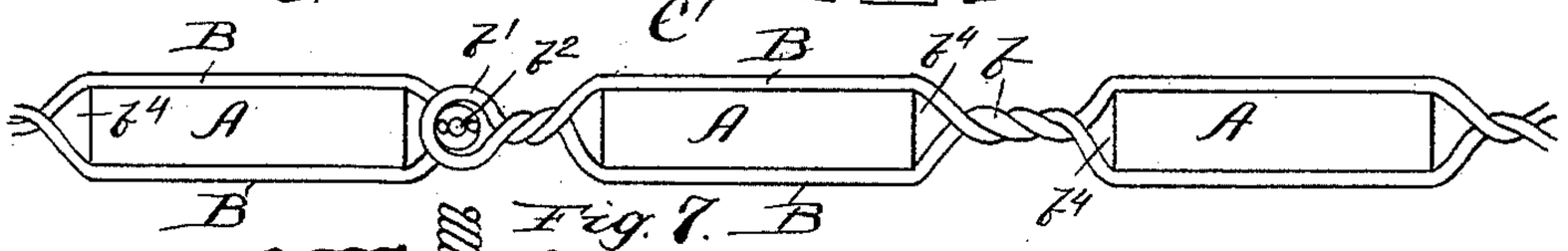
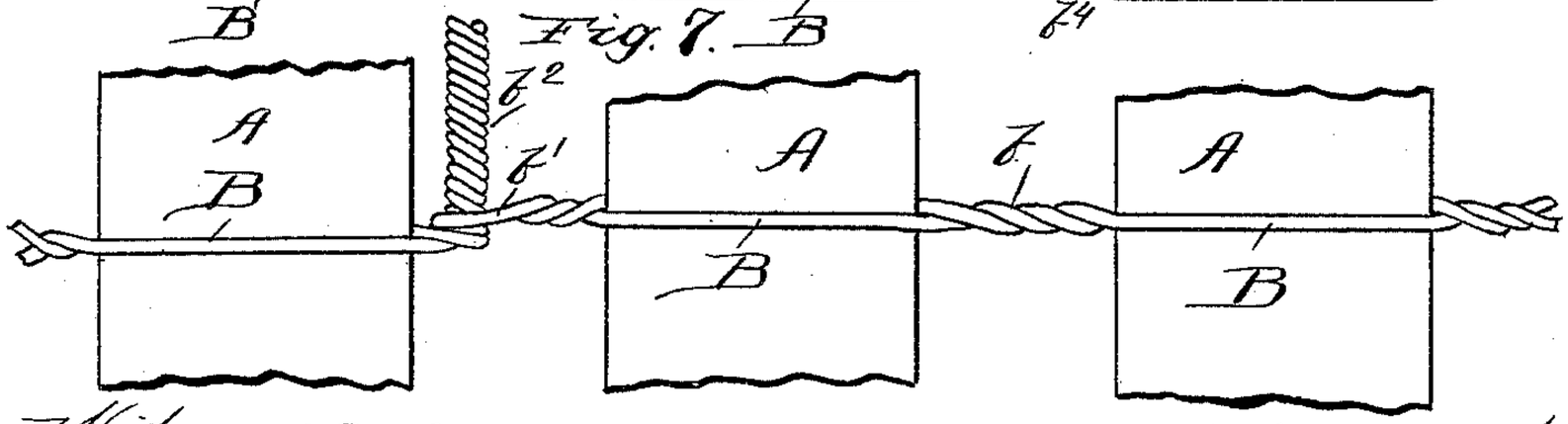


Fig. 7.



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His Attorneys.

(No Model.)

2 Sheets—Sheet 2.

W. H. CADWELL.

SHIPPING PACKAGE.

No. 435,203. Patented Aug. 26, 1890.

Fig. 2.

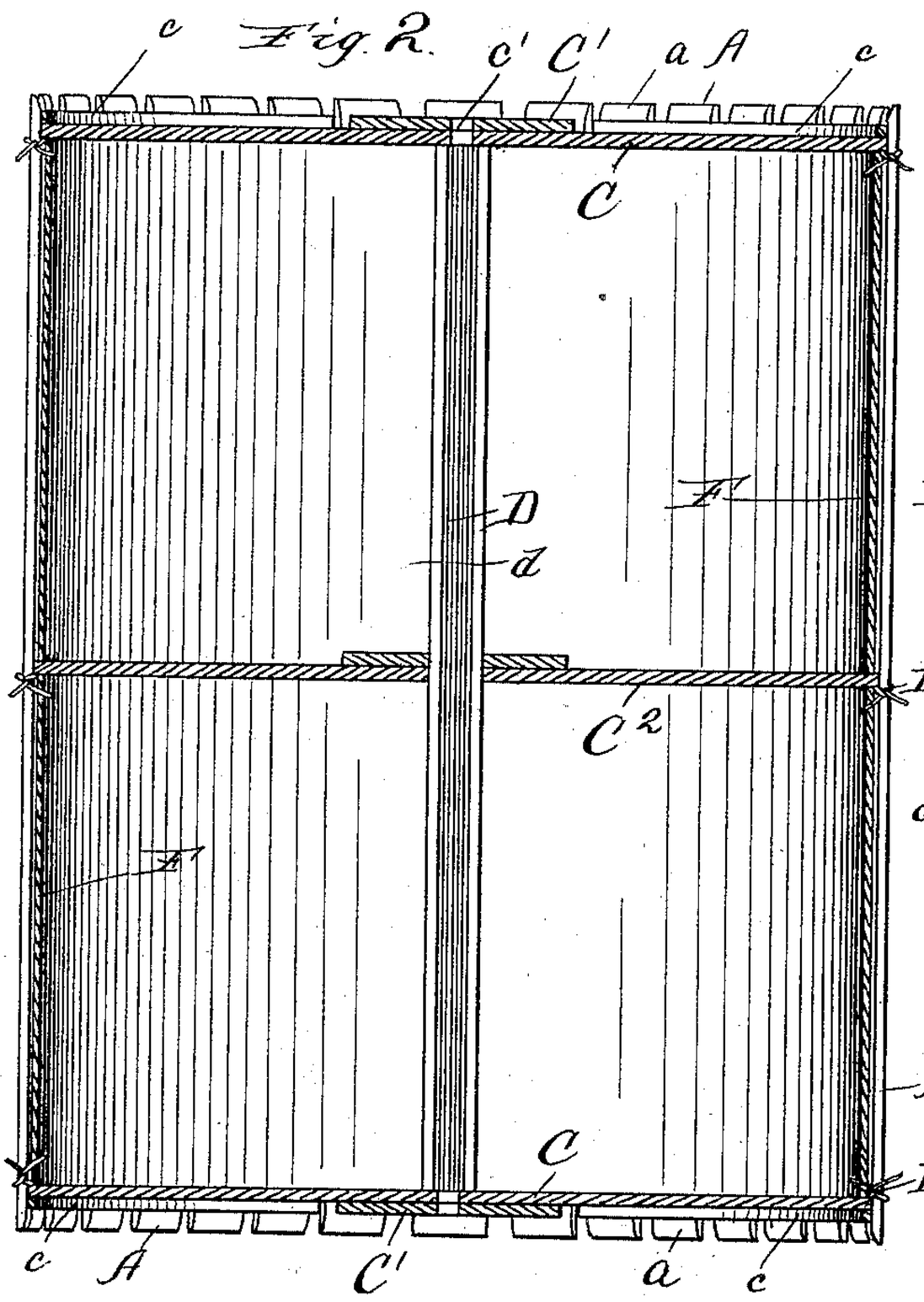


Fig. 3.

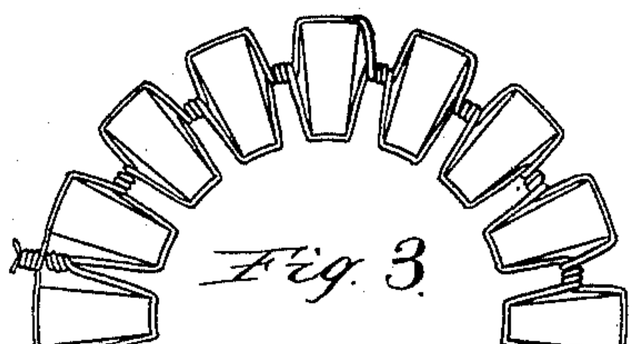


Fig. 4.

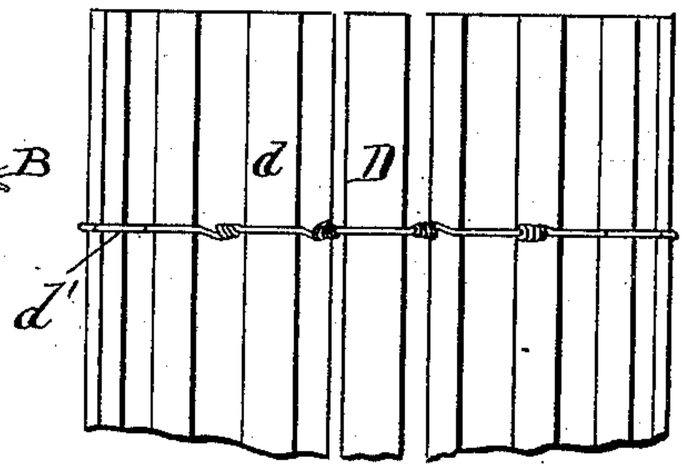


Fig. 5.

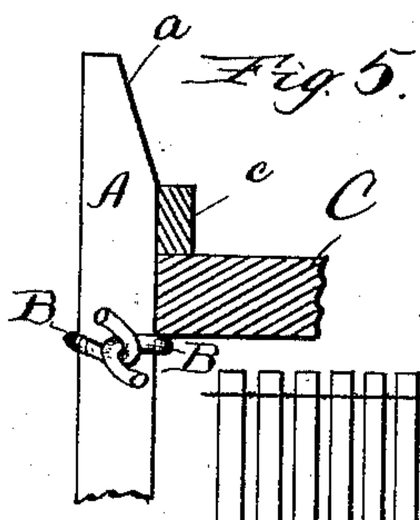


Fig. 10.

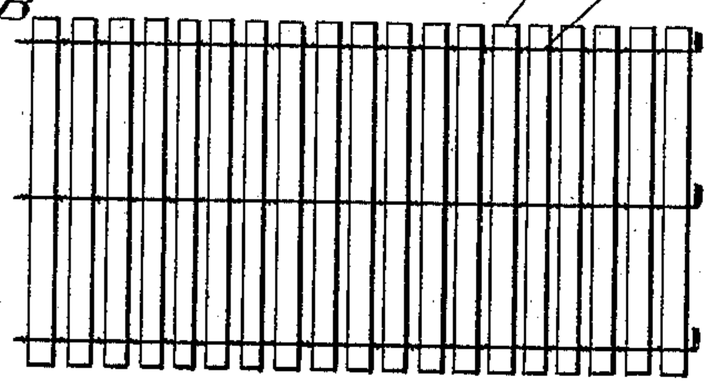


Fig. 8.

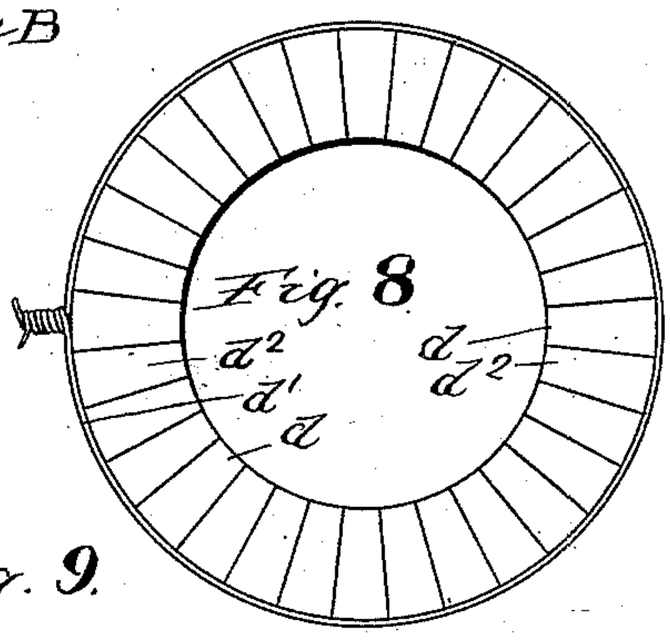
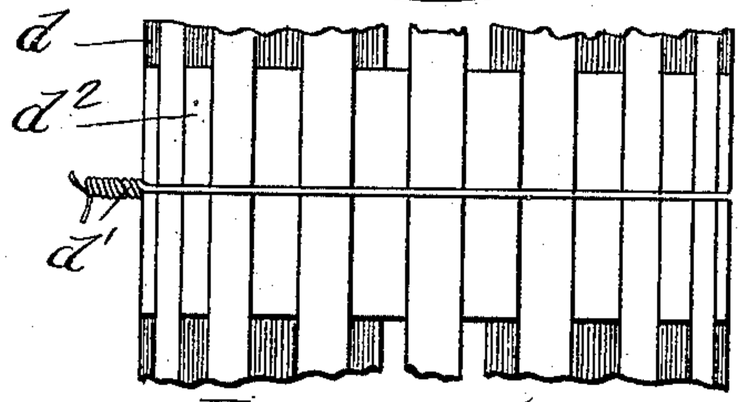


Fig. 9.



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UNITED STATES PATENT OFFICE.

WILLIAM H. CADWELL, OF LANSING, MICHIGAN.

SHIPPING-PACKAGE.

SPECIFICATION forming part of Letters Patent No. 435,203, dated August 26, 1890.

Application filed January 9, 1890. Serial No. 336,413. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CADWELL, a citizen of the United States, residing in Lansing, in the county of Ingham and State of Michigan, have invented a new and useful Improvement in Shipping-Packages, of which the following is a specification.

My invention relates to shipping-packages.

The object of my invention is to produce a shipping-package of a cylindrical or barrel form of a strong, simple, and durable construction, which may be cheaply manufactured, and which may be easily and quickly set up or taken down when it is desired to ship or return the package in a flat form. It is my design to produce the package of a cylindrical or barrel shape, as this round or rolling form of package is more conveniently handled, and freight in this form is generally shipped at a cheaper rate.

It is also my object to produce a shipping-package having these characteristics and also capable of interior ventilation, so that articles—such as sweet potatoes, for instance—which are liable to decay in the center of a barrel may be properly preserved when shipped or stored in my improved package.

To this end my invention consists in a shipping-package having one or more heads of a circular form, the cylindrical or vertical sides of which consist of a series of thin narrow wooden strips, preferably laths, or about the dimension of laths, woven together by wires. These encircling wires are twisted together between the contiguous wooden strips. These encircling wires by which the wooden strips are woven together thus serve as the binding-hoops of the package. The number of these encircling wires or hoops may be two or more, according to the length or height of the package. These encircling wires or hoops should be located near the ends of the package, and they thus serve as a support for the head or heads to rest upon. The inner faces of the wooden strips are beveled or made tapering to facilitate the insertion of the head, and the head is secured in place by a chine-strip, which may be tacked to the longitudinal strips after the head is inserted in place. The head or heads of the barrel is or are provided with central openings, and the interior ventilation of the barrel is effected by means of an open ventilating-tube constructed of slat-work, preferably the same as the barrel or package itself, excepting that the ventilating-slats are placed edgewise or radially, as is clearly indicated in the drawings. My open slat-work package may be lined with paper or other material on the inside where it is desired to afford an absorbant material for the contents of the package or where it is desired to make a closer package than the open slat-work produces.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a perspective view of a device embodying my invention. Fig. 2 is a central longitudinal section. Fig. 3 is a top or end view of the slat-work ventilator. Fig. 4 is a partial elevation of the ventilator. Fig. 5 is an enlarged view showing the means for retaining the head in place. Figs. 6 and 7 are enlarged top and side views, respectively, showing the means for securing the ends of the binding-wires together. Figs. 8 and 9 show a modified construction of the slat-work ventilator; and Fig. 10 is a view on a smaller scale, showing the slat-work in the flat.

In said drawings, A A are the slats which, in connection with the binding-wires B B, constitute the sides or cylindrical portion of the package. The slats A are made flat and narrow and preferably of about the dimension of an ordinary lath in cross-section. The binding-wires B B (two in number) are twisted together between each two contiguous slats A A, as is clearly shown in Figs. 6 and 7. The wires B B should preferably be given two twists b between the slats. The wires B are furnished with an eye b' at one extremity and a fastening key or pin b^2 at the opposite extremity, adapted to pass through the eye b', as is clearly shown in Figs. 6 and 7. The fastening key or pin b^2 is preferably formed by simply twisting together the wires B B at the ends thereof, as is clearly indicated in Fig. 7, the twisted portion of the wires being bent at an angle. The free end of the locking-key b^2 may be secured to one of the slats A by a wire loop b^3. The slats A are firmly held in place in the pockets b^4 between the

wires B B by reason of the twists *b* in the wires between the contiguous slats. The open slat-work A B may be very rapidly and cheaply produced by simply weaving and twisting the wires and slats together in the ordinary machinery or process now commonly employed in the manufacture of wire-slat-work fences. The ends of the slats or strips A are furnished with an inner beveled face *a*, as is clearly shown in Figs. 1, 2, and 5.

The heads C are made of wood and of a circular form. They are preferably furnished with a cross-bar C′. The heads rest upon the binding wires or hoops B at each end of the package, which constitutes the inner support for the heads. A chine-strip *c*, nailed or tacked to the slats A, serves to secure the head or heads C in place. It is sometimes desirable to furnish the package with a central head, especially where the package is made of ordinary barrel length and where it is desired for use in the shipment of oranges or other like articles of a somewhat soft or delicate nature. This central head C^2 is shown in Fig. 2, and may be used or not, as is desired.

D is the slat-work ventilator extending longitudinally through the center of the package. The ventilator D consists of a series of slats *d*, placed edgewise or radially and preferably made somewhat wedging in cross-section, as is shown in Fig. 3. These slats *d* are woven or bound together by the wires *d′ d′*, intertwisted, as shown in Fig. 3, between the slats. The wires *d′ d′* should or may be much lighter than the wires B B, as it will be understood that the wires B B must be made strong enough to serve the function of the hoops of an ordinary barrel, while the wires *d′ d′* have little or no strain to resist. The heads C of the barrel are furnished with openings *c′*, which communicate with the ventilator D. By this means it will be seen that the package is furnished with an interior ventilating-shaft. I also provide my improved shipping-package for use in some cases with an interior lining-paper F. This paper or paper board F will be retained in place by the cylindrical portion A B of the package, and may consist simply of a rectangular sheet of paper of the proper length to fit the interior of the barrel or package.

In Figs. 8 and 9 the ventilator-shaft is shown of a slat-work construction with simply encircling bands or wires in the place of intertwisted wires *d′ d′*, the slats *d d* being separated by wedge-shaped blocks d^2 d^2.

When it is desired to knock down or extend the package in the flat for the purpose of shipping the same in the flat, all that is required to be done is to remove the head or heads C and then unfasten or unhook the locking keys or hooks b^2 from the eyes *b′*, so that the woven-wire slat-work A B may be unrolled from its cylindrical form to a flat.

I claim—

1. The combination, with a head C, of slats A A and binding-wires B B, embracing said slats and intertwisted between them, said binding-wires having an eye and a locking-key for securing the extremities thereof together, substantially as specified.

2. The combination, with a head C, of slats A A and binding-wires B B, embracing said slats and intertwisted between them, said binding-wires having an eye and a locking-key for securing the extremities together, and a wire loop b^3, for securing the free end of said locking-key to one of said slats, substantially as specified.

3. The combination, with slats A, having inside bevel-faces *a* at their ends, of binding-wires B B, embracing said slats and intertwisted between them, and a head C, said bevel-faces *a* of said slats serving to tighten the binding-wires B B as the head C is forced or driven in place, and thus form a rigid package, substantially as specified.

4. The cylindrical knockdown or extensible shipping-package, consisting of the combination, with slats A, having inside bevel-faces *a* at their ends, of binding-wires B B, embracing said slats and intertwisted between them, said binding-wires having an eye and a locking-key for securing the extremities thereof together, and said head C being driven into place over the bevel-faces *a* of said slats A, so as to tighten the encircling wires or hoops B B and render the package rigid, said heads being removably secured in place by a chine-strip, so that the heads may be removed and the binding wires or hoops unfastened to extend the package in the flat, substantially as specified.

5. The cylindrical knockdown or extensible shipping-package, consisting in a woven-wire slat-work A B, the wires B B of which are twisted together between the slats and furnished with a loop or eye *b′* at one extremity and a locking key or pin b^2 at the other extremity, formed by twisting together the ends of the wires B B, substantially as specified.

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