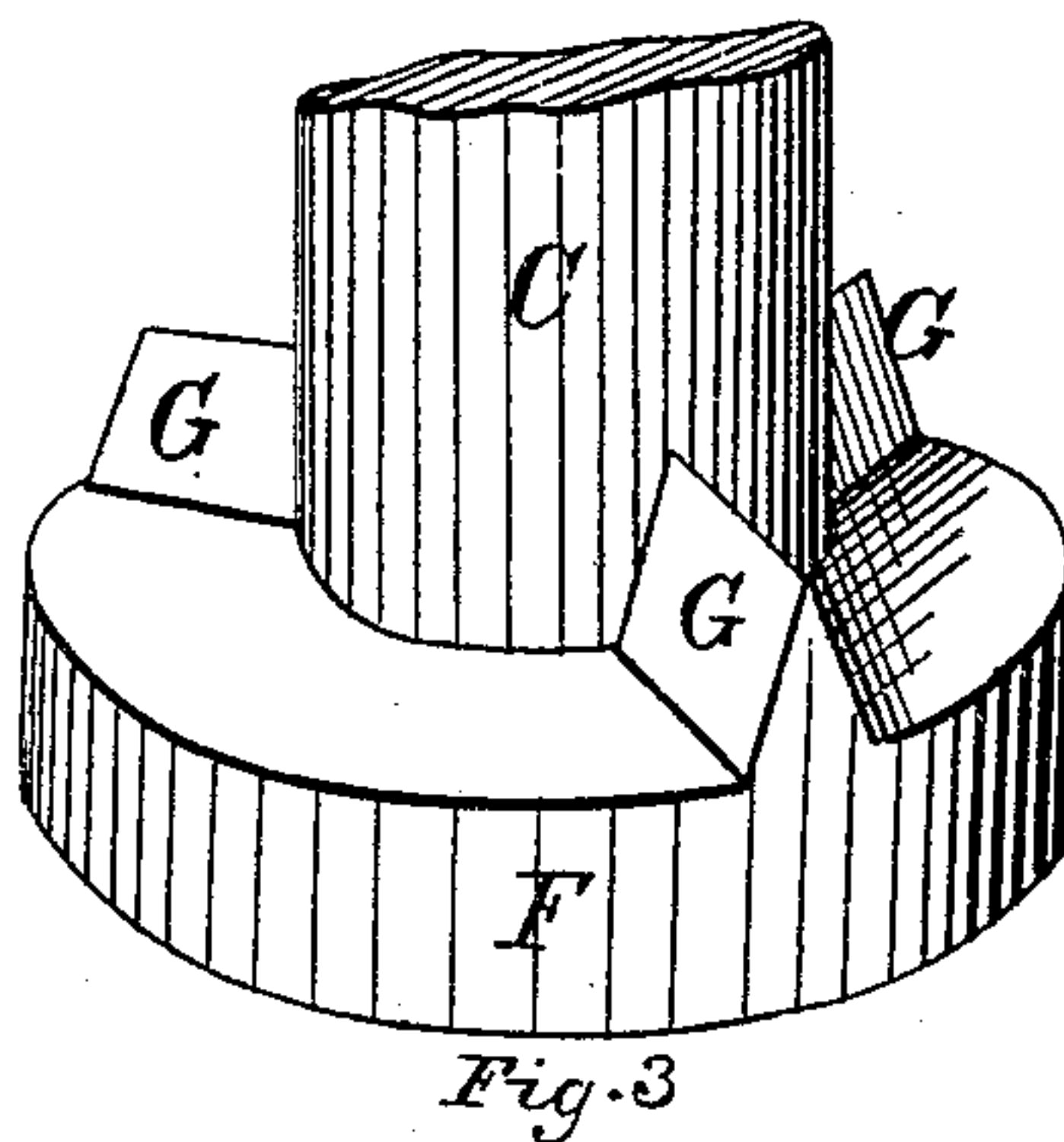
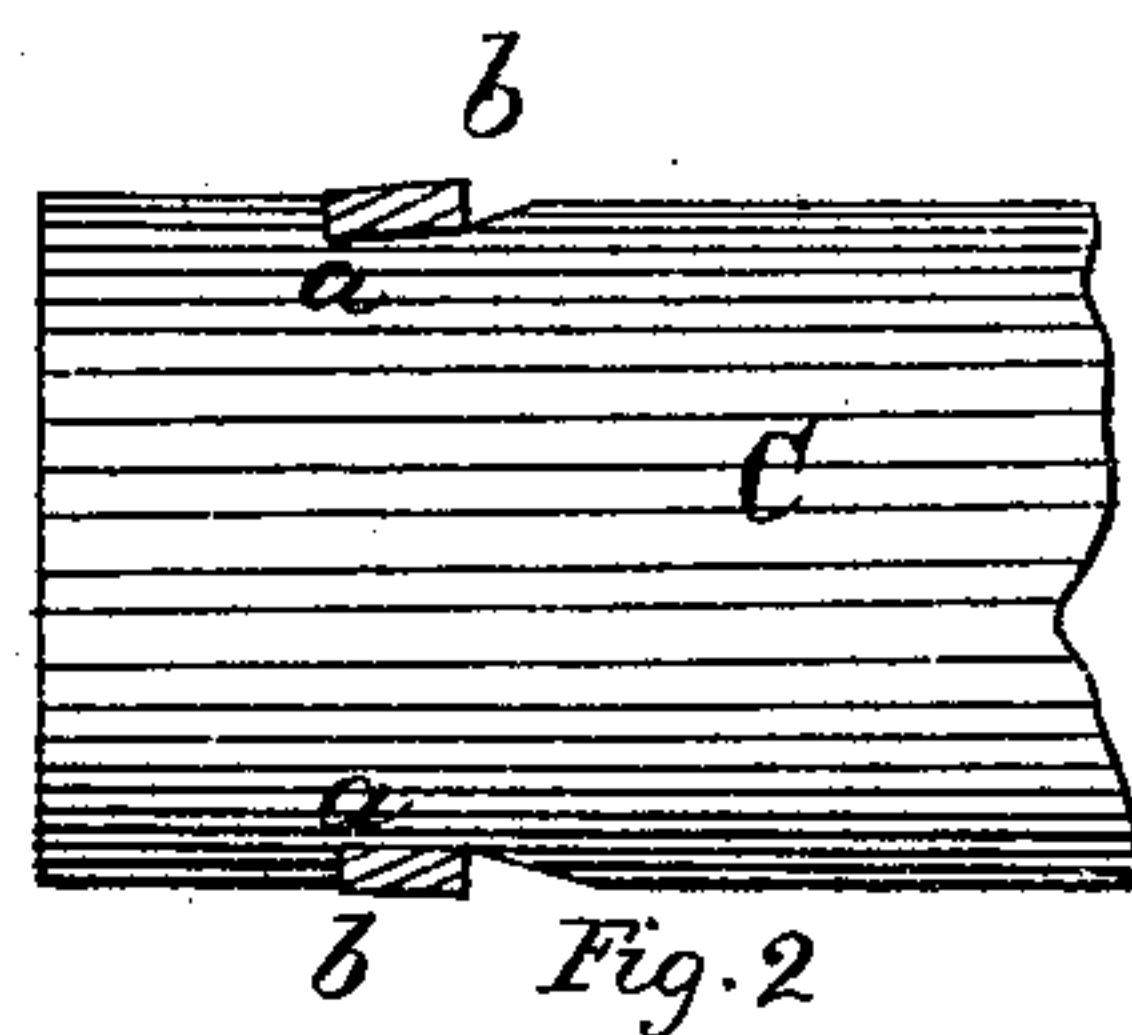
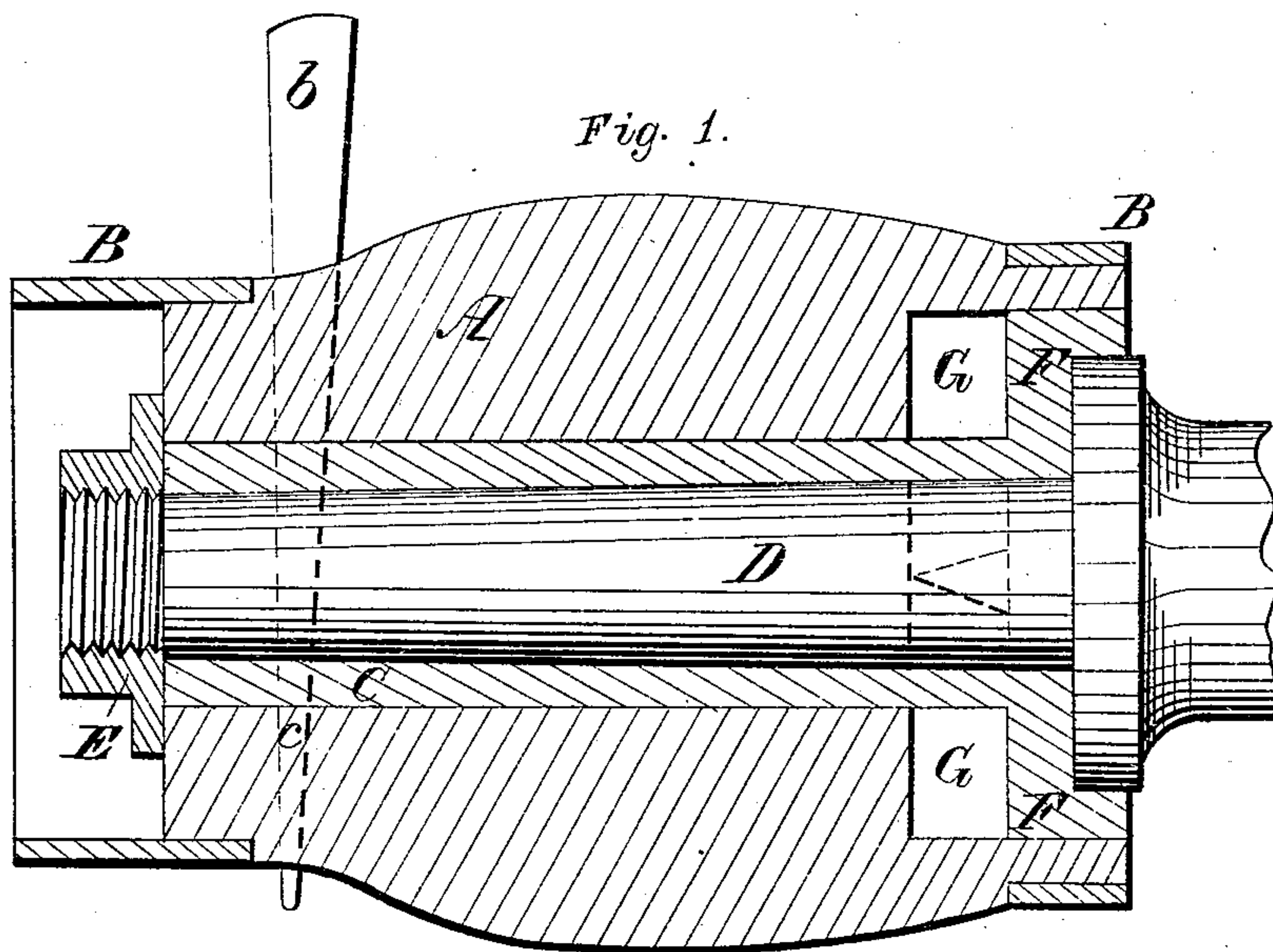


C. H. HOLDREDGE.

Axle Box.

No. 84,548.

Patented Dec. 1, 1868.



Witnesses;

Mrs. G. Champlin }
Wm D Wilcox } witnesses

Inventor;

Chas H Holdredge
Inventor



CHARLES H. HOLDREDGE, OF WESTERLY, RHODE ISLAND.

Letters Patent No. 84,548, dated December 1, 1868.

IMPROVED BOX FOR CARRIAGE-WHEELS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, CHARLES H. HOLDREDGE, of Westerly, in the county of Washington, and State of Rhode Island, have invented a new and useful Improved Box for Carriage-Wheels; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal section of a carriage-wheel hub and box, showing my improvements applied thereto.

Figure 2 is a detached view of the outer end of the axle-box, showing sections of the wedges for securing the same in the hub.

Figure 3 is a detached perspective view of the inner end of the axle-box.

Similar letters of reference indicate like parts.

This invention relates to certain improvements in boxes for carriage-wheels; and

It consists in constructing the box with transverse notches or grooves near its outer end, to receive keys or wedges, driven transversely through the hub of the wheel in opposite directions, whereby the box is firmly secured in the hub against longitudinal movement.

It also consists in providing the inner flange of the box with a series of wedge-shaped projections, which are adapted to enter corresponding recesses in the end of the wooden hub, whereby the latter is prevented from turning upon the box.

In the drawings,

A represents the wooden hub of a carriage or wagon-wheel, and

B B, the metal bands upon its ends.

C is the metallic box receiving the axle D, and

E is the nut upon the outer end of the axle, for holding the hub thereon.

The interior of the box is tapering, in the usual manner, but its exterior diameter is uniform.

a a are notches or grooves, formed transversely in opposite sides of the box, near its outer ends; and these notches are adapted to receive keys or wedges, *b*, driven transversely through the hub, as shown at *c*, fig. 1.

The position of the wedges with relation to the box is shown more completely in fig. 2.

The wedges are driven from opposite sides of the hub, and, therefore, serve to centre or true the box, at the same time holding it firmly in place. After having been driven, they are cut off flush with the outer surface of the hub, and can, at any time, be driven out to remove the box.

F is the flange upon the inner end of the box, against which the shoulder of the axle bears, as in ordinary axle-boxes.

The inner face of this flange is provided with three or more radial wedge-shaped projections, G, which are adapted to fit into corresponding recesses in the end of the hub, and effectually prevent the latter from turning upon the box.

Axle-boxes, as usually constructed, are tapering exteriorly, and, when fitted within the hub, the space between them and the interior of the hub is filled by wedges, the driving of which frequently splits and destroys the hub. Moreover, these wedges are liable to work loose, and thereby cause an unpleasant rattling of the wheel.

By my construction it will be seen that these difficulties are avoided, as the box fits snugly within the hub, without the use of longitudinal wedges.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The box C, of uniform exterior diameter, provided with the transverse notches or grooves *a*, and the radial wedge-shaped projections G, formed upon the flange E, substantially as described, for the purpose specified.

2. The box C, secured within the hub A by means of the transverse notches *a*, and keys *b*, and prevented from turning therein by means of the wedge-shaped projections G, fitting within recesses in the end of said hub, substantially as herein shown and described.

3. The combination of the box C, wedge-shaped projections G, and the transverse keys *b* with the hub A, substantially as described, for the purpose specified.

CHAS. H. HOLDREDGE.

Witnesses:

WM. G. CHAMPLIN,
WM. D. WILCOX.