

E. H. Cady,

Barrel.

No. 103,298.

Patented May 24, 1870.

Fig. 1.

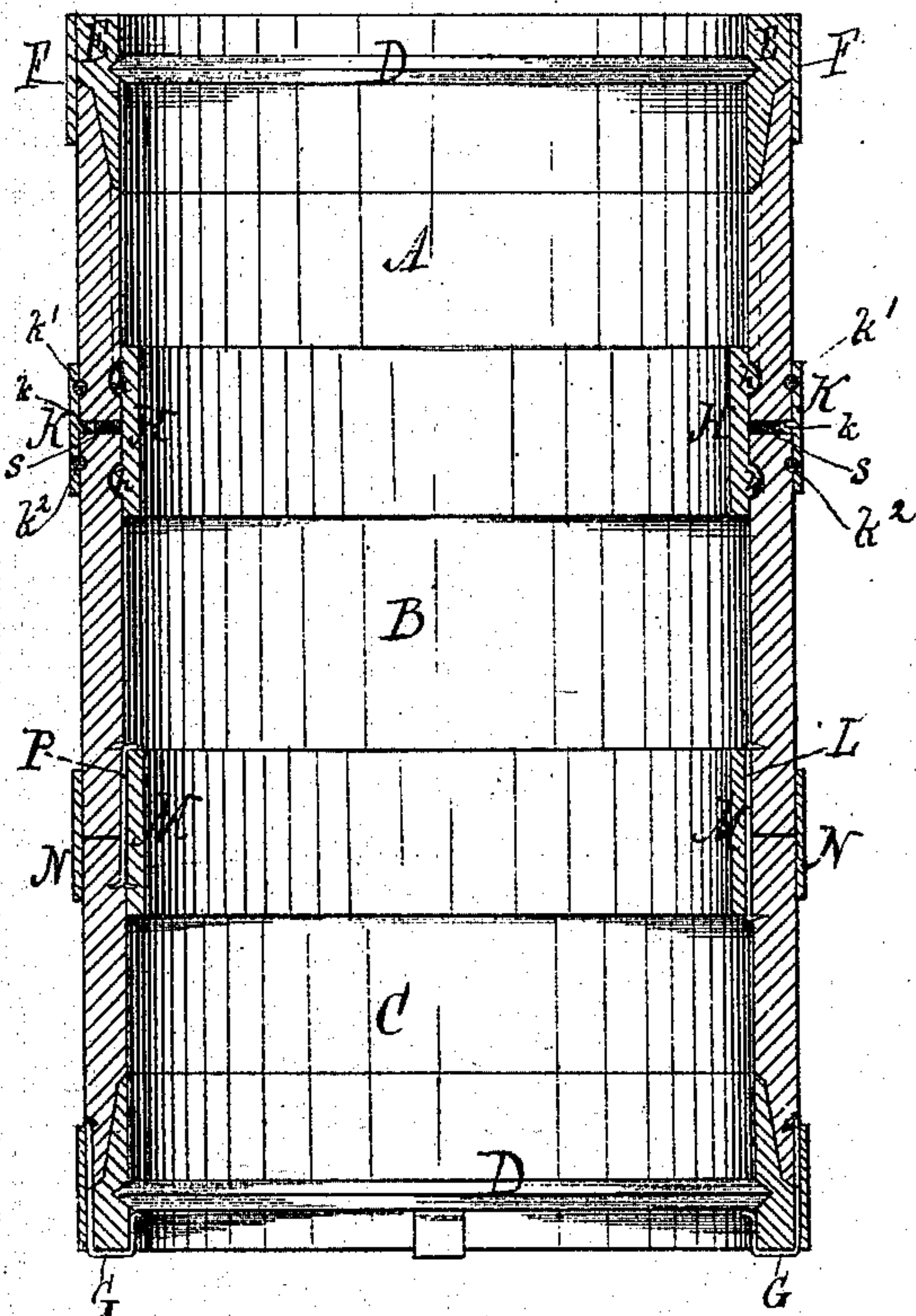


Fig. 4.

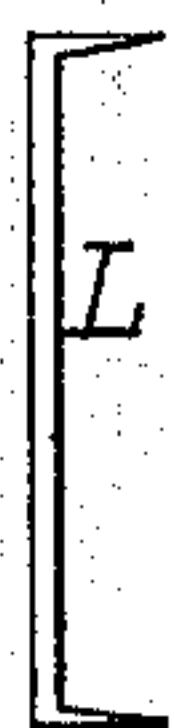


Fig. 3

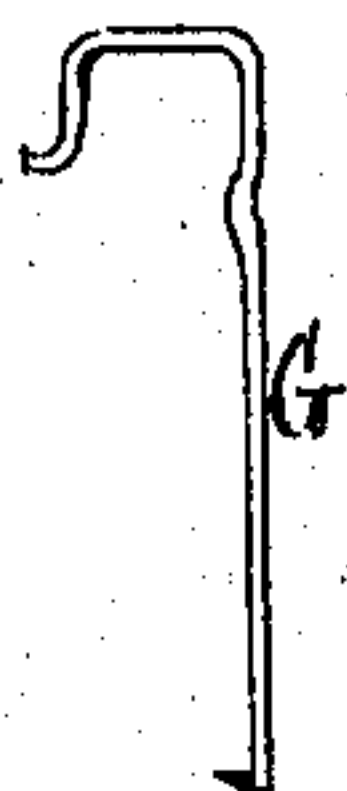
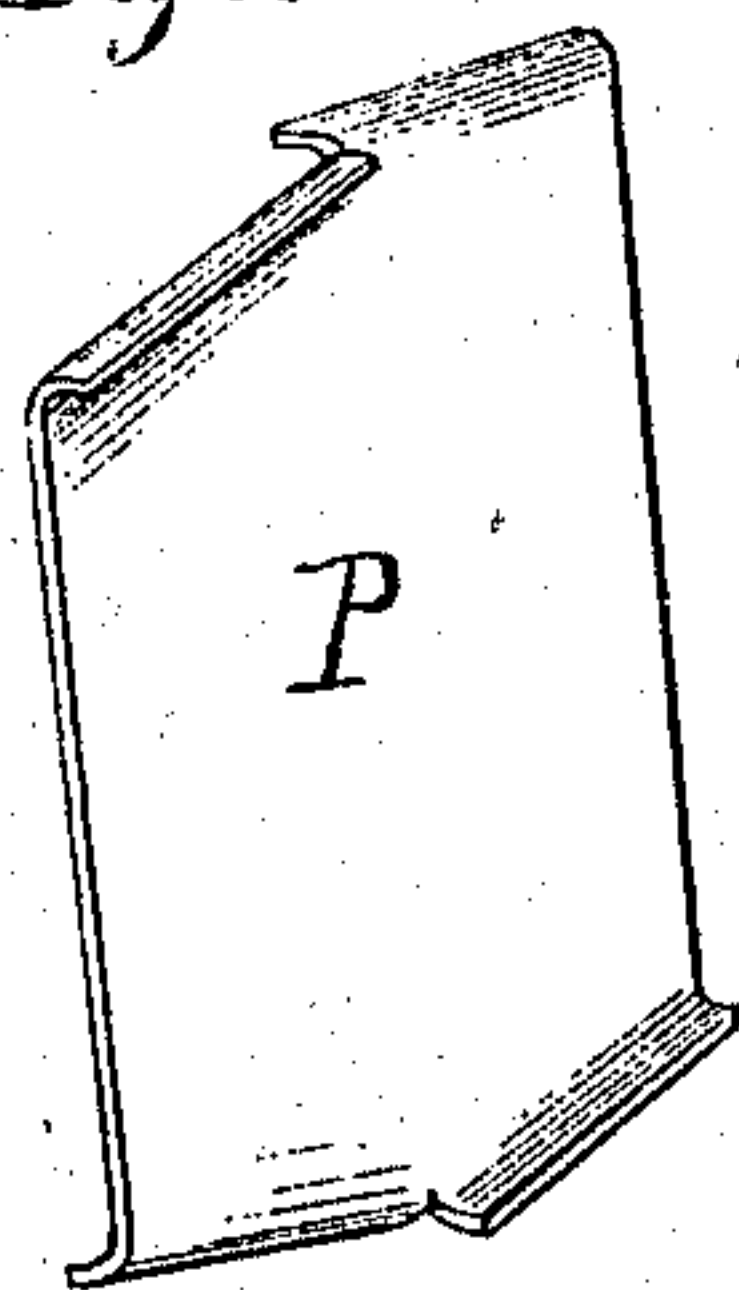


Fig. 2.



Witnesses:

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EBENEZER H. CADY, OF GRAND RAPIDS, MICHIGAN.

Letters Patent No. 103,298, dated May 24, 1870.

IMPROVED BARREL.

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, EBENEZER H. CADY, of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Improved Barrel; and I do hereby declare that the following is a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a central longitudinal vertical section.

Figures 2, 3, and 4 are views of devices, hereinafter more particularly referred to.

The nature of my invention consists in constructing a barrel of bent timber, and connecting two or more sections together without the use of an inside stave, and in such a manner as to secure a tight joint, thus forming a barrel capable of holding liquids as well as dry substances; also, in so constructing the heads that they can be taken out and replaced with facility, and without injuring the head or the chine.

The wood is cut in pieces of the proper length and breadth, and the ends are either beveled or formed with tongues and grooves, or with shoulders, so as to fit closely when lapping each other. They are then bent into circles and properly secured, forming sections A B C, as shown in fig. 1.

For connecting the sections together I use an inside hoop, H, having ribs or tongues *h* formed on the outside, corresponding with grooves on the inside of the sections.

When the ribbed hoop H is placed in position on the inside, and a binding-hoop K on the outside, the sections are securely held together. This form of attachment is shown in the drawing at the joint connecting the sections A and B. The ribbed hoop may be outside if preferred.

Another form of attachment is shown at the joint connecting the sections B and C. A clasp, L, (see also fig. 4,) consisting of a piece of metal with its ends pointed or wedge-shaped, and bent at right angles with its length, is placed so that the ends enter the wood and clamp the sections together, the clasp L being held in place by the inside hoop M, and a binding-hoop, N, placed over the joint on the outside, opposite the hoop M.

A third form of attachment is shown at the joint connecting the sections B and C. A metallic plate, P, has a short slit cut at each end, so as to form flanges, two or more at each end, one bent in one direction and the other in an opposite direction, and both bent at right angles with the length of the plate, as shown clearly in fig. 2. This plate P is placed over the joint,

so that one of the flanges at each end enters the wood of the barrel, and the others either enter the hoop M or clasp it on one or both edges.

Either or both of these clasps, or any desired number of them, may be used in connection with the ribbed hoop, or with a plain hoop, as desired.

For rendering the barrel water-tight, in addition to the ribs or tongues *h* and corresponding grooves, I form a tongue, *k*, on the inside of the hoop K, which enters the joint between the sections A and B, far enough to exert a pressure on a packing, *s*, placed therein. This packing may be of gutta percha, oakum, cotton cloth, flag, or any other suitable material. The joint may be rendered still more impervious by cutting grooves *k'* *k''* on the inside of the hoop K, and corresponding grooves on the outside of the sections, thus forming between the barrel and the hoop annular tubes, which may be filled with suitable water-proof packing.

The head D is made in the ordinary form, with beveled edge, and is attached to a hoop, E, which is crozed for its reception.

The outer portion of the hoop E is beveled toward its inner edge, and the chine is beveled to correspond, so that the hoop E, with the head attached, fits closely when inserted in place, where it is held securely by means of the chine-hoop F, and a spring fastener, G, placed between the chine and the chine-hoop F.

The fastener G is made of spring steel, wire, or band, with one end bent, so as to form a hook to engage with the outer edge of the hoop E. It may be driven between the chine and the chine-hoop, acting as a wedge, or it may be formed with a barb, as shown in fig. 3, and placed in position before the chine-hoop is put on, so that the chine-hoop will press the barb into the wood beyond the point where the hoop E meets the chine.

This barrel may be made and put together entirely without the use of nails of any kind; but, should their use be desired in order to fasten the ends of the sections, or in order to insure greater strength and security to any of the parts, I use nails, made of copper or other suitable metal, with a flat point, like the point of a brad-awl, and of the same size from head to point, to prevent splitting the wood.

The hoops used in this barrel may be made of either wood or metal, as may be desired, or as may best suit the nature of the articles to be contained in the barrels.

I am aware that barrels have been constructed of bent timber, and also that barrels have been made in sections and connected together by longitudinal strips placed inside or outside and fastened with nails.

I am also aware that barrel-heads have been attached to hoops, for the purpose of facilitating the insertion and removal of the heads.

Therefore, I do not claim, broadly, the construction of barrels of sections of bent timber, nor the attachment of barrel-heads to hoops.

Neither do I claim, broadly, the rendering of a barrel water-tight by means of packing; but

Having described my invention,

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

1. A barrel, made of sections of bent timber, con-

nected together by means of plates P and hoops M, substantially as shown and described.

2. The head D attached to the beveled hoop E, placed inside the chine, and held in place by means of the barbed fasteners G and chine-hoop F, substantially as shown and described.

3. The combination of the head D, hoop E, and fastener G, with the sectional barrel A B C, substantially as shown and described.

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