(No Model.)

T. L. LEE.

BARREL FORMER.

No. 307,313. Patented Oct. 28, 1884.

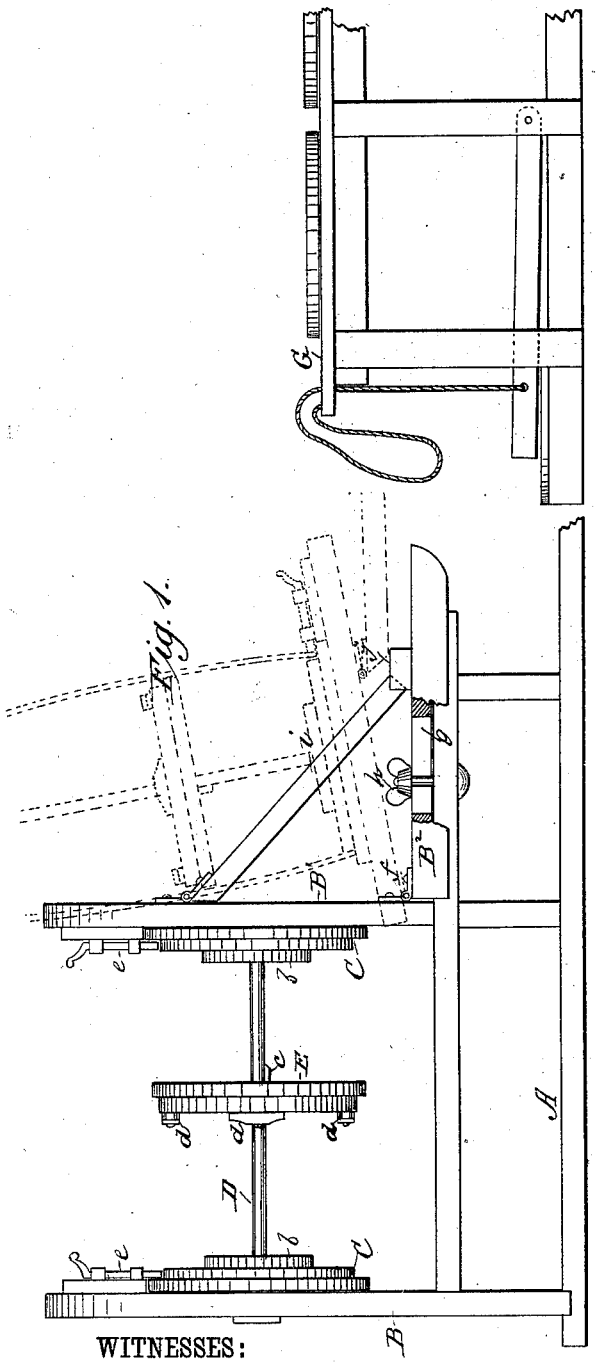

Fig. 1.

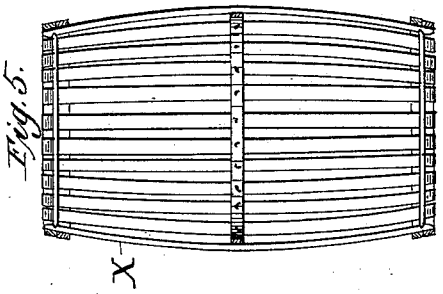

Fig. 5.

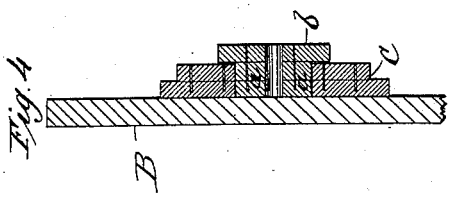

Fig. 4.

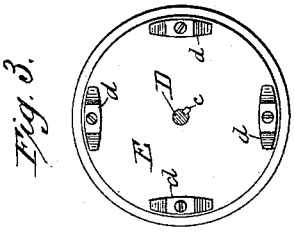

Fig. 3.

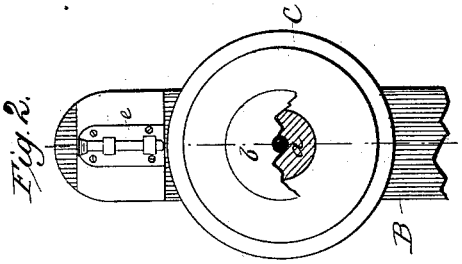

Fig. 2.

WITNESSES:

W. W. Hollingsworth

Edw. A. Bryan.

INVENTOR:

Thos. L. Lee

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

THOMAS L. LEE, OF MEMPHIS, TENNESSEE.

BARREL-FORMER.

SPECIFICATION forming part of Letters Patent No. 307,313, dated October 28, 1884.

Application filed July 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. LEE, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain Improvements in Barrel-Formers, of which the following is a description.

Figure 1 is a side elevation, partly in section. Fig. 2 is an inside view of one of the former-heads, partly in section. Fig. 3 is a side view of the middle disk, E. Fig. 4 is a sectional view through one of the former-heads, and Fig. 5 is a longitudinal sectional view of the barrel formed on the machine.

My invention relates to certain improvements upon the barrel-former for which Letters Patent No. 290,334 were granted me December 18, 1883; and it consists in such peculiar construction and arrangement of parts as permit a barrel to be quickly made without skilled labor, which barrel may be either of the form shown in my Patent No. 290,335, in which a middle partition is nailed to spaced staves, or one in which the middle partition is supplanted by an inside hoop, as hereinafter described.

The machine herein illustrated is designed more especially for making this latter construction of barrel, which barrel I propose to make the subject-matter of a separate application for a patent.

In the drawings, A represents the base-frame, from one end of which rises a rigid upright, B, and facing which, at a distance representing the length of a barrel, is an adjustable upright, B′. To the inner sides of these two uprights are loosely journaled the former-heads C C, each composed of two circular disks nailed together, with the grain of the wood crossed, to prevent splitting, and the inner ones of which disks are of less diameter than the outer ones, so as to form a circular groove or rabbet to receive the ends of the staves. To form the journals for these heads a circular hole of about six inches diameter is sawed in the center of each, and the piece *a*, Fig. 4, which comes out of this hole, is nailed to the uprights, and then to this is nailed a larger disk, *b*, which is about twelve inches in diameter, and which, by overlapping the former-heads, holds the latter from slipping off.

D is a central mandrel, which passes through the disks *a* and *b* of each upright, and to which is fastened by a key, *c*, a middle disk, E, which has a rabbeted periphery armed with a metal band, and having on its face of smallest diameter a series of turn-buttons, *d*. This middle disk is designed to receive the middle inside hoop of the barrel, (shown at *x*, Fig. 5,) which hoop is placed upon the iron-bound smaller circumference of the disk, and the buttons then turned to hold it in place. To this wooden hoop the staves are then nailed, the nails clinching against the iron periphery of the disk. The ends of the staves rest in the rabbeted edges of the former-heads, and the former-heads are held from revolving by the bolts *e e*. The bolts are also used to align the staves as they are nailed, in conjunction with the wedge shown in my former patent, No. 290,334, and the staves are spaced also in accordance with the construction shown therein. The upright B′ is hinged at the bottom at *f* to a horizontal adjustable slide, B^2. This slide is provided with flanges overlapping the base-frame A, and is fixed in its adjustment in relation to the base-frame by a slot, *g*, and set-screw, *h*. This permits the upright B′ to be set closer to or farther from the upright B in adapting my former to longer or shorter barrels. The upright B′ is also provided with a brace, *i*, hinged at the top to said upright, and adapted to abut against a notched cleat, *j*, on the slide B^2 when said upright is adjusted to a vertical position. The object of this brace and the hinge at the bottom of upright B′ is to permit the latter to be thrown to one side, as in dotted lines, with its former-head, the mandrel, and middle disk, and thus permit the barrel to be removed and transferred to the bench G, where its ends are drawn together with a rope, the heads inserted, and the outer hoops put on. To take the partially-formed barrel off the middle disk, it is only necessary to turn the buttons and slip the barrel longitudinally therefrom.

When a barrel is to be made with a middle partition, the middle disk, E, is dispensed with, and its place is supplied by the partition-disk which is to be incorporated in the barrel.

The manner of making the barrel is as follows: The inside hoop is first placed around

the center disk. The staves are then nailed to same, close or apart, as desired, until the circle is formed. The adjustable upright is then bent down, and the barrel or staves as they stand nailed to the hoop removed, and a temporary hoop placed around one end to prevent them spreading while the first head is being put in. It is then taken to the bench, the draw-rope placed around the staves, and by use of the treadle or lever the staves are drawn in to the size of the head, the head being tacked together, so that all the pieces may be held in place and the head put in and the first hoop put on. The barrel is then reversed and the other end treated in the same manner. These hoops are then set down far enough to receive the last hoops, which are put on and the barrel is complete. The entire hooping and heading can be done at the bench, the two disks on top of the bench serving as formers for the two or more sizes of hoops. A third one is added if quarter-hoops are desired. The circular mandrel can be made entirely of iron, if desired.

Having thus described my invention, what I claim as new is—

1. The combination, with the base-frame and the upright B, bearing stave-holding devices, of a central mandrel, the upright B′, hinged at its lower end and carrying stave-holding devices, and a sliding adjustable frame bearing the upright B′, as and for the purpose described.

2. The combination, with the base-frame and the upright B, bearing stave-holding devices, of the upright B′, bearing stave-holding devices and hinged at its lower end, a central mandrel, and a rabbeted and iron-bound disk, E, located upon the mandrel midway between the uprights, as and for the purpose described.

3. The rabbeted and iron-bound disk E, in combination with turn-buttons on its smaller face, the central mandrel, and the uprights B and B′, with stave-holding devices, as and for the purpose described.

4. The combination of the base A, upright B, having rabbeted head C, and the adjustable slide B^2, carrying hinged upright B′ with rabbeted head C, as and for the purpose described.

5. The combination, with the uprights B B′, of the journal-disk *a*, attached to the uprights, the revolving heads C, and the holding-disks *b*, fastened to the disks *a* and overlapping and retaining the revolving heads, as and for the purpose described.

6. The combination of the base A, uprights B B′, with barrel-formers C C, one of which uprights is hinged at its bottom end, the slide B^2, carrying said hinged upright, and the brace *i*, hinged to the said upright and adapted to find a bearing against a seat, *j*, of the slide, as and for the purpose described.

THOS. L. LEE.

Witnesses:
P. B. CLARK,
JNO. C. ROGERS.