

(No Model.)

C. WYTENBACH.

APPARATUS FOR UNITING THE STAVES OF CASKS.

No. 459,921.

Patented Sept. 22, 1891.

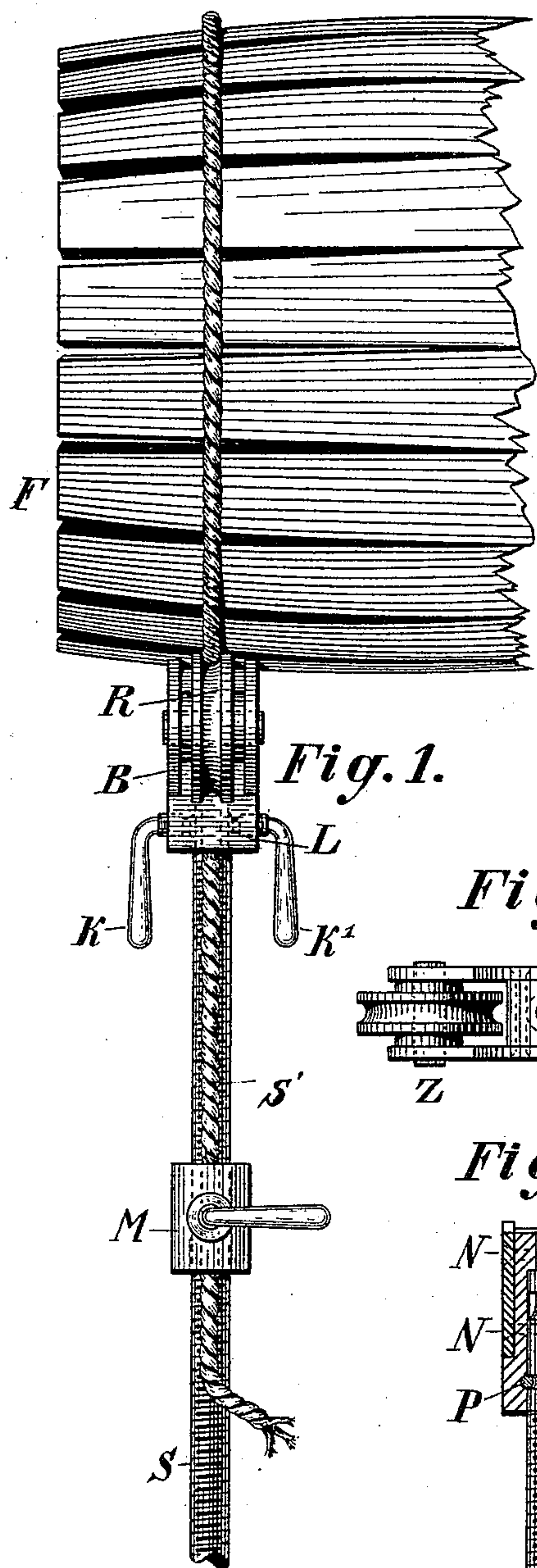


Fig. 1.

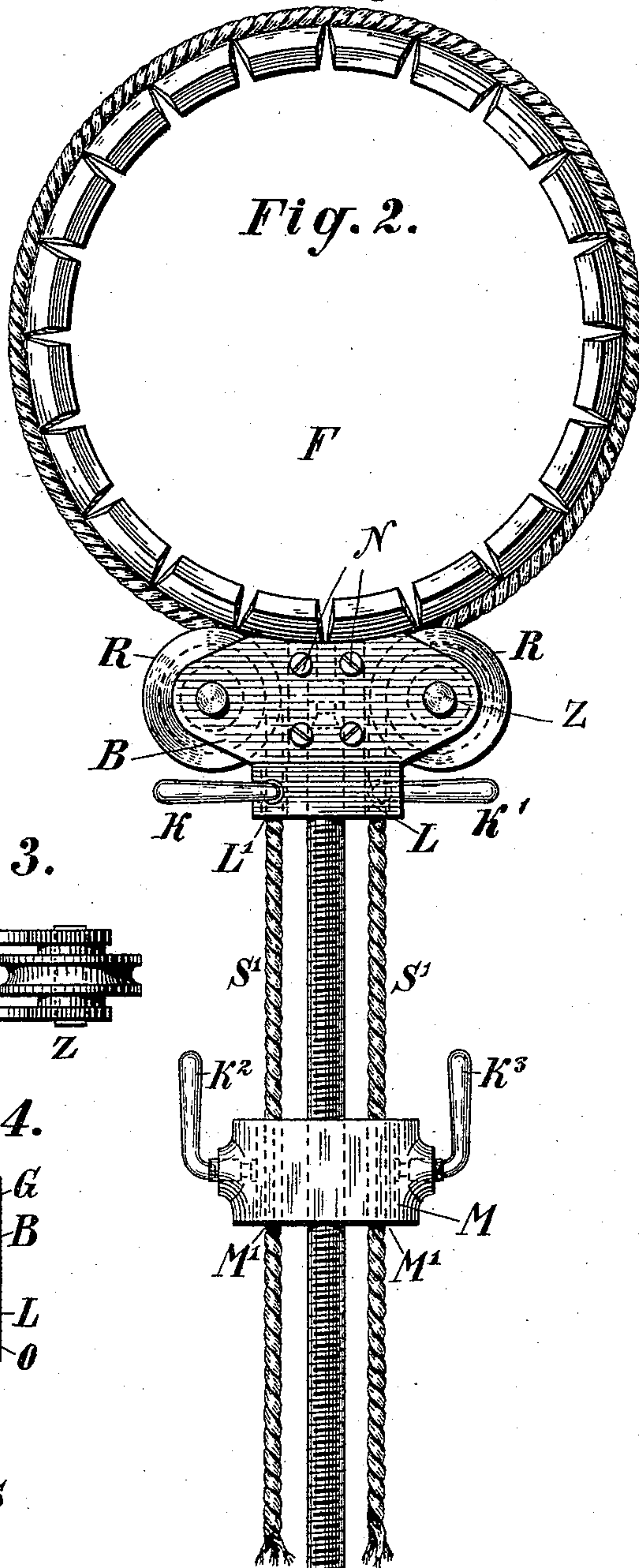


Fig. 2.

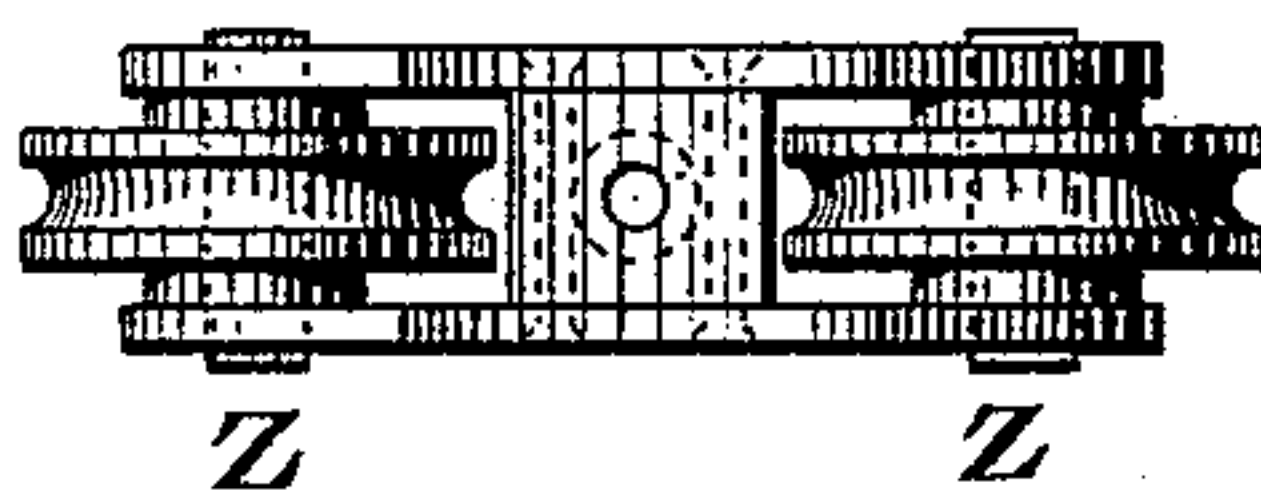


Fig. 3.

Fig. 4.

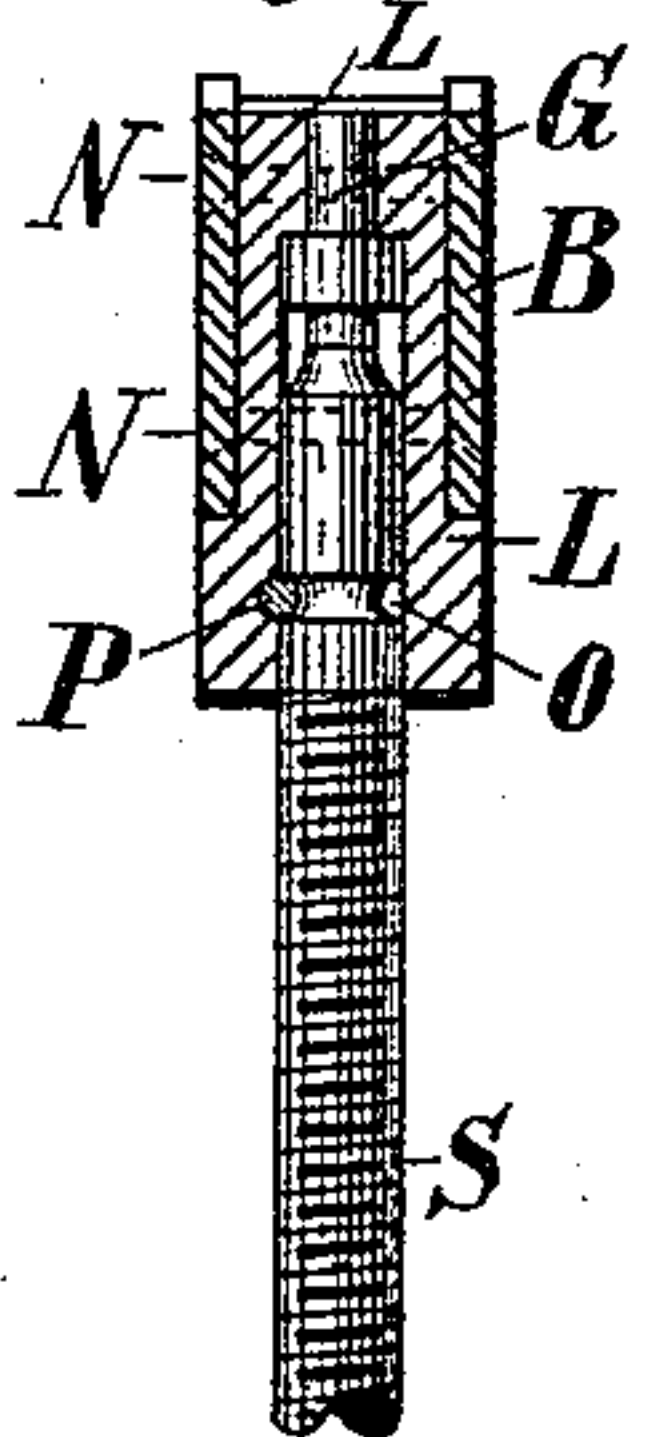


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHRISTIAN WYTENBACH, OF ZURICH, SWITZERLAND, ASSIGNOR TO
GEORG SCHEFFER, OF SAME PLACE.

APPARATUS FOR UNITING THE STAVES OF CASKS.

SPECIFICATION forming part of Letters Patent No. 459,921, dated September 22, 1891.

Application filed July 21, 1891. Serial No. 400,236. (No model.) Patented in Switzerland December 17, 1890, No. 2,892.

To all whom it may concern:

Be it known that I, CHRISTIAN WYTENBACH, a citizen of Switzerland, residing at Zurich, in the Republic of Switzerland, have
5 invented certain new and useful Apparatus for Uniting the Staves of Casks, (for which I have obtained Letters Patent No. 2,892 in Switzerland, dated December 17, 1890,) of which the following is a specification.

10 This invention relates to apparatus for drawing together with a moderate expenditure of power the staves already suitably cut and treated which are intended to form a barrel, and for giving the proper shape to the
15 barrel by reason of the curvature imparted to the staves.

In the accompanying drawings, Figure 1 is a side elevation. Fig. 2 is a plan of apparatus according to this invention, and Figs. 3
20 to 5 are detail views hereinafter more particularly referred to.

Similar letters of reference indicate corresponding parts.

25 The apparatus comprises a cast-iron bearing or cheek L, in which is carried a rotary spindle S, which is screw-threaded for the greater part of its length, and which passes through a cross-piece or screw-threaded nut M, that is capable of being moved nearer to
30 or farther from the bearing L by the rotation of the spindle. The nut is also provided with slots and gripping-jaws for the end portions of the rope S'. The bearing L is also similarly provided.

35 In the drawings the spindle S is shown as held always in the bearing L by means of a pin P, that enters a groove O in the spindle. This pin and groove can, however, be dispensed with without interfering with the operation of the apparatus when it is desired
40 that the spindle shall be removable from the bearing for the purpose of more easy transport.

On the bearing L there rotate two pulleys
45 R R, mounted loosely on pins Z, carried by cheeks B B, that are fastened to the bearing L by means of rivets N, Fig. 4. In the lower part of the bearing L are holes L', corresponding or opposite to slots or holes M' in the nut M, through which is guided the wire
50 rope S', that passes over the pulleys R R.

The rope S' can be fixed in the holes L' and M' by means of gripping devices consisting, as shown in the drawings, of pressure-screws provided with hand-levers K K' K² K³. The
55 screws, for the better preservation of the rope, do not grip the rope directly, but through the medium of brass liners or gripping-pieces B', one of which is shown in end and side views in Fig. 5. 60

In order to reduce friction and consequent wear of the bearing L, in which the spindle S is carried, due to the considerable end pressure of the spindle, it is advantageous to insert in such bearing a bearing-piece G
65 of steel, Fig. 4, that is arranged to receive the pressure of the spindle.

When using the apparatus, the loop of the wire rope S' is placed over the staves of the barrel F. Then after the rope has been
70 gripped in the holes of the nut M by means of the levers K² and K³ a crank-handle or the like is placed upon the squared part V of the spindle S, and by rotating the spindle S the nut M is moved away from the pulleys
75 R R, whereby the loop of the rope is made smaller and the staves are drawn together until they are in contact. Should the nut M arrive at the end of the spindle before the barrel has received its proper shape—that is
80 to say, before the staves come in contact—then in such case the wire rope is gripped fast in the spindle-bearing L, the gripping-screws of the nut M are loosened, and the nut M is screwed back again, in order by
85 again pulling the rope to draw the staves completely together.

The apparatus hereinabove described may be used for barrels of various kinds and sizes, because the embracing loop of the rope
90 can be widened to any desired extent.

The holes in the spindle-bearing and in the nut M can be made of sufficient size to enable ropes of various thicknesses to be employed, according to requirement. 95

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An apparatus for drawing barrel-staves together to form a barrel, comprising a guide
100 or bearing adapted to be placed against the periphery of an annular row of barrel-staves

set up to form a barrel, pulleys on said guide or bearing, a rope forming a loop and passing over said pulleys, a spindle mounted to turn in the bearing, a nut mounted on said spindle, means for clamping the rope to said nut, and means for clamping the rope to the bearing, substantially as set forth.

2. In an apparatus for drawing barrel-staves together to form a barrel, the combination, with a guide or bearing, of rollers on the same, a rope passed over said rollers, a spindle mounted to turn in said bearing, a nut mounted on said spindle, said nut having apertures through which the rope can be passed, clamps for clamping said rope on the nut, clamps for clamping the rope to said guide or bearing, and a bearing-piece in said guide or bearing, against which bearing-

piece the end of the rotating spindle rests, substantially as set forth.

3. In an apparatus for drawing barrel-staves together to form a barrel, the combination, with a guide or bearing, of rollers on the same, a rope forming a loop and passing over said rollers, means for clamping the rope in the bearing, and means for drawing the rope in the direction from the bearing or guide, substantially as set forth.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 2d day of July, 1891.

CHRISTIAN WYTENBACH.

Witnesses:

EMIL BLUM,
HENRY LABHART.