UNITED STATES PATENT OFFICE.

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PROCESS OF MAKING BARRELS.

SPECIFICATION forming part of Letters Patent No. 352,850, dated November 16, 1886.

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To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented a certain Improved Process of Making Barrels, of which the following is a specification.

The object of my invention is to manufacture barrels, casks, or kegs more expeditiously and at less expense than by the methods now in use.

The accompanying drawing is a plan view of a barrel-making plant adapted for carrying out my improved process of manufacture.

The lumber is first cut into proper size for staves, and the stave-blanks are subjected to the action of the machine A, which I prefer to construct in the manner shown in the Letters Patent granted to me June 10, 1884, No. 300,194, although any other form of stave-cutting machine, by which the staves are formed while bent to the shape which they are to assume in the finished barrel, may be used. The stave is delivered by a cutting-machine onto an apron, *a*, and is thereby conveyed to a steaming-box, B, which is so constructed that the staves will be traversed slowly through the box, and be thereby thoroughly steamed, before being delivered onto an apron, *b*, at right angles to the box. This apron conveys the hot staves to the bending and forming rolls C, whereby they are caused to assume the proper form, and are delivered onto the apron *c*, which deposits the staves in the hopper F of a setting-up machine, D, which I prefer to construct in accordance with the patent granted to me June 10, 1884, No. 300,193. The staves are fed continuously and rapidly from the steaming-box to the bending-rolls, and from the latter to the setting-up machine, so that the staves are set up while still hot and retaining the shape given them by said bending-rolls. This is an essential feature of my invention, as the staves are readily forced into proper position and retained by the truss-hoops of the setting-up machine when the latter acts upon the staves while they are still hot and retain the shape given to them by the bending-rolls.

The setting-up machine serves to apply the staves to the heads of the barrel, and to confine them in proper position by a number of hoops, and with the setting-up machine I also preferably combine an auger, G, thrown into and out of action by a rod, *g*, and serving to bore a bung-hole in one of the staves after the barrel has been set up.

The setting-up machine delivers the barrel onto skids or ways *d*, by which it is directed to the hooping-machine E, whereby the hooping of the barrel is completed.

If the barrel is to be painted and sealed, it is discharged from the hooping-machine onto ways *f*, and conveyed to a machine, F, for painting the heads of the barrel. Adjacent to this machine is a vessel, I, in which glue, pitch, or any suitable cement is kept in liquid form, this vessel having a flexible discharge-pipe, *g*. The barrel is turned on end in the head-painting machine F, and a small quantity of glue or cement is introduced into the barrel through the bung-hole. While the brush *h* of the machine is painting the upper head of the barrel the glue or cement is internally sealing the joints of the lower head, and when the operation of painting the upper head is completed the barrel is reversed and the opposite heads are painted and sealed in the same manner, the supply of glue or cement introduced into the barrel being sufficient to seal both heads. From the head-painting machine F the barrel passes along ways *m*, to a machine for painting the sides of the barrel, this machine having a reciprocating brush which applies the paint while the barrel is being rotated, the painted barrel being finally directed by ways *n* to the drying-room.

As in carrying out my improved process of making barrels the staves are conveyed and the barrel directed from one machine to another without handling, I am enabled to dispense with much of the labor now required in making barrels, the manufacture being thereby both expedited and cheapened.

I claim as my invention—

1. The mode herein described of making barrels or like vessels, said mode consisting in first cutting the staves to the proper form, then steaming said staves, then, while they are hot, bending or shaping the same, and then, while bent and still hot, setting them up and securing them around the heads, all substantially as specified.

2. The mode herein described of making barrels or like vessels, said mode consisting in first cutting the staves to the proper form, then steaming said staves, then, while they are hot,