P. BEAMER.

MACHINE FOR TRUSSING BARRELS.

No. 189,176. Patented April 3, 1877.

Fig. 1.

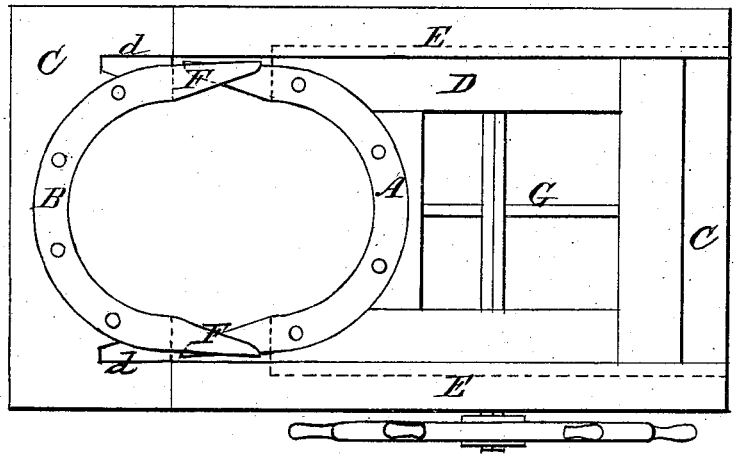


Fig. 2.

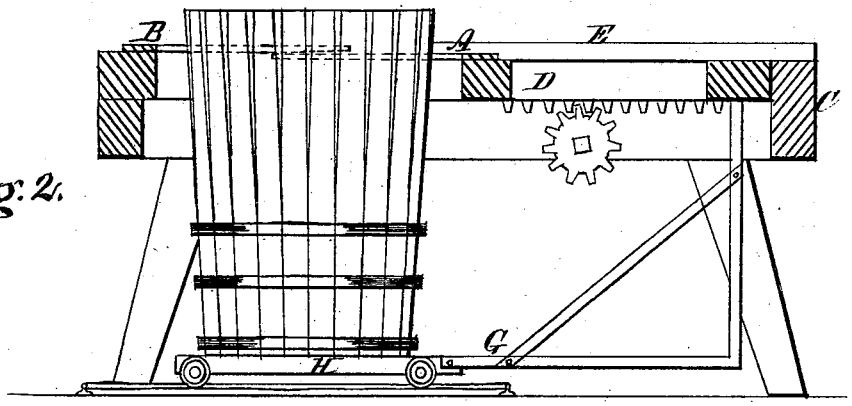
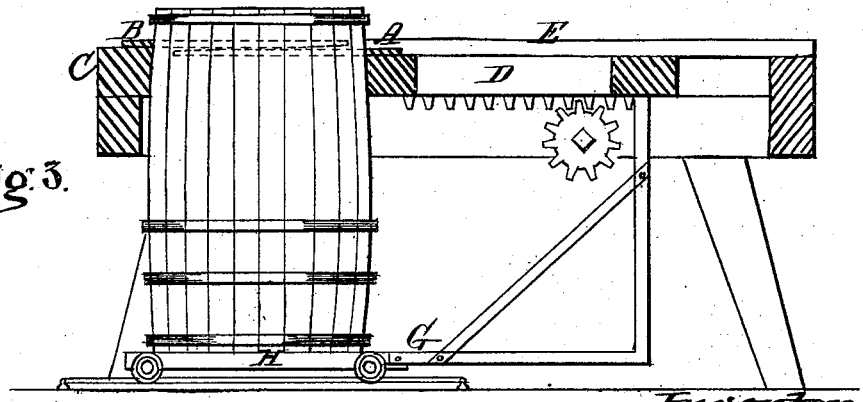


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

PHILIP BEAMER, OF DUNCANSVILLE, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR TRUSSING BARRELS.

Specification forming part of Letters Patent No. **189,176**, dated April 3, 1877; application filed December 12, 1876.

To all whom it may concern:

Be it known that I, PHILIP BEAMER, of Duncansville, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Trussing Barrels, of which the following is a specification:

My object is to produce a barrel-trussing machine which shall perform its work in an effective manner, and with simple mechanical contrivances.

My invention consists of a machine for trussing barrels, constructed and organized with trussing-clamps arranged to act upon the upper portion of a previously set-up barrel hooped at one end, and a clear and unobstructed space beneath said bench and clamps, within which space the barrel is moved along and adjusted by said clamps upon a support independent of said bench and its trussing-clamps, the object being to join the edges of the staves in a true circle to allow the top hoop to be put on. In this action the barrel is moved or slid along upon its hooped end into the clamps, and this adjustment is effected by the clamps themselves, the barrel being free to be moved into trussing position by said clamps by reason of the clear and unobstructed space beneath them, and which allows the barrel to be centered entirely by the action of said clamps. Both clamps can have a horizontal reciprocating movement to act upon the upper free ends of the staves in conjunction with the clear and unobstructed space referred to, and which gives perfect freedom for the centering of the barrel.

This clear and unobstructed space must be equal to the space between the clamps when opened to their fullest extent, and extend to the floor or truck upon which the barrel is supported, so that the barrel need only be placed in the space between the clamps, and it will be by them brought to the center, thus requiring no time to center or adjust the barrel by hand, as the clear space within which it is placed allows the clamps to do this.

The barrel or cask is first set up and hooped by hand at one end with the first three hoops. It is then set with the other end between and extending above the clamps, which are then brought together to draw or gather the staves, and the second head-hoop put on. After this it is taken out, the bilge and quarter-hoops put on, and the trussing completed by hand or otherwise. The clamps can be arranged to gather the smallest cask or the largest hogshead, and operated by any suitable devices.

The clamps are of semicircular form, with flaring ends, so that when brought together to form the circle they will lap and pass each other, and thus gather and hold the ends of the staves to receive the hoop or hoops.

As the moving clamp acts upon the upper portion of the barrel to carry it into the other clamp, it is necessary that the lower portion of the barrel should be uniformly moved with the upper portion, and for this purpose I have combined with the moving clamp a push-arm, which, depending from the clamp-carriage, extends downward in position to act simultaneously with the clamp upon the lower portion of the barrel, or a truck upon which it is supported, and push it along evenly in position.

In the accompanying drawings, Figure 1 represents a top view of my improved barrel-trussing machine, the clamps being shown open, and the barrel in position to be acted upon; Fig. 2, a vertical section of the same; and Fig. 3, a similar section, showing the clamps closed and the second head-hoop put on.

The clamps A and B are arranged upon a bench, C, the fixed one, B, being formed therein, and the movable one, A, arranged to have a reciprocating movement, so that when brought together they will be in the same horizontal plane and form a circle. The reciprocating clamp is formed in the end of a horizontal carriage, D, which is fitted to move in guideways E in the table. Semicircular plates are bolted to the top surface of the clamps, with projecting flaring ends F, to pass freely on the barrel and lap over each other when brought together, the fixed clamp having recesses *d*, to admit of such lapping, and allow the clamps proper to be brought close together to give the required pressure upon the staves, and join them at all points alike. The barrel which has been previously hooped at one end by the first three hoops, as stated, is placed with its unhooped end between the clamps, and is carried into the circle formed by them by the

movement of the clamp against the upper end of the barrel, and in order that the barrel may have an equal movement at both ends I combine with the movable clamp a push-arm, G, fixed to the under side of the clamp-carriage, and extending down in a position to act upon the lower end of the barrel, or upon a truck, H, which carries it, so that the barrel will not be tilted, but will always keep its vertical position in the clamps. The clamp-carriage is reciprocated by means of racks and pinions, or other suitable contrivance, and may be operated by a hand-wheel or other power.

The barrel can be trussed with or without a carrying-truck, but, when the latter is used, it is moved upon a truckway.

The frame and clamps may be of either wood or iron.

In the drawings I have shown the push-arm as adapted to push the truck along with the barrel, and it is obvious that it must be adjusted to act in unison with the movable clamp or clamps.

The staves having been gathered, and the second head-hoop put on, the clamps are opened and the barrel is removed, and the trussing completed, as stated.

In this way the clamps aid in a very expeditious manner in the operation of trussing barrels.

I claim—

1. A machine for trussing barrels, constructed and organized with a horizontal bench, C, trussing-clamps A B, arranged to act upon the upper portion of the barrel, and a clear and unobstructed space beneath said bench, and clamps within which said barrel is moved and adjusted centrally with and by said clamps, the support for the barrel being independent of said bench and its trussing-clamps, substantially as described.

2. The combination of a horizontally-reciprocating clamp with a fixed clamp, arranged upon a bench to operate in the same horizontal plane, or nearly so, with their projecting flaring ends adapted to lap and pass each other in gathering the staves, substantially as herein set forth.

3. The combination, with a horizontal reciprocating clamp, of a push-arm, adapted to act upon the lower end of the barrel or its supporting-truck in unison with the clamp, to move the barrel vertically in position between the clamps.

In testimony whereof I have affixed my signature in the presence of two witnesses.

PHILIP BEAMER.

Witnesses:

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