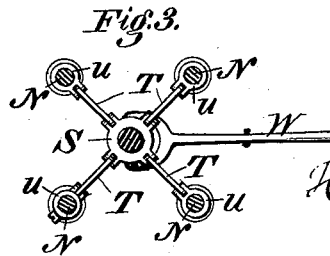
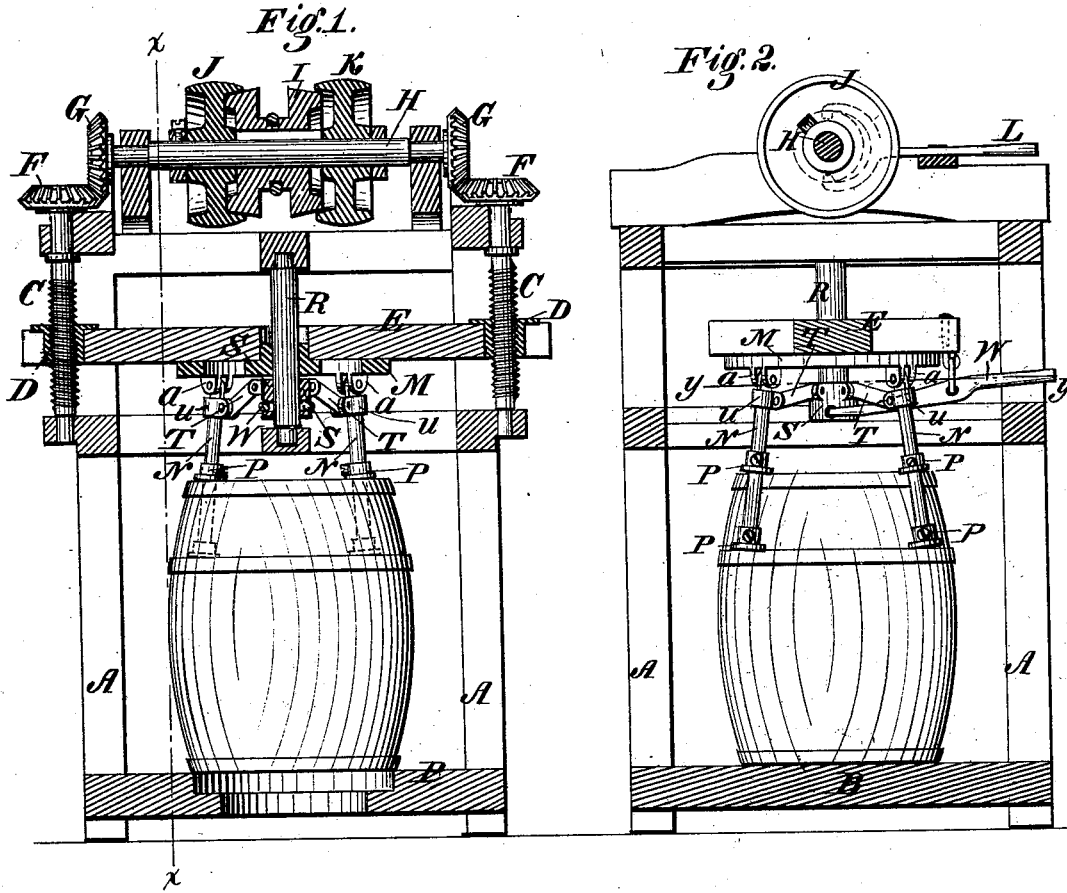


H. R. TYSON.
Machine for Trussing Barrels.

No. 207,461.

Patented Aug. 27, 1878.



Witnesses:
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UNITED STATES PATENT OFFICE.

HARVEY R. TYSON, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN MACHINES FOR TRUSSING BARRELS.

Specification forming part of Letters Patent No. **207,461**, dated August 27, 1878; application filed May 2, 1878.

To all whom it may concern:

Be it known that I, HARVEY R. TYSON, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Barrel-Trussing Machines, of which the following is a specification:

My invention relates to that class of machines employed for forcing hoops upon barrels; and consists in certain improvements in the details of construction, as hereinafter fully described.

Referring to the accompanying drawings, Figure 1 represents a vertical transverse section of the machine through its center; Fig. 2, a vertical section of the machine on the line *x x* of Fig. 1; Fig. 3, a sectional view on the line *y y* of Fig. 2, looking downward.

A represents a strong rectangular frame, provided with a base, B, containing a central opening having an annular shoulder on the inside, the opening being made of such size as to admit the end of the barrel but not the end hoop, so that the hoop resting on the base will be forced upon the barrel thereby as the barrel is forced downward into the opening, as represented in Fig. 1.

On opposite sides of the machine I mount in fixed bearings on the frame two vertical screws, C, which have mounted upon them nuts or boxes D secured in the end of and serving to sustain a transverse bar or cross-head, E, so that as the screws are rotated they will move the head up and down while maintaining it in a true horizontal position. On the upper ends of the screws C I mount beveled pinions F, which gear respectively into two pinions, G, mounted on opposite ends of the transverse shaft H, which latter is mounted in bearings on the top of the frame. The shaft H is provided at its middle with a slide-pulley, I, prevented from rotating by a spline, and beveled on its two edges. On opposite sides of the pulley I there are mounted two loose band-pulleys, J and K, which will be driven in opposite directions by means of belts connecting with an engine or other motor. The pulley I is grooved at its middle to receive one end of the hand-lever L pivoted upon the frame, by means of which the pulley I may be moved to the right or left to engage with and lock either one of the two pulleys J and K to the shaft,

in order to cause the rotation of the shaft to the right or left as required.

The rotation of the shaft through the intermediate gearing actuates the two screws C, which in turn elevate or depress the cross-head. On the under side of the cross-head there is secured a plate, M, having three or more pairs of depending ears, *a*, each supporting a pivoted depending arm, N, as shown in Fig. 1; each arm N being provided with one, two, or more round collars, P, secured by means of set-screws, as shown in the drawings, so that they may be adjusted vertically upon the arms. In the center of the machine there is mounted a vertical shaft or guide-rod, R, extending down through the cross-head; and upon this shaft there is mounted a vertical sliding collar, S, connected by a series of arms, T, with collars U secured upon the respective arms N.

A hand-lever, W, pivoted to the cross-head, as shown in Fig. 2, connects with the collar S for the purpose of moving the same up and down. The movement of the lever and collar causing the links to throw all the arms N inward or outward, as the case may be, simultaneously, and to the same extent, inasmuch as the arms, the hand-lever, and the connecting devices are all attached to and moved with the cross-head, the rise and fall of the latter have no effect upon them.

In using the machine the hand-lever L is moved in the proper direction to cause the elevation of the cross-head and its arms N. The hand-lever W is then elevated to cause the arms N to swing outward in order to permit the introduction of the barrel, which is passed between them and seated directly over the opening in the base. The hand-lever W is then operated and caused to swing the arms N inward until their collars P engage over the hoops of the barrel, as represented in the drawings, after which the lever L is shifted and the cross-head caused to descend, whereby the collars of its arms N are caused to force the top hoops downward upon the barrel, while at the same time the latter is forced downward into the bottom opening, and the lower hoop thereby driven to its place.

I am aware that a trussing-machine has been made with a single central screw to force

down trussing-arms or hoop-drivers, and also that pivoted trussing-arms have been connected with various arrangements of mechanism for throwing them into and out of action; and to these features I lay no broad claim.

By the employment of the two operating-screws and the cross-head in the manner shown, I prevent all danger of the parts cramping or binding, and force all the trussing-arms downward to the same extent, so that there is no danger, as in the ordinary machines, of the hoops being driven down farther on one side than on the other; and by the special arrangement of parts shown for controlling the truss-

ing-arms I am enabled to throw them into and out of action easily and quickly, and to avoid the complicated and expensive construction hitherto employed to that end.

Having thus described my invention, what I claim is—

In combination with the vertically-moving cross-head E, having the trussing-arms N pivoted thereto, the central guide R, sleeve S, links T, and hand-lever W.

HARVEY R. TYSON.

Witnesses:

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