

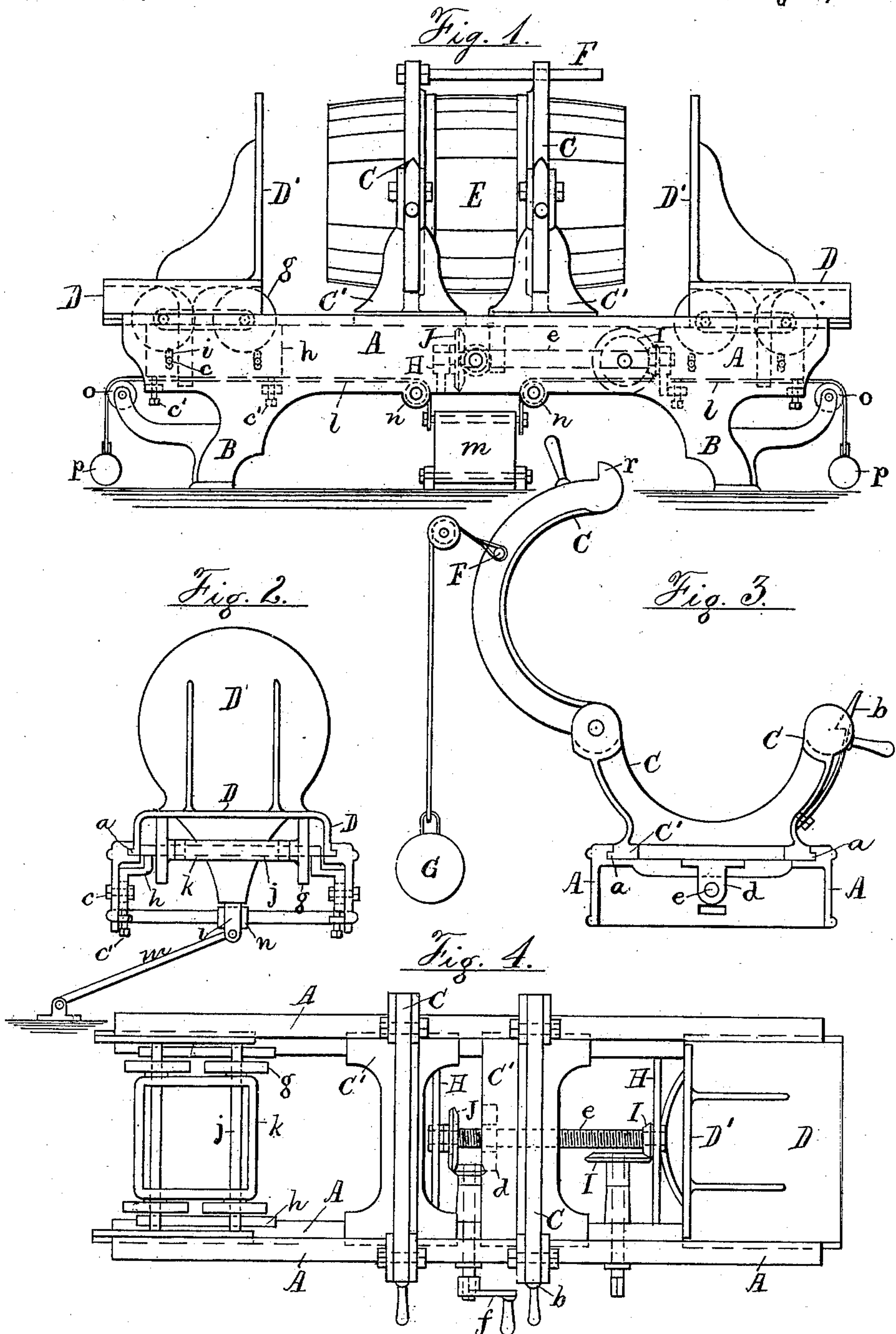
(No Model.)

H. WILDE.

BARREL TRUSSING MACHINE.

No. 257,260.

Patented May 2, 1882.



Attest:

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UNITED STATES PATENT OFFICE.

HENRY WILDE, OF NEWARK, NEW JERSEY.

BARREL-TRUSSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 257,260, dated May 2, 1882.

Application filed November 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, HENRY WILDE, a citizen of the United States, residing in the city of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Barrel-Trussing Machines, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

My invention consists in improved means for performing the three operations of trussing, setting the bilge-hoops, and squaring the barrel in a single machine and substantially at one operation. The improved means I have devised consist in a machine in which the cylinder of staves, after having been raised and fired, is laid in divided trussing-rings constructed to open for receiving the barrel, the bilge-hoops being already placed upon the cylinder of staves when raising or after firing. The barrel is then rounded or trussed by the movement of the rings toward each other, the hoops being forced up to their permanent position by the pressure of the rings upon them, and the ends of the barrel or cylinder of staves being squared at the same time by the impact of suitable plates moved upon the bed or frame of the machine by suitable devices. I attain these objects by the mechanism illustrated in the accompanying drawings.

Figure 1 is a side view of the machine. Fig. 2 is a transverse view of the vertical face-plates and carriage attached. Fig. 3 is a view of one of the truss-rings, showing the upper and lower sections when open to receive the barrel; also, the spring-catch and grooves on the inside of the frame for the base of the rings to slide in, with the screw-box on the under side of the ring. Fig. 4 is a top view of the machine.

Similar letters refer to similar parts throughout the several views.

The ways A and legs B are formed of a heavy casting, and constitute the frame of the machine on which the working parts are supported. C C are the truss-rings; D D, the carriages with vertical face-plates D' attached for squaring the barrel; E, the barrel in position when squared and trussed.

Upon the top of the frame are mounted the truss-rings C and squaring-plates D', one of the former being secured in a fixed position, and the other, with the squaring-plates and

carriages, being arranged to slide in grooves a, formed on the inside of the frame.

The bases of the rings C' and the carriages connected with the squaring-plates are planed to fit the groove, and each of the rings is divided at the center line, and a hinge formed at one side and a catch, b, at the other.

To provide for lifting the upper sections of the rings together a connecting-bar, F, is secured to one of the sections and passed through a hole in the other, which enables the operator to raise both at once, the weight of the rings being counterbalanced by a weight, G, as shown in Fig. 3.

A screw-box, d, is secured to the base of the movable ring C', and a screw, e, is arranged beneath the base of the same in bearings H, which may be arranged to bolt the two sides of the frame together. Each end of the screw is provided with bevel-wheels and a shaft extending through a part of the frame for the operator to turn by a crank, f, and one pair of the gears, I, is proportioned differently from the other pair, J, so that a quicker motion may be given to the movable ring at first and a slower and more forcible toward the last, when pressing the staves together.

The carriages for operating the squaring-plate are constructed to fit the groove a a little slack, and their weight is carried on anti-friction rollers mounted upon adjustable tracks secured to the frame inside the ways. g g are the anti-friction rollers, and h h the adjustable tracks, secured to the frame by a bolt, c, passed through slot i. The track is adjustable by set-screws c', passing through lugs on the frame to raise the carriage sufficiently to prevent friction on the ways. The rollers are shown arranged with their axles j resting upon the tracks and their centers prevented from displacement by a guide-frame, k.

To draw the vertical plates up quickly in order to produce the effect of a blow on the ends of the staves, they are both connected by straps l to a treadle, m, passing over a pulley, n, above the treadle, and to draw the carriages back a strap is attached and passed over a pulley, o, and provided with a weight, p. By this arrangement the squaring-plates can be brought up against the ends of the barrel simultaneously by a tread of the foot, the operator's hands being left free to close the

trussing-rings and move the same by the crank *f*, as required.

From the above description it is obvious that the operator can move the squaring-plates by the treadle while he is operating the trussing-rings by hand, and that by the quick and slow motion secured by the double gearing of the screw *e* an increased force can be applied to the hoops when they begin to tighten on the barrel.

I have shown the upper section of each truss-ring provided with a projection and the lower section with a hooked spring adapted to engage the same, but the spring may be applied in the opposite manner, if preferred, as to the upper section. The counter-balance *G* might also be replaced by a suitable spiral spring, and the rollers for the carriages *D* might be made with stationary axles, or provided with axles fitted to journals upon the carriages, and wheels thereon adapted to run directly on the track or ways *A*.

I am aware that squaring or leveling plates have been operated before by screws, cams, and levers, and do not therefore claim such an operation broadly; but considering that the friction-rollers render the movement very easy, and that I am thus enabled to substitute a treadle for the hand and power devices heretofore used, I have claimed the combination of such rollers and treadle as dependent agencies.

I am also aware that trussing-rings and leveling-plates have been combined and operated in various ways, and do not therefore claim their combination; but,

Having set forth the special features I have devised, I claim the same as follows:

1. In combination with the bed *A*, formed with grooves *a*, and provided with mechanism for supporting and operating the truss-rings *C*, the squaring-plates *D'*, supported upon carriages *D*, fitted to the grooves *a* and mounted upon anti-friction rollers, as described, and the treadle *m*, straps *l*, and pulleys *n*, arranged and operating substantially as and for the purpose set forth.

2. The combination, with the squaring-plates *D'* and carriages *D*, of the anti-friction rolls *g* and the adjustable tracks *h*, the carriages being fitted to grooves for guiding them in the bed or frame *A*, and the tracks being movably secured to the frame, substantially as and for the purpose set forth.

3. The combination, with the divided truss-rings *C C*, having a hinge at one side, of spring-catches operating to lock them automatically when closed, and the tie-bar *F* and counter-balance *G*, operating to support the upper halves of the rings automatically when opened, as herein shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HENRY WILDE.

Witnesses:

SAMUEL H. BALDWIN,
THOS. S. CRANE.