C. R. Tompkins,

Making Barrel Heads.

No. 46,508, Patented Feb. 21, 1865.

Fig. 1

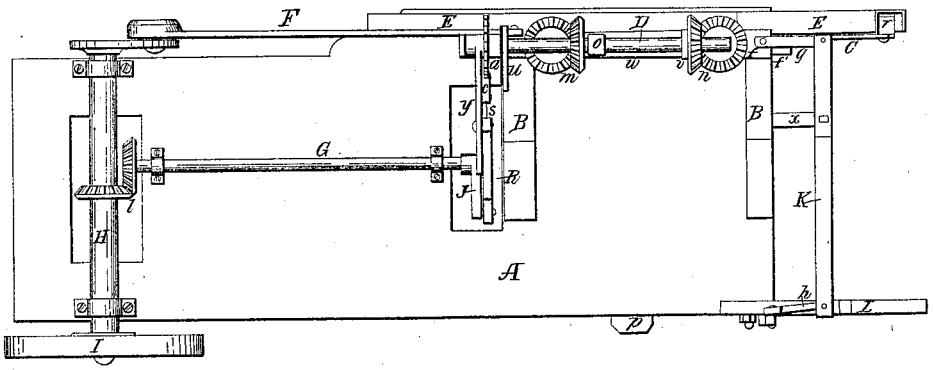


Fig. 2

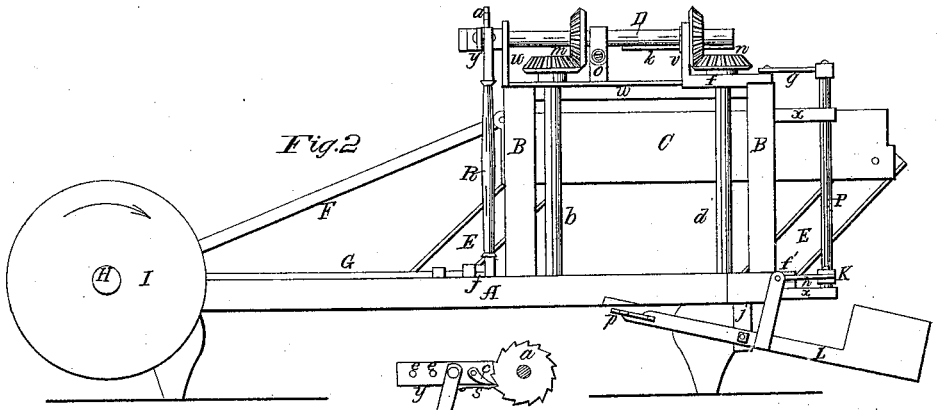
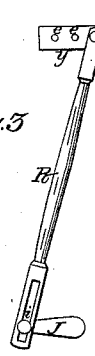


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

C. R. TOMPKINS, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN MACHINES FOR CUTTING BARREL-HEADS.

Specification forming part of Letters Patent No. **46,508**, dated February 21, 1865.

To all whom it may concern:

Be it known that I, C. R. TOMPKINS, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Heading Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan or top view of my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detached face view of the crank J, slotted connecting-rod R, pawl-arm *y*, and ratchet-wheel *a*.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of this invention consists in providing a parallel lateral adjustment to the movable feed-roller by hanging both ends in sliding boxes that are connected to an adjusting-lever, and connecting the pinion that drives that feed-roller to the shaft by a slot and feather, so as to be kept in gear with the feed-roller pinion by means of an arm connected to the upper sliding box; also, in such a construction and arrangement of the connecting-rod and pawl and ratchet that the crank shall produce an intermittent feed, and during the instant the knife is at its upward stroke.

To enable others to work my invention, I will describe its construction and operation.

The uprights B are framed to the base A, which rests upon suitable legs. They are connected together at the top by the plate *w*. One end of the shaft D rests in the standard *u*, and the other has a bearing in the arm *v* of the sliding box *f*, the journal-bearing being formed by a projecting hub of the pinion, which is fitted loosely upon that end of the shaft, but made to revolve with it by the feather *k*. The shaft may be provided with a bearing at that end also, if desired. The upper and lower boxes, *f* and *f'*, of the feed-roller *d* are connected to the arms of the rock-shaft P by short rods *g*, the lower one of which is not shown. The lever K of this shaft is connected to the vertical arm of the weighted lever L by a rod, *h*. The inclined metal grooves E, in which the friction-rollers *r* of the knife C run, are bolted to the front of the bed or base A. The ratchet-wheel *a* is keyed to the shaft D, and the pawl-arm *y* is fitted upon it loosely. The pawl *c* is kept in gear with the ratchet *a* by the spring *s*. Either the upper or the lower end of the rod R should be slotted, as seen at *i* in Fig. 3.

o is an adjusting friction-clasp, designed to prevent shaft D from turning backward or from turning farther forward than it shall be forced by the ratchet. The feed-rollers *b* and *d* should be fluted or otherwise roughened.

The operation is as follows: The operator places his foot upon the plate *p* of lever L, bearing that end down, which carries the roller *d* to the right of its present position, and a heading-bolt is then placed upon the bed between the rollers and against the knife. He then releases that end of the lever by removing his foot, and the weighted end drops, which causes the bolt to be clasped between the feed-rollers. When the knife C has nearly reached its upward throw, the feed-rollers *b* and *d* are acted upon by the ratchet *a* and pinions *m* and *n*, and the bolt is carried forward, so as to project beyond the knife far enough to give proper thickness to the heading, which is made by the downward stroke of the knife. The thickness of the heading may be varied by increasing or diminishing the feed, which is done by connecting the rod R nearer to or farther from the shaft D. When connected, as seen in Figs. 1 and 3, it gives the greatest feed, and less when at either of the holes *e*, Fig. 3. Motion is communicated through the band-wheel I to the main driving-shaft H, and through rod F to the knife C. Shaft G is geared to shaft H by pinions *l*, and to shaft D by the crank J and slotted rod R and the ratchet. Either end of the rod R may be slotted and the same effect produced. The arm *y* may be provided with a slot instead of the series of holes *e*.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination and relative arrangement of the rock-shaft P and lever K with the upper and lower boxes, *f* and *f'*, of the adjustable feed-roller *d*, substantially in the manner shown, and for the purpose of producing a parallel adjustment of the said roller.

2. In combination with the adjustable pawl-arm *y* and ratchet *a*, the crank J, and slotted connecting-rod R, substantially in the manner shown, and for the purpose of producing the intermittent feed, as set forth.

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