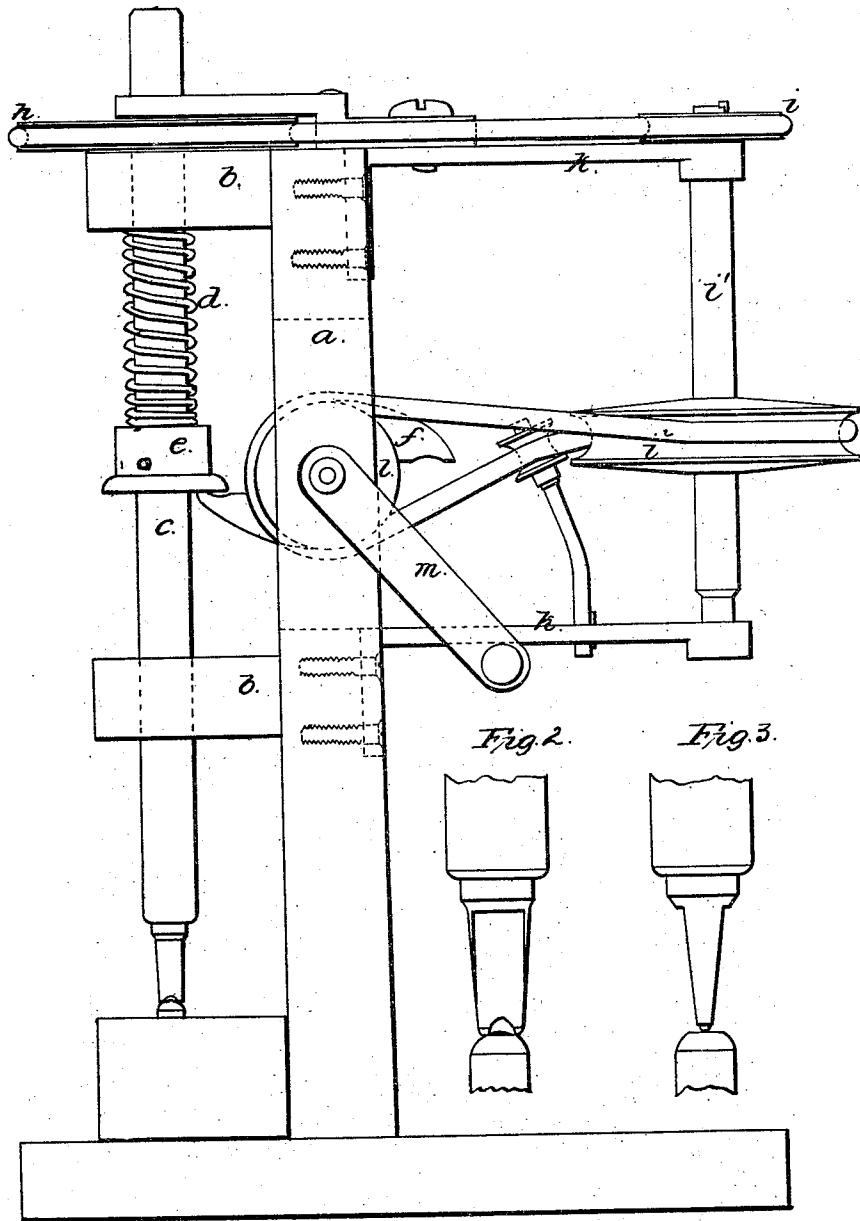


P. B. TYLER, B. LATHROP & W. JONES.
RIVETING MACHINE.

No. 20,685.

PATENTED JUNE 22, 1858.



UNITED STATES PATENT OFFICE.

P. B. TYLER, OF SPRINGFIELD, MASSACHUSETTS, B. LATHROP, OF SANDUSKY, OHIO, AND W. JONES, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNORS TO P. B. TYLER, OF SPRINGFIELD, MASSACHUSETTS.

RIVETING-MACHINE.

Specification of Letters Patent No. 20,685, dated June 22, 1858.

To all whom it may concern:

Be it known that we, P. B. TYLER, of Springfield, Massachusetts, BENJ. LATHROP, of Sandusky city, Ohio, and WILLIAM JONES, of Springfield, Massachusetts, have invented certain new and useful Improvements in Machinery for Heading Rivets; and we do hereby declare and ascertain our said improvements, referring to the accompanying drawings, in which—

Figure 1, is a side elevation; Figs. 2, 3, the tool or peening edge detached.

In riveting small work, especially where there are long wires used for rivets, by hand, such as caster pivots and journals, &c., great difficulty is experienced on account of bending the wire—so also in forming the heads of these rivets. They cannot be made perfect without dies, and these cannot be used with the long wires aforesaid without bending them by the necessary pressure to produce a head.

Our improvements are made to avoid these difficulties and any others that may be found to exist in riveting any articles where our device can be applied.

The improvement consists of a peening edge or hammer which is made to strike a blow by means of a spring the hammer or peen being raised by any proper mechanism while at every blow the peen is turned a little so as to strike all around the circle. The curve of the edge of the peen determining the configuration of the head.

It is obvious that a variety of devices for making the several necessary motions may be resorted to, well known to mechanics but as we make no claim to them by themselves we will only describe one of them which we have shown in the drawing. This represents an upright standard *a* from which two projections or brackets *b* project in front forming collars to sustain an upright shaft *c* and allow it to slide up and down. Between the two brackets *b* there is a spiral spring *d* bearing against the under side of the upper bracket and a collar *e* around the shaft *c* which is firmly fixed to the shaft. This collar may form a shoe for a cam *f* to strike by which the shaft is raised against the action of the spring which in its turn forces the shaft downward when the cam releases it. The strength of the blow is determined by regulating the strength of the spring *d*.

In the lower end of the shaft *c* there is a socket for inserting a peen edged tool such as is shown in the drawing Fig. 2, of any curve which the head is intended to be; the edge extending across the diameter of the circle of the intended rivet. Above the upper bracket there is a wheel *h* on the shaft, loose, so that the shaft *c* can slide through it, with a feather to cause the two to turn together. The wheel *h* is turned by a band connecting it with a pulley *i* on a shaft *i'* supported on brackets *k* projecting from the rear side of the standard *a* below pulley *i* is another *i''* that receives its motion by means of a band from a pulley *l* on the same shaft as the cam *f* that has its supports in the standard *a*. This shaft is turned by a crank *m* or other device.

The operation of the machine when put in motion is to give a series of rapid blows with the peen all around the circle, all of said blows being of the same strength, determined by the spring, whether the machine is driven with more or less rapidity—and a succession of said blows all around the circle gives the proper head to the rivet. When the article to be riveted is put under the peen the rapidity and precision of its action centers it and holds it in place until the operation is performed. One or two circles of blows will ordinarily finish a rivet smooth as if turned and from the exact regulation of the strength of the blows all possibility of being or injuring the rivet is avoided.

We do not claim a revolving reciprocating tool as that is well known in many trades but

Having thus set forth our invention, what we claim therein as new and for which we desire Letters Patent is—

The employment of a peen as herein described shaped to the configuration of the head of a rivet and operated in the manner and for the purposes set forth, by which a rivet head is formed by a succession of light blows around the circle.

PHILOS B. TYLER.
BENJ. LATHROP.
WILLIAM JONES.

Witnesses:

J. JOHNSON,
A. HOOK,
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