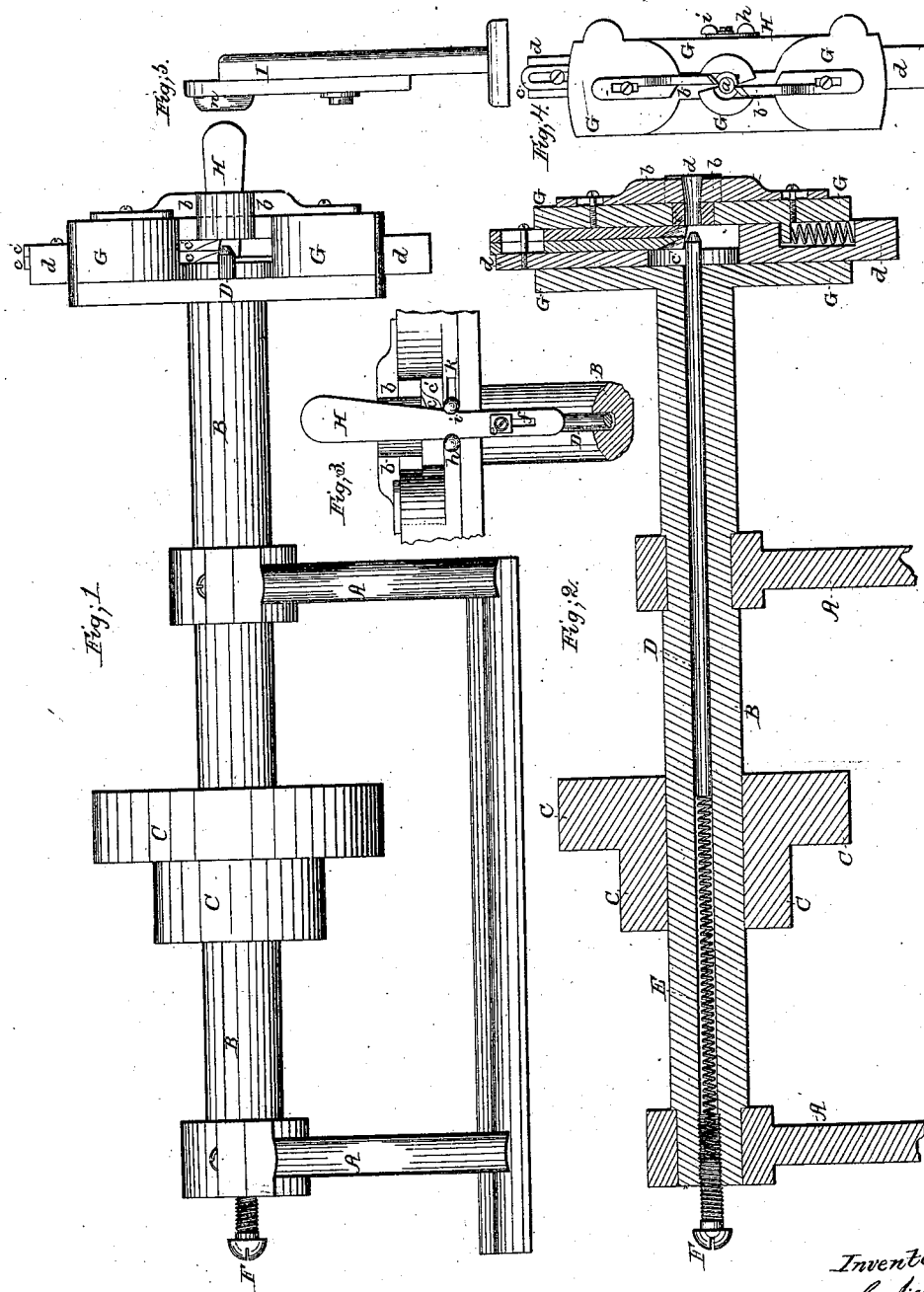


C. Jillson,
Wire-Pointing Machine,
Patented Feb. 7. 1865.
N^o 46,242.



Witnesses;
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UNITED STATES PATENT OFFICE.

C. JILLSON, OF WORCESTER, MASSACHUSETTS.

IMPROVED MACHINE FOR POINTING WIRES IN THE COIL.

Specification forming part of Letters Patent No. 46,242, dated February 7, 1865.

To all whom it may concern:

Be it known that I, C. JILLSON, of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Machines for Pointing Wires in the Coil; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a side view of the machine. Fig. 2 represents a longitudinal section through the same. Fig. 3 represents a portion of the machine having the pattern or guide attached thereto; so as to revolve with it. Fig. 4 represents a front view of the cutter-head and its several connected parts. Fig. 5 represents a rest through which the wire from the coil passes to the pointing-machine.

Similar letters of reference, where they occur in the separate figures, denote like parts of the machine in all the drawings.

My invention relates to a machine for pointing wires from the coil, in which the cutter-head, cutters, and pattern are all made to revolve with the mandrel or shaft, and the cutters so arranged as that while they are free to be moved by the pattern or the feeding of the wire they will not be affected by the centrifugal force of the revolving cutter-head or of the cutters.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

On suitable pillow-blocks or supports A A is mounted a shaft B, which may be rotated by means of a band or belt passing over either of the pulleys C. This shaft B is made hollow, so as to contain a piston or rod D, behind which there is a coiled spring E, and behind the spring a set-screw F, for adjusting the pressure of the spring upon the piston or rod D. On the forward end of the shaft B there is placed a cutter-head G, which has a tapering hole or eye *a* through it, in line with the rod D, and two adjustable cutters *b b* protrude slightly into this eye to reduce the wire to a uniform size should there be any inequality in its diameter. Behind the eye *a* and its cutters *b b* there are two other cut-

ters *c c'*—one slightly set in advance of the other—the one to take off the bulk of the metal in pointing, the other to finish and smooth it off.

The cutters *c c'*, or, rather, their stock *d*, passes entirely through lengthwise of the cutter-head G. This is done to prevent the centrifugal force of the revolving head from changing or altering the position of the cutters, and by thus constructing the cutters or their stock a very high speed may be given to the revolving cutters or head, which not only expedites the operation, but turns out more highly-finished and smoother work.

The pattern H, which revolves with the cutter-head and shaft, is fastened to the piston or rod D by means of a set-screw *e*, passing through a tongue-piece on the rod that projects through the slot *f* in the shaft B, and this pattern H may be adjusted by its slot *g* to change the taper of the wire that is being pointed, or may be replaced by another of a different form. The pattern H, as it is moved by the wire pressing against the end of the rod D, moves between two pins or studs *h i*, of which the one *h* is stationary in the cutter-head and the other *i*, passing through a slot *k* in the cutter-head, is fastened to the cutter-stock *d*, that carries the cutters *c c'*. The edge of the pattern that moves in contact with the pin *h* is straight, while the opposite edge that moves against the movable pin or stud *i* is tapered or inclined to suit or define the taper to be given to the wire. The cutters *c c'* are moved from the wire by the positive action of the pattern, but are returned to their point of beginning when the pointed wire is withdrawn by the recoil of the spring *m*, which is contracted as the cutters are moved out. As the wire that is to be pointed operates the pattern—one following exactly the speed of the other—there is no difficulty in feeding in the wire either by hand or by tongs or a clamp or any other ordinary means.

I is a guide or rest in front of the pointing-machine, through the eye *n* of which the wire may be more accurately fed into the eye of the cutter-head. The cutters, as well as the pattern and spring E, are all made adjustable, so as to admit of the nicest accuracy.

The operation is obvious. The wire is fed

through the rest *n* into the eye *a*, where it is reduced to a uniform size by the cutters *b*. It then is acted upon by the cutters *c c'*, and as the wire is forced in against the rod *D* it pushes back said rod, and the rod carries back with it the pattern *H*, which in turn moves out the cutters *c c'*, and thus tapers the wire from the extreme point up to the body of the wire.

What I claim herein as new, and desire to secure by Letters Patent, is—

1. Combining the cutter-head and pattern with a revolving shaft having a spring or

yielding rod within it, as and for the purpose herein described and represented.

2. In combination with a revolving cutter-head and pattern, the extending of the cutter-stock or cutters that are operated by said pattern clear through the cutter-head, so that said cutters will not be thrown out or in any wise moved by the centrifugal force of the revolving head, substantially as described.

C. JILLSON.

Witnesses:

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