

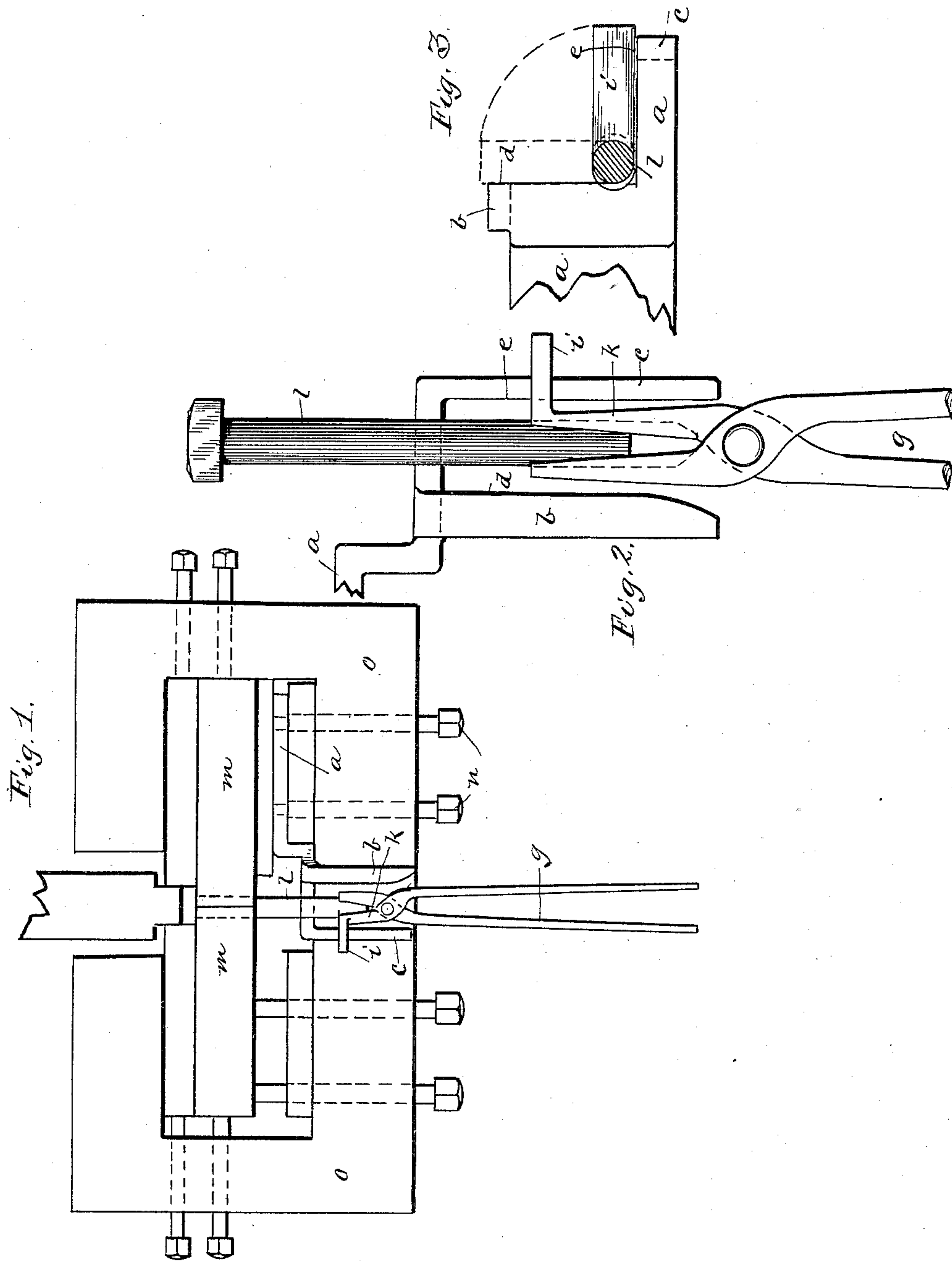
(No Model.)

J. H. ALKER.

TONGS AND GUIDE FOR BOLT HEADING MACHINES.

No. 409,595.

Patented Aug. 20, 1889.



Witnesses:
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JOHN H. ALKER, OF PITTSBURG, PENNSYLVANIA.

TONGS AND GUIDE FOR BOLT-HEADING MACHINES.

SPECIFICATION forming part of Letters Patent No. 409,595, dated August 20, 1889.

Application filed April 6, 1889. Serial No. 306,232. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. ALKER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Tongs and Guides for Bolt-Heading Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved tongs and rest for bolt-heading machines; and it consists in an extension or piece projecting at a right angle from one of the jaws of the tongs and operating in a guide in a manner that will admit of a quarter-revolution of the tongs, together with certain other details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a plan view of a die-box of a bolt-heading machine provided with my improved guide and showing the tongs for holding the bolt in position. Fig. 2 is an enlarged plan view of my improved tongs and guide constructed in accordance with my invention. Fig. 3 is an end elevation of the same.

To put my invention into practice with a bolt-heading machine of ordinary construction, and such as are now in common use, I provide a metallic strip *a* of suitable size and form of construction and form thereon two outwardly-projecting tangs *b c*—the one *c* located at the base of the strip *a*, and the other *b* at the top and arranged in a manner that the edges *d e* are at right angles with each other. At the front end of the top tang *b* the same is rounded or curved outward the better to admit the tongs *g* into the guide.

In connection with the above-described guide *a*, I form an oblong projection *i* on an ordinary pair of tongs *g*, used for holding the blank bolt during the process of heading the same. This projection *i* is formed at the end of one of the jaws *k* of the tongs *g* and at right angles to the axis of the bolt *l* contained therein.

In operation, the blank on which the head is to be formed is held by the tongs *g* and placed between the gripping-dies *m*, which close and hold the same while the head is being formed.

In the manufacture of bolts heretofore it has been the practice to turn the bolt from left to right continuously, and to depend upon the skill and experience of the operator in securing the desired shape of the head. In my improvement the blank is rotated from left to right alternately, the lug or projection *i* on the tongs *g* striking on the vertical or horizontal guides, thereby preventing the operator from turning the blank past a right angle, and thus secure a square head to the bolt, the device being capable of successful manipulation by an unskilled operator. At the succeeding revolution of the machine the tongs *g* are turned to the right, the projection *i* on the same striking the top tang *b* of the guide, and this operation is continued until the head of the bolt is finished.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a guide having the two arms or prongs arranged in a position relatively at right angles to each other, and a bolt-gripping tool having a device which is adapted to alternately strike the arms or prongs when the gripping-tool is turned axially in the guide, and thus limit the play or movement of said tool, substantially as and for the purpose described.

2. The combination of a fixed guide having the angularly-arranged arms, and a bolt-gripping tool provided with a projection, which is adapted to limit the axial movement of the tool in the guide by alternately striking the arms thereof, substantially as and for the purpose described.

3. The combination of a fixed guide-strip *a*, having the two projecting arms or tangs, which are arranged in different vertical planes at right angles to each other, and a bolt-gripping tool provided with a right-angled projection *i*, combined and adapted for service substantially as described, for the purpose set forth.

In testimony that I claim the foregoing I hereunto affix my signature this 23d day of March, A. D. 1889.

JOHN H. ALKER. [L. S.]

In presence of—
FRANK W. SMITH,
M. E. HARRISON.