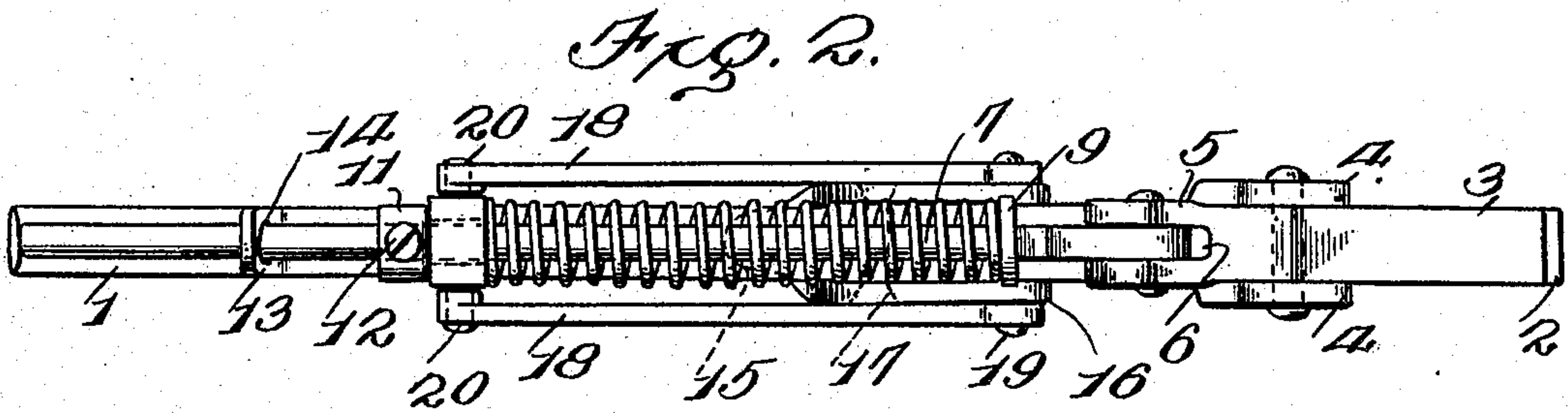
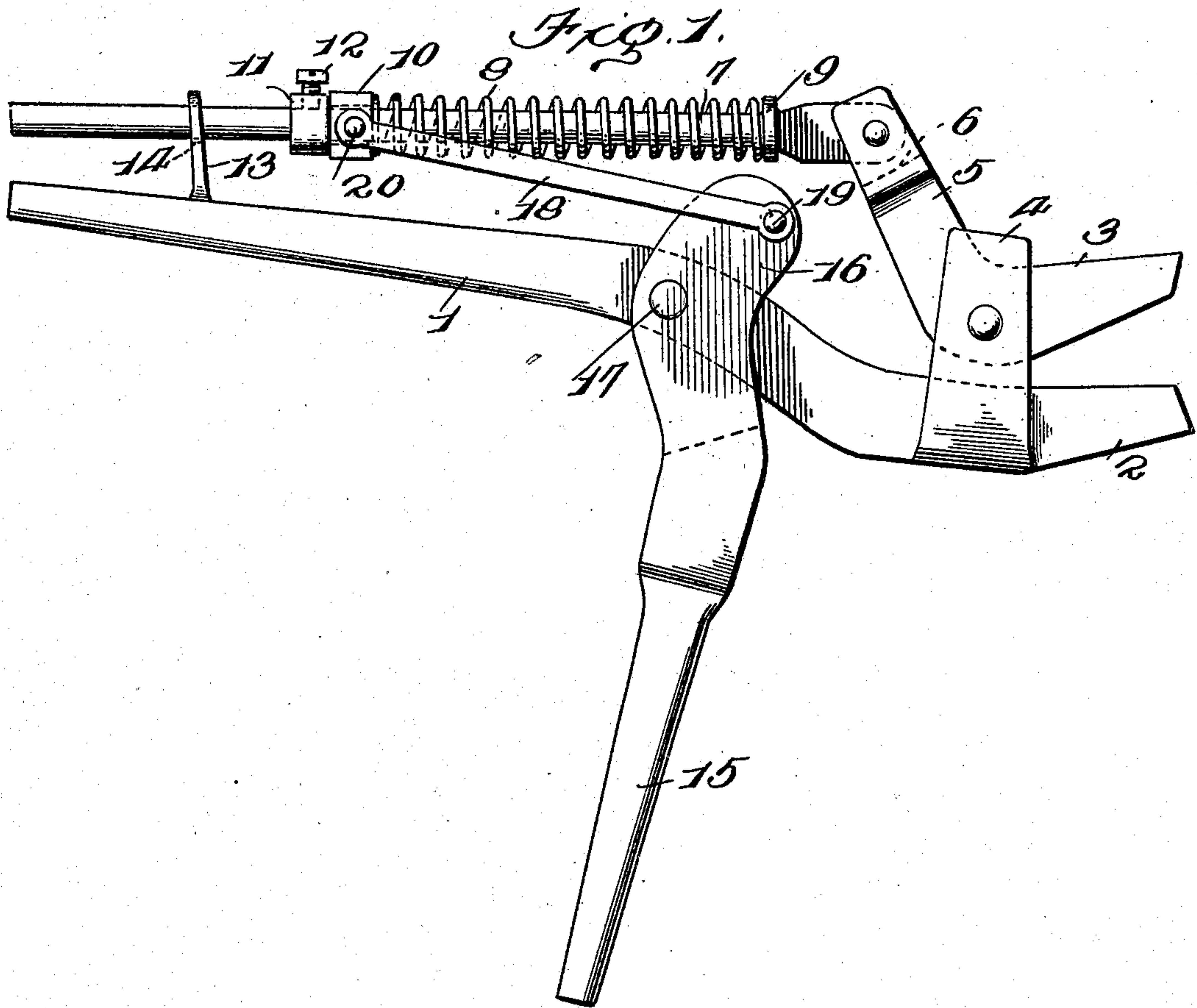


A. BING.
TONGS.

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936,980.

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ARNOLD BING, OF CANBY, MINNESOTA, ASSIGNOR OF ONE-HALF TO HENNIE MORTENSON, OF CANBY, MINNESOTA.

TONGS.

936,980.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed September 28, 1908. Serial No. 455,134.

To all whom it may concern:

Be it known that I, ARNOLD BING, a citizen of the United States, residing at Canby, in the county of Yellow Medicine and State of Minnesota, have invented certain new and useful Improvements in Tongs, of which the following is a specification.

The object of my invention is to provide a tool adapted for use in handling and manipulating articles during the process of manufacture, commonly known as tongs and particularly designed for use by blacksmiths and metal workers.

The invention consists of the novel construction and arrangement of the several parts whereby the gripping and retaining efficiency of the tool will be manifestly superior to ordinary tools of this character, in that the gripping force directed out of alignment with the handles will not be limited to the extent of the pressure exerted upon the handles by an operator, except, to regulate and control the action of the gripping jaws.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of the tool; and, Fig. 2 a top view thereof.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates a relatively stationary gripping member constituting a handle provided at one end with a jaw 2, and the numeral 3 designates a movable jaw pivotally secured to the jaw 2 by means of side plates 4 secured to said jaw 2 in any desired manner. The said movable jaw is provided in the rear of its pivot with an angularly disposed arm 5 forked as shown at 6 for the reception of a tension rod 7, a spiral spring 8 surrounding said rod. The tension of the spring 8 is exerted at one end against a stop 9 carried by said rod, and at the opposite end against a sliding ring 10 also carried by said rod.

The movement of said ring 10 and the tension of the spring 8 are regulated by a collar 11 adjustably secured upon the rod 7 by a set screw 12.

The numeral 13 designates a guide integral with or secured to the handle 1 and provided with an opening 14 through which the free end of the rod 7 protrudes for the purpose of guiding and holding the end of said rod in its proper relative position upon the handle 1.

A movable handle 15, provided with a cam-shaped forked head 16, is pivotally secured to the handle 1 as by a pin 17 passing through the head and handle, and links or bars 18 on both sides of the handle are pivotally secured to said cam head as shown at 19, at one end, and to the ring 10 as shown at 20, at their opposite ends.

With the arrangement of the several parts as shown the leverage of the handle 15 and the cam movement of the head pivotally connected to the ring 10 by the side bars 18 will cause said ring to slide upon the tension rod 7 to the extent permitted by the resiliency of the spring 8. The tension thus directed upon the stop 9 consequent upon the closing movement of the handles will force the rod 7 to move with the ring, and the movable jaw 3 pivotally secured to the relatively stationary jaw 2 will be operated by movement of the arm 5 pivotally secured to the rod 7.

Particular attention is directed to the arrangement of the gripping members, whereby no effort on the part of the operator is necessary after the jaws have closed upon an article or object to retain said object, the tension exerted upon the spring being sufficient to hold said jaws in a closed or locked position when the pivotal point of the side bars on the cam head in describing an arc, has passed the center of the pivotal point of the two handles. The spring is permanently held under tension when the tongs are closed by the cam movement of the head cooperating with the side bars, and the gripping force directed out of alignment with the handles and jaws, enables the operator to secure the best results in the manipulation and operation of the tool.

Having thus described the invention, what is claimed as new is:—

A tool of the character described, comprising a stationary member, a movable handle
5 pivotally connected thereto, a movable jaw
carried by said stationary member, a tension
rod pivotally secured to said movable jaw,
a spring mounted upon the tension rod, a
ring carried by said tension rod cooperating
10 with said spring, an adjustable collar de-

signed to regulate the movement of said ring
upon said tension rod, and side bars pivotally
connected to said movable handle and ring.

In testimony whereof I affix my signature
in presence of two witnesses.

ARNOLD BING.

Witnesses:

J. P. LANGMACK,
ARTHUR OVROM.