

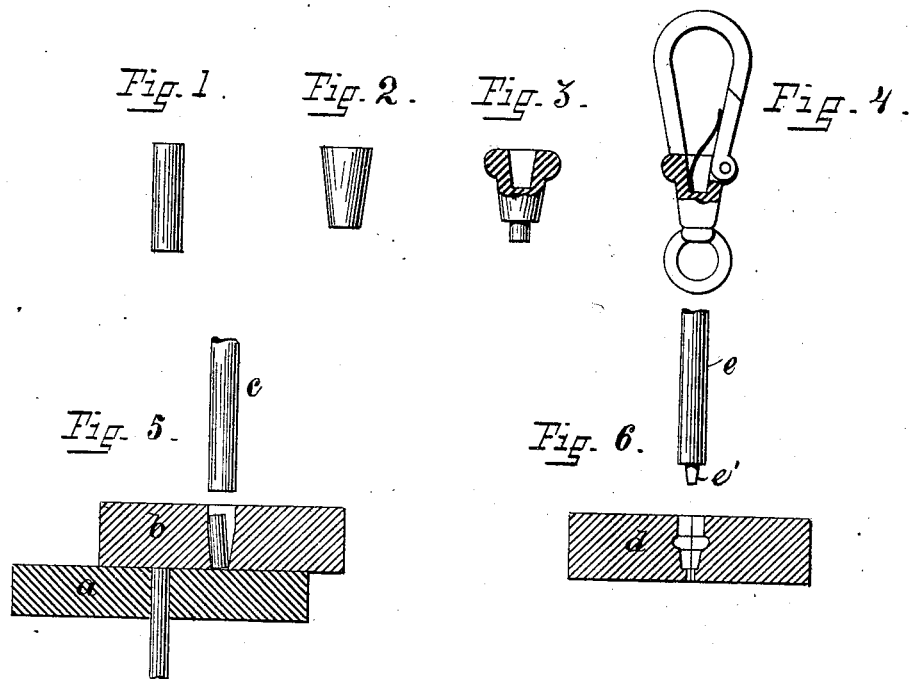
(No Model.)

J. E. WALCOTT.

PROCESS OF MAKING CHAIN SWIVELS.

No. 262,631.

Patented Aug. 15, 1882.



WITNESSES:

W. J. Miller  
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# UNITED STATES PATENT OFFICE.

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## PROCESS OF MAKING CHAIN-SWIVELS.

SPECIFICATION forming part of Letters Patent No. 262,631, dated August 15, 1882.

Application filed February 20, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JABEZ E. WALCOTT, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in the Process for Making Chain-Swivels; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

The invention has reference to an improved process for making the swivel usually placed on one end of a watch-chain, which swivel forms part of the loop by which the watch is connected with the chain.

The invention consists in the new and improved process herein described for making the swivel, as will be more fully set forth hereinafter.

The swivel referred to has heretofore been made out of solid stock, fashioned by turning, or formed in a drop-press, after which the central cavity was made by boring. By my improved process a wire of suitable size is fed into a sliding die and cut off by the lateral motion of the die. A plunger now descends, and by compressing the wire longitudinally forms approximately the swivel desired. The so-formed piece is now placed under a plunger having a central projection, and by forcing the same into the blank first formed the metal flows sidewise and finishes the swivel with the central cavity. The swivel is now slotted to receive the loop, and the swivel-ring is secured in the usual manner.

Figure 1 is a view of the length of wire cut off to make a blank for the swivel. Fig. 2 is a view of the blank after the first operation. Fig. 3 is a view, partly in section, of the swivel-piece having the central cavity formed. Fig. 4 is a view of the completed swivel-loop. Fig. 5 represents the cutting-off and first-shaping die. Fig. 6 represents the finishing-die, which may be a split die.

In the drawings, *a* is a die through which the wire is fed. *b* is a die having a lateral motion by which the wire is cut off. *c* is the plunger

for forming the first blank. (Shown in Fig. 2.) *d* is a die in which the next operation is performed. This die is made in two parts when the form of the swivel is such that it could not otherwise be easily removed, but can be used in one piece if the upper form is made in the end of the plunger *e*, so that the same will form the central cavity and also the rounding half of the upper bead. The punch *e* is provided with a tenon or projection, *e'*, which is forced into the metal to form the central cavity of the swivel.

By this process the swivels can be made very rapidly and cheaply, while the same are superior to the old style of swivel, as the metal is compressed and solidified. No hand-labor is required to finish the swivel, as the die will finish them in all respects.

I am aware that various articles of metal have been manufactured by first cutting off a blank from a stock-piece or bar and then completing the article by swaging the blank to proper shape in a suitable die; and I do not claim such a process broadly.

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

The herein-described method of making chain-swivels, the same consisting in the following steps, namely: first inserting a stock-piece of wire through a holder into a blank-forming die and then moving the blank-forming die laterally to cut off the portion of wire which projects within it, then driving a punch into the blank-forming die upon the piece of wire left therein to swage the same into the form of a blank, and then transferring the blank to a finishing-die and swaging it to proper shape therein by means of a punch which is provided with a tenon or projection which is forced into the blank to form the central cavity of the swivel simultaneously with the formation of its exterior surface.

JABEZ E. WALCOTT.

Witnesses:

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H. J. MILLER.