S. Gissinger.

Squeezing Puddled Balls of Iron.

No. 72388 Patented Dec. 17, 1867.

Fig: 1.

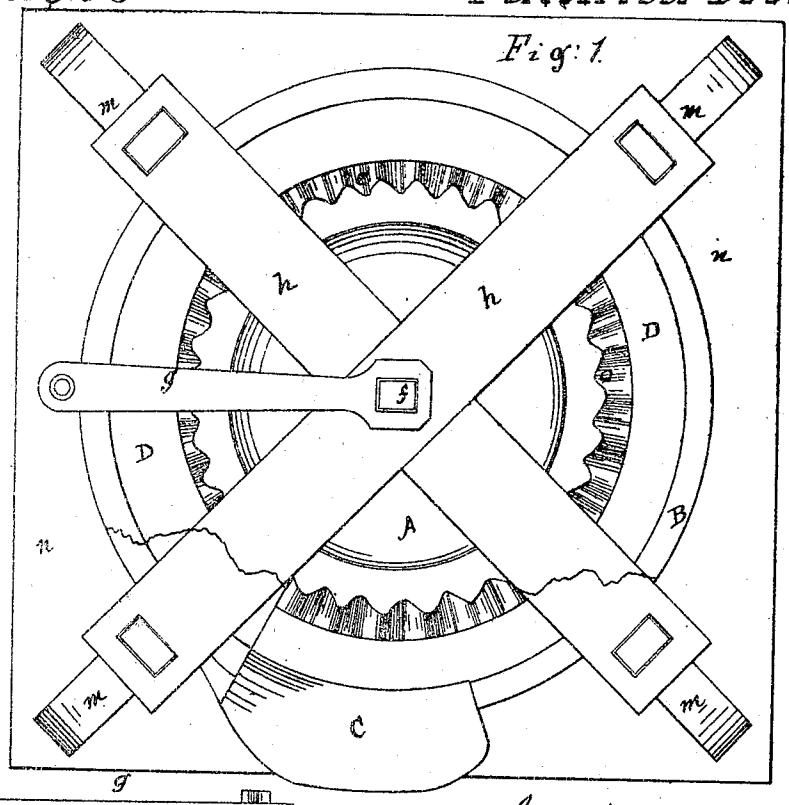
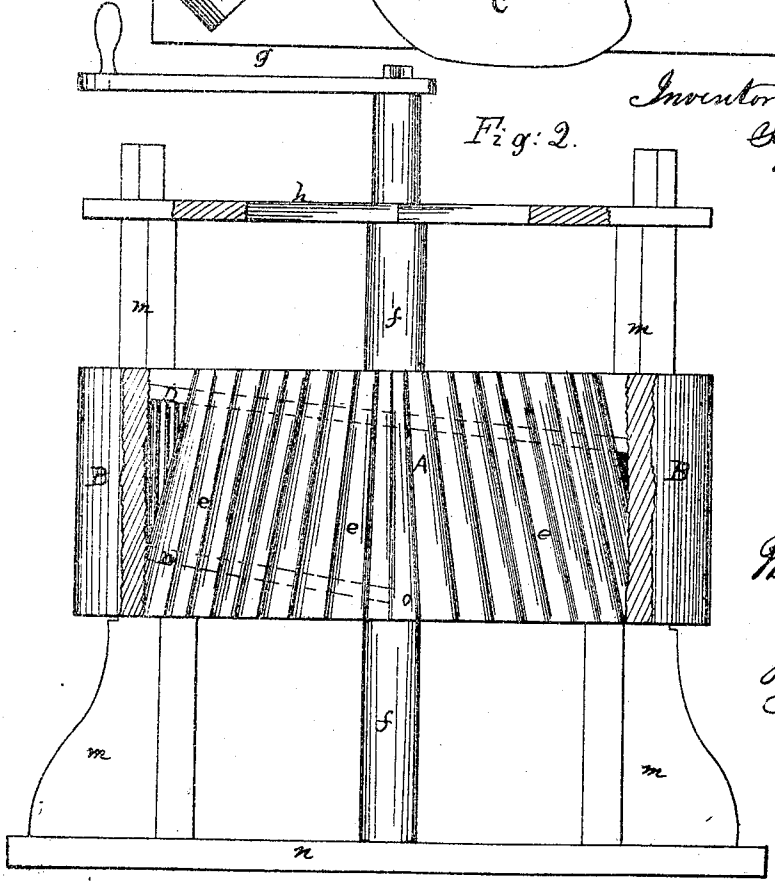


Fig: 2.



Inventor
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By his attorney
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Witnesses
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SAMUEL GISSINGER, OF LAWRENCEVILLE, PENNSYLVANIA.

Letters Patent No. 72,388, *dated December* 17, 1867.

IMPROVED MACHINE FOR SQUEEZING PUDDLED BALLS OF IRON.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL GISSINGER, of Lawrenceville, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in "Squeezers;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the use of a coniformed "nut" or "burr," and shell or case, provided with an upsetting-plate running spirally around on the inside face of the shell or case, the whole being constructed, arranged, and operating in the manner hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation. In the accompanying drawings, which form part of my specification—

Figure 1 is a top view of my improved "squeezer" for forming and preparing puddled iron into blooms.

Figure 2 is a side or front view of the same, representing a portion of the shell or case broken off.

In the drawings, A represents the coniformed nut or burr, which is secured on the shaft *f*, the bearings of which are in the bottom plate *n* and the cross-pieces *h*. The surface of the nut or burr A is provided with grooves or corrugations, marked *e*, which increase in size from the top to the bottom of the nut or burr. The shell or case B is constructed in the ordinary manner, and is held in position by the upright pieces marked *m*. On the inside face of the shell or case B is placed an "upsetting"-plate, D, which runs spirally around the nut or burr. The space between the shell B and nut or burr A is arranged in the same manner as in the ordinary "squeezers." C represents the "apron" of the "squeezer," and is made in any of the known forms, and secured to the shell or case in any desired manner. The driving-gear of the "squeezer" is applied to the upper end of the shaft *f*, (as indicated by the crank, marked *g*,) and is arranged in the usual manner for operating "squeezers." The upsetting-plate D is so arranged that the puddled ball of iron will, when it becomes compressed and elongated by the action of the "squeezers," be "upset;" that is to say, the plate D will compress the bloom endwise. The nut or burr A being of greatest diameter at the bottom, and the grooves or corrugations being wider and deeper at the bottom of the nut or burr, the puddled ball and bloom formed from it will have a tendency to travel downwards.

The operation of my improved "squeezer" is as follows: The puddled ball of iron is thrown on the apron C, and is then forced in between the shell and nut, the motion of which will draw in the ball, compress, and elongate it until its ends come in contact with the upper and under surface of the plate D; that is to say, the lower end of the bloom will press on the upper face of a part of the plate D, and the upper end of the bloom will press on the under face of a part of the plate D, and thereby "upset" or compress the bloom endwise. After the bloom has passed the end O of the plate D, it will drop from between the shell and nut a completely-compressed and well-formed bloom.

Having thus described the nature, construction, and operation of my improvement, what I claim as of my invention, is—

Squeezers constructed, arranged, and operating substantially as herein described, and for the purpose set forth.

SAMUEL GISSINGER.

Witnesses:

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