

L. THOMAS.
Pointing Spikes.

No. 85,146.

Patented Dec. 22, 1868.

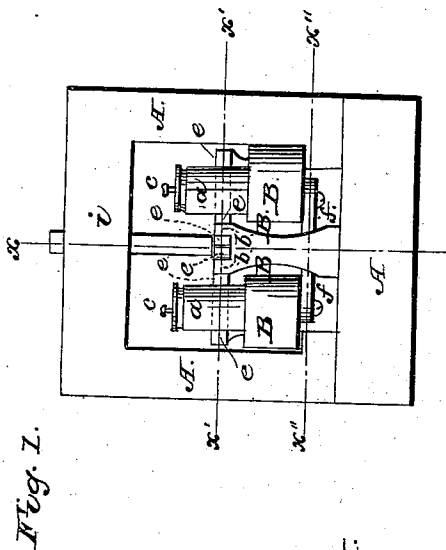


Fig. 1.

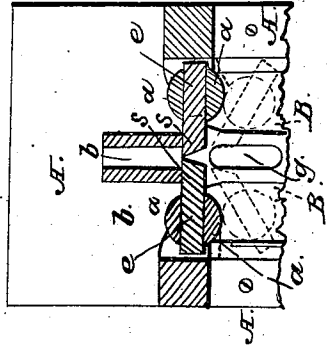


Fig. 3.

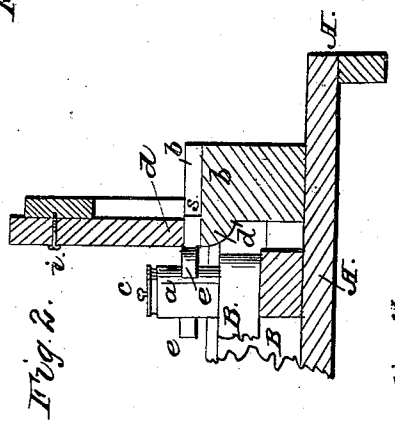


Fig. 2.

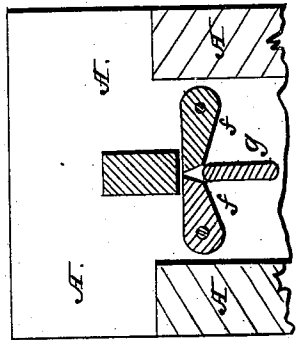


Fig. 4.

Witnesses
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Inventor
Leopold Thomas.
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United States Patent Office.

LEOPOLD THOMAS, OF ALLEGHENY CITY, ASSIGNOR TO ANDREW KLOMAN, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 85,146, dated December 22, 1868.

IMPROVEMENT IN POINTING SPIKES.

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, LEOPOLD THOMAS, of Allegheny City, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Machines for Pointing Spikes; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a front elevation of a machine containing my improvement;

Figure 2 is an elevation of a longitudinal vertical section through the line *x-x*, fig. 1;

Figure 3 is a plan view of a horizontal section through the line *x'-x'*, fig. 1; and

Figure 4 is a plan view of a horizontal section through the line *x''-x''*, fig. 1.

Like letters of reference indicate like parts in each.

My invention relates to an improvement in a spike-machine, for which I have already filed application for Letters Patent, and particularly to that part of the machine by which the spike-blanks are cut from the bar and pointed; and

The nature of it consists—

First, in so combining the tool-posts or pointing-tools with fixed guide-posts or projections, that, with the forward stroke of the carriage, the tool-posts or pointing-tools shall engage such guide-posts, and the pointing-tools shall thereby be made to engage the iron rod or bar fed in, and so cut off and point a new spike;

Second, in the combination of the pointing-tools with movable or stationary square-faced dies, such that, while the pointing-tools are cutting a spike from its bar, the dies will prevent the spread of the iron in the point; and

Third, in the combination of fixed guide-posts with arms attached to or connected with the tool-posts, such that, when the spike-blank is severed from the rod or bar, and the sliding carriage commences its return stroke, the pointing-tools will be opened.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and mode of operation.

In the drawing, only so much of the spike-machine is shown as is necessary to the pointing of the spike.

A is the frame of the machine, on the rear end of which are placed the cam-shaft, cams, &c., for communicating to the other devices the motions desired.

On the sliding carriage B, and just in the rear of the tool-posts *a*, the gripping-dies are set. The tool-posts *a* are also set in the forward end of the carriage, one on each side of the feeding-point, and the axes of the posts extend down through the carriage B.

In mortises in the tool-posts *a* are adjusted, by set-screws *c*, the pointing-tools *e*, the tools being so made and shaped that, when they come together, as in figs.

1 and 3, their extreme points will sever the bar fed in between them, and their working-faces will act as dies to give the spike-blank cut off a wedge-shaped point such as is desired.

The heated bar is fed in along a trough, *b*, or between suitably-shaped guides, so that it will come exactly between the pointing-tools *e*.

Above and below the bar, at the point where the pointing-tools operate, or a little in the rear thereof, are two flat-faced dies *d d'*, which are adjusted at a distance from each other equal to the width to be given to the point of the spike. The bottom of the feed-box *b* may, if so desired, project sufficiently far to constitute the lower die in fig. 2.

Either or both the dies may be adjustable, as by a set-screw, *i*, so as to be used with pointing-tools of different thickness in making differently-sized spikes.

Then, when the spike is cut off, and pointed by the tools *e*, the dies prevent the spreading of the metal, and the two together give a point of the required form. The spike-blank is then caught by the gripping-dies, and carried forward on the carriage against the header.

But, in order to secure the desired motions in the pointing-tools *e*, I carry the sides of the feed-trough back till their ends occupy the position required, as guide-posts to the tools *e*, or I shorten the sides, and use such posts in lieu thereof.

These posts *s*, fig. 3, I place in such position, relatively to the pointing-tools *e*, that, with the forward stroke of the carriage B, the front face of each pointing-tool will strike one of the posts, and the tools thereby be thrown or guided in toward each other. In this way they are made to embrace the bar, and cut off and point the spike-blank.

The rear faces of the posts *e* may be rounded off or otherwise so shaped that the pointing-tools will slide or roll thereon, with a minimum of friction, and, if so preferred, friction-wheels may be set in the working-sides of the guide-posts *s*.

The axes of the tool-posts extend down through the carriage B, and on their lower ends carry arms *f*, which are set in exactly or nearly the same vertical planes with the tools *e* above, so as to close together when the pointing-tools close.

With the backward or return stroke of the carriage, the arms *f* engage a fixed guide, *g*, which causes them to open, and thereby open the pointing-tools *e*. The pointing-tools are thus thrown clear of the end of the spike-blank, while the spike-blank is carried forward against the heading-die, and are left in the proper position for closing in on a new length of metal, to be fed in as before.

Thus the tools are automatically opened and closed. Their positions when closed are shown, figs. 1 and 3, and, when open, by red lines in fig. 3.

By such construction of devices, I save in the cost of the machine, and in loss by friction and wear and tear, and secure the motions desired equally as well as in the original machine.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Tool-posts *a* and pointing-tools *e*, arranged on a reciprocating carriage, and in such relation to fixed guide-posts or projections *s*, that, with the forward stroke of the carriage, the tool-posts *a* or pointing-tools *e* shall engage such guide-posts, and the pointing-tools shall thereby be made to engage the iron rod or bar fed in, and cut off and point a new spike, substantially as above described.

2. The pointing-tools *e e*, mounted on a reciprocating carriage, in combination with fixed guide-posts or projections *s* and square-faced dies *d d'*, above and below, such dies being either movable or stationary, the dies

and tools being so arranged and operated, relatively to each other, that, while the pointing-tools are cutting a spike from its bar, the upper and lower dies will prevent the spread of the iron in the point, substantially as above set forth.

3. The arms *f*, attached to or connected with the tool-posts *a*, when so arranged, relatively to one or more fixed guide-posts *g*, that, when the spike is severed from the rod or bar, and the carriage commences its return stroke, the pointing-tools will be opened, substantially as above set forth.

In testimony whereof, I, the said LEOPOLD THOMAS, have hereunto set my hand.

L. THOMAS.

Witnesses:

JOHN GLENN,
THEO. B. KERR.