(No Model.) 4 Sheets—Sheet 1.

H. M. MYERS.

METHOD OF MAKING SHOVEL BLANKS.

No. 385,821. Patented July 10, 1888.

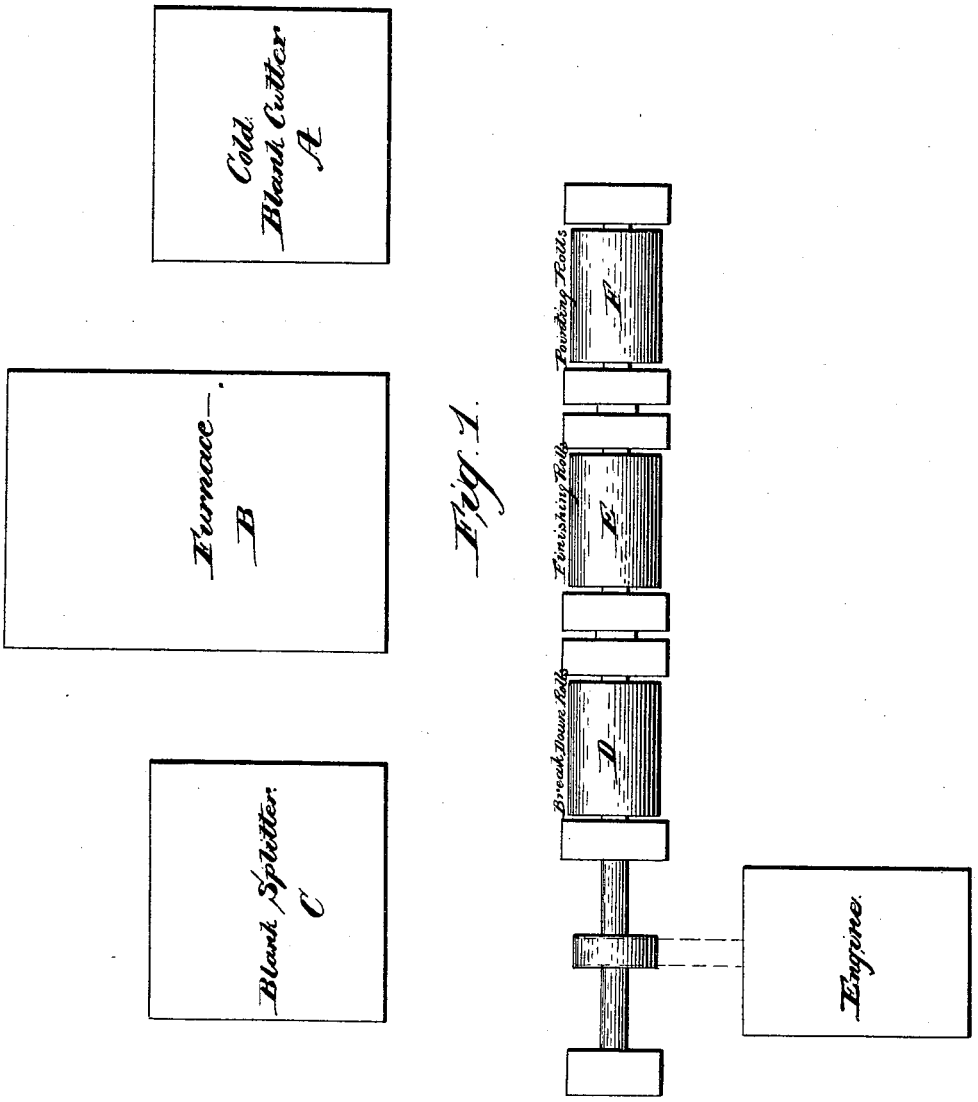

Fig. 1.

Witnesses.
Wm. H. Scott
Wm. E. Doyle.

Inventor.
Henry M. Myers.
By Johnston, Riddell & Doyle
Attorneys.

(No Model.) 4 Sheets—Sheet 2.

H. M. MYERS.

METHOD OF MAKING SHOVEL BLANKS.

No. 385,821. Patented July 10, 1888.

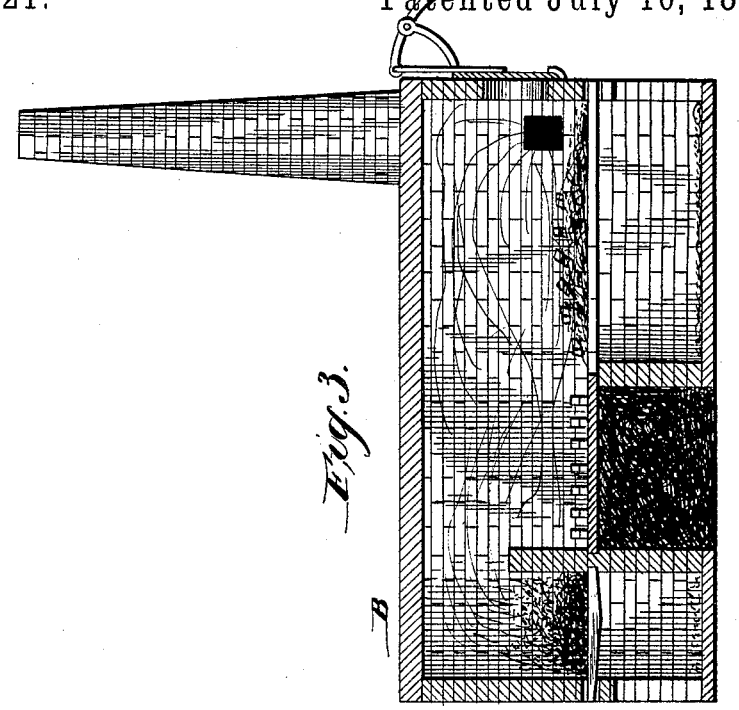

Fig. 3.

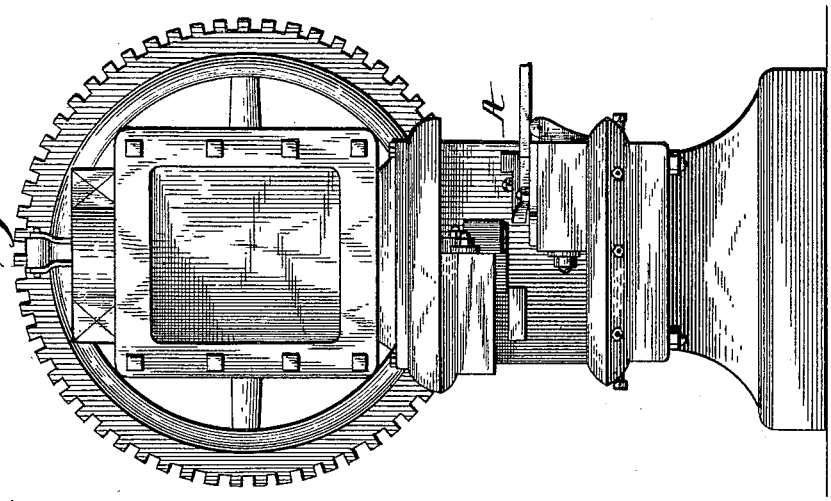

Fig. 2.

Witnesses—
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(No Model.) 4 Sheets—Sheet 3

H. M. MYERS.

METHOD OF MAKING SHOVEL BLANKS.

No. 385,821. Patented July 10, 1888.

Fig. 5.

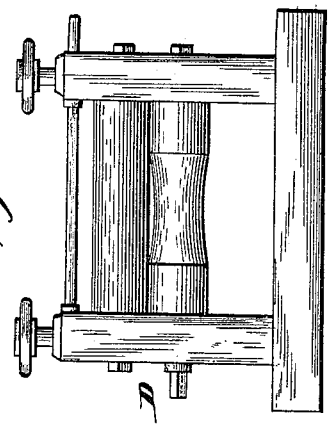


Fig. 6.

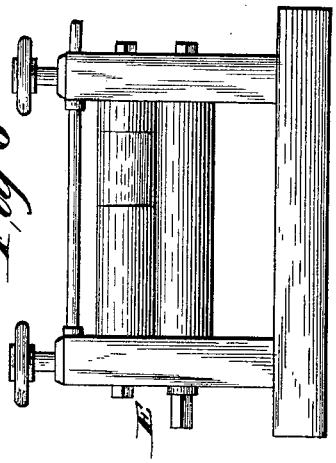
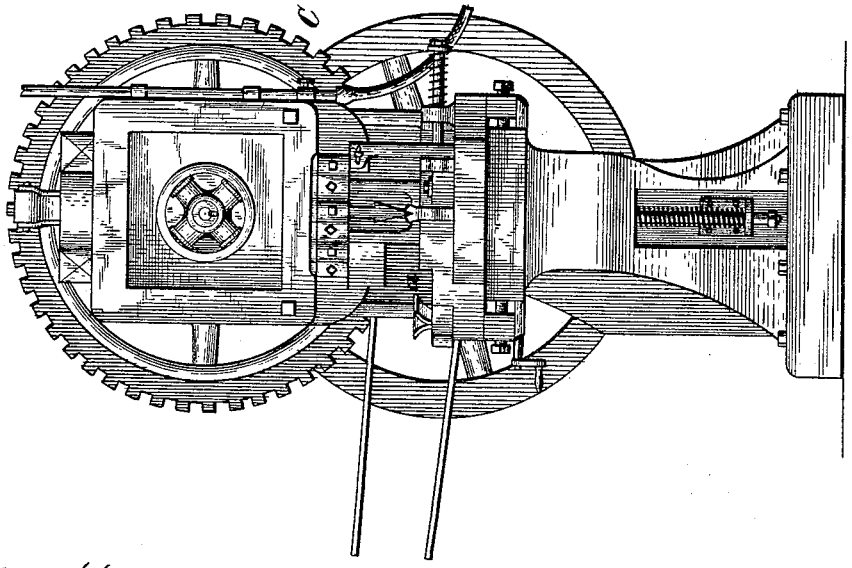


Fig. 4.



Witnesses—
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(No Model.) 4 Sheets—Sheet 4.

H. M. MYERS.

METHOD OF MAKING SHOVEL BLANKS.

No. 385,821. Patented July 10, 1888.

Fig. 7.

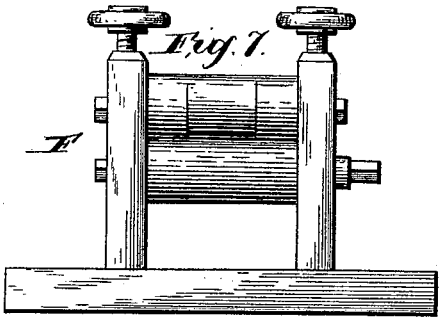


Fig. 10.

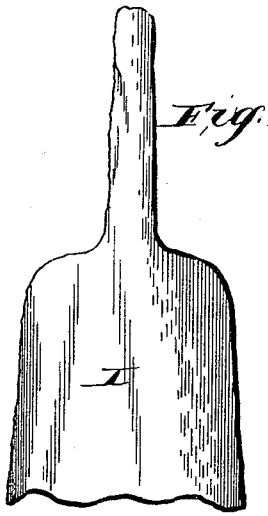


Fig. 9.

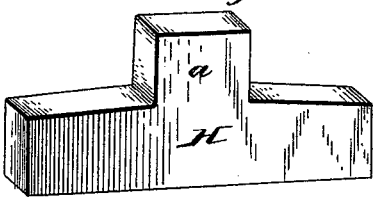
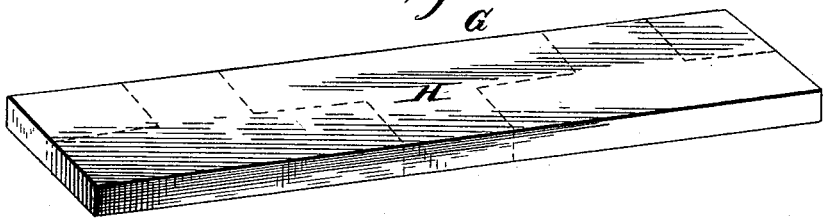


Fig. 8.



Witnesses—

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Wm. E. Dyer.

Inventor—

Henry M. Myers.

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UNITED STATES PATENT OFFICE.

HENRY M. MYERS, OF BEAVER FALLS, PENNSYLVANIA.

METHOD OF MAKING SHOVEL-BLANKS.

SPECIFICATION forming part of Letters Patent No. 385,821, dated July 10, 1888

Application filed April 5, 1888. Serial No. 269,645. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. MYERS, a citizen of the United States, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Methods of Manufacturing Shovel-Blanks to the Shearing-Point; 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 appertains to make and use the same.

My invention relates to the art of shovel-making, and has for its object an improved method of manufacturing shovel-blanks to the shearing-point.

In the manufacture of shovels as practiced under the system of cutting blanks from heated bars it has been found impossible to reduce the blanks as rapidly as they can be cut, and as a consequence the furnace for heating the bar and the machine for cutting the blanks had to be put out of operation periodically, or the blanks allowed to cool and be reheated. Either of these is objectionable, the former for the reason that the workmen attending the machine and the furnace cannot be kept employed, and the latter for the reason that the blanks must be handled and reheated at additional expense.

Under my present practice blanks are cut from cold bars of metal, and by running the blank-cutter under full speed double the quantity can be cut that the rolls can reduce in the same length of time, and as a consequence the machine turns out enough blanks in one day to supply the rolls two days, and the blanks are heated only once to reduce them.

The invention will be hereinafter described, and particularly pointed out in the claim.

In the accompanying drawings, which form a part of this specification, Figure 1 represents a diagrammatic plan view; Fig. 2, a front elevation of a machine for cutting blanks from a cold bar; Fig. 3, a vertical longitudinal section of a furnace for heating blanks; Fig. 4, a front elevation of a machine for splitting the tang and forming the socket; Fig. 5, a front elevation of a pair of breaking-down rolls; Fig. 6, a similar view of a pair of finishing rolls; Fig. 7, a similar view of a pair of pointing-rolls; Fig. 8, an enlarged perspective of a bar with blanks shown in dotted lines; Fig. 9, an enlarged perspective of a blank cut from a bar, and Fig. 10 a similar view of a blank reduced to the shearing-point.

Reference being had to the drawings and the letters marked thereon, A represents a machine for cutting blanks from cold bars of steel. Its construction and operation are fully set forth and claimed in my application Serial No. 269,417, and need not therefore be more fully herein set forth.

B is a furnace of ordinary construction for heating blanks.

C is a machine for splitting the tang and forming the socket in the blanks.

D represents a pair of breaking-down rolls; E, a pair of finishing-rolls; F, a pair of pointing-rolls; G, a bar of metal from which blanks H are cut, and I a blank reduced to the shearing-point.

The operation is as follows: Blanks H are cut from a cold bar, G, of steel, and heated in a furnace, B. They are then taken to a blank-splitting machine, where the tang *a* of the blank is split and the socket for the handle-strap formed. A little cinder is then placed between the split members of the tang and the members partially closed. The blank is then subjected to the breaking-down rolls D, where the blade of the shovel and the handle-straps are partially drawn out. It is then passed through the cylindrical portion of the finishing-rolls E until the blade has been fully reduced, when it is passed through an eccentric pass in said rolls for reducing the handle-straps and drawing them out to a proper taper. In manufacturing polished work the blanks are then subjected to an acid bath for removing scale, after which the blank is heated to a cherry-red heat and the blade pointed in the rolls F, when it is ready for shearing or trimming off the ragged edges.

In manufacturing blank work, the blanks are conducted from the finishing-rolls to the pointing-rolls without subjecting them to an acid bath.

Having thus fully described my invention, what I claim is—

The method herein described of manufacturing shovel-blanks to the shearing-point, which consists in cutting blanks from a cold bar of metal, heating the blank, splitting the tang, and forming the socket, then breaking down, finishing, and pointing the blank, substantially as described.

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

HENRY M. MYERS.

Witnesses:
J. F. MERRIMAN,
JOHN REEVES.