

H. D. COWLES & G. STACY.
HORSESHOE NAIL MACHINE.

No. 114,413.

Patented May 2, 1871.

Fig. I.

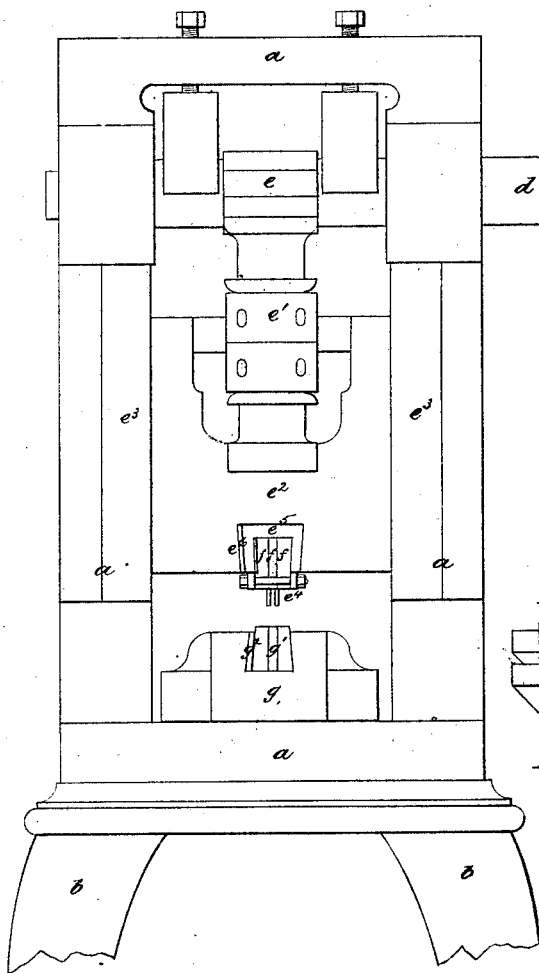


Fig. VI.

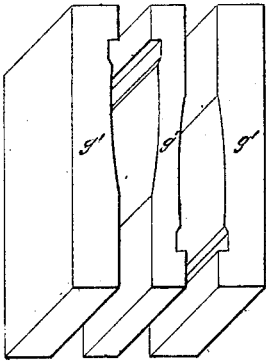
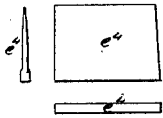


Fig. IV.



Witnesses
Charles Legge
Charles G. Simpson

Fig. II.

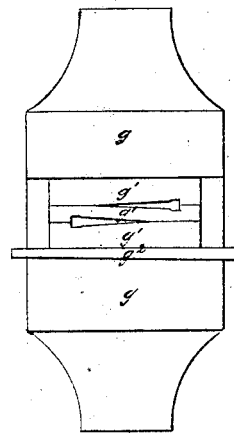


Fig. III.

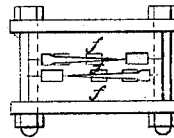


Fig. V.

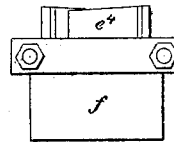
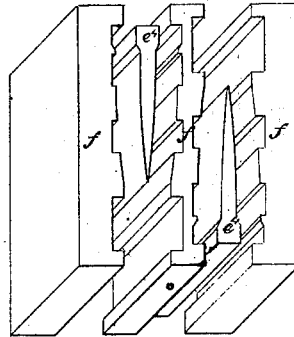


Fig. VII.



Inventors
H. D. Cowles
George Stacy

United States Patent Office.

HARLEY DWIGHT COWLES AND GEORGE STACY, OF MONTREAL,
CANADA.

Letters Patent No. 114,413, dated May 2, 1871.

IMPROVEMENT IN HORSESHOE-NAIL MACHINES.

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

To all whom it may concern:

Be it known that we, HARLEY DWIGHT COWLES and GEORGE STACY, both of the city of Montreal, in the district of Montreal, in the Province of Quebec, in the Dominion of Canada, manufacturers, have invented new and useful Improvements on the "Manufacture of Steel Horseshoe-Nails and on the Apparatus used therein;" and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, where—

Figure I represents a front elevation of a nail-cutting machine.

Figure II represents a detail plan of die.

Figure III represents a detail plan of punches and holders.

Figure IV represents three detail views of punches.

Figure V represents a side elevation of the punches and holders.

Figure VI represents a perspective view of the die in parts.

Figure VII represents a perspective view of the punches and holders in parts.

This invention relates to that class of machines which is employed for punching nails from previously-rolled plates, and consists in certain details of construction, as will be fully described hereinafter.

In the drawing similar letters of reference indicate like parts.

Letter *a* is the frame of the press or machine, made of cast-iron and of a size commensurate with the scale of the machinery required.

It is supported on legs *b b*, and serves to hold the various parts of the machinery in proper position.

c is a pulley placed on the end of shaft *d*, and communicates motion to the same.

The shaft *d* carries the eccentric, situated at *e*, which actuates the pitman *e'* for the purpose of elevating or depressing the gate *e''*, moving in guides *e'''* attached to the frame-work *a*.

In the lower part of this gate are placed the punches *e'* in a shoe, *e''*, fitting into a slot arranged in the gate, and held in place by keys *e'''*.

These punches are held in place or supported by holders *f* bolted together, as shown in Fig. III, representing a bottom view, with side view in Fig. V.

As above referred to two punches are arranged to work at the same time, but when it is desired to use the machine with one punch, *e'*, only, the parts *f* and *g* are formed, as shown in Figures XIII and XIV, for holding but one punch, and are secured in the press or machine in a similar manner to that described as above for two punches.

g is a cast-iron bed bolted to the frame *a*, and provided with an opening through its center by which the nails pass after being cut.

On the upper side of this block is a dovetail recess for the reception of the dies *g'*, held firmly in place by key *g''*. These dies are shown in place in Figs. I and II, and in perspective in Fig. VI.

The configuration of the head of nail in the dies may be graduated by guides, so as to produce any desired length of head.

The operation is as follows:

The steel having first been rolled by suitable machinery into strips of convenient length of the proper form, the latter are then introduced from the side of the machine between the cutters *e'* and dies *g'*, and fed forward automatically in proportion to the cutting power or velocity of the machine, the nail of steel being delivered in a finished condition by this one operation, through the aperture in blank *g* into a suitable receptacle below.

Having now described our invention, to which we have given the name of "the international steel horseshoe-nail," and the manner in which the same is manufactured, we beg to state that we disclaim all other modes of making horseshoe-nails now in use.

What we claim as our invention, and wish secured by Letters Patent, is—

The apparatus in its novel combination of frame *a*, legs *b*, shaft *d*, eccentric *e*, pitman *e'*, gate *e''*, guides *e'''*, punch or punches *e'*, shoe *e''*, keys *e'''*, holders *f*, bed *g*, dies *g'*, key *g''*, all working together substantially in the manner and for the purpose described.

Montreal, 16th day of September, 1870.

H. D. COWLES.
GEORGE STACY.

Witnesses:

CHARLES LEGGE,
CHARLES G. C. SIMPSON.