(No Model.)

A. E. GORSE & H. S. HARRIS.

WIRE NAIL MACHINE.

No. 537,972. Patented Apr. 23, 1895.

FIG. 1.

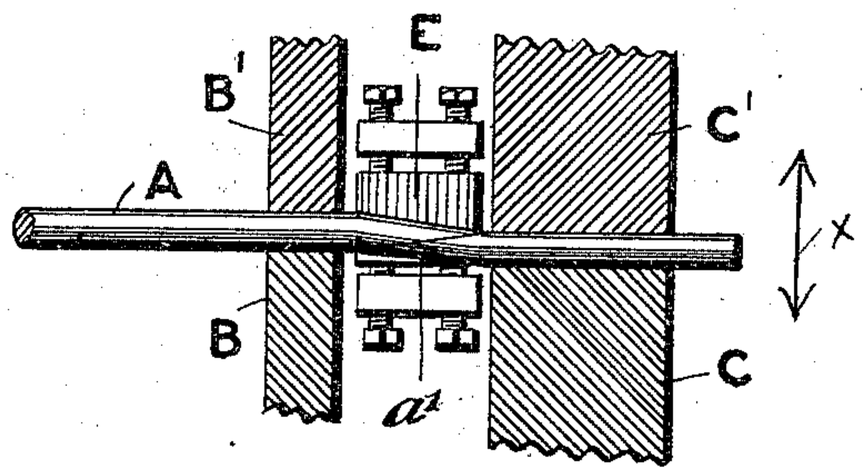


FIG. 2.

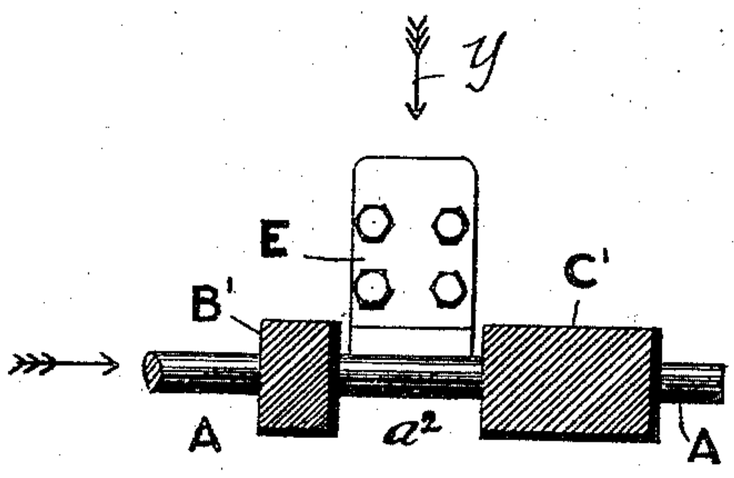


FIG. 3.

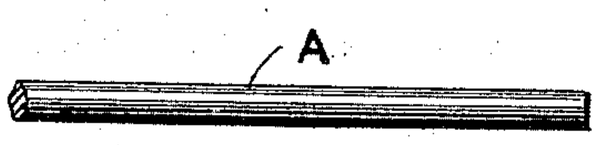


FIG. 4.

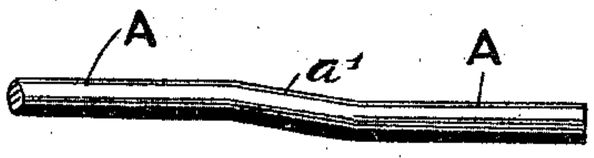


FIG. 7.

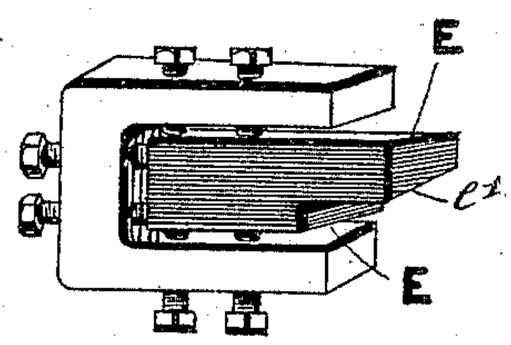


FIG. 5.

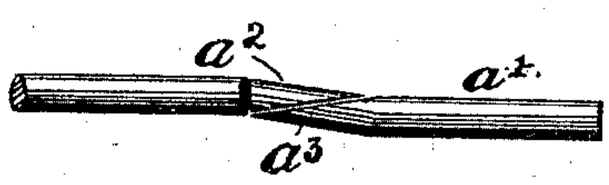
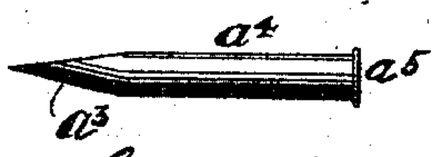


FIG. 6.



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UNITED STATES PATENT OFFICE.

ARTHUR EDMUND GORSE AND HERBERT STANLEY HARRIS, OF SALOP, ENGLAND.

WIRE-NAIL MACHINE.

SPECIFICATION forming part of Letters Patent No. 537,972, dated April 23, 1895.

Application filed September 25, 1894. Serial No. 524,087. (No model.) Patented in England September 22, 1886, No. 12,037, and May 5, 1893, No. 8,988.

To all whom it may concern:

Be it known that we, ARTHUR EDMUND GORSE and HERBERT STANLEY HARRIS, subjects of the Queen of Great Britain, residing at Bishop's Castle, Salop, in the county of Salop, England, have invented a certain new and useful Wire-Nail Machine, of which the following is a specification.

The invention has been patented in England, No. 12,037, dated September 22, 1886, and No. 8,988, dated May 5, 1893.

Our invention has for its object an improved wire nail machine by which we so cut the one end that the point is left perfectly central with the other part of the nail thus pointing the nail with one cut of the tool which leaves it in a true form for driving.

We pass the wire, of which nails are to be made, into a machine so constructed that a pair of dies meeting on the wire hold the same whil another pair of dies set at some distance from the first pair move together also gripping the wire, but as the second pair of dies are set or pitched out of line with the first pair of dies, the wire is consequently bent in a slanting direction in the space between the two sets of dies the wire being held by the dies as described. A cutter attached to the machine now severs or cuts the wire in a slanting direction but in a reverse or opposite way to the slant produced by the dies as before mentioned, this process producing a sharp cut central point on the piece or length of wire as held between the second mentioned pair of dies, the nails being afterward formed of this said piece of wire.

In order that our invention may be clearly understood and more easily carried into practice we have appended hereunto a sheet of drawings, upon which we have shown our invention applied to the pointing of nails of circular section but from which its application to nails of other sections will be readily understood.

Figure 1 is a longitudinal section through the dies on the line of wire. Fig. 2 is a plan of same. Fig. 3 is an elevation of a length of wire. Fig. 4 is a similar elevation to Fig. 3 showing the wire after the bending operation has taken place. Fig. 5 is a similar elevation to Fig. 3 showing the wire after the cutting operation. Fig. 6 is a similar elevation but showing the finished nail. Fig. 7 is a view of the cutting tool.

In carrying our invention into effect the wire A from which the nails are to be made is fed into a machine having a pair of dies B, B′, which grip the same while the second pair of dies C, C′, which are set a distance apart from the dies B, B′, afterward grip the wire nearer its end but as this pair of dies are set or pitched out of line with the first pair of dies A, A′, the wire is by the movement of the latter dies C, C′, bent into a slanting direction at a' as shown by Figs. 1 and 4 in which position it is firmly retained while the cutter E is operated forward and being provided with the inclined face e' severs or cuts the wire in the slanting direction shown by Figs. 1 and 5 this process forming the sharp central point a^3 on the piece or length of wire a^4 and at the same time by the removal of the piece a^2 leaving the end of the wire square for the head of next nail to be ultimately formed. The head a^5 is then formed which thus completes the nail as shown by Fig. 6.

The dies B, B′ and C, C′ may either work vertically as shown or horizontally or one pair may be vertical and the other horizontal.

The dies C C′ are moved for instance, up and down as indicated by the double arrow x in Fig. 1 by any suitable means not shown, in order to bend the wire, said dies being represented as in their lowermost position. While in this position the cutter is operated transversely of the dies as indicated by the arrow y in Fig. 2 by any suitable means not shown.

What we claim, then, is—

In combination the two pairs of dies B B′ C C′ arranged with a space between them and with normally aligning openings to receive the nail blank which thus extends across the space between them, the knife movable in said space transversely of the blank one of

the said pairs of dies being movable at right angles to the line of movement of the knife whereby their openings will be thrown out of alignment with the nail blank extending through both openings and across the space on an incline substantially as described.

In testimony that we claim the foregoing as our own we affix our names in the presence of two witnesses.

ARTHUR EDMUND GORSE.
HERBERT STANLEY HARRIS.

Witnesses:
ARTHUR SANDFORD CORSER,
ROBERT HENRY STEWART.