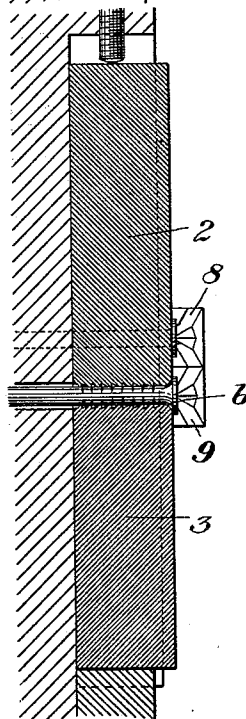
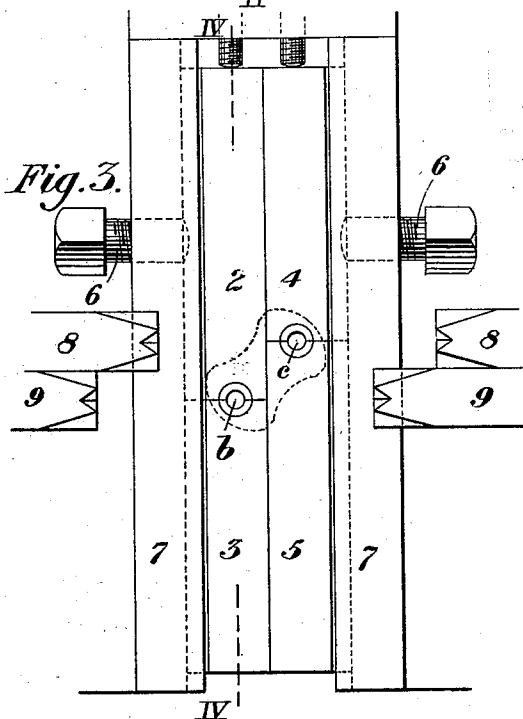
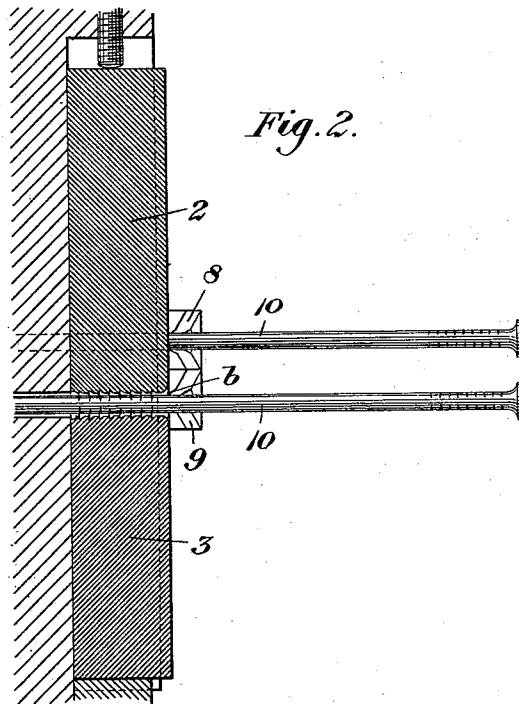
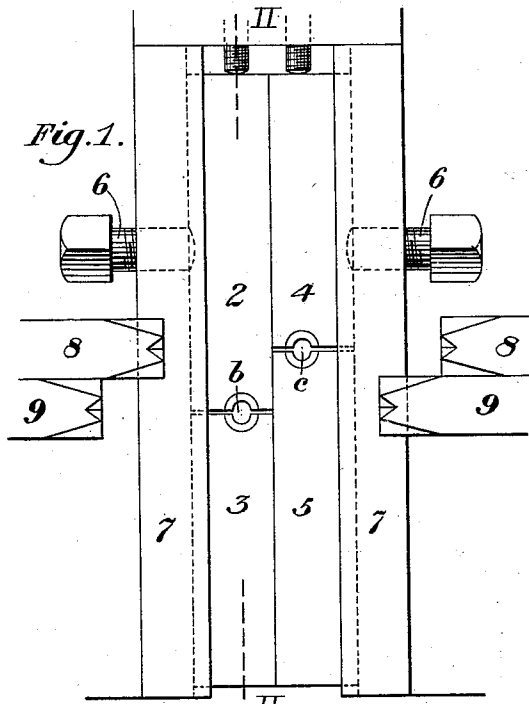


(No Model.)

R. NAYSMITH.
DIE FOR WIRE NAIL MACHINES.

No. 507,379.

Patented Oct. 24, 1893.



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

ROBERT NAYSMITH, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE
OLIVER & ROBERTS WIRE COMPANY, OF SAME PLACE.

DIE FOR WIRE-NAIL MACHINES.

SPECIFICATION forming part of Letters Patent No. 507,379, dated October 24, 1893.

Application filed December 22, 1892. Serial No. 456,006. (No model.)

To all whom it may concern:

Be it known that I, ROBERT NAYSMITH, of
Pittsburg, in the county of Allegheny and
State of Pennsylvania, have invented a new
and useful Improvement in Dies for Wire-
Nail Machines, of which the following is a
full, clear, and exact description, reference
being had to the accompanying drawings,
forming part of this specification, in which—

Figure 1 is a front elevation of my improved
die-mechanism, comprising gripping-dies and
cutting-dies, the gripper-dies being open.
Fig. 2 is a vertical section on the line II—II of
Fig. 1. Fig 3 is a view similar to Fig. 1, but
showing the gripping-dies closed; and Fig. 4
is a vertical section on the line IV—IV of
Fig. 3.

The object of my invention is to provide
improved means by which a machine for mak-
ing wire-nails or rivets can be adapted to
make two or more nails or rivets at one oper-
ation, and to this end it consists in the com-
bination of two or more pairs of gripping-
dies set parallel with each other but with their
grippers in different planes, and cutters mov-
ing transversely to the direction of motion of
the gripping-dies.

In the drawings, 2, 3, and 4, 5, are two pairs
of gripping-dies set side by side; the dies 2
and 4 may be held stationarily by set-screws
6, while the dies 3 and 5 are adapted to recip-
rocate between guides 7, being actuated by
suitable cam or lever mechanism, not shown.
The opposite dies have end-grooves constitut-
ing gripping-cavities *b, c*, these cavities being
in different transverse planes, as shown in
Figs. 1 and 3. The purpose of thus locating
the dies is to permit the transverse action of
the cutters hereinafter described. Each pair
of gripping-dies has two cutters, 8, 8, and 9,
9, respectively. The adjacent members of
the cutters are connected together and move
simultaneously as shown. They are stepped
in their positions relatively to each other, so
that their cutters 8, 8, will meet at the die-
cavity *c*, while the cutters 9, 9, will meet at
the die-cavity *b*.

The operation is as follows:—By means of
suitable feeding mechanism, (not shown,) two
parallel wires 10 having been fed forward
simultaneously within the gripping-die cav-
ities *b, c*, are gripped by simultaneous mo-
tion of the grippers 3, 5. They are then sev-
ered by the cutters 8, 9, which advance in
opposite directions and recede. Thereupon,
the heading-die, shown by dotted lines in
Fig. 3, which is made of diagonal form so as
to enter well between the cutters, advances
and simultaneously upsets the projecting
ends of the wires, as shown in Fig. 4. By
retraction of the grippers 3, 5, the wires are
then released, and the heading-die retreating,
the feeding-mechanism advances the wires
the length of one nail. Then the wires hav-
ing been gripped again, the cutters advance,
cut off and point the nails just made, and so
the cycle of operations is continued as above
described.

The advantages of my invention will be
appreciated by those skilled in the art.

Within the scope of my invention, as de-
fined in the claims, modifications may be
made in the form and construction of the
parts, since

What I claim is—

1. The combination of pairs of parallel
moving gripping dies having gripping-cav-
ities in different planes, and transversely mov-
ing cutters operating in conjunction with
said cavities; substantially as described.

2. The combination of parallel moving
stepped gripping dies having gripping-cav-
ities in different planes, transversely moving
cutters operating in conjunction with said
cavities, and a header situate diagonally re-
latively to the gripping-dies; substantially as
described.

In testimony whereof I have hereunto set
my hand.

ROBT. NAYSMITH.

Witnesses:

W. B. CORWIN,
H. M. CORWIN.