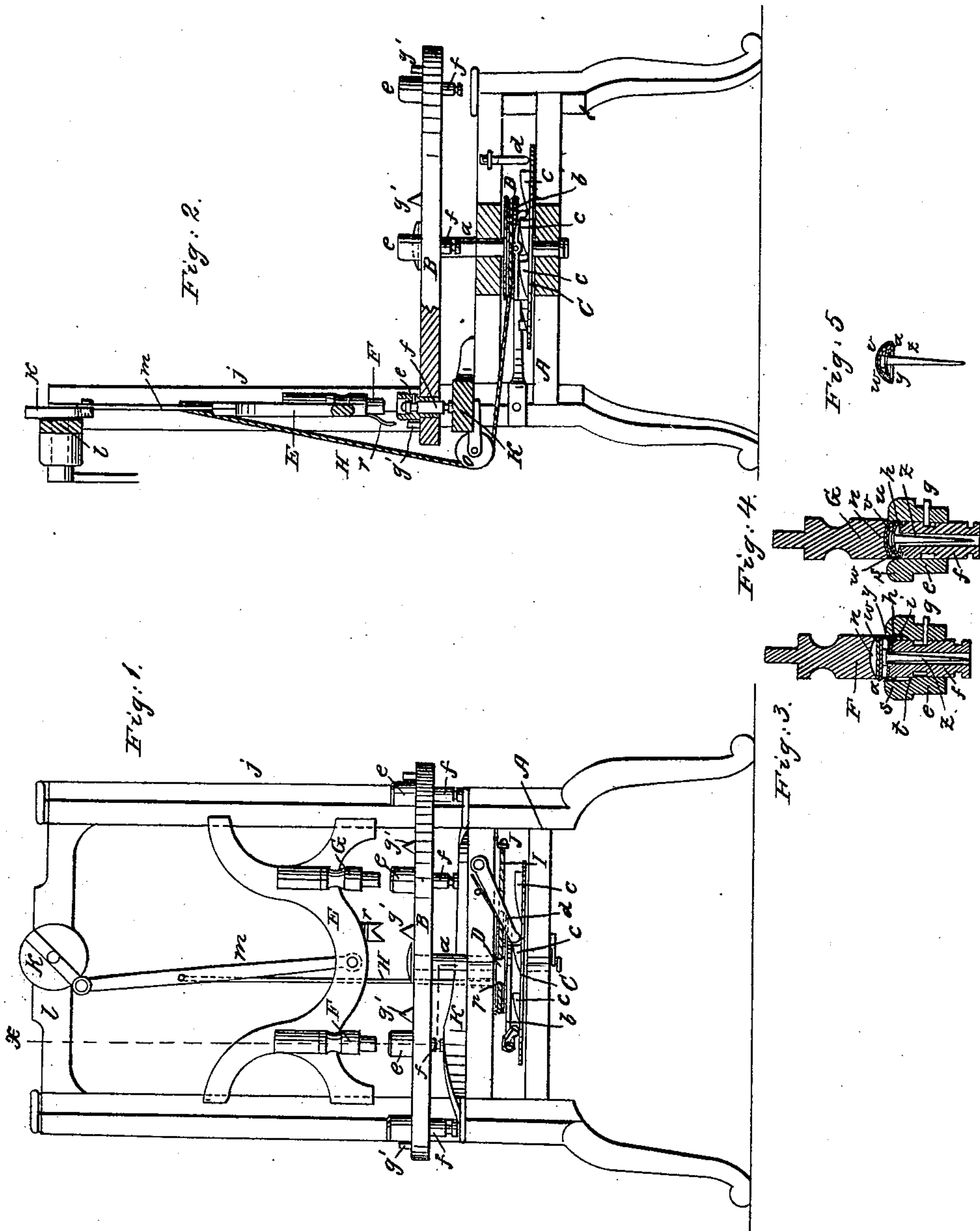


J. P. BLAKE.

Device for Covering Heads of Trunk Nails.

No. 19,123.

Patented Jan'y 19, 1858.



UNITED STATES PATENT OFFICE.

JAMES P. BLAKE, OF WATERBURY, CONNECTICUT.

MACHINE FOR COVERING THE HEADS OF TRUNK-NAILS.

Specification of Letters Patent No. 19,123, dated January 19, 1858.

To all whom it may concern:

Be it known that I, JAMES P. BLAKE, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new and Improved Device for Closing the Metal Shells or Covers Around the Heads of Trunk and other Nails; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a front elevation of my improvement. Fig. 2 is a side sectional elevation of ditto, taken in the line (x) (x). Figs. 3 and 4 are central sectional views of the dies showing the different positions thereof. Fig. 5 is a sectional view of the head of a trunk nail.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in the employment or use of dies constructed, arranged and operated as hereinafter described, whereby the several parts comprising the filling of the head and the shell or cover of the same, may be first snugly compressed together and the shell or cover then closed, firmly around said parts, the device working automatically, rapidly and efficiently.

I would here remark that I distinctly disclaim the invention of a rotating bed for carrying the dies, as this is seen and claimed in J. G. Day's patent rivet machine, of July 3, 1849. Nor do I claim any of the parts shown in Daniel Dodge's nail machine, patented June 22, 1852.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A represents a frame on which a horizontal rotating platform B is placed the axis or shaft (a) of which at its lower end has a ratchet wheel C upon it and also a pulley D directly above the ratchet wheel, and a pawl (b) is attached or pivoted to the periphery of the pulley D, said pawl catching by its own gravity behind the ends of the teeth (c) of the ratchet, and a retaining or holding pawl (d) which is attached to the frame A, also rests or bears on ratchet C.

To the upper surface of the platform B and all around it near its edge a series of metal sockets (e) are placed at equal distances apart. An enlarged view of the sockets is shown in Figs. 3 and 4. Within each socket (e) an arbor (f) is placed and re-

tained therein by a screw or pin (g). These screws pass horizontally through the sockets and their inner ends fit in grooves made circumferentially in the arbors and sufficiently wide to allow the arbors a certain degree of vertical play as shown in Figs. 3 and 4. The arbor (f) is hollow and its upper surface is made of convex form as shown at (h) with an angular edge as shown at (i). The lower ends of the arbors (f) pass through the platform B as shown clearly in Figs. 1 and 3.

E represents a vertical reciprocating frame which is fitted and works between two uprights (j) (j) of the frame A. This frame is operated by means of a crank pulley (k) which is attached to a cross piece (l) at the upper ends of the uprights (j) (j), and a connecting rod (m). To the frame E two dies or plungers F, G, are attached. These plungers or dies are precisely similar in construction, their under surface being of concave form as shown clearly at (n) in Figs. 3 and 4. The space between the two dies or plungers F, G, is precisely equal to the space between the sockets (e).

H is a cord or chain the upper end of which is attached to the frame E. This cord or chain passes around a pulley (o) attached to the frame A and its lower end is attached to the periphery of the pulley D, as shown at (p). A cord or chain I, is also attached to the periphery of said pulley said cord being attached at its outer end to a spring J which is attached to the frame A.

To the upper surface of the platform B, and near its edge or periphery a series of triangular or vertical wedge-shaped projections (q) are attached, and a pendent bar (r) is attached to the frame E, the lower end of the bar (r) being forked or notched corresponding inversely in form with the projections (q).

The upper portions of the sockets (e) are made internally of rather larger diameter than the other or lower portions as shown at (s) and the bottom of the enlarged portion is slightly beveled or inclined as shown at (t).

To the frame A, underneath the platform B and in line with the die or plunger F an inclined plane K is placed.

The operation is as follows. The filling of the heads is formed of a circular piece of tin (u) and card (v), and the shells (w) are previously swaged or struck up by any

proper means the shells being formed of sheet brass or other metal. The circular pieces of tin (*u*) are perforated and the nails (*z*) passed through them and the cards (*v*) are placed within the shells (*w*) the heads (*y*) of the nails being between the cards and tins as shown plainly in Figs. 3 and 4, and 5. The parts thus prepared are placed in the sockets (*e*) the shanks of the nails passing downward within the arbors (*f*) and the shells or covers (*w*) fitting within the upper parts (*s*) of the sockets. Motion is given the crank pulley (*h*) in any proper way and a reciprocating motion is given the frame E and the platform B is made to rotate intermittingly by means of the ratchet C, and pawl D in connection with the spring J. At every dwell of the platform B the dies or plungers F, G enter the sockets (*e*) which are directly below or in line with them. When the die or plunger F enters its socket its arbor (*f*) is raised by the inclined plane K, the arbor (*f*) and die F, approaching each other and compressing the tin (*u*) card (*v*) and shell (*w*) together, and the parts thus compressed are when brought under the die or plunger G acted upon as follows. The arbor (*f*) descends as its lower end passes off the inclined plane K, so that its edge (*i*) will be nearly flush with the inclined bottom (*t*) of the part (*s*) of the sockets, the pin (*g*) retaining the

arbor at the proper height. As the die or plunger G descends, the lower edge or flanch of the shell (*w*) will in consequence of the inclined bottom (*t*) of the part (*s*) be deflected or bent inward and as the die still further descends and is forced "home" the convex portion (*h*) of the arbor (*f*) closes the same snugly around and under the edge of the tin (*u*). Each time the frame E descends and the dies or plungers enter the sockets the forked end of the bar (*r*) passes over a projection (*g'*) and not only retains the platform B or prevents its moving casually but serves to adjust the platform so as to bring the sockets in line with the dies or plungers.

The nails may be fed into the sockets (*e*) and when covered discharged therefrom in any proper way.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is,

The sockets (*e*) provided with the arbors (*f*) in combination with the dies or plungers F, G constructed and arranged so as to operate conjointly as and for the purpose set forth.

JAMES P. BLAKE.

Witnesses:

W. TUSCH,
WM. HAUPT.