

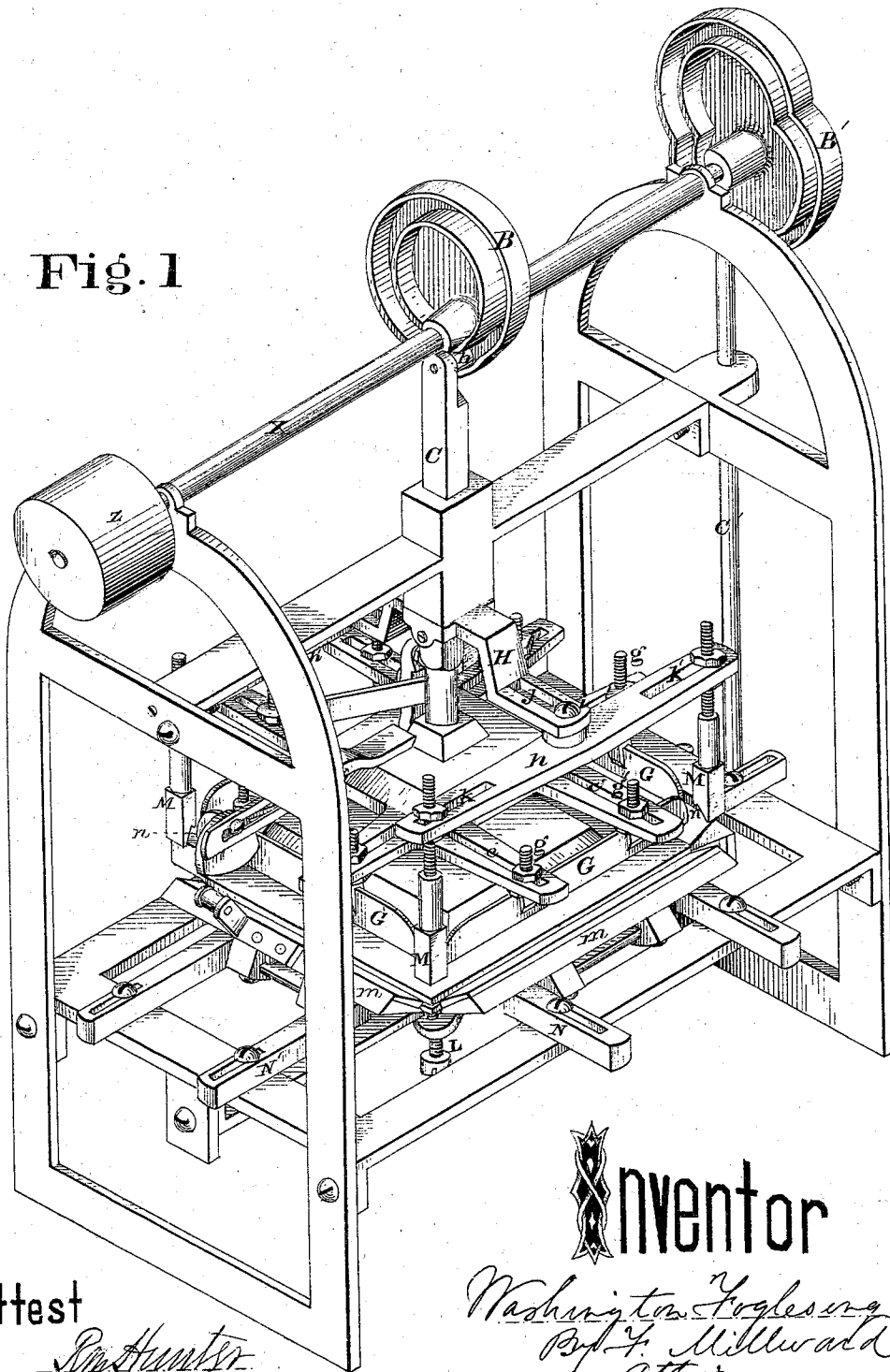
W. FOGLESONG.

Machines for Wiring Sheet-Metal Pans.

No. 136,986.

Patented March 18, 1873.

Fig. 1



Attest
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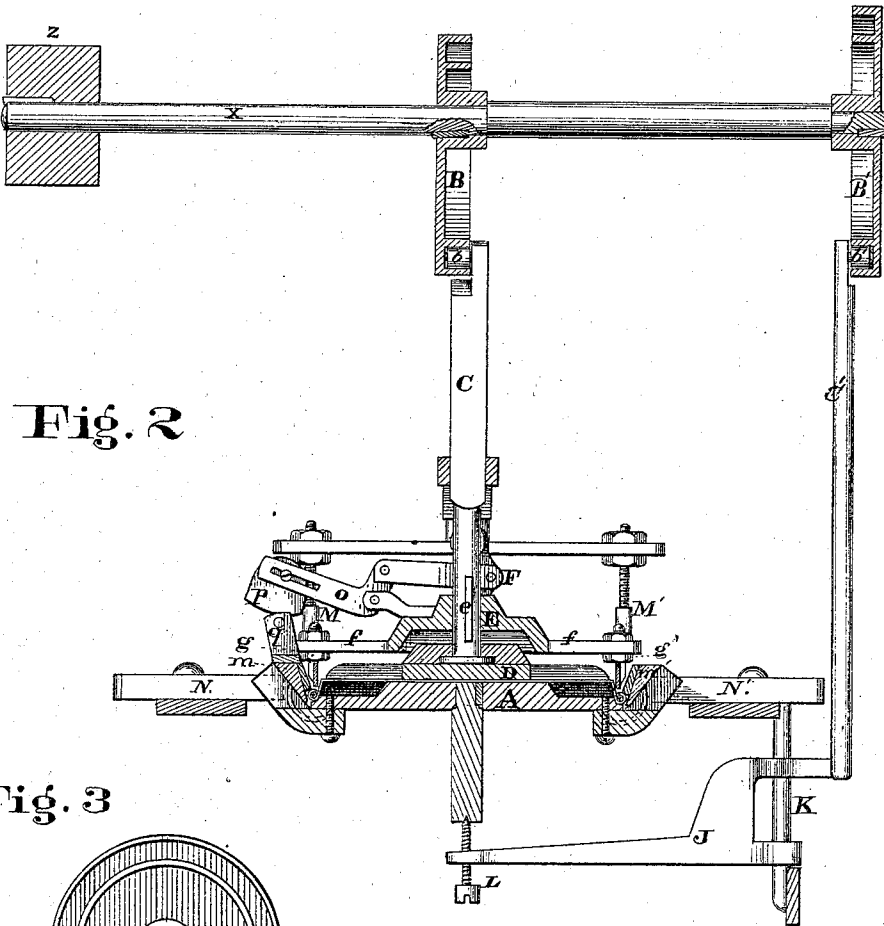


Fig. 2

Fig. 3

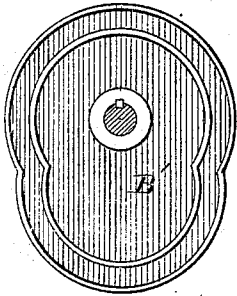
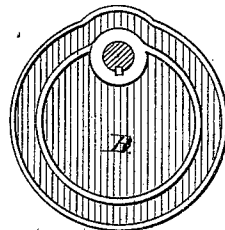


Fig. 4



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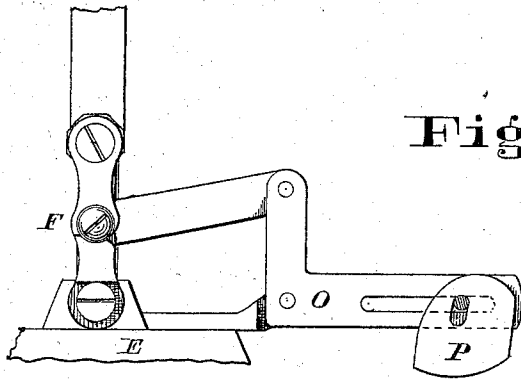


Fig. 5

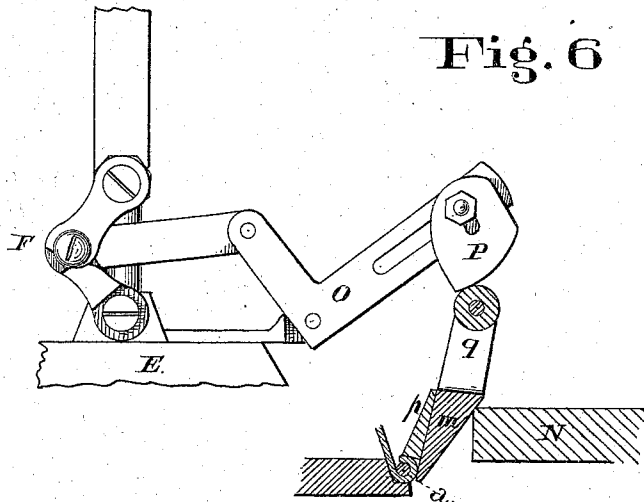


Fig. 6

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UNITED STATES PATENT OFFICE.

WASHINGTON FOGLESONG, OF DAYTON, OHIO, ASSIGNOR TO HIMSELF,
JOSIAH E. BOYER, JOHN McMASTER, AND ISAAC HAAS.

IMPROVEMENT IN MACHINES FOR WIRING SHEET-METAL PANS.

Specification forming part of Letters Patent No. 136,986, dated March 18, 1873.

To all whom it may concern:

Be it known that I, WASHINGTON FOGLESONG, of Dayton, Montgomery county, State of Ohio, have invented a new and useful Machine for Wiring Sheet-Metal Pans, of which the following is a specification:

Nature and Objects of Invention.

My invention consists of a device for applying the customary metal wire and fastening it to the edge of pans formed of sheet metal, in which, by a series of consecutive mechanical movements, the wire is fitted to its place and the edge of the sheet metal forming the pan is reverted and bent over and around the wire, so as to cover and retain it; and my machine is so constructed that at the proper moment the plates which hold the wire in its position are retracted, by means of a trigger, so as to allow the formers or plates which swage the sheet metal around the wires to pass sufficiently round the outer surface of the wire to bend the sheet closely back upon itself, thereby entirely covering the wire; and the four sides of a rectangular pan are thus completely wired by a simultaneous motion of the several parts of a machine embodying my invention.

Description of Drawing.

Figure 1 is a perspective view of a machine embodying my invention. Fig. 2 is a vertical section through the plunger-table, with its hinged wings or swaging-plates and the dies or heads with their appendages. Fig. 3 is an elevation of the cam which governs the motion of the table. Fig. 4 is a similar elevation of the cam which moves the plunger and dies. Figs. 5 and 6 are elevations of the toggle-joint and trigger, which raises the upper head and lifts the annexed pressure-plates from the wires at the proper instant, to allow the wings to swage the metal sheet round it.

General Description.

A pan of sheet metal, shaped and bent to dimensions, is laid bottom upward upon the table A. The shaft X of the driving-pulley Z, passing across the top of the machine, carries two cams, one, B, at its midlength, the other, B', at its extremity. The cam B, by means of a projecting pin and roller, b, moves

a plunger, C, fitted near its lower extremity with two heads, the lower one, D, being a flat die or table fixed at the end of the plunger-rod, while the upper one, E, consisting of a square metallic plate, recessed around the rod, to enable it to fit closely down upon the lower one, is allowed to slide vertically upon the rod, its motion being guided by the projecting feather e, and governed by a toggle-joint, F, attached to the side of the plunger. This head E is furnished with two projecting arms, f f, upon each of its four sides, which arms are slotted their whole length. In these slots c c' rest the perpendicular standards g g', rendered adjustable as to height and position by being screw-threaded, and having tightening-nuts above and below the arms. These standards support four horizontal knife-blades or plates of metal, G G', whose lower edges correspond with the four sides of the pan. Above the toggle F is attached to the plunger a cross-head, H, which has at each extremity attached at right angles a horizontal bar, h h', adjustable on the cross-head by screws i working in the slots j, and having near its ends longitudinal slots k k', in which are adjustable, by means of nuts, screw-threaded vertical standards M M', whose squared lower ends correspond exactly to the four corners of the pan, and have at their inner corners rectangular recesses n, deepening obliquely from above downward, for a purpose hereafter to be noticed. The cam B', by means of a projecting pin and roller, b, and a vertical connecting-rod, O', moves a slide, J, which has a reciprocating motion upon a vertical guide-rod, K, and an arm extending under the center of the table A to the upright standard, to which it is attached by the adjusting-screw L, so as to give to the table a reciprocating vertical motion, so governed by the cam B' as to correspond to the motion of the central plunger and dies, while holding the table closely against the lower die D during a portion of its motion.

The wire for the edges of the pan a, Fig. 6, being bent to the proper form and dimensions, is placed in its position around the pan, which rests upon the table. The revolution of the shaft X and the cam B presses the plunger C and its dies down upon the table, between which and the lower die D the pan is held fast.

The sloping rectangular recesses *n* in the vertical standards *M*, impinging against the corners of the wire, force it into the closest contact with the sides of the pan, and the horizontal blades *G G'* press it firmly down. The table *A* is allowed, by its guiding-cam *B'*, to descend with the dies, so that the hinged wings *m m'*, striking against the adjustable bars *N N'* attached to the frame, are rotated upon their bearings, and bend the edges of the metal sheet around the wire, Fig. 6.

Attached to the toggle-joint *F* is a bell-crank lever, *O*, and trigger *P*, which, when the toggle is drawn out straight by the weight of the head *E*, and its appendages project horizontally from the side of the plunger, Fig. 5, an arm, *q*, is so attached to the hinged wing *m* that as the wing rotates it strikes the trigger *P*, lifts the arm of the crank *O*, presses out the center of the toggle and raises the sliding-head *E* with its arms, thereby lifting the edges of the blades *G G'* from the wire, and allowing the shoulder *p* of the wing *m*, Fig. 6, to pass sufficiently around the wire to bend the sheet metal closely back upon itself, and entirely cover the wire. The continued rotation of the cams *B B'* now raises the die *D* from the table and releases the pan. The sliding upper head *E*, by its weight, straightens out the toggle and slides down upon *D*, and as the table is raised to its original position, it allows the rotary wings *m m'* to fall back to a level with the central portion, and the finished pan is removed to make room for another.

Claims.

1. In combination with the movable table *A*, having the hinged wings *m m'* for bending the edges of the metal sheet, the plunger *C*

and its two heads *D E*, one, *E*, movable, with arms *f f* carrying blades *G G'* for pressing the wire to its place, and one, *D*, stationary, for holding the pan, the whole constructed, connected, and operating substantially as and for the purpose specified.

2. In combination with the elements of the first clause, the cross-head *H*, carrying the corner standards *M M'*, shaped and operating as described, the whole connected and operating substantially as herein specified.

3. In connection with the elements of the two preceding clauses, the slots *c c'* in the arms *f f*, and slots *k k* in the bars *h h'*, and slots *j* in the cross-head *H*, with the accompanying tightening-nuts, or their equivalents, for rendering the blades *G G'* and corner standards *M M'* adjustable for different sizes of pan, the whole being arranged, connected, and operating substantially as and for the purpose specified.

4. In combination with the elements of the first clause, the toggle-joint *F*, bell-crank lever *O*, and trigger *p*, with the arm *q*, or their equivalents, for raising the movable head, arranged and operating substantially as and for the purpose herein specified.

5. In combination with the elements of the preceding clauses, the cam *B'*, connecting-rod *C'*, sliding arm *J*, and screw *L*, adjustable to the bottom of the table *A*, constructed and acting substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

WASHINGTON FOGLESONG.

Witnesses:

FRANK MILLWARD,
J. L. WARTMANN.