(146.)

2 Sheets--Sheet 1.

JOHN W. DODGE.

Stamping Press.

No. 122,817.

Patented Jan. 16, 1872.

Fig. 1

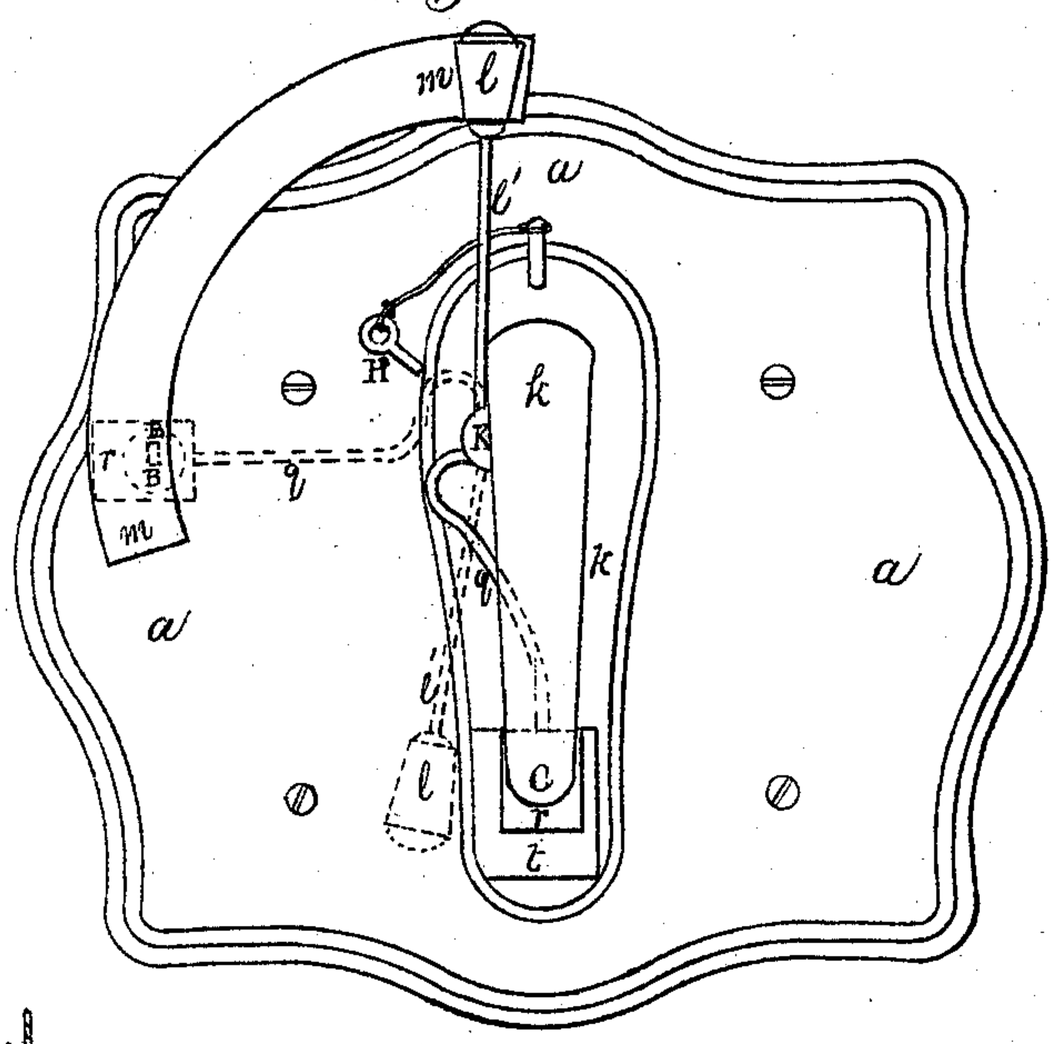


Fig. 3

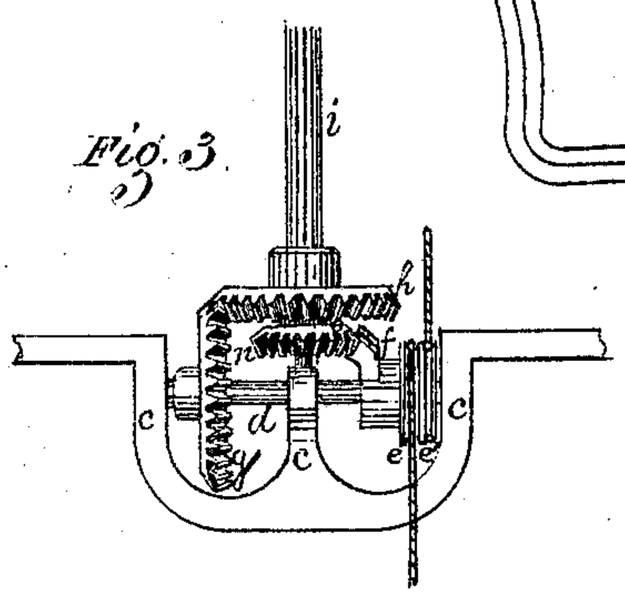
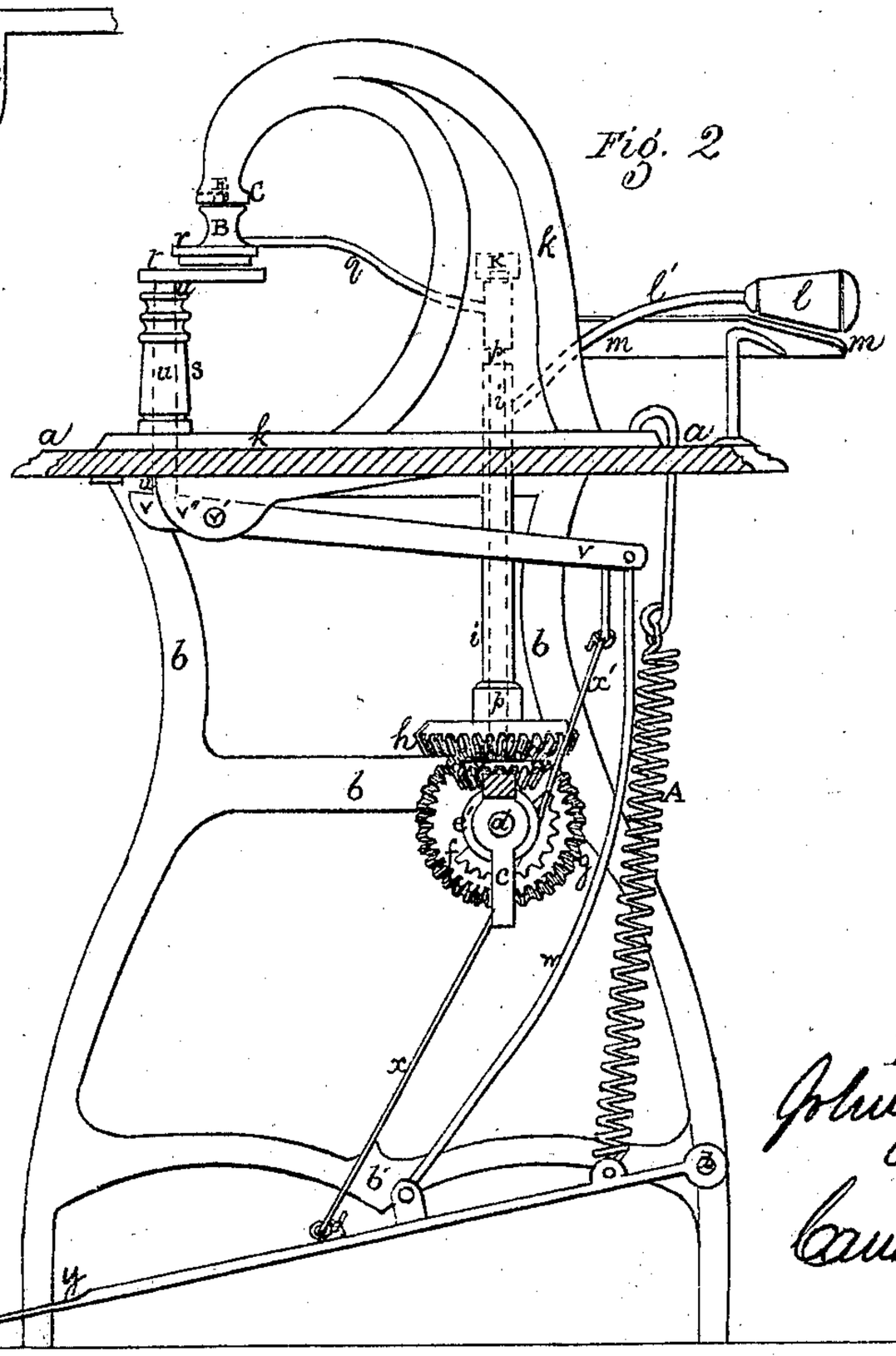


Fig. 2



Witnesses

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Edmund Wright

(146.)

2 Sheets--Sheet 2.

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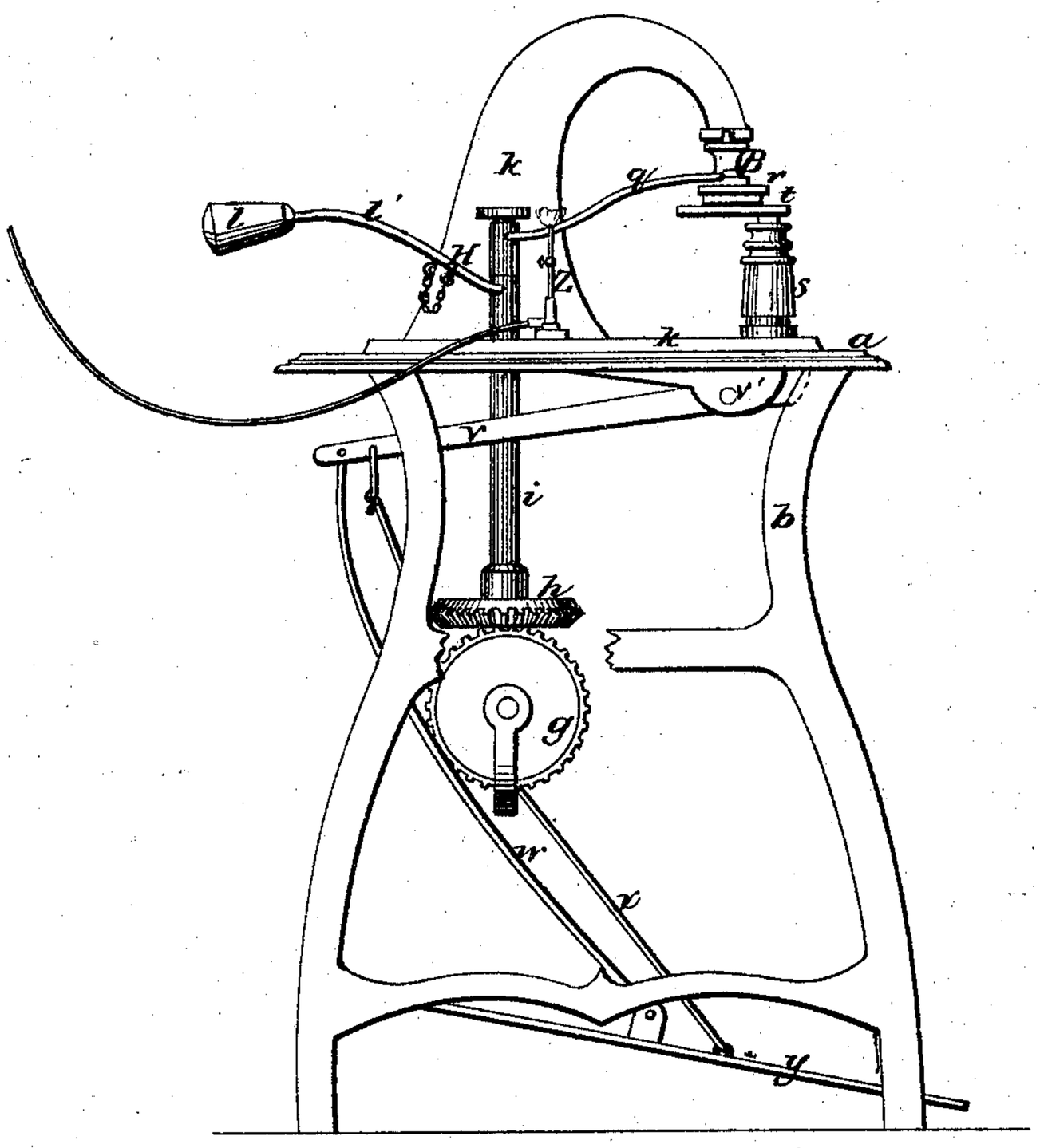
Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN WESLEY DODGE, OF MALDEN, ASSIGNOR TO HIMSELF, CHARLES E. WOODMAN, AND WILLIAM BUTTERFIELD, OF BOSTON, MASS.

IMPROVEMENT IN STAMPING-PRESSES.

Specification forming part of Letters Patent No. 122,817, dated January 16, 1872.

SPECIFICATION.

I, JOHN WESLEY DODGE, of Malden, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in a Self-Inking, Embossing, and Printing Press for Boots, Shoes, &c., of which the following is a specification:

Figure 1 in the drawing represents a top view, Fig. 2 is a vertical section through one side, and Fig. 3 is a front view of the gearing, &c., of my improved machine. Fig. 4 is a side elevation, showing the ink-table removed and a gas-burner substituted.

The present invention relates to certain new and useful improvements in machines for printing, embossing, gilding, &c.; and has for its object the providing a machine which shall be self-inking, simple, and expeditious in operation and economical in cost, it being applicable principally to the printing or gilding of hat-tips, &c., and to the embossing or printing on boots, shoes, &c. My improvements consist in so arranging and operating a series of mechanical devices, to be fully explained in due course, as to cause, by one movement of a treadle, an ink-roller to pass over an ink-table, from which it receives the ink, which is imparted to a die that passes over the ink-table in a contrary direction to it, and is carried above a bed-plate or impression-platen holding the article to be operated upon, which is pressed up against the die so as to receive the impression from it. It also consists of so arranging and operating the several devices connected with the machine as to allow the die to be used independently of the ink-roller, so as to be carried over a gas-jet or other heating apparatus and thence back over an impression-platen, for the purpose of embossing, &c.

In the drawing, *a a a* represent the top of a stand or table supported by a frame, *b b b*, to which is attached a frame, *c c c*, which forms bearings for a shaft, *d*, which is provided with pulley-wheels *e e'*, and a segmental vertical gear, *f*, on one end, and a vertical gear, *g*, on its other end. The vertical gear *g* connects with and operates a horizontal gear, *h*, attached to a vertical shaft, *i i*, that passes up through the top of the stand or table *a a a* and the bottom of a curved frame, *k k*. Attached to the shaft *i i*, by a curved rod, *l'*, or other suitable contrivance, is a roller, *l*, formed so as to pass over and receive from a curved ink-table, *m m*, the ink deposited upon it. The segmental gear *f* connects with, and is detached from, when reaching its terminus at either end, a small horizontal gear, *n*, which is formed on the top with a collar, *o*, that forms the seat of a socket formed in the gear *h*, which fits over and revolves on the collar *o*. Connected with and operated by the gear *n* is a shaft, *p*, which revolves within the shaft *i i* and finds a bearing in a lug, K, formed on the side of the curved frame *k k*. Formed on and operated by the shaft *p* is a bent rod, *q*, or other suitable contrivance, which holds a die, *r*, which is raised sufficiently above the ink-roller *l* that in passing over it will receive the ink from it. The bottom of the curved frame *k k* is formed at the front with a standard or socket, *s*, which forms a seat for an impression-platen, *t*, which is connected with a piston, *u*, that travels vertically in the standard or socket *s*, and connects with and is operated by a lever-arm, *v v*, that turns on a pivot, *v'*, supported by bearings *v''* formed on the under part of the bottom of the frame *k k*, and is actuated by a bent movable rod, *w*, or other suitable device attached to a lever foot-treadle, *y*, turning on a rod, *z*, connecting with the frame *b b b*. Attached to the lever-treadle *y* and the frame *k k* or stand or table *a a a* is a spiral spring, A. Connecting with and operating the pulley-wheel *e* is a chain or cord, of rawhide or other suitable material, *x*, which is attached to and operated by the treadle *y*. And connecting with and operated by the pulley-wheel *e'* is another similar chain or cord, *x'*, which is attached to the lever-arm *v v* for the purpose of reversing the revolution of the shaft *d*.

The operation of my improved machine is as follows: Reference being had to the drawing, it will be seen that by applying a downward pressure to the lever-treadle *y* the bent movable rod *w* is brought down so as to lower one end and raise the other end of the lever-arm *v v*, so as to raise the piston *u* and consequently the impression-platen *t* attached to it. By the same action of the treadle *y* the chain or cord *x* is made to operate on the pulley-wheel *e* in such a manner as to revolve the shaft *d*, and consequently the vertical gear *g*

and segmental vertical gear *f* connected with it, by which operation the horizontal gears *h* and *n* are revolved in a contrary direction with each other, so that the shafts *i i* and *p* operate the ink-roller *l* and die *r* in such a manner as to rotate them horizontally in an opposite direction with each other, the ink-roller being carried along over and receiving ink from the ink-table *m m*, while the die *r* is carried above the ink-roller, from which it receives the ink, over the impression-platen *t*, which, rising, as above described, is pressed against the die *r*, which is formed with a stem, B, that finds a bearing against the bottom of the curved end C of the frame *k k*, which is provided with a slot formed half-way across it to receive a dog, E, formed on the top of the stem B, so as to prevent the die *r* from being carried beyond its proper position for receiving the impression from the impression-platen *t* when the latter is pressed up against it. By relieving the treadle *y* of the pressure the action of the spring A and bent rod *w* connected with the treadle *y* so operates the lever-arm *v v* as to lower its piston end and elevate its other end, so that the pulley *e'* is acted upon by the cord or chain, &c., *x'*, in such a manner as to revolve the shaft *d*, and consequently the devices connected with it, in the contrary direction from before, thus causing the die *r* to swing back above the ink-roller *l* over the ink-table *m m*, and the ink-roller *l* to be brought toward the front of the stand *a a a*. By applying and removing the pressure to and from the treadle *y*, as above described, the ink-roller is readily supplied with ink from the ink-table *m m*, which imparts it to the die *r* as it passes either way under it, and the die *r* is carried either above the impression-platen *t* or over the ink-table *m m*, a dog, E, traveling in the slot formed in the curved end C of the frame *k k* preventing the die *r* from passing beyond the desired position above the impression-platen *t*, and the segmental gear *f* regulating, by its disconnection from the gear *n*, the extent of the movement of the ink-roller *l* and die *r*.

In using the machine for embossing or gilding, or for any process when the die is required to be heated, the ink-roller *l* is disconnected from the operating mechanism by raising the shaft *i*, to which it is attached, said shaft having a limited vertical play on the shaft *p*, thereby disconnecting the gears *h g* and rendering the former inoperative. When thus raised the arm *l'* of roller *l* is moved around and confined by a pin, H, on the side of the curved frame *k*, as shown in Fig. 4, thus holding the ink-roller out of the way. The ink-table is removed and a gas-burner, *Z'*, or other suitable heating apparatus is substituted in its place, over which the die *r* is brought and heated, and then carried over the impression-platen *t*, the operation being precisely similar to that above described for simple printing.

Having thus fully described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

1. A self-inking machine for printing, embossing, gilding, &c., provided with an ink-roller, *l*, and die *r*, so operated by and in connection with the several devices hereinabove described as to partially revolve the ink-roller *l* and die *r* forward and backward horizontally in a contrary direction with each other, substantially as specified.

2. The die *r*, arranged and operated in connection with a gas-jet or other heating apparatus and the several devices hereinabove described so as to act independently of the ink-roller *l*, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN WESLEY DODGE.

Witnesses:

SAML. M. BARTON,

CARROLL D. WRIGHT. (146)