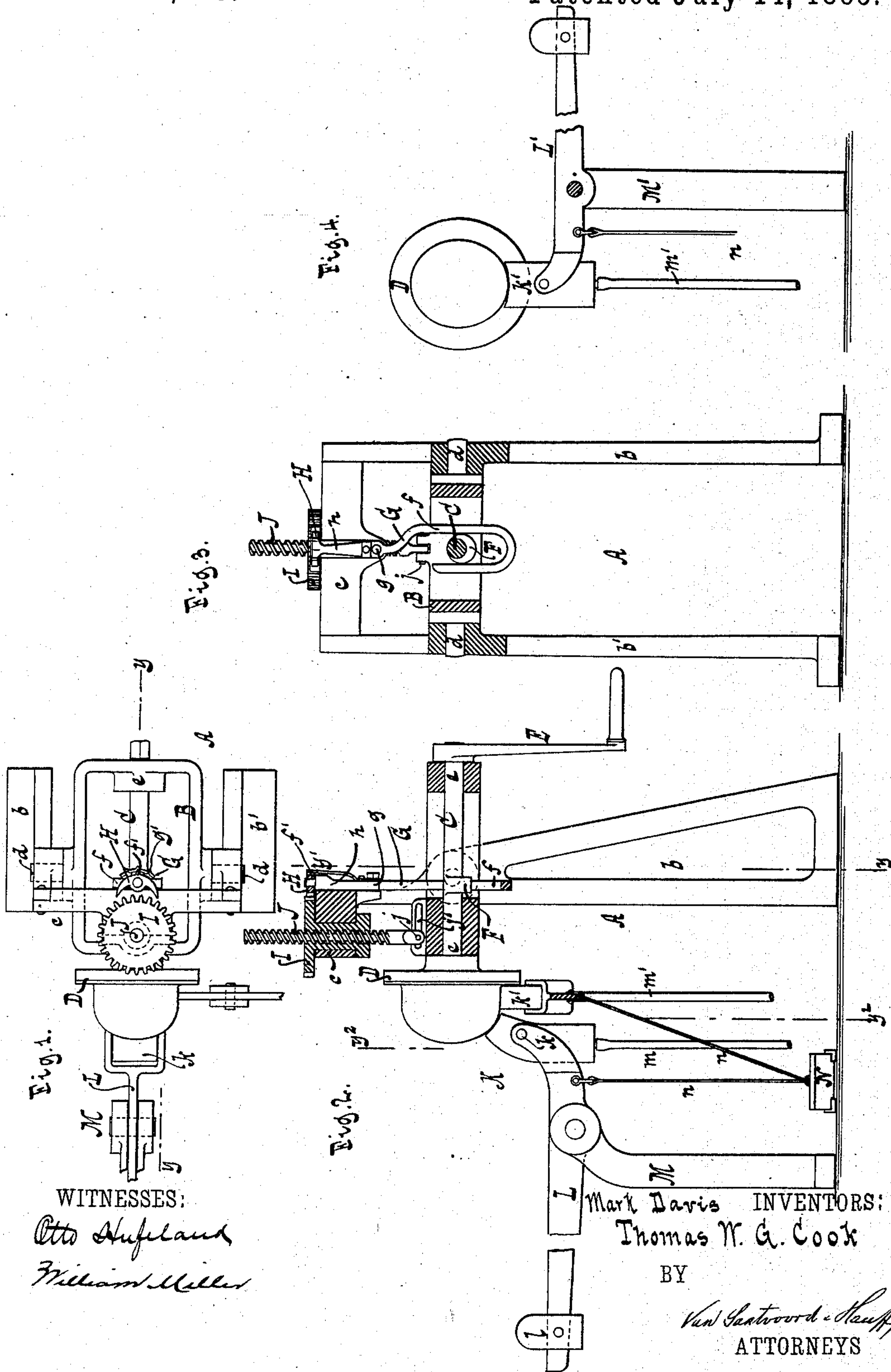


(No Model.)

M. DAVIS & T. W. G. COOK.
HAT IRONING MACHINE.

No. 322,263.

Patented July 14, 1885.



UNITED STATES PATENT OFFICE.

MARK DAVIS AND THOMAS W. G. COOK, OF NEW YORK, N. Y.

HAT-IRONING MACHINE.

SPECIFICATION forming part of Letters Patent No. 322,263, dated July 14, 1886.

Application filed April 23, 1885. (No model.)

To all whom it may concern:

Be it known that we, MARK DAVIS and THOMAS W. G. COOK, both citizens of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Hat-Ironing Machines, of which the following is a specification.

This invention has for its object to provide novel mechanism for ironing hats; and it consists in the combination of devices hereinafter described and claimed, reference being made to the accompanying drawings, illustrating our invention, in which—

Figure 1 is a plan view of our improved hat-ironing machine. Fig. 2 is a vertical section of the same in the plane $y y$, Fig. 1. Fig. 3 is a vertical section in the plane $y' y'$, Fig. 2. Fig. 4 is a vertical section in the plane $y^2 y^2$, Fig. 2.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates the frame of our ironing-machine, which consists of two standards, $b b'$, and an upper cross-piece, c . B is the swinging frame, which turns on pivots d , journaled in the standards of the frame A, and in this swinging frame is arranged a shaft, C, on which is mounted the hat-block D, having its bearings at e . A rotary motion is given to the shaft, and consequently to the hat-block, by means of a crank, E, Fig. 2, as in the example shown in the drawings; but any other suitable means may be employed to effect the said purpose. On the shaft C is formed or secured an eccentric or cam, F, which engages with one arm, f , of a lever, G, which is pivoted to the frame at g , its other arm, h , carrying a reversible pawl, H, which engages the teeth of a ratchet-wheel, I, when the lever G is caused to oscillate by the action of the cam on the arm f , the latter being suitably curved around said cam.

The ratchet-wheel I, previously mentioned, has a bearing in the cross-piece b , and is provided with internal threads, which engage the threads on a feed-screw, J, which is attached at its lower end to the swinging frame B; and in the example shown the attachment is effected by means of a pivot extending through the end of the screw and traveling in the parallel slots j' , formed in projections on the swinging

frame, in order to allow for the obliquity of the swinging frame.

In order to make the pawl F reversible it is provided with a small projection, f' , and is subjected to the action of a spring-plate, F', which is secured to the lever G, and provided with recesses g' , the end ones of which are engaged by the projection f' on the pawl when the same is in either of its engaging positions, while the central one is engaged when the pawl does not act on the ratchet-wheel.

To effect the ironing, one or more irons are used. In the example shown in the drawings an iron, K, is used to iron the curved portions of the crown of the hat, and a second iron, K', to smooth the brim and the remaining portion of the crown.

The iron K is loosely mounted on pivots at k to a lever, L, which is pivoted to a post, M, and has attached thereto a weight, l , whereby the iron is constantly pressed against the hat. The iron K' is similarly mounted, Figs. 2 and 4, on a weighted lever, L', on the post M', and both irons are heated by gas-burners situated in the irons, to which gas or other heating agent is led by the tubes $m m'$; and since it is evident that the heat will travel upward, the irons are best placed underneath the hat. To withdraw the irons from the hat they are both connected to a suitable treadle, N, by a rope, n .

It will be seen that the mechanism for raising and lowering the end of the frame which carries the hat-block is connected with the frame between the hat-block and the center of the axis on which the frame rocks, whereby the frame can be swung by the rotation of the shaft which carries the block.

From the foregoing description it will be seen that when the shaft C is rotated the pawl F is actuated and engages with the teeth of the ratchet-wheel I, whereby the feed-screw imparts a motion either upward or downward, depending on the direction of the rotation of the shaft, to the swinging frame, and all parts of the hat can be thus brought into contact with the irons.

We are aware that a swinging frame provided with a rotating shaft carrying a hat-block is not broadly new with us; but our invention differs from prior constructions in that the hat-block is raised and lowered by the rotation of the shaft which carries the hat-block, while

the ironing device is entirely independent of the swinging frame, and can be manipulated without imparting motion to the hat-block.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a hat-ironing machine, of a swinging frame, a rotating shaft carried thereby, and a hat-block on the shaft, with a screw connected with the said frame, a cam on the shaft, and connections between the cam and screw for rotating the latter, substantially as described.

2. The combination, in a hat-ironing machine, of an iron for ironing the hat, with a swinging frame, a shaft journaled in the frame, a hat-block on the shaft, and a feed-screw connected with the frame, and by its turning movement acting to swing the frame on its pivotal bearings, substantially as described.

3. In a hat-ironing machine, the combina-

tion, with the swinging frame, of the rotary shaft having bearings in the swinging frame, the hat-block mounted on the shaft, the weighted irons K K', the lever G, the eccentric or cam on the shaft constructed to engage the said lever, the ratchet-wheel, the screw attached to the shaft and adapted to be engaged by threads in the ratchet-wheel, and the reversible pawl on the lever, which engages the ratchet-wheel, substantially as shown and described.

In testimony whereof we have hereunto set our hands and seals in the presence of two subscribing witnesses.

MARK DAVIS. [L. S.]
THOMAS W. G. COOK. [L. S.]

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.