

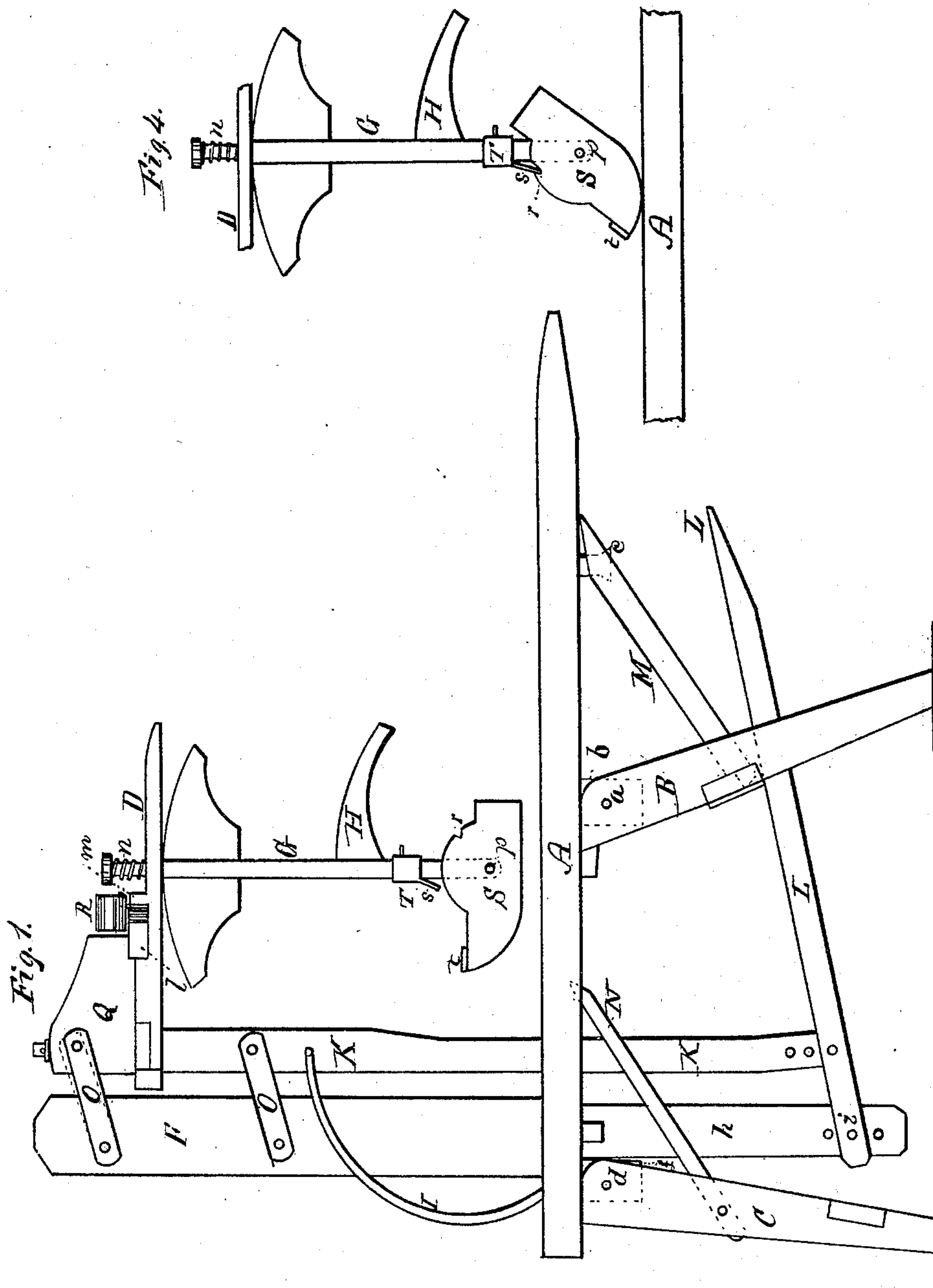
(Model.)

2 Sheets—Sheet 1.

J. K. O'NEIL.
Ironing Machine.

No. 233,007.

Patented Oct. 5, 1880.



WITNESSES:

A. S. Brown,
P. C. By.

By *his* Attorney,

INVENTOR:

John K. O'Neil,
J. S. Brown.

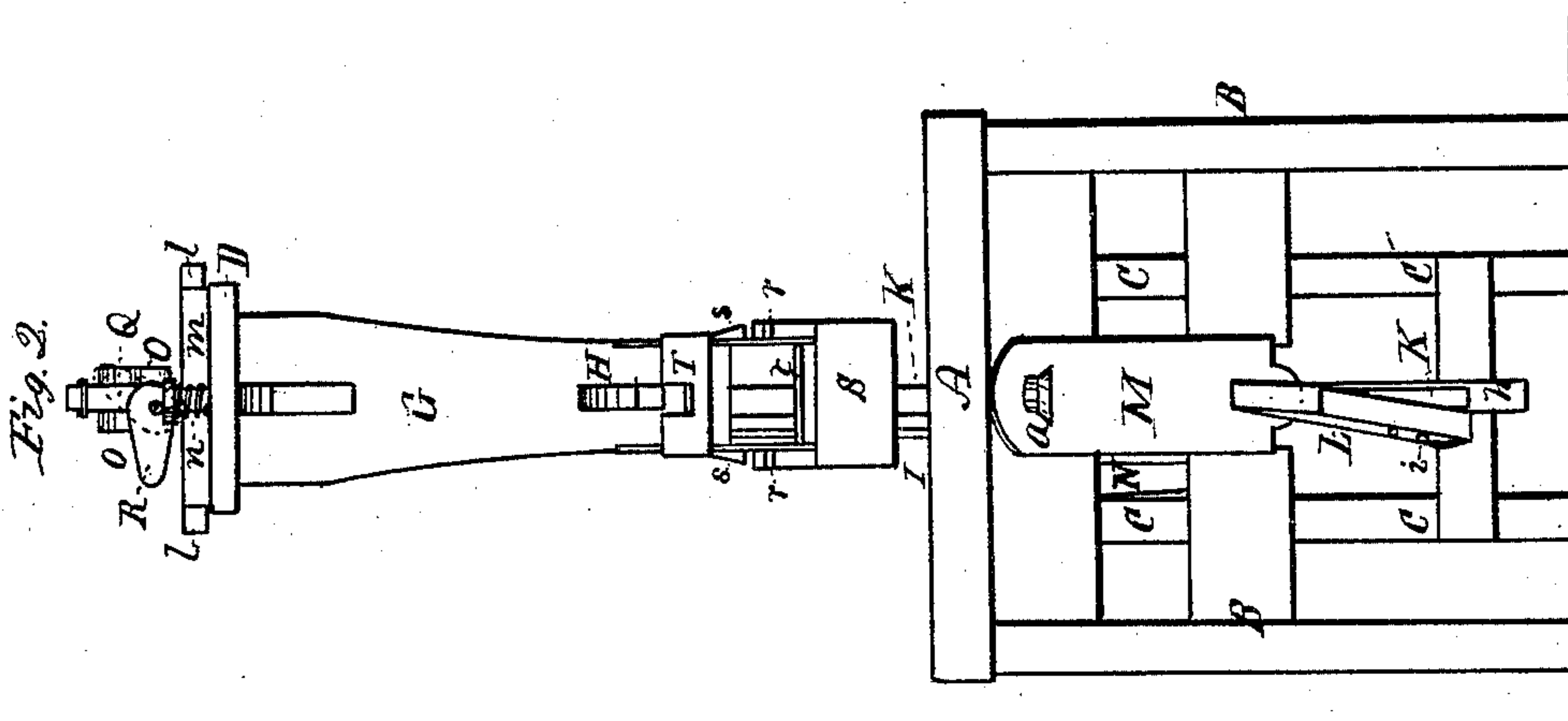
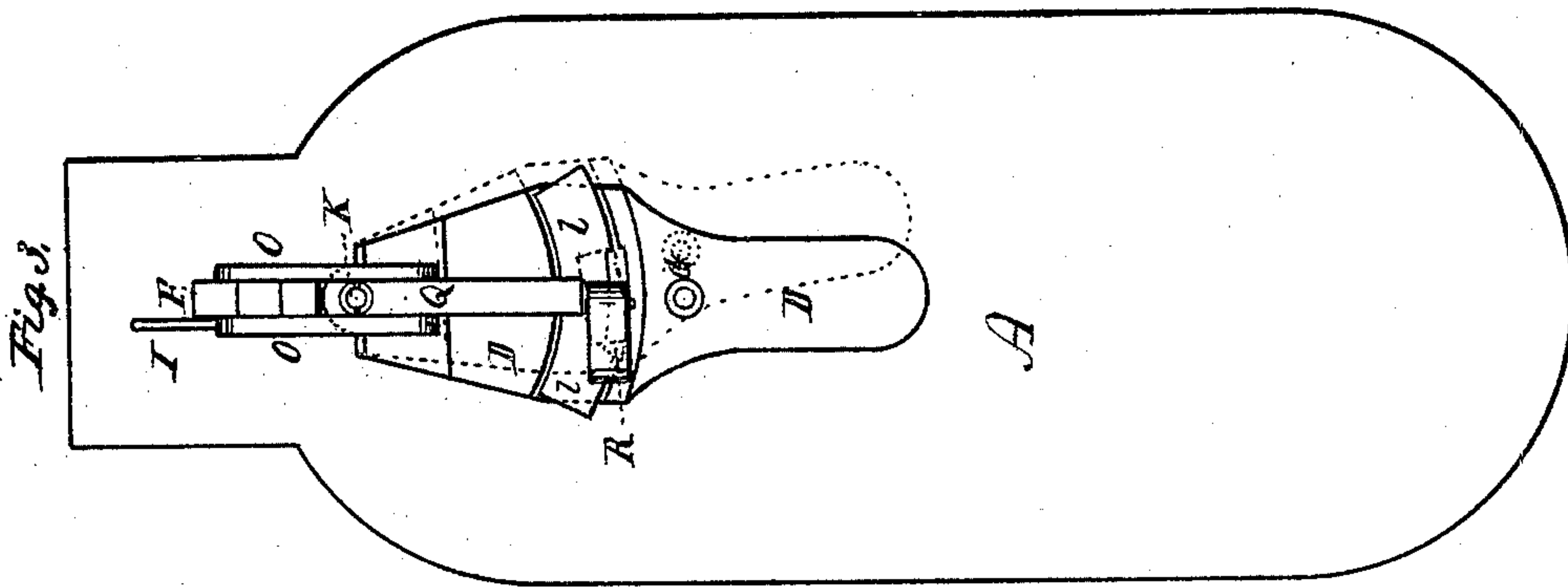
(Model.)

2 Sheets--Sheet 2.

J. K. O'NEIL.
Ironing Machine.

No. 233,007.

Patented Oct. 5, 1880.



WITNESSES:

A. S. Brown,
J. C. Day.

INVENTOR:

John K. O'Neil,

By his Attorney,

A. S. Brown.

UNITED STATES PATENT OFFICE.

JOHN K. O'NEIL, OF TROY, NEW YORK.

IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 233,007, dated October 5, 1880.

Application filed July 23, 1880. (Model.)

To all whom it may concern:

Be it known that I, JOHN K. O'NEIL, of Troy, in the county of Rensselaer and State of New York, have invented an Improved Ironing-Machine; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a side elevation of my improved ironing-machine; Fig. 2, a front view of the same; Fig. 3, a top view thereof; Fig. 4, a view of the smoothing-iron and suspending-arm detached, the former locked to the latter in position for polishing.

Like letters designate corresponding parts in all of the figures.

Some parts of this machine, including the suspending-cap D, suspending-arm G, and handle H, are constructed substantially and perform the same functions as the corresponding parts in a former application filed by me, and for which Letters Patent are about to issue. This machine also is capable of folding up compactly for transportation, as is the machine therein described.

The mode of constructing to fold and reduce to compact form is somewhat different from the former mode, as follows: The front pair of legs, B B, framed together, are hinged at *a a* to a downwardly-projecting lug, *b*, of the table or board A, so that they can be swung and folded forward and upward under the table, but cannot be swung backward beyond the forwardly-bracing position in which they stand to support the forward part of the machine. A brace, M, pivoted at *c* to the under side of the ironing-board, locks these legs in their standing position in the manner shown, but can be swung aside for folding up the said legs. The rear legs, C C, also framed together, do not extend above the table to form a supporting-standard for the suspending-cap, as in the former application, but they are hinged at *d d* to a downwardly-projecting lug, *f*, of the table, so that they also may be swung forward and upward under the table in the same way as the front legs. A brace, N, pivoted to a cross-round of these legs, and taking into a notch, *g*, in the under side of the table, secures these legs in their backwardly-bracing position for

supporting the rear part of the machine, and back of this position the legs are not allowed to swing.

The supporting-standard F, above the table, has a long tenon, *h*, projecting down through a mortise in the table, and this tongue supports the rear end of the foot-lever L, which is pivoted thereto at *i*. This standard does not directly support the suspending-cap D, as in my former application, and I have adopted a new method of suspending the said cap D and of applying the downward pressure thereto by the foot-lever L, this constituting one feature of my present invention, substantially as follows: The connecting-rod K between the foot-lever L and suspending-cap D extends upward through the table nearly or exactly parallel with the standard F and a little distance in front of it, and it is connected with the said standard by means of one or more pivoted parallel bars, O O, two (or two pairs) of them being shown in the drawings, and being the preferable construction. By this means the connecting-rod is kept in a perfectly upright position with very little friction, and it cannot get out of place. Its weight and that of the suspending-cap D and the smoothing-iron and suspending-arm, as well as the foot-lever, are sustained, and somewhat more, by a spring, I, arranged as represented, or in any other suitable manner. Thus the suspending cap and arm are kept raised, and the smoothing-iron held lifted from the table thereby, except when forced down upon the table by the operator depressing the foot-lever L.

On the upper end of the connecting-rod K, which carries the suspending-cap D, is secured a forwardly-projecting brace-block or bracket, Q, with an arc-shaped bearing-piece, *l*, at the front end thereof, under which the suspending-cap, which is pivoted to the connecting-rod, swings horizontally to the right and left, and is held firmly in a horizontal position thereby, as indicated in Fig. 3, which shows the brace-block Q and its bearing-piece *l* stationary, while the suspending-cap is shown in two positions—one by full lines and one by dotted lines. By this means of mounting and moving the suspending-cap D it is raised and lowered in a constantly horizontal position par-

allel with the table below, rendering the movement of the smoothing-iron and its pressure even and constant.

The parallel bars O O are represented as strictly parallel, and theoretically this is the proper construction; but in practice it is desirable to have the upper bar or bars a little out of parallel line with the lower bar or bars, as represented by dotted lines in Fig. 1, where-
by the connecting-rod or standard F is moved slightly forward in its downward movement, and thereby overcomes or compensates for any slight yielding of parts from imperfection of construction, especially of the suspending-arm G. The brace-block Q is removable from the connected rod K, as indicated by the construction shown in the drawings, and then the suspending-cap may be removed therefrom.

Ordinarily a free lateral movement is desirable for the suspending-cap D, especially in ironing large plain articles; but frequently, especially in ironing starched articles, and polishing them in parts, it is preferable to hold the suspending-cap firm in position without lateral movement for the time being. To effect this I provide a means of locking the suspending-cap to the brace-block Q above. This can be accomplished in various ways; but I have shown in the drawings a convenient means, and preferable to any other now known to me. A hand-cam, R, is pivoted to a raised part, *m*, of the suspending-cap D, and arranged, as shown in Fig. 1 and in full lines in Fig. 2, so that ordinarily it does not bear on the arc-shaped bearing-piece *l* of the brace-block; but by turning it up into the position shown by dotted lines in Fig. 2 it presses or clamps the said bearing-piece and holds the suspending-cap rigidly in a fixed position. This cam is readily reached and operated by the attendant.

The suspending-arm G is constructed and operates as set forth in my former application, above referred to; but I have added one feature of improvement, as shown in the accompanying drawings. It is a spring, *n*, on the said arm, above the suspending-cap, or otherwise arranged to lift and hold the rocking surface of the arm close up under the suspending-cap, while it at the same time allows a sufficiently free rocking movement and forward and backward motion of the suspending-arm and smoothing-iron suspended thereby. The smoothing-iron is also thereby fully sustained and raised from the table when not ironing.

The smoothing-iron S is of peculiar construction and arrangement, so that it can be used both for ordinary ironing and for polishing. It is pivoted at *p* to the strap-irons on the lower end of the suspending-arm G, and in ordinary ironing it turns or vibrates freely on these pivots, thus retaining a horizontal position flat on the table, and capable of adapt-

ing itself to the surface of the article it is smoothing. The greater part of its length also has a plane surface on the bottom for general use; but it also has a curved or partially-cylindrical surface at one end, as shown in Figs. 1 and 4, for the purpose of polishing. When used for the latter purpose it is to be tilted into an inclined position, as shown in Fig. 4, and is to be retained fixed in that position while thus employed. To retain it thus tilted I form notches *r r* in the upper side edges and use a sliding detent, T, on the arm G, with a catch, *s*, thereon to catch into the notches *r*, as shown in Fig. 4, the iron being inclined or tilted as far as the construction allows, so that no catch on the other side of the suspending-arm is necessary. The detent is made to embrace the suspending-arm elastically, so as to be retained in a raised position, as shown in Fig. 2, when not to be in action; but no harm arises if it even rests on the top of the iron.

The smoothing-iron is a shell open at the top to receive the heating-blocks. Each block is inserted into the shell on the side of the suspending-arm opposite to the curved end, room being furnished for the purpose. A cross-bar or stop, *t*, covers the top of the curved end of the shell, so that the heating-blocks shall not fall out when the shell is tilted for polishing. The smoothing-iron receives all its movements by the handle H in the hand of the operator.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The connecting-rod or movable standard K, connected with the fixed standard F by parallel, or nearly parallel, pivoted bars O O, and bearing the suspending-cap D, substantially as and for the purpose herein specified.
2. The combination of the suspending-cap D, having a horizontal movement, the fixed brace-block Q, and a device, R *l*, for coupling the two together, substantially as and for the purpose herein specified.
3. The smoothing-iron constructed with a plane part and a curved part for both ironing and polishing, in combination with the suspending-arm G, provided with a detent, T, to hold it in a tilted position while in use for polishing, substantially as and for the purpose herein specified.
4. The combination of the pivoted smoothing-iron shell open at the top, and provided with the stop-bar *t*, the suspending-arm G, detent T, and detent-notch *r*, substantially as specified.

The foregoing specification signed by me.

JOHN K. O'NEIL.

Witnesses:

JOHN P. CURBY,
THOMAS J. PITTS.