(No Model.) 2 Sheets—Sheet 1.

# J. McKAY.

## IRONING MACHINE.

No. 456,658. Patented July 28, 1891.

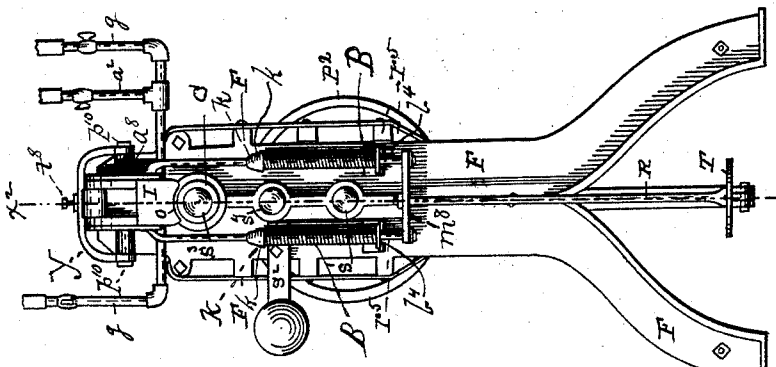


Fig. 1.

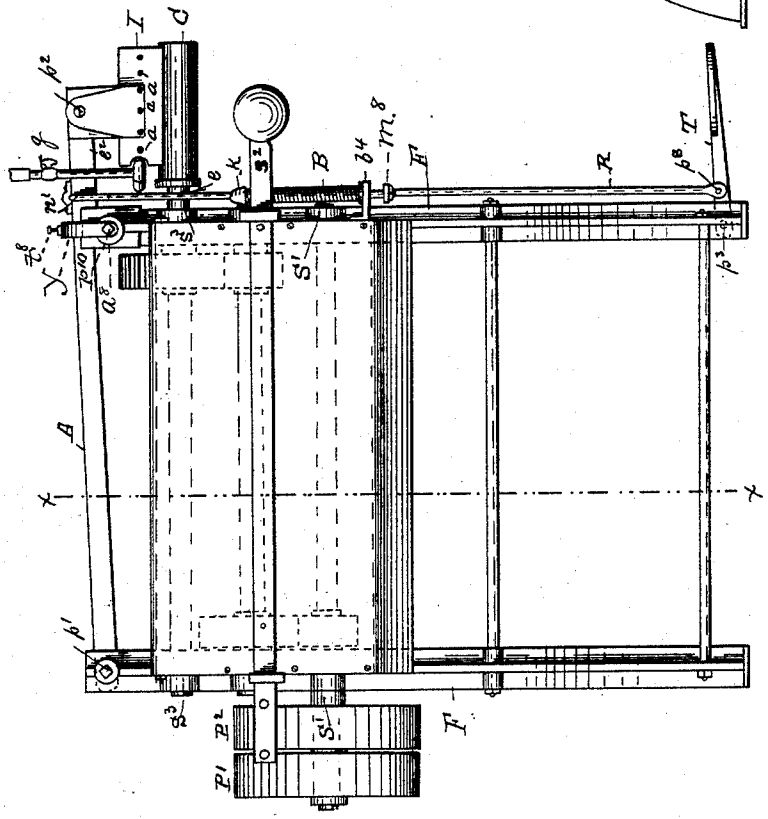


Fig. 2.

WITNESSES

William A. Swett

Charles S. Brintnall

INVENTOR

Joseph McKay

by W. C. Hagan atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

# J. McKAY.

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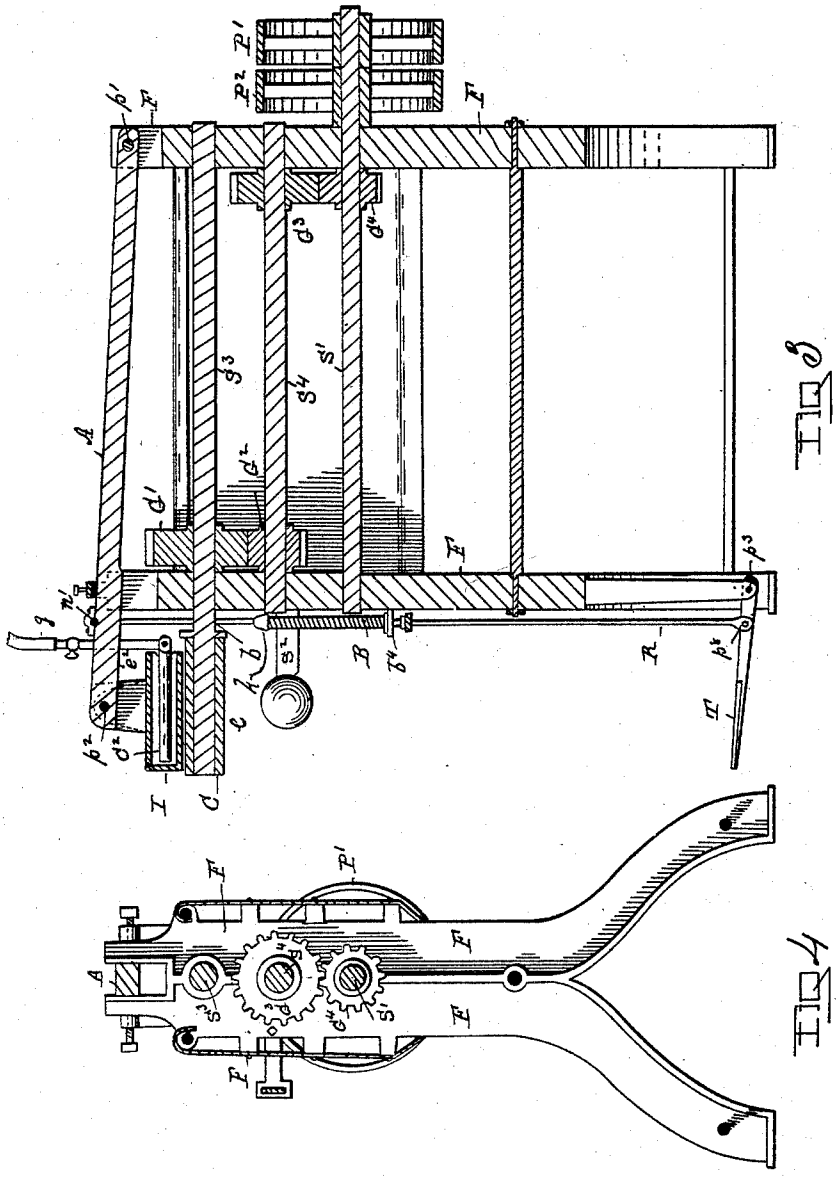


Fig 3



Fig 4

WITNESSES

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# UNITED STATES PATENT OFFICE.

JOSEPH McKAY, OF TROY, NEW YORK.

## IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 456,658, dated July 28, 1891.

Application filed March 3, 1890. Serial No. 342,331. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH McKAY, of the city of Troy, county of Rensselaer, and State of New York, have invented a new and useful Improvement in Ironing-Machines, of which the following is a specification.

My invention relates to improvements in ironing-machines, and more particularly to that class of them in which an iron that is concavely rounded out in cross-section is used in connection with a cloth-covered roller; and the purpose and object of my invention is to better adapt this class of devices to do the work for which they are designed.

Accompanying this specification to form a part of it there are two sheets of drawings, containing four figures, illustrating my invention, with the same designation of parts by letter reference used in all of them.

Of these illustrations, Figure 1 is a front end elevation of my improved ironing-machine. Fig. 2 is a side elevation of the same machine. Fig. 3 is a section taken on the line $x^2$ $x^2$ of Fig. 1, and Fig. 4 is a cross-section of the mechanism taken on the line $x$ $x$ of Fig. 2.

The several parts of the apparatus thus illustrated are designated by letter reference, and the function of the parts is described as follows:

The letter F designates the frame of the machine, within and upon which the several parts are arranged to operate.

The letter P′ designates a loose pulley running on the shaft S′, and $P^2$ the driving-pulley by which said shaft is operated and power communicated to the apparatus.

The letter $S^2$ designates a belt-shifter.

The letter C designates the cloth roll arranged on the end $e$ of the shaft $S^3$, which projects beyond its bearings $b$. The letter G′ designates a gear-wheel on said shaft $S^3$, and $G^2$ a gear-wheel on the shaft $S^4$, which meshes into the gear-wheel G′ to operate the shaft $S^3$ and the cloth roller thereon, and the letter $G^3$ a gear-wheel, also on the shaft $S^4$, which latter gear meshes into the gear-wheel $G^4$ on the driving-shaft S′, as shown at Fig. 3.

The letter A designates an arm that at its rear end is pivoted to the top of the frame F at $p'$ and at its front end $e^2$ is projected beyond the frame.

The letter I designates the iron, which at $p^2$ is pivotally hung from the front end $e^2$ of the arm A, so as to be automatically adjustable on the engagement of its rounded-out surface with the articles being ironed between it and the clothed roller. This iron has an interior chamber $C^2$, having side apertures $a$, and in which chamber gas mixed with air, by means of gas-pipes $g$ and an air-pipe $a^2$, is burned for heating the iron. The lower face of the iron is rounded out concavely at $o$, so as to coincide with the outwardly-rounded convexity of the clothed roller C, so that when the iron I is down upon the clothed roller the latter will turn in the concavity of the iron.

The letter T designates a foot-treadle, fulcrumed to the frame at $p^3$ and connected to a connecting-rod R, as shown at $p^8$. The rod R has secured to its upper end a plate or cross-bar $m^8$, to the ends of which are secured the lower ends of vertically-arranged rods $r^5$, which pass through a guide or bracket $b^4$, secured to the frame, and are arranged at their upper ends in a bearing N′ on the arm A. The rods $r^5$ are provided with stops $k$, between which and the brackets $b^4$ springs B are arranged, the springs being arranged on the rods, as shown. When the treadle is pressed downward, the rod R, with the connected arm A, is drawn down, bringing the iron down on the article on the roller C, and when the treadle is released the force of the springs lifts the arm A and the iron is carried up free from the roller or article thereon.

The letter Y designates a yoke having the ends of its arms attached to a bar $a^8$ at $p^{10}$ and arranged to straddle the arm A, and the letter $t^8$ designates an adjusting-screw let through the yoke and bearing on the arm A, as shown. The purpose of the yoke with the adjusting-screw is to adjust and limit the upthrow of the arm A, caused by the recoil of the springs B.

With an apparatus thus constructed, when the sleeves of shirts, shirt-wristbands, collars, cuffs, and other articles are passed between the engaging rounded surfaces of the clothed roller and the iron, the articles are ironed with a curl, having the finished face on the outer surface of the curve, so that the curl of the article does not have to be reversed to break up its finish or the stiffness of the articles.

This iron may be made of different lengths

of ironing-surface, so as to adapt it to iron collars, cuffs, shirt-sleeves, or shirt-wristbands by having a cloth-covered roller made of proper length. When a rounded-out-faced iron is rigidly held in contact with the articles passing between it and the cloth-covered roller, the latter being actuated to carry the articles, the articles are apt to draw irregularly, so as to prevent their receiving a good finish, particularly when seams or uneven thicknesses in the material are being ironed. By making the iron automatically adjustable to the face of the cloth-covered roller these difficulties are avoided and the efficiency of the machine to do good work is greatly increased.

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

In an ironing-machine, the combination, with a clothed roller actuated to turn substantially as described, of an iron adapted to be heated interiorly and having a rounded surface to conform to the cylindrical surface of said clothed roller, an arm pivoted at its rear end to the frame of the machine and at its front end to said iron, a yoke arranged to straddle said arm and connected to the machine-frame, and a treadle connected to said arm and adapted to operate against the recoil of springs interposed between the treadle and arm, substantially as set forth.

Signed at Troy, New York, this 15th day of January, 1890, and in the presence of the two witnesses whose names are hereto written.

JOSEPH McKAY.

Witnesses:
W. E. HOGAN,
CHARLES S. BRINTNALL.