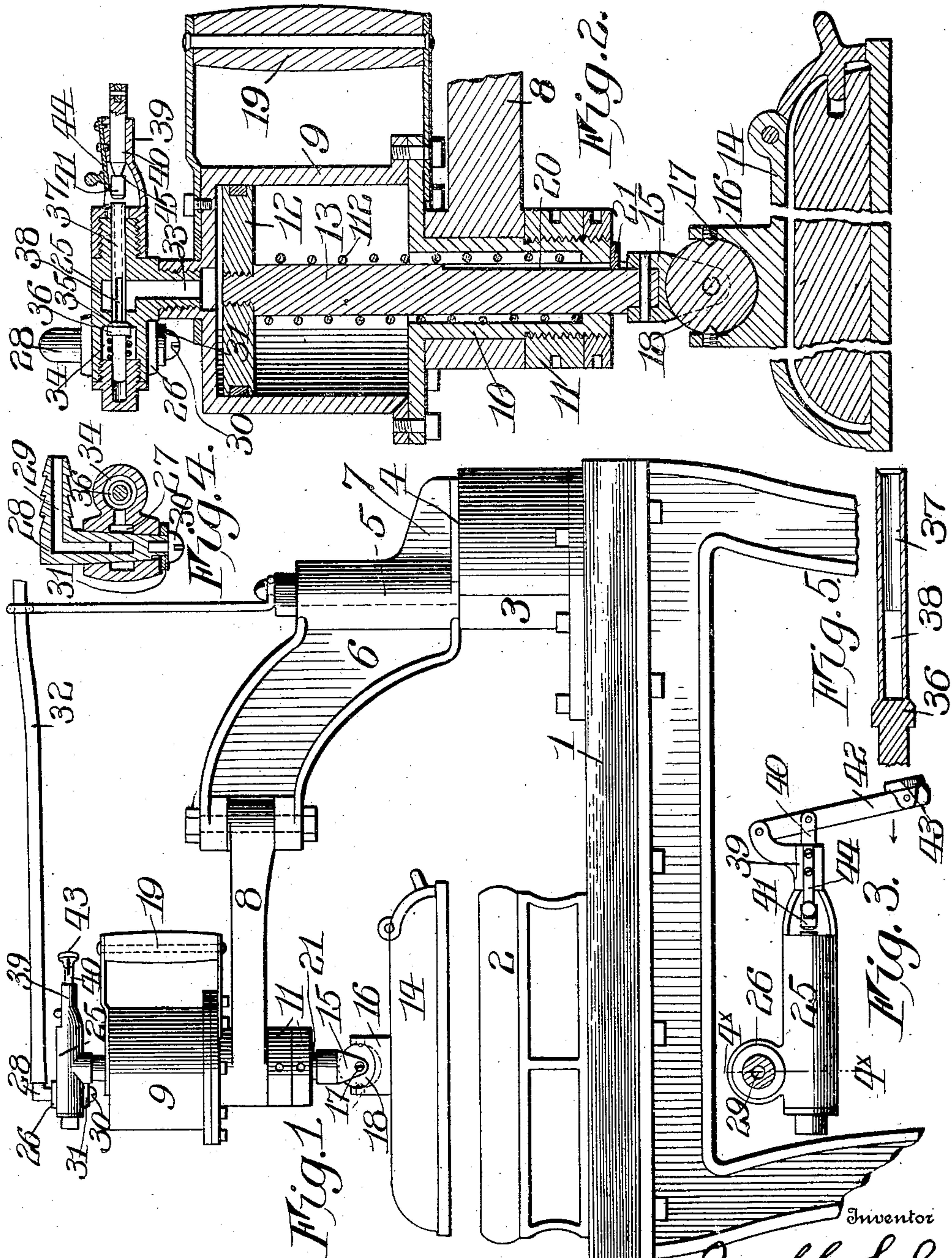


No. 869,857.

PATENTED OCT. 29, 1907.

J. LEHR.  
PRESSING MACHINE.  
APPLICATION FILED OCT. 17, 1902.



Witnesses  
Walter B. Payne.  
Gibland Rich.

Inventor  
Joseph Lehr  
By Frederick H. Church  
his Attorneys



# UNITED STATES PATENT OFFICE.

JOSEPH LEHR, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-HALF TO MARTIN H. SCHIRMER, OF ROCHESTER, NEW YORK.

## PRESSING-MACHINE.

No. 869,857.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed October 17, 1902. Serial No. 127,727.

*To all whom it may concern:*

Be it known that I, JOSEPH LEHR, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Pressing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

10 My present invention has for its object to provide a pressing machine adapted for pressing garments and particularly such as are undergoing the process of manufacture when the seams and other portions have to be subjected to heat and pressure and it consists in providing means under the control of the operator for moving the sad-iron into and out of engagement with the garment on the ironing board or support and further for regulating the pressure with which it engages the garment or other object thereon.

20 To these and other ends the invention consists in certain improvements and combination of parts, all as will be hereinafter described and the novel features pointed out in the claims at the end of the specification.

In the drawings: Figure 1 is a side elevation of a pressing machine constructed in accordance with my invention. Fig. 2 is a cross sectional view thereof. Fig. 3 is a detail plan view of the valve casing. Fig. 4 is a cross sectional view on the line 4<sup>x</sup>—4<sup>x</sup> of Fig. 3. Fig. 5 is a detail sectional view of the valve stem.

30 Similar reference numerals in the several figures indicate similar parts.

A pressing machine constructed in accordance with my invention embodies a frame or table 1 having thereon a suitable support or pressing board 2 upon which a garment or other article may be arranged. At the rear of the table is a short standard 3 having a flat horizontal top 4 and projecting therefrom and forward of the center thereof is a stud or rod 5 indicated in dotted lines, upon which is journaled an upwardly and forwardly projecting arm 6 having at its rear side a short foot or extension 7 adapted to bear against the face 4. Mounted in the arm 6 is a horizontally swinging arm 8 at the outer end of which is carried a motor device which in the form illustrated is shown as embodying a cylinder 9 having the lower end or head provided with an annular extension 10 journaled in said arm and prevented from vertical movement therein by nuts 11. Arranged within the cylinder is a piston head

12 provided with a piston rod 13, said head being held 50 in its normal position as shown by a coil spring 112. At the lower end of the piston rod is supported a pressing head in the form of a sad-iron 14 of the usual or any preferred construction, the one shown, however, is hollow and provided at one end with a door through which 55 a heater may be inserted, and between said iron and piston rod there is arranged a joint by means of which a swinging and tilting movement is permitted the sad-iron. This joint is constructed by means of oppositely arranged yoke frames 15 and 16, arranged upon the 60 piston rod and sad iron respectively, said yokes being provided with bearing screws 17 engaging apertures or indentations in the surface of a ball 18 the interior portions of said yokes being concaved to conform to the surface of the ball so that when pressure is transmitted 65 through the joint it is not borne by the bearing screws, the latter simply serving to retain the parts in position and to support the iron when it is moved out of contact with the ironing board 2.

19 indicates a handle arranged at one side of the cylinder, whereby the operator may manipulate the sad-iron, the jointed arms 6 and 8 permitting it to be moved freely and the rotary movement of the cylinder permitting the iron to be easily guided in any direction so as to bring any point of its surface in the desired position and to this end, to prevent a rotation of the piston in the cylinder, a key-way 20 is provided in the rod 13 and a key 21 engages therein and is arranged on the extension 10 of the piston head, as shown particularly in Fig. 2. 80

The operation of the piston in the cylinder may be accomplished by air, steam or other fluid under pressure and in order that the operation of the motor may be controlled at the will of the operator I have provided a suitable controlling device to be presently described. 85 Arranged at the upper end of the cylinder is a valve casing 25 and at one side thereof is a boss or extension 26 provided with an annular channel 27 and having journaled therein a head 28 provided with an interior passage 29 communicating with the passage 27. This 90 head is rotatably mounted in the boss and secured against removal therefrom by means of a screw 30 and clamping washer 31 and attached to the head is a flexible supply pipe 32 which latter permits the pressing mechanism to be moved in any direction upon the 95 jointed supporting arms while the rotatable head 28 permits the cylinder to be freely revolved. The valve casing 25 is provided with a passage 33 leading to the cyl-



inder, also a chamber or passage 34 communicating with the annular passage 27, before described, and between these passages is arranged a valve seat 35 with which coöperates a valve head 36 normally held in contact with its seat by means of the pressure of the fluid in the chamber 34. In rear of the head 36 is arranged a coil spring, as shown, which operates to close the valve when said head is moved out of contact with its seat. The valve head 36 is mounted upon and guided by means of a valve stem 37 the forward end of which extends to the exterior of the casing and is recessed and provided with an elongated aperture 38 connecting said recess with the passage 33. At the forward end of the valve casing is a supporting frame 39 in which is mounted a longitudinally movable plunger 40 having at its inner end a valve head 41 adapted to coöperate with the end of the valve stem 37 and adapted to be operated into engagement therewith by means of a small lever or handle 42 having its outer end arranged in proximity to the handle 19 and provided with a small presser plate 43 against which the operator may conveniently place his thumb when operating the lever. In order, however, to obviate the necessity of a constant pressure being exerted upon the lever, if it is desired to retain the pressure in the cylinder for any length of time, I provide an automatically operated latch which in the present instance consists of a spring arm 44 the end thereof being adapted to engage with a notch or shoulder 45 when said plunger is pushed inwardly, as will be understood.

To effect the operation of the device it is simply necessary for the operator to move the lever 42 in the direction indicated by the arrow in Fig. 3, this operation causes the head 41 to become seated upon the end of the valve stem 37 causing the recess therein to be closed before the valve head 36 is operated to open the valve at the valve seat 35, the valve being opened by the movement of the lever allows the fluid under pressure to flow from the chamber 34 into the recess 38 and thence by the passage 33 to the interior of the cylinder 9 forcing the piston 12 outwardly and causing the sad iron to engage the garment or other article arranged on the ironing board or support 2. When the pressing operation is completed or it is desired to release the sad-iron the plunger 40 is allowed to move outwardly permitting the valve head to engage its seat 35 and close the valve, the fluid escaping from the cylinder being then allowed to pass outwardly through the aperture 38 and the recess in the valve stem, permitting the piston head to be returned to its normal position by the action of the spring.

A pressing machine such as I have described is simple and consists of few parts, the arrangement of which in the manner I have shown and described enables me to provide a machine that is simple and effective in operation and one particularly adapted for pressing operations in which it is desired to move the sad-iron into engagement with the work with great force. By arranging the controlling device or valve in proximity to the handle 19 the operator may employ both hands in directing the movement of the sad-iron and at the same time instantly release the latter from the work when desired.

I have not claimed the particular construction of the

controlling valve herein described as this has been reserved to form the subject matter of a subsequent application.

I claim as my invention,

1. In a machine for pressing garments, the combination with a support and an arm pivotally supported at one side of the latter and swinging over it in a horizontal plane only, of a cylinder carried on the free end of said arm, a piston operating in the cylinder having a rod and a sad-iron attached thereto, means at the free outer end of the arm operating to normally move the sad-iron away from the support, means for supplying fluid under pressure to the cylinder to move the sad-iron toward the support and a valve for controlling the fluid supply to the cylinder.

2. In a pressing machine, the combination with a support, a jointed arm extended over the latter and swinging only in a horizontal plane, a cylinder thereon, a piston operating in said cylinder and a sad-iron attached to the piston and movable toward and from the support, of a retracting device arranged within the cylinder for normally holding the sad-iron out of contact with the support, means for supplying fluid under pressure to the cylinder to move the sad-iron toward the support, a handle for guiding the sad-iron and a valve for controlling the operation of the piston arranged in proximity to the handle.

3. In a pressing machine, the combination with a support, a movable arm located above the latter and a cylinder journaled on the arm and having an operating handle attached thereto, of a piston in the cylinder, a sad-iron attached thereto, means for supplying pressure to the cylinder and a valve for controlling the movement of the piston.

4. In a pressing machine, the combination with a support, a movable arm located above the latter and a cylinder having the extension journaled in the arm, a piston in the cylinder, a rod attached thereto and operating through said extension and a sad-iron connected to the rod and permitted a universal movement relative the support, of a handle on the cylinder, means for supplying pressure to the latter, a valve controlling the movement of the piston and a valve operating device arranged in proximity to the handle.

5. In a pressing machine, the combination with a support, a cylinder having a piston therein and a pressing head attached to the piston, of a valve casing connected to the cylinder having an inlet port, a valve operating therein having the stem provided with a passage, a plunger controlling said passage and means for operating it to open the valve.

6. In a pressing machine, the combination with a support, a cylinder having a piston therein and a pressing head attached to the latter, a valve casing connected to the cylinder having an inlet port, a valve controlling the latter having a stem provided with an exhaust passage, a plunger controlling the latter and movable to operate the valve and a latch for retaining the plunger to hold the valve in the open position.

7. In a pressing machine, the combination with a support, a movable arm operating over the latter, a cylinder rotatably mounted on the arm having a piston and a pressing head thereon, of a casing attached to the cylinder having a passage and a port therein, a head rotatably mounted on the casing having the passage communicating with the passage in the casing and a fluid supply pipe attached to the head, a valve coöperating with the port and means for operating it.

8. In a pressing machine, the combination with a support, operating devices movable relatively thereto and a sad-iron having a jaw, of a jaw on the operating devices, said jaws having the concaved inner surfaces, a ball arranged between the jaws and engaging said surfaces and pivoted connections between the jaws and ball.

9. In a pressing machine, the combination with a freely movable support, a cylinder rotatably mounted thereon adapted to receive fluid under pressure and having a piston and a pressing head attached to the piston, of a valve casing connected to the cylinder having an inlet port and a valve, a rotatable head journaled in said casing having the



passage communicating with that in the casing and means for controlling the valve.

10. In a pressing machine, the combination with a support and an arm supported at one end at the side of the latter and movable only in a horizontal plane, of a pressing head and a motor device carried on the free end of the arm normally operating to move the head relatively thereto away from the support and when actuated operating to move the head toward said support and a manually operable controller for said motor device.

11. In a pressing machine, the combination with a sup-

port, an arm movable over the latter and a motor device journaled on the arm, a pressing head operated by said device relatively to the arm and toward the support, a handle attached to the motor whereby the pressing head may be rotated on the arm and guided thereby, and means for controlling the motor arranged in proximity to the handle.

JOSEPH LEHR.

Witnesses:

G. WILLARD RICH,  
ELIZABETH J. PERRY.