H. PRICE.

PRESSING MACHINE.

APPLICATION FILED DEC. 5, 1911.

1,027,502.

Patented May 28, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

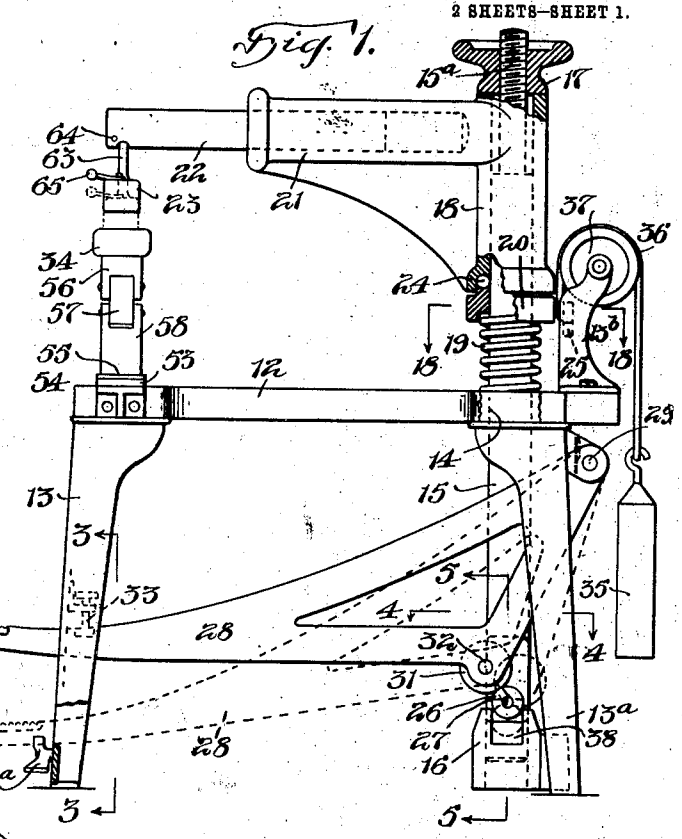


Fig. 3.

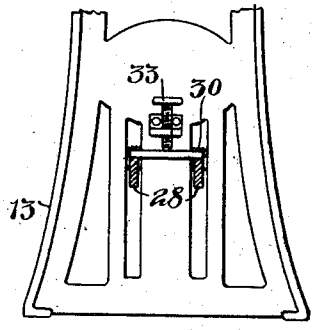


Fig. 6.

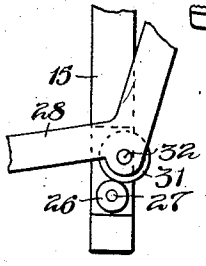


Fig. 2.

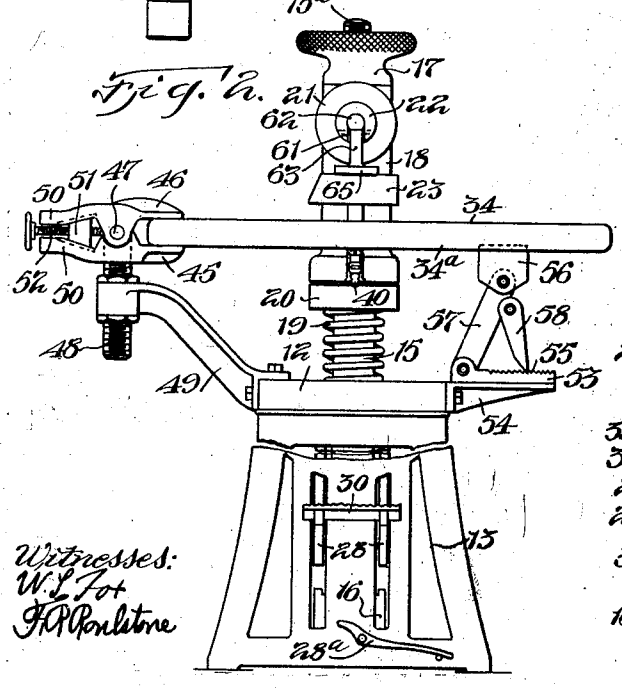


Fig. 4

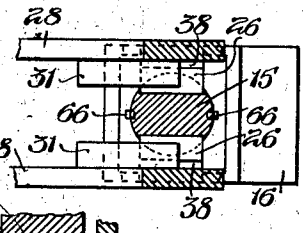
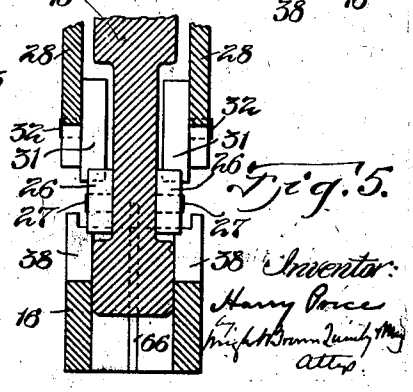


Fig. 5.



Witnesses:
W. L. Tot
F. P. Ponletone

Inventor:
Harry Price
by Wright Brown Quinby & May
attys.

H. PRICE.

PRESSING MACHINE.

APPLICATION FILED DEC. 5, 1911.

1,027,502.

Patented May 28, 1912.

2 SHEETS—SHEET 2.

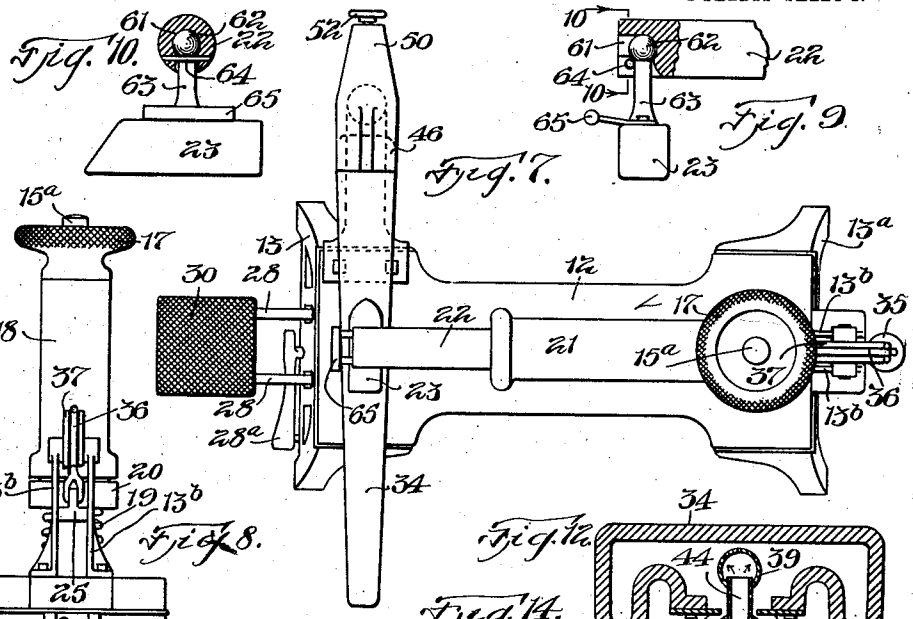


Fig. 10.

Fig. 9.

Fig. 7.

Fig. 8.

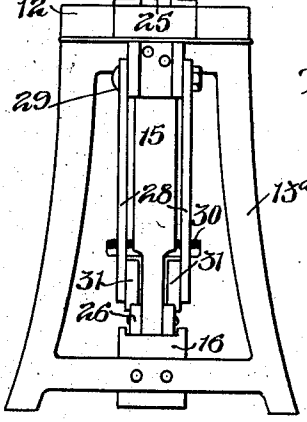


Fig. 13.

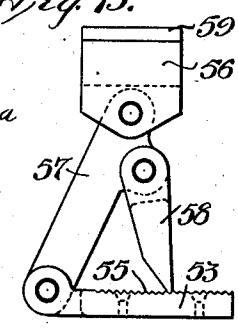


Fig. 14.

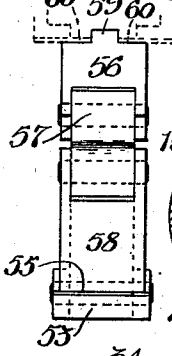


Fig. 12.

Fig. 18.

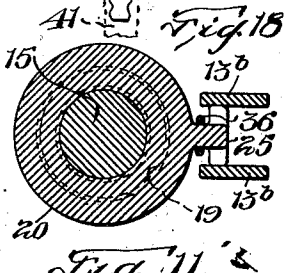
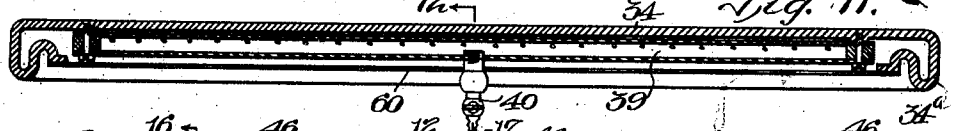


Fig. 11.



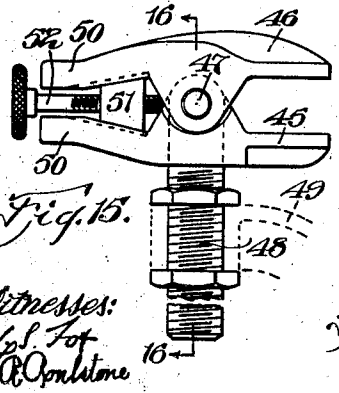


Fig. 15.

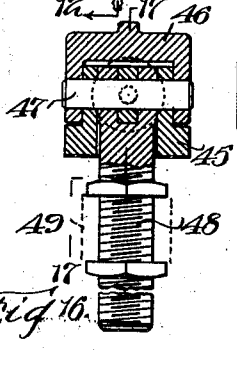


Fig. 16.

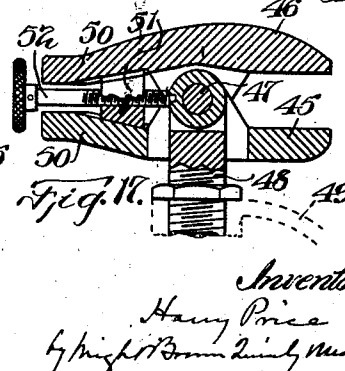


Fig. 17.

Witnesses:
W. S. Fot
H. R. Ouldstone

Inventor:
Harry Price
by Wright Brown Quinby & May
Atty.

UNITED STATES PATENT OFFICE.

HARRY PRICE, OF BOSTON, MASSACHUSETTS.

PRESSING-MACHINE.

1,027,502. Specification of Letters Patent. Patented May 28, 1912.

Application filed December 5, 1911. Serial No. 664,120.

To all whom it may concern:

Be it known that I, HARRY PRICE, a subject of the Czar of Russia, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pressing-Machines, of which the following is a specification.

This invention relates to improvements for use of tailors in pressing fabrics usually made up into garments, the machine being equipped with a press bed and with a pressing iron or tool similar to an ordinary tailor's goose, and with mechanism for supporting the iron in such manner that the tailor may move it freely about by the use of his hand and may exert downward pressure upon it by the use of his foot.

The invention has for its object to provide improved means for supporting, guiding, and applying pressure to the movable iron.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings which form a part of this specification:—Figure 1 represents a side elevation of a pressing machine embodying my invention, parts being shown in section; Fig. 2 represents an end elevation of the same; Fig. 3 represents a section on line 3—3 of Fig. 1 looking toward the left; Fig. 4 represents a section on line 4—4 of Fig. 1; Fig. 5 represents a section on line 5—5 of Fig. 1; Fig. 6 represents a fragmentary view similar to a portion of Fig. 1 showing a different adjustment; Fig. 7 represents a top plan view of the machine; Fig. 8 represents a rear elevation of the same; Fig. 9 represents an end view of the pressing iron and a side view of a portion of the arm which supports it, the arm being shown partly in section; Fig. 10 represents a section on line 10—10 of Fig. 9; Fig. 11 represents a longitudinal section of the press bed; Fig. 12 represents a section on line 12—12 of Fig. 11; Figs. 13 and 14 represent different elevations of one of the press bed supports; Fig. 15 represents a side elevation of another adjustable press bed support; Fig. 16 represents a section on line 16—16 of Fig. 15; Fig. 17 represents a section on line 17—17 of Fig. 16; Fig. 18 represents a section on line 18—18 of Fig. 1.

The same reference characters indicate the same parts in all the figures.

The supporting frame of my machine includes a base 12 and supporting legs 13 and 13^a. The base 12 is provided with a guide 14 in which an upright spindle 15 is vertically movable. Another guide 16 is preferably attached to the supporting legs 13^a and is formed to receive and guide the lower end portion of the spindle 15. The upper end portion 15^a of the spindle is reduced and screw-threaded, and with said reduced portion is engaged a stop nut 17 adapted to be adjusted vertically on the spindle extension 15^a.

18 represents a sleeve adapted to move vertically and rotate on the spindle 15. The upper end of the sleeve bears on the stop nut 17.

An upwardly pressing spring 19 bearing at its lower end on the base 12 and at its upper end on a collar 20 interposed between it and the sleeve 18, exerts a continuous upward pressure on the sleeve and on the spindle 15, the spindle and sleeve being, therefore, normally supported yieldingly in the raised position shown by Fig. 1.

The sleeve 18 is provided with a telescopic arm composed of an inner member 21 formed on or attached to the sleeve, and an outer member 22 which is slidable in the inner member 21 and is provided with means for engaging a pressing iron or tailor's goose 23. The collar 20, which is interposed between the spring 19 and the sleeve 18, is adapted to slide vertically on the spindle 15, and is formed as a ball race to support a series of anti-frictional balls 24 interposed between it and the sleeve 18, as shown by Fig. 1. Rotation of the collar 20 is preferably prevented by a stop arm 25, Fig. 18, projecting between the brackets 13^b.

The lower end portion of the spindle 15 is provided with a seat for a rider on the treadle lever hereinafter described, said seat being preferably formed by a circular roll 26 mounted to turn freely on a trunnion 27 attached to and projecting laterally from the spindle 15. As shown by Fig. 4, the spindle is provided with two rolls 26, these being

located at opposite sides of the spindle and forming a two-part antifrictional rider seat.

28 represents a lever pivoted or fulcrumed at 29 above the rider seat to the supporting frame at one side of the spindle, said lever extending across the spindle and being provided at its opposite end with a foot rest 30 adapted to be depressed by an operator standing in position to manipulate the iron 23. The lever 28 is provided with a rider 31 which is located below the fulcrum 29 and bears upon the rider seat 26, the rider being preferably composed of an anti-frictional roll having trunnions 32 which are journaled in bearings in the treadle 28, there being preferably two of these rolls, as shown by Fig. 4, these constituting a two-part rider which is supported by and is movable upon the rider seat.

The spindle 15, normally held yieldingly in an elevated position by the spring 19, causes the rider seat 26 to exert a constant upward pressure against the rider 31 and thus normally hold the lever 28 in the elevated position shown by full lines in Fig. 1, the frame being provided with a stop 33 adapted to limit the upward movement of the lever and therefore the upward movement of the spindle and the arm carrying the pressing iron 23. The iron is thus yieldingly supported above a press bed 34 which is supported, as hereinafter described, by the base 12, the height of the iron above the press bed being determined by the stop 33.

The arrangement of the lever 28, its fulcrum 29, and rider 31 relatively to the spindle and the rider seat 26 is such that when the lever is raised the rider bears on the rider seat at one side of the highest part of latter, as shown by full lines in Fig. 1, and when the lever is depressed the rider moves in a downwardly inclined path. When the operator depresses the treadle 30, the rider is caused to move downwardly over the rider seat and to depress the latter until the rider reaches the highest part of the rider seat, the spindle 15 and the iron 23 being thus depressed and the iron caused to bear firmly on the fabric placed on the press bed 34. It will be seen by reference to Figs. 1 and 6 that when the lever 28 reaches the extreme of its downward movement, the point of contact between the rider 31 and the seat 26 is transferred from one side of the seat to the opposite side so that when the lever is fully depressed, the upward pressure of the seat against the rider tends to hold the lever and the iron 23 depressed, so that the operator may remove his foot from the treadle without releasing the iron. Pressure of the iron upon the fabric may therefore be maintained without the aid of the operator's foot. When it is desired to release and raise the iron, the operator may exert upward pressure on the treadle in any suitable way until the rider has moved back over the seat sufficiently to permit the upward pressure of the spring 19 to raise the spindle, iron, and lever. I have here shown a supplemental treadle lever 28^a whereby the operator may press the lever 28 upwardly. The antifriction character of the rider and rider seat and the downward inclination of the path of the rider, reduce to the minimum the muscular power required to press the iron against the work.

35 represents a weight connected with the collar 20 by a strap 36 passing over a pulley 37 journaled in fixed bearings on the brackets 13^b. Said weight acts as an adjunct of the spring 19 in exerting upward pressure on the spindle and the associated parts yieldingly supported by the spring.

The spindle is prevented from rotating in its bearings by suitable means such as slots or openings 38 in the lower guide 16, the vertical sides of said openings bearing on the rolls forming the rider seat and acting as guides for said rolls and as stops to prevent rotary movement of the spindle.

The normal height of the iron 23 may be varied by adjusting the nut 17 vertically and also by similarly adjusting the stop 33 which limits the upward movement of the lever 28.

The press bed 34 is preferably heated by means of a horizontal elongated burner 39 (Figs. 11 and 12) which receives a mixture of air and gas, the gas being supplied through a nipple 40 connected by a flexible tube 41 (Fig. 12) with a source of gas supply, said nipple delivering the gas to a mixing chamber 42 having air inlets 43. The mixture of air and gas passes through a short tube 44 connecting the mixing chamber with the burner 39. The bed 34 is preferably a flat metal plate to the under side of which the burner 39 is attached, as shown by Fig. 11, said plate having a marginal flange or rim 34^a of the form shown by Figs. 11 and 12, said rim forming portions of a combustion chamber under the press bed.

I prefer to secure the bed 34 to the frame on the machine in such manner that it can be readily removed and also can be swung horizontally on one of its end portions. To this end I provide the supporting frame with a pair of clamping jaws 45 and 46 which are pivoted at 47 to the screw-threaded stud 48 engaged with an arm 49 attached to the base 12. The jaws 45 and 46 are provided with rearwardly extended inclined arms 50 between which is interposed a wedge block 51. Said block is adjustable by means of a screw 52 to close the jaws upon the bed 34 or to release their pressure thereon.

The outer end portion of the bed 34, or the portion opposite that engaged by the

jaws 45 and 46, is sustained by an adjustable support composed of a bed piece 53 attached to a bracket 54 on the base 12 and having ratchet teeth 55 on its upper side, a block 56 bearing on the under side of the bed, a link 57 pivoted to the block 56 and bed piece 53, and a pawl 58 pivoted to the link and adapted to engage the ratchet teeth 55 and support the block 56 at different heights. The block 56 is provided with an upwardly projecting tenon 59 (Fig. 14) which is adapted to enter the slot formed by the inner edges of longitudinal strips 60 on the flange of the bed 34, (the space between these strips forming an outlet for the products of combustion from the combustion chamber formed by the body portion and flange 34ª of the press bed). When it is desired to remove the press bed from the machine the jaws 45 and 46 are separated to release their hold on the bed and the bed is lifted from the block 56. The described supports enable the bed to be held at any desired height above the base 12 and to be inclined, if desired, from a horizontal position.

The outer member 22 of the iron-carrying arm is provided with a socket 61 (Figs. 9 and 10) adapted to receive a spherical enlargement 62 on a shank 63 affixed to the iron 23, the iron being thus adapted to oscillate on the center of the enlargement 62. A pin 64 retains the shank 63 in the socket. The iron is provided with a handle 65 by which it may be manipulated.

In practice, the lever 28 is provided with two side portions located at opposite sides of the spindle 15, as indicated by Figs. 4 and 5. In Figs. 4 and 5 I show the lower guide 16 provided with vertical ribs or guiding keys 66 which enter grooves formed for their reception in the lower portion of the spindle 15 and prevent said spindle from rotating in its bearings.

It will be seen that the elevation of the spindle 15 is limited by the abutment of the lever 28 against the stop 33. The stop nut 17, which is virtually a part of the spindle, does not limit the elevation of the spindle but enables the iron-carrying arm to be adjusted vertically independently of the spindle. It is obvious that any other suitable means may be substituted for the stop 33 for limiting the upward movement of the spindle.

I claim:—

1. A pressing machine comprising a supporting frame having a press bed and spindle-guiding means, an upright spindle movable vertically on said frame and having an antifriction roll at its lower portion, constituting a rider seat, an oscillatory iron-carrying arm carried by the spindle and projecting over the press bed, means for yieldingly elevating the spindle and arm, and a treadle lever fulcrumed on the frame at a point above the rider seat and at one side of the spindle and having an antifrictional roll constituting a rider bearing on the rider seat, the lever being normally supported by the rider seat with the treadle in a raised position and the rider being moved in a downwardly inclined path by the depression of the lever, and thus caused to depress the rider seat, spindle and arm.

2. A pressing machine comprising a supporting frame having a press bed and spindle-guiding means, an upright spindle movable vertically on said frame and having a rider seat at its lower portion, an oscillatory iron-carrying arm carried by the spindle and projecting over the press bed, means for yieldingly elevating the spindle and arm, and a treadle lever fulcrumed on the frame and having a rider bearing on the rider seat, the rider being movable by the depression of the lever into a locking engagement with the rider seat to hold the spindle and arm depressed.

3. A pressing machine comprising a supporting frame having a press bed and spindle-guiding means, an upright spindle movable vertically on the frame and having an adjustable stop nut at its upper end portion, a sleeve rotatable on the spindle below said stop nut, an iron-carrying arm supported by the sleeve and projecting over the press bed, means for yieldingly pressing the sleeve upwardly against said stop nut, and thereby yieldingly elevating the spindle and arm, means for limiting the elevation of the spindle and arm, the stop nut enabling the elevation of the arm to be adjusted independently, and means controlled by the operator for depressing the spindle and arm.

4. A pressing machine comprising a supporting frame having a press bed and spindle-guiding means, an upright spindle movable vertically on the frame and having an adjustable stop nut at its upper end portion, a sleeve rotatable on the spindle below said stop nut, an iron-carrying arm supported by the sleeve and projecting over the press bed, a collar surrounding the spindle below the sleeve and movable vertically on the spindle, ball bearings interposed between the collar and sleeve, means for yieldingly pressing the collar upwardly against the sleeve and the sleeve against the stop nut, said means acting to yieldingly elevate the spindle and arm, means for limiting the elevation of the spindle and arm, the stop nut enabling the elevation of the arm to be adjusted independently, and means controlled by the operator for depressing the spindle.

5. A pressing machine comprising a supporting frame having a press bed and spindle-guiding means, an upright spindle movable vertically on said frame and having a rider seat at its lower portion, an oscilla-

tory iron-carrying arm carried by the spindle and projecting over the press bed, means for yieldingly elevating the spindle and arm, a treadle lever fulcrumed on the frame and having a rider bearing on the rider seat, the rider being movable by the depression of the lever into a locking engagement with the rider seat to hold the spindle and arm depressed, and a supplemental lever adapted to press the treadle lever upwardly and move the rider out of locking engagement with the rider seat.

In testimony whereof I have affixed my signature, in presence of two witnesses.

HARRY PRICE.

Witnesses:
C. F. BROWN,
P. W. PEZZETTI.