F. H. DUNBAR & J. H. JONES.

MACHINE FOR PRESSING GARMENTS.

APPLICATION FILED FEB. 23, 1910.

1,131,493.

Patented Mar. 9, 1915.

4 SHEETS—SHEET 1.

Fig. 1

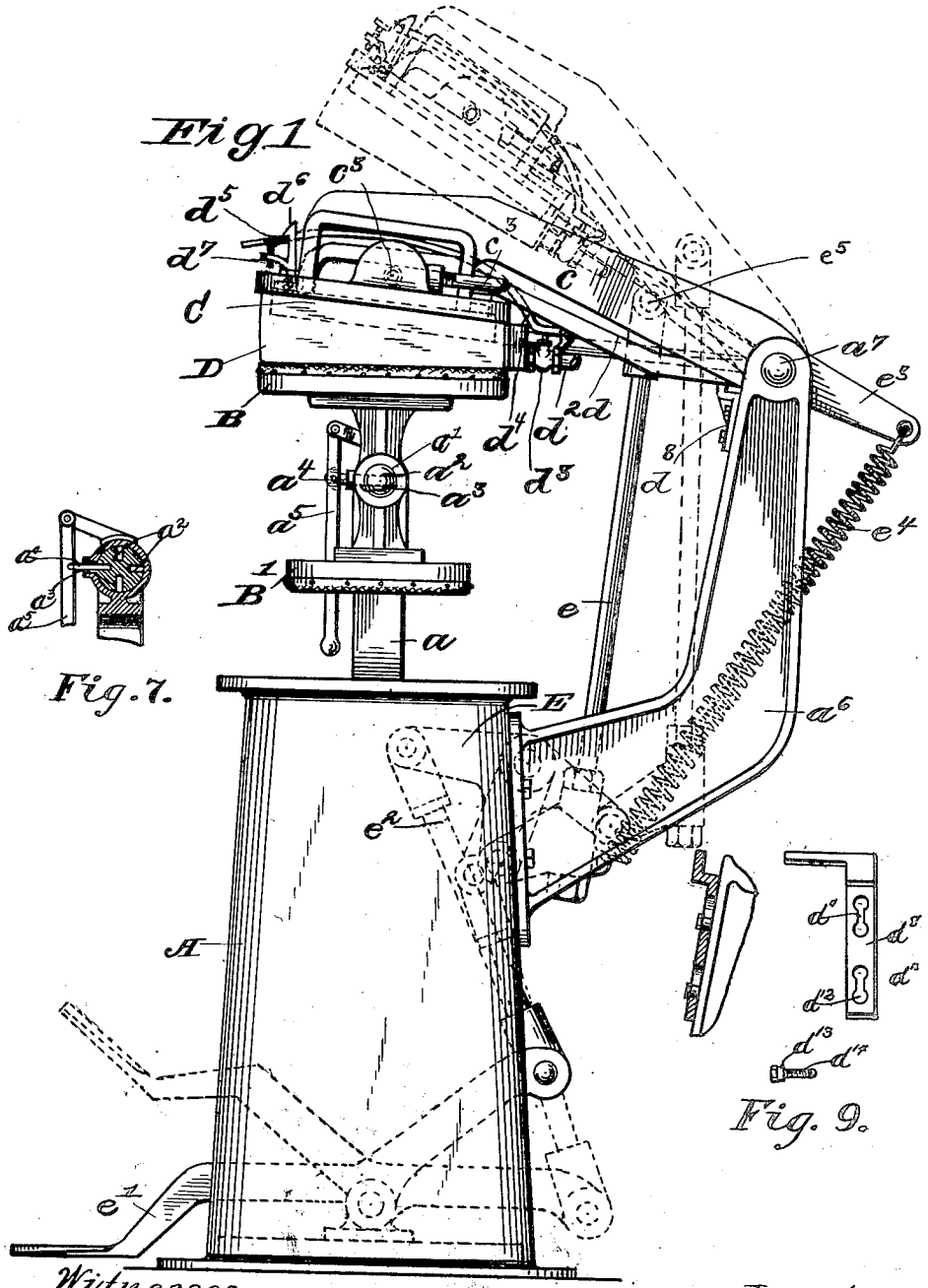


Fig. 7.

Fig. 9.

Witnesses.

Robert M. Sze

Anna L. Gill

Inventors

Frank H. Dunbar

and James H. Jones

By J. B. Fay

Attorney.

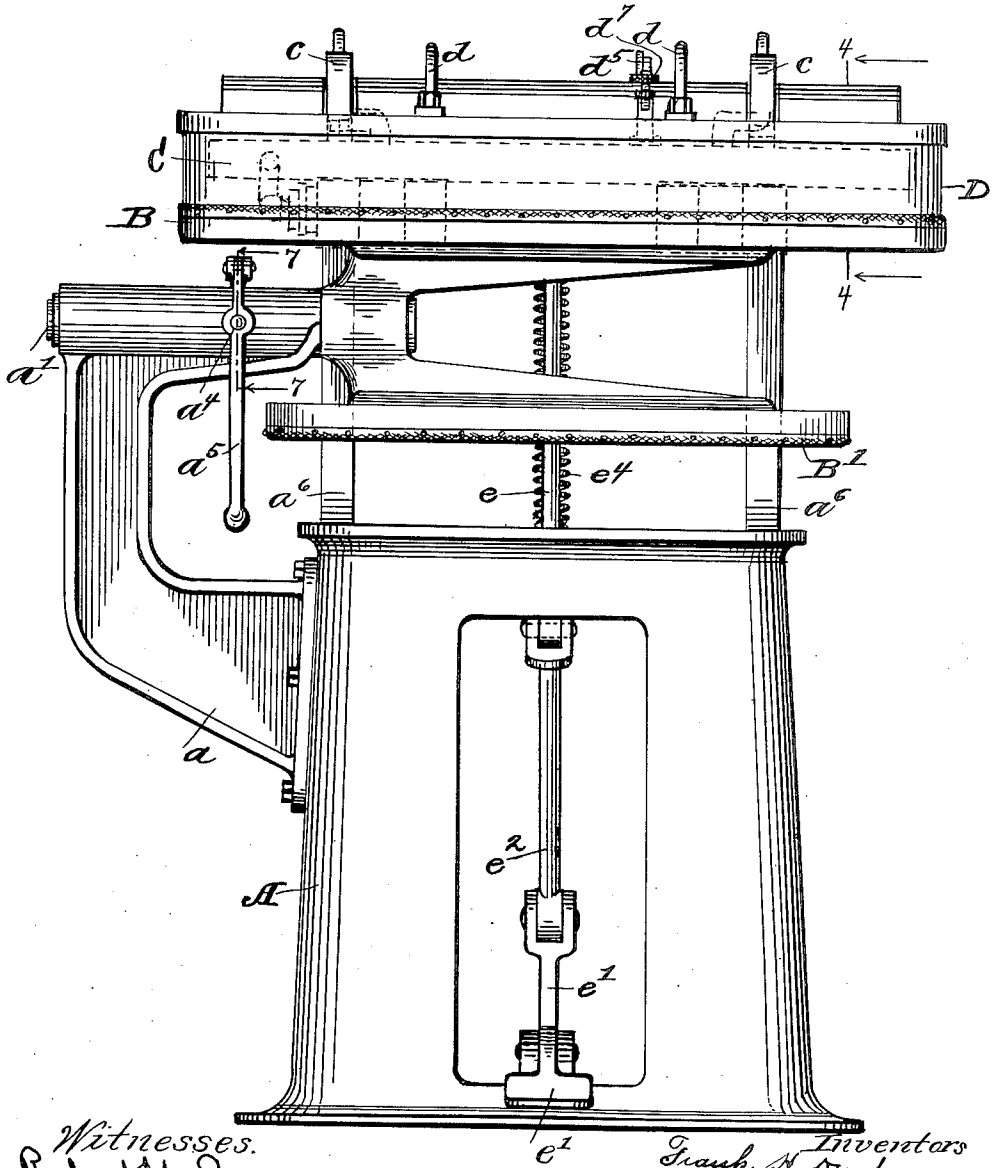
F. H. DUNBAR & J. H. JONES.
MACHINE FOR PRESSING GARMENTS.
APPLICATION FILED FEB. 23, 1910.

1,131,493.

Patented Mar. 9, 1915.

4 SHEETS—SHEET 2.

Fig 2



Witnesses.
R. H. Whitty. Sr.
Anna L. Gill

Inventors
Frank H. Dunbar
and James H. Jones
By J. B. Fay
Attorney.

F. H. DUNBAR & J. H. JONES.

MACHINE FOR PRESSING GARMENTS.

APPLICATION FILED FEB. 23, 1910.

1,131,493.

Patented Mar. 9, 1915.

4 SHEETS—SHEET 3.

Fig. 3

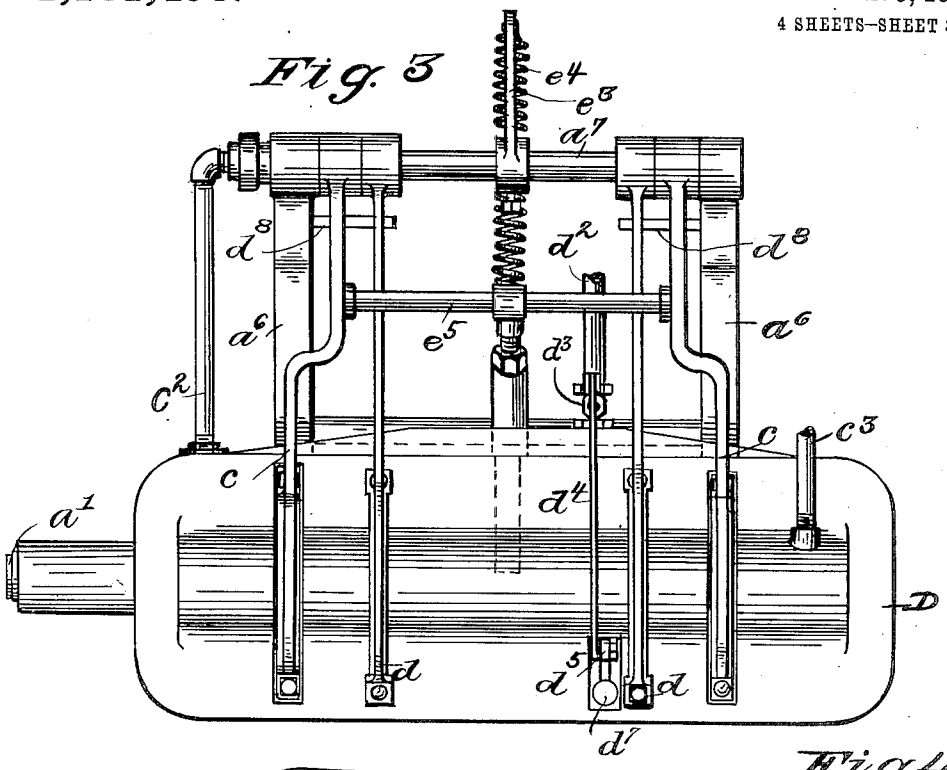
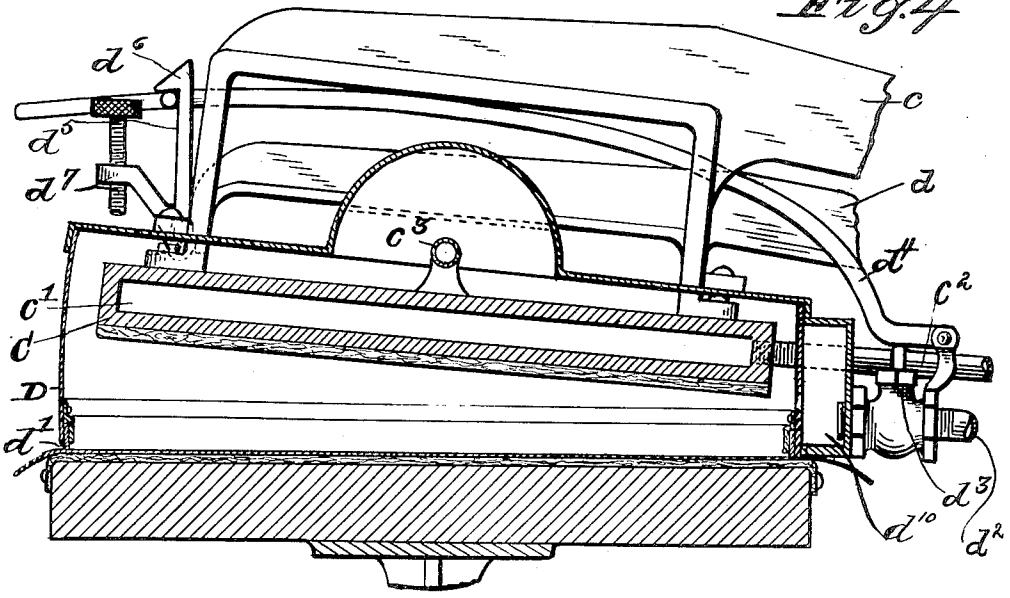


Fig. 4



Witnesses.

Robert M. Sykes

Anna L. Gill

Inventors

Frank H. Dunbar

and James H. Jones

by

J. B. Fay

Attorney.

F. H. DUNBAR & J. H. JONES.

MACHINE FOR PRESSING GARMENTS.

APPLICATION FILED FEB. 23, 1910.

1,131,493.

Patented Mar. 9, 1915.

4 SHEETS—SHEET 4.

Fig. 5

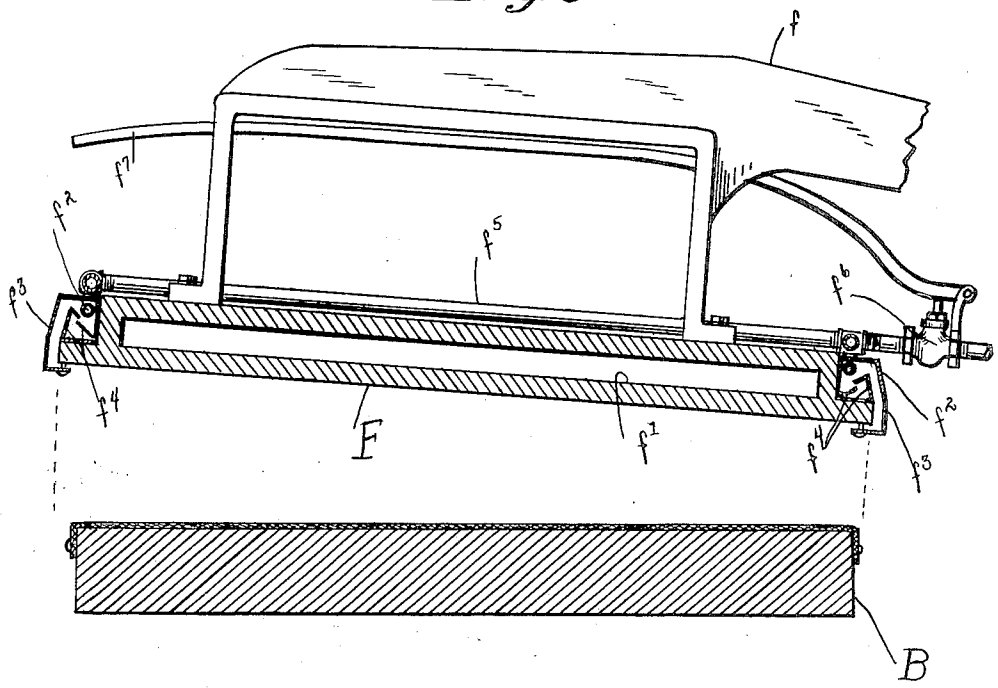
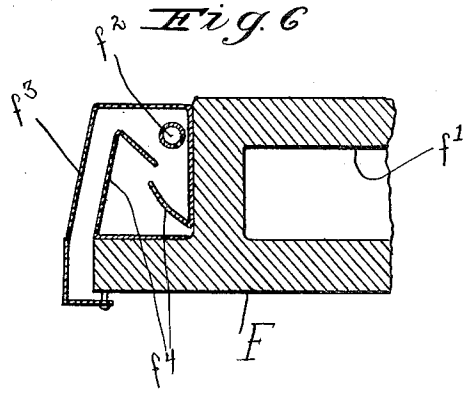


Fig. 6



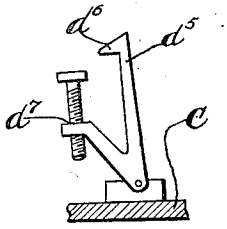


Fig. 8.

Witnesses.

Robert M. See

Anna L. Gill

Inventors

Frank H. Dunbar

and James H. Jones

by

J. B. Fay

Attorney.

UNITED STATES PATENT OFFICE.

FRANK H. DUNBAR AND JAMES H. JONES, OF CLEVELAND, OHIO.

MACHINE FOR PRESSING GARMENTS.

1,131,493. Specification of Letters Patent. Patented Mar. 9, 1915.

Application filed February 23, 1910. Serial No. 545,318.

To all whom it may concern:

Be it known that we, FRANK H. DUNBAR and JAMES H. JONES, citizens of the United States, and residents of Cleveland, county of Cuyahoga, State of Ohio, have jointly invented a new and useful Improvement in Machines for Pressing Garments and the like, of which the following is a specification, the principle of the invention being herein explained and the best mode in which we have contemplated applying that principle, so as to distinguish it from other inventions.

Our invention relates to machines for pressing garments and the like.

In the operation of pressing garments it is desirable that the garment be subjected to both steam and mechanical pressure; the steam is applied to the garment for the purpose of softening it and for raising the nap, while the mechanical pressure is applied for the purpose of pressing the garment into desired shape.

The general objects of the invention are to provide a machine for this use in which the two operations of steaming the garment and of applying the mechanical pressure may be simultaneously performed in a simple and facile manner.

Further objects of the invention are the provision of such a machine which may be economically manufactured, and which will be little liable to need repair after installation, and a still further object is to adapt the machine for use with various sized garments.

Although the invention is peculiarly adapted for use in tailoring establishments and in garment manufacturing establishments, it will be understood that the invention may be utilized in machines for pressing other materials than garments.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings:—Figure 1 is a side elevation of a machine embodying our invention; Fig. 2 is a front elevation thereof; Fig. 3 is a plan thereof; Fig. 4 is a transverse section on the line 4—4 in Fig. 2, with certain parts broken away; Fig. 5 is a transverse section of a modified pressing member; Fig. 6 is a detailed transverse section thereof on an enlarged scale; Fig. 7 is a section on the line 7—7 in Fig. 2, showing four recesses, thus adapting the machine to have four supporting members; Fig. 8 is a detailed view of the stop and latch shown in Fig. 4, showing the same attached by a pin and socket to member *c;* Fig. 9 shows detailed views of adjustable stop d^8 and the parts of the same.

The machine comprises a suitable support or base A to one side of which is bolted an upwardly extending bracket *a* having journaled in its end, a horizontally disposed rotatable shaft a'. A plurality of supporting members B B′ for the garment to be pressed, are secured rigidly to the shaft a' substantially above the support A. The shaft a' is provided with a series of radial apertures a^2 while the bracket *a* is provided with an aperture a^3 which is adapted to register alternatively with the apertures a^2 in the shaft. A pin a^4 slides through the aperture a^3 and into one of the apertures a^2, and this pin may be operated by any suitable hand or foot mechanism, a lever a^5 being illustrated as a convenient way of actuating the pin. The supporting members B B′ are illustrated as being two in number, but it will of course be understood that such series may be of any desired number and of any desired size or shape, each of these members being provided with a suitable cloth or other soft facing if desired.

Extending upwardly and rearwardly from the support A, is a pair of arms a^6 having journaled in their upper ends, a horizontally disposed rotatable shaft a^7. Two arms *c* are fixed to the shaft a^7 and bear at their outer ends substantially over the supporting member, which is in its upper operative position, a pressing member, or head, C, which is formed with solid walls and with a steam chamber c' inclosed thereby, a steam pipe c^2 opening into the chamber c' and being connected with a steam supply by a suitable swivel joint. An apertured pipe c^3 is secured to, and extends longitudinally of, the pressing member C and is connected with a gas supply. Two other arms *d* are loosely journaled on the shaft a^7 and bear at their outer ends over the supporting member a shield D. The shield D incloses the pressing member C, and is of such size as to allow movement of the pressing member within it, the rear wall of the shield being slotted to allow relative move-

ment of the steam pipe c^2 and the top of the shield being slotted to allow relative movement of the arms c.

The shield has secured to its lower edge, which is adapted to contact with the garment, a soft packing edge d'. A steam pipe d^2, connected with a suitable steam supply by a swivel joint, discharges steam through the rear wall of the shield, preferably through a chamber d^{10}. A valve d^3 is disposed in the pipe d^2 immediately to the rear of the shield and is conveniently operated by means of a lever d^4 which extends forwardly over the shield and which is adapted on depression to depress the valve stem, against the force of a spring, to open the valve. A catch d^5 is pivoted to the pressing member C near the front thereof and is formed with a hook d^6 which is adapted to engage a pin on lever d^4 and is provided with an adjustable stop d^7 which is threaded in the catch and is adapted, during movement of the pressing member C, to have its head strike the shield D. The shield is slotted to allow the catch and stop on the pressing member to move through the top of the shield, and the head of the stop is designed to contact with the edge of the slot to throw the catch out of engagement with the lever d^4. A suitable stop d^8 may be adjusted to variously limit the downward movement of the arms d and hence of the shield D.

The construction of the adjustable stop d^8 will be clearly seen in Fig. 9, and it will be noticed that while any suitable means of adjustment may be used, we preferably provide the stop d^8 with apertures or slots d^{11} having circular parts d^{12} at spaced intervals, adapted to be engaged by washers d^{13} held in place by bolts d^{14}.

A bell crank E is pivoted to the support A and a rod e is pivoted at one end to one arm of the bell crank E, while at its other end it is pivoted to a rod e^5 which connects the two arms c intermediate their ends.

A treadle e' is pivoted between its ends to the support A, and a rod e^2 is pivoted to the other arm of the bell crank E and to the inner end of the treadle e'. Fixedly secured to the shaft a^7 is a rearwardly extending arm e^3 and a tension spring e^4 is connected with the outer end of the arm e^3 and with the lower end of the rod e.

From this detailed description the operation and advantage of the machine may be readily understood.

The operator first sets in upper position the proper supporting member, or buck, and secures the shaft in such position. The garment is properly placed upon the supporting member and the operator then depresses the treadle at the base of the support. By means of the intermediate bell crank and connecting rods the pressing member is thereby depressed and the shield, which is supported when in raised position, by the pressing member, is lowered with such member. Depression of the shield ceases when its lower edges strike the garment, or when its arms strike the adjustable stops, but the pressing member continues to descend. When the latter member is approaching its pressing position, that is when it is approaching contact with the garment, the pivoted catch borne thereby automatically engages the pin carried by the valve operating lever and further depression of the pressing member pulls the lever downward and opens the valve which admits steam within the shield and between the supporting and pressing members. At the instant at which the pressing member comes into contact with the garment, the head of the adjustable stop carried by the catch strikes the shield and releases the catch from the lever, whereupon the valve closes. The pressing member then exerts its pressure upon the garment to perform the pressing operation, and after being held there the proper length of time, the treadle is released and the spring raises the pressing member which carries upward with it the shield. It will be noted therefore, that the machine by reason of the plurality of supporting members, any one of which may be brought into operative position, is adapted for pressing any size or any shape garment desired. The machanism comprising the bell crank and connecting rods is designed to lower the pressing member against the garment with relatively great pressure, although but little pressure need be exerted by the operator upon the treadle in order to attain this result. The operation of the valve which admits steam within the shield is automatically controlled by movement of the pressing member so that steam is admitted between the two members for the required length of time and at a proper period. The pressing member is always hot because of the steam chamber formed therein, and its heat may be increased, as may that of the shield, by the gas burner mounted upon the pressing member.

Figs. 5 and 6 illustrate a modified form of pressing head which may be substituted for the shield and head above described. Such head, or pressing member F, is reciprocably supported from the shaft a^7 by arms f and is actuated by means of the treadle in the same way as has been described in connection with the member C. The pressing member F is formed with a steam chamber f' connected with a steam supply. Secured to the pressing member F exteriorly thereof is an apertured pipe f^2 which may surround the member or merely extend along the sides thereof. This pipe f^2 is preferably inclosed by a shield or guard f^3 which opens

inwardly under the under side of the pressing member F. Within the guard f^3 is formed an apertured guard f^4 which serves to collect the moisture from the steam. The steam is led into pipe f^2 through a pipe f^5 in which is located a valve f^6 which is adapted to be controlled by a forwardly extending lever f^7. If, then, the valve be opened as the head or pressing member approaches the supporting member B, steam is projected against the lower part of the guard f^4 and the steam rebounds from such guard and downwardly within the guard f^3 and thence between the two members and onto the garment. The moisture drains into the pocket formed by the guard f^4 and may be conveniently drained therefrom at one end of the pressing member. It will of course be understood that the lever f^7 may be automatically operated by mere adaptation of the method of automatically operating the valve lever previously described.

Other modes of applying the principle of our invention may be employed instead of those explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

We therefore particularly point out and distinctly claim as our invention:—

1. A pressing machine, comprising a supporting member, a shield movable toward and from said supporting member, a pressing member movable toward and from said supporting member and adapted to move within said shield, and independent means for projecting steam within said shield and between said members.

2. A pressing machine, comprising a supporting member, a shield movable toward and from said supporting member, a pressing member movable toward and from said supporting member and adapted to move within said shield and provided with a steam chamber, and independent means for projecting steam within said shield and between said members.

3. A pressing machine, comprising a supporting member, a shield movable toward and from said supporting member, a pressing member movable toward and from said supporting member and adapted to move within said shield and provided with a steam chamber, and a pipe opening within said shield and connected with a steam supply.

4. A pressing machine, comprising a supporting member, a shield movable toward and from said supporting member, a pressing member movable toward and from said supporting member and adapted to move within said shield and provided with a steam chamber, an apertured pipe adjacent to said pressing member and connected with a gas supply, a pipe opening within said shield and connected with a steam supply, and a valve in said pipe.

5. A pressing machine, comprising a supporting member, a shield movable toward and from said supporting member, a pressing member movable toward and from said supporting member and adapted to move within said shield and provided with a steam chamber, a pipe opening within said shield and connected with a steam supply, a valve in said pipe, and means, operable by said pressing member, upon movement, for successively opening and closing said valve.

6. A pressing machine, comprising a supporting member, a vertically reciprocable pressing member above said supporting member and provided with a steam chamber, a vertically reciprocable shield laterally inclosing, and of greater depth than, said pressing member, adjustable means for limiting depression of said shield, a pipe opening through one side of said shield and connected with a steam supply, and a valve in said pipe, said pressing member being adapted, during depression, to open said valve and, upon reaching its pressing position, to close said valve.

7. A pressing machine, comprising a supporting member, a vertically reciprocable pressing member above said supporting member provided with a steam chamber, a vertically reciprocable shield laterally inclosing, and of greater depth than, said pressing member, a pipe opening through one side of said shield and connected with a steam supply, a valve in said pipe, a lever adapted, on depression, to open said valve, a catch carried by said pressing member and adapted, during the latter's depression, to engage said lever, and an adjustable stop carried by said catch and adapted to strike said shield and disengage said catch from said lever.

8. A pressing machine, comprising a member rotatable on a horizontal axis, a plurality of supporting members mounted on the first-named member and adapted to be alternatively brought into operative position, a shield movable toward and from the operatively positioned supporting member, a pressing member similarly movable and adapted to move within said shield and provided with a steam chamber, and independent means for projecting steam within said shield and between said members.

9. A pressing machine, comprising a support, a supporting member mounted thereon, a horizontally disposed shaft journaled in said support, an arm loose on said shaft, a shield carried by said arm over the supporting member, an arm fixed on the shaft, a pressing member carried by said fixed arm within the shield, a bell-crank pivoted to said support, a rod connecting one arm of

the bell-crank with said fixed arm, a treadle pivoted to said support, and a rod connecting the other arm of the bell-crank with said treadle.

10. A pressing machine, comprising a support, a supporting member mounted thereon, a horizontally disposed shaft journaled in said support, an arm loose on said shaft, a shield carried by said arm over the supporting member, an arm fixed on the shaft, a pressing member carried by said fixed arm within the shield, a bell-crank pivoted to said support, a rod connecting one arm of the bell-crank with said fixed arm, a treadle pivoted to said support, a rod connecting the other arm of the bell-crank with said treadle, and means for projecting steam within said shield and between said supporting and pressing members.

Signed by us this 19th day of February, 1910.

FRANK H. DUNBAR.
JAMES H. JONES.

Attested by:
ROBERT M. SEE,
JNO. F. OBERLIN.