

Feb. 8, 1949.

I. P. SOWERS

2,461,006

TROUSER PRESSER

Filed Feb. 24, 1945

Fig. 1

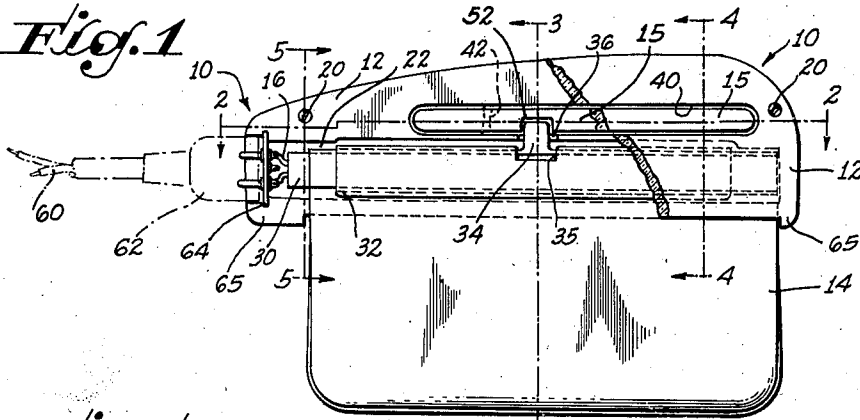


Fig. 3

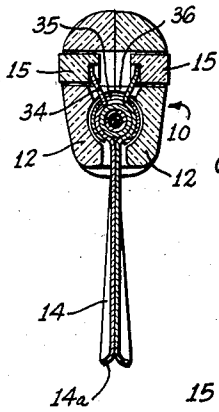


Fig. 2

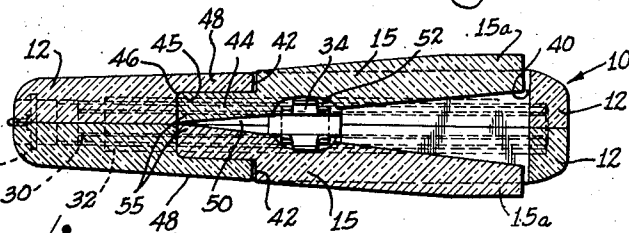


Fig. 4

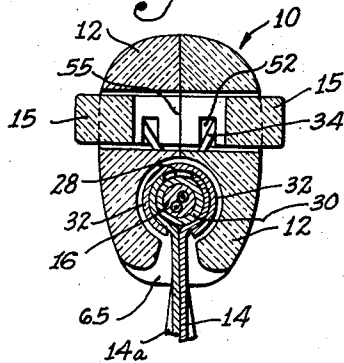


Fig. 5

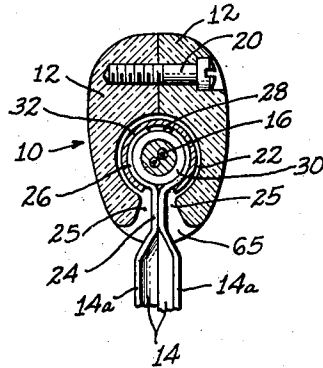
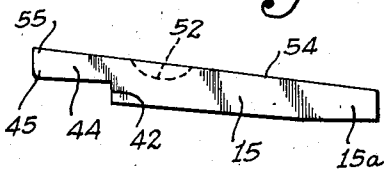


Fig. 6



INVENTOR
IVAN P. SOWERS
BY
HARRIS, KIECH, FOSTER & HARRIS
Fall W. Harris
FOR THE FIRM
ATTORNEYS

UNITED STATES PATENT OFFICE

2,461,006

TROUSER PRESSER

Ivan P. Sowers, Los Angeles, Calif.

Application February 24, 1945, Serial No. 579,538

11 Claims. (Cl. 219-19)

1

This invention relates to devices for pressing and creasing men's trousers, women's slacks, and other wearing apparel, for pleating garments and for kindred uses, and is especially adapted to the hand-type of creasers or pressers which are provided with electrically heated pressing plates.

The principal object of the invention is to provide a desirably compact structure which shall be easy to assemble, smaller than usual and relatively simple and effective, and shall insure against injury by the heating element to fabrics and to the hands of an operator.

A further object of the invention is to provide a hand-type creaser of the general nature indicated which may be readily actuated by the operator's hand while being held thereby. A still further object of the invention is to provide a creasing and pressing device in which a handle encloses and supports inner portions of pressing plates, and also encloses and supports an electrical heating element and means for moving the pressing plates relative to one another when placing the device upon fabrics to be pressed or creased.

An additional object and important feature of the invention is the employment of a handle construction containing the inner edges of creasing and pressing plates wherein actuating devices are carried within the handle for the purpose of imparting the required relative movement to the plates, such movement being imparted to those plates by pressure of the operator's fingers upon projecting portions of the mentioned actuating devices.

In a preferred form, the hand-type of creasing and pressing appliance of this invention comprises a handle of adequate length to be grasped readily by the operator, and also of adequate length to receive the inner portions of a pair of connected creasing and pressing plates, for which purpose a cavity is provided within the handle. The connected portions of the plates are suitably retained as by means of a split spring sleeve and a housing of an electric heating element is conveniently employed as a means upon which to mount the inner portions of the plates. The handle, in this preferred form, also receives actuating means, such as levers having portions exposed at the sides of the handle, for engagement by the operator's hand and having portions within the handle to engage and actuate the plates as by contact with operating projections extending from the inner edges of the plates. A particular

2

feature in this construction is the disposal of portions of the ends of the handles beyond the ends of the pressing and creasing plates to provide abutments for fabric disposed between the plates whereby to keep such fabric spaced from the heating element to which the inner portions of the plates are connected, whereby to avoid injury to the fabric by the high temperature of the heating element itself.

Other objects and features of the present invention will become apparent to those skilled in the art upon reference to the following specification and accompanying drawing wherein a preferred embodiment of the invention is disclosed by way of illustration. In the drawing,

Fig. 1 is in part a side elevation and in part a longitudinal vertical section through a creasing appliance constructed in accordance with the invention;

Fig. 2 is a longitudinal horizontal section, taken from the line 2-2 of Fig. 1;

Figs. 3, 4, and 5 are cross sections taken respectively on the lines 3-3, 4-4, and 5-5 of Fig. 1; and

Fig. 6 is a plan view of one of the lever arms which actuate the creasing plates.

These figures disclose an elongated handle 10 which, in the form shown, is composed of two opposed elongated handle members 12 in the form of similar bars together yielding a symmetrically shaped contour. The handle 10 carries a pair of cooperating creasing and pressing plates 14 which are adapted to be actuated by lever arms 15 into open position for receiving a folded fabric, and for the purpose of heating the plates 14 an electric heating element 16 is provided.

The two handle members 12 are retained in operative position as by means of two or more countersunk headed screws 20 so that two opposing cavity portions of the respective handle members 12 provide a substantially cylindrical elongated cavity 22 which receives inner portions 24 of the pressing plates 14 which project into the cavity 22 by way of a connecting channel 25 leading thereto from the exterior of the handle 10.

The exterior or exposed portions of the plates 14 are in general flat and suitably shaped to receive between them folded fabric, such as a leg of trousers, the edges of the plates 14 being appropriately curved as at 14a (Fig. 3), if desired. The innermost portions of the portions 24 are respectively curved into partially cylindrical members 26, each of which is somewhat less than a

semi-cylinder whereby to provide between their ends a narrow elongated space 28 to permit a corresponding amount of relative movement, as hereinafter described. The two curved members 26 are mounted upon a cylindrical bearing tube 30 which constitutes both a housing for the electrical heating element 16 and a bearing for the members 26. The members 26 are bound upon the bearing tube 30 by means of a split spring sleeve 32 which embraces the members 26 and accommodates the inner portions 24 connecting the plates 14 to the members 26.

The split spring sleeve 32, together with the curved members 26 and the bearing tube 30, constitute a mounting assembly which is conveniently retained within the cylindrical cavity 22 and supported by the lowermost wall portions thereof as seen in Figs. 3, 4, and 5. As best seen in Figs. 1 and 3, the middle portion of the extreme edge of each of the curved members 26 is provided with an upstanding lug 34 which projects upwardly through an opening 35 in the upper middle portion of the split spring sleeve 32 and through an opening 36 in the upper wall of the cylindrical cavity 22 into position for engagement with the middle portions of the lever arms 15.

The lever arms 15 are elongated and are respectively seated in elongated slots 40 in the two handle members 12 so that the outermost end portions 15a of the lever arms 15 are normally projected into slightly exposed position, as best indicated in Fig. 2, where they may be depressed by the fingers and thumb of an operator. Each lever arm 15 is shouldered adjacent the end opposite from the portion 15a, as indicated at 42, to provide an internal extension 44 of which its corner 45 serves as a fulcrum point which bears in a corresponding corner 46 provided within each handle member 12 by an overlying ledge 48 comprising a wall for a corresponding cavity 50 receiving the extension 44 at one end of the corresponding slot 40. At an intermediate position in each lever arm 15 a notch 52 is cut in the under side of the lever arm to receive the upstanding lug 34 of the corresponding pressing and creasing plate 14 whereby to actuate the latter against the tension of the split spring sleeve 32. In the form shown, this notch 52 extends about halfway up through the respective lever arm 15 and is also cut into the inner wall 54 thereof. The inner ends of the extensions 44 of the two lever arms 15 are desirably provided with heels 55 which conveniently engage each other whereby to act mutually as stops which limit the outward movement of the projecting portions 15a.

For the purpose of connecting the electrical heating element 16 with electric current provided by an electric supply line 60 and a socket 62, a suitable terminal plug 64 is imbedded in the adjacent ends of the handle members 12 comprising the handle 10.

An important feature of this improvement resides in so offsetting end portions 65 of the handle members 12 which extend beyond the ends of the plates 14 that the offset portions lie beyond the line of the side wall of the tube 30 containing the heating element 16, the purpose of this offsetting being to space fabric adequately from the tube 30 in order to avoid scorching of the fabric when placed between the plates 14. Thus, distribution of heat from the heating element 16 by way of the tube 30 to the fabric being

pressed or creased is produced only through the plates 14. Inasmuch as the handle members 12 and the lever arms 15 are made of insulating and non-heat conducting material, such as Bakelite, these parts never become sufficiently hot to be annoying or injurious to the operator's hand.

In using the pressing and creasing appliance of this invention, the socket 62 carried by the electric supply line 60 is connected with the plug 64 carried by the handle members 12, whereby the heating element 16 is energized to heat the tube 30 and thereby transmit heat to the pressing and creasing plates 14. When a satisfactory heating temperature has been attained, the operator grasps the handle 10 and presses either or both of the lever arms 15, especially along their projecting end portions 15a. By reason of the fulcruming of the lever arms 15 at the corners 45, and their bearing upon the extremities of the actuating lugs 34, the plates 14 are separated and the folded fabric to be pressed is inserted. Both plates 14 being movable, or floating, easy placement and positive adjustment on the press line are insured. The offset extending portions 65 at the ends of the handle 10 serve as stops to limit the introduction of the fabric between the plates 14 and thereby act as spacers to prevent the fabric from contacting the hot tube 30. With the heating element 16 of desirable capacity, the plates 14 under reasonable operating procedure will not become sufficiently hot to injure the fabric. Having applied the device to the folded fabric the device is slowly slid along the fold, sufficient time being allowed to produce the desired pressing and creasing of each part of the fabric. Or the fabric may be pressed and creased by sections, as in the case of fragile materials, the lever arms 15 being depressed to release the fabric and the device progressively advanced along the fold until the desired creasing and pressing have been completed.

From the foregoing description of the construction and operation, it is apparent that the device of this invention may be readily operated to move the presser and creaser along the folded fabric as desired, the portions of the operator's hand at the two sides of the handle 10 being in convenient position to manipulate the lever arms 15 whenever desired. It will also be apparent that injury to the fabric being pressed and creased by reason of contact with the hot tube 30 is automatically prevented by the spacing function of the offset portions 65 of the handle members 12.

Since many variations of the generic invention here disclosed will become apparent to those skilled in the art, it is intended to cover all such modifications as fall within the scope of the appended claims.

I claim as my invention:

1. In combination in a heated hand-type fabric presser: a handle enclosing a cavity; movable fabric pressing plates having portions disposed in said cavity and portions lying beyond said handle; means carried by said handle to separate said plates; and heating means for said plates carried within said cavity in operative relation with and between said portions of said fabric pressing plates within said cavity, said handle being extended beyond said heating means at the opposite ends of said plates sufficiently to engage fabric being pressed and prevent entrance of said fabric into said cavity and into engagement with said heating means when said plates are separated.
2. In combination in a heated hand-type fabric presser: a handle enclosing a cavity; movable fab-

5

ric-pressing plates having portions disposed in said cavity, said plates extending from said cavity; and means in said handle and projecting therefrom to separate said plates, said plate-separating means including lever arms in opposite sides of said handle and respectively engaging said plates, said arms having inner ends fulcrumed in said handle, opposite ends extending from said handle for manipulation by an operator, and intermediate portions in engagement with said plates.

3. In combination in a presser: a handle enclosing a cavity; movable fabric-pressing plates having portions supported in said cavity, said plates extending from said handle and adapted to be moved to separated position; actuating lever arms carried in opposite sides of said handle, a portion of each arm being fulcrumed in said handle, an end portion being adapted to project from said handle for manipulation by an operator and a portion being adapted to engage the supporting portion of the respective plate; and means to urge said plates into pressing position.

4. A combination as in claim 3 including a heating means disposed within said cavity in operative contact with said supported portions of said plates, said handle providing portions extending beyond said heating means to serve as spacing means to prevent fabric being pressed between said plates from coming in contact with said heating means.

5. In combination in a hand-type presser: a handle enclosing a cavity; fabric-pressing plates having portions supported within said cavity, said plates extending beyond said handle into creasing position, one of said plates having plate-moving means; and a plate-actuating lever carried within said handle having a portion fulcrumed in said handle, a portion engaging said plate-moving means and a portion adapted to project from said handle for actuation by an operator.

6. A combination according to claim 5 including means for positively urging said plates into pressing relationship.

7. A combination according to claim 5 including heating means carried in said handle in operative relation with said supported portions of said plates, said handle providing spacing portions extending beyond said heating means for spacing fabric being pressed between said plates away from said heating means.

8. In combination in a creasing appliance: an elongated handle having therein an opening and an elongated cavity; fabric-creasing plates disposed outside said handle and having supported portions extending into said cavity and supported therein, one of said plates having means adapted to be engaged for movement thereof; and plate-

6

actuating means disposed in said opening in engagement with said means on one of said plates, said plate-actuating means extending from said handle and being exposed for manipulation by an operator to actuate the respective plate, said opening comprising an elongated slot having a second cavity at the end thereof within said handle, and said actuating means comprising a lever lying in said slot in engagement with said means on one of said plates, said lever having a portion extending into said second cavity and fulcrumed therein.

9. In combination in a hand-type presser: a pair of opposed elongated handle members separably connected, said handle members being hollowed to provide between them an elongated cavity, each member having an elongated slot spaced from said cavity; fabric pressing plates disposed outside of said handle members; supporting means carried within said cavity and connected with said plates to support said plates in said handle; operating means respectively connected with said plates and extending into said slots; and levers disposed in said slots in engagement with said operating means to actuate the latter, said levers being exposed through said slots for engagement by the hand of an operator.

10. In combination in a hand-type presser: handle means having a cavity therein; fabric-pressing plates having pressing portions disposed outside said handle and supporting portions disposed within said cavity; plate-actuating means carried by each of said plates and disposed within said handle means; opposing levers projecting through slots in opposite sides of said handle means, portions of said levers being disposed within said handle means and portions being exposed through said handle means for actuation by an operator, said levers being respectively engaged with said actuating means on said plates; and means for limiting outward movement of said levers from said slots.

11. A combination according to claim 10 wherein said movement-limiting means comprises opposing heels on said levers, said heels being in engagement with each other.

IVAN P. SOWERS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,127,970	Dryfoos	Feb. 9, 1915
1,889,432	Boilman	Nov. 29, 1932
1,933,287	Vita	Oct. 31, 1933
2,243,061	Lamia	May 20, 1941