May 2, 1967 A. SCHMID 3,317,094

PRESSING MACHINE

Filed Aug. 17, 1965 2 Sheets-Sheet 1

Fig.4

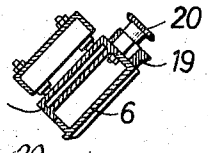


Fig.1

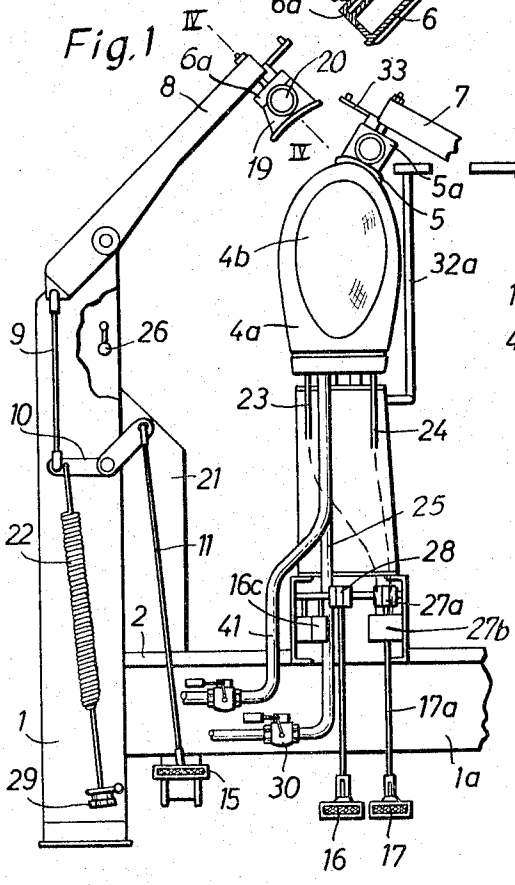


Fig.2

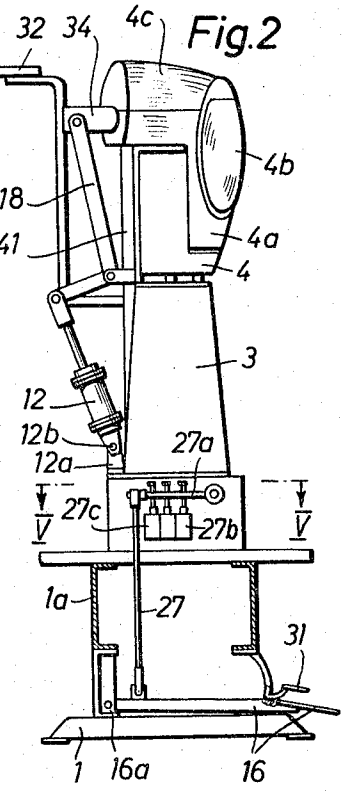
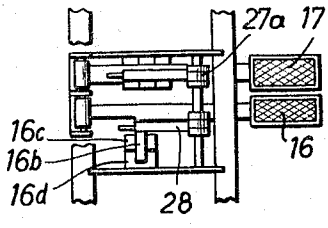


Fig.5



INVENTOR

BY ALOIS SCHMID

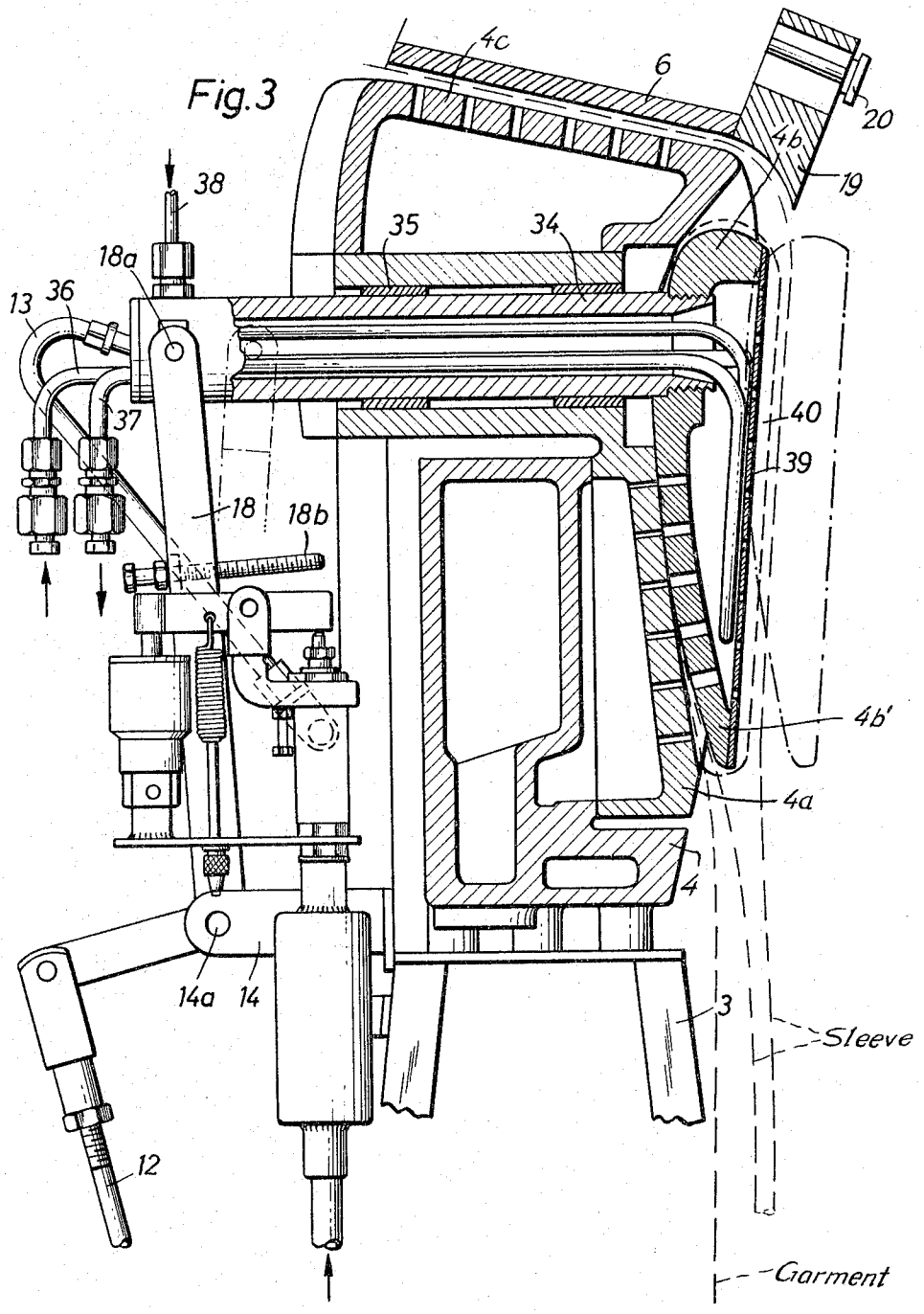
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PRESSING MACHINE

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Fig.3



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PRESSING MACHINE

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Filed Aug. 17, 1965, Ser. No. 480,377
Claims priority, application Germany, Aug. 17, 1964, H 53,544
7 Claims. (Cl. 223—57)

The invention relates to an ironing press for the ironing of the shoulder and sleeve portions of articles of outer clothing, such as lounge jackets, overcoats and costumes, wherein a lower plate shaped in accordance with the shoulder portion and at least one upper plate adapted to be pressed against the said lower plate, are able to co-operate.

The ironing to shape of shoulder portions, sleeve transition portions or arm-hole or sleeve-insertion seams requires different manipulations and also the utilisation of various ironing devices. For the ironing of the shoulders, due to varying shoulder width on the articles of clothing, a small bearing face is desirable. Nevertheless, in the great majority of cases, no shaped-fitting abutment is achieved. Furthermore, the article of clothing is not worked on in the suspended position, so that it may prove to be necessary to carry out additional ironing work on portions of the garment which have already been ironed, such as the back and the front portion. The ironing of the sleeve insertion seam, referred to in the art as "setting" the seam, is effected by ironing the seam together by means of which the sleeve is secured on the garment. In order to be able to compensate for creases at the seam and also uneven points on the portion adjacent the seam, such as the front portion, the back portion and the sleeves, it is advantageous to use a machine having a relatively long bearing face. The working step necessary with the machines of the prior art, is still relatively inconvenient. The portions adjacent the sleeve insertion seam cannot be ironed in the shape which they were originally intended to have. The garment must be so turned that the lining faces upwards, so that it is necessary for the operator to carry out this ironing step purely "by feel," since the position of the sleeve is not visible. Thus, it will be necessary to check almost every stroke of the iron for possible ironing creases. This requires the turning back of the garment in every case and involves a corresponding expenditure of time.

Furthermore, it is frequently necessary that, during the ironing of the sleeves, the latter, and also the portions such as the back portion, the front portion and the side portion adjacent the sleeve insert seam, should be subsequently treated a second time from the exterior. This is done, as a rule, only in order that the portions which, during the previous working step of setting the sleeve have lost their shape may again be put in order. During the two working steps described hereinabove, the garment frequently bears on the table and cannot be worked on in the hanging position and this may require renewed pressing of portions which have already been ironed. Even if the ironing of the shoulder and sleeve transition points is effected with a special shoulder-ironing machine, disadvantages are still encountered, for example inasmuch as shoulders having so-called puffed sleeve transition points cannot be ironed with the proper shaping. Consequently it becomes necessary to use yet another machine and making the handling of the garment less convenient.

It is the object of the invention to provide a shoulder and sleeve ironing press, wherein the ironing to shape of the shoulders, the sleeve transition points, the arm-hole or sleeve-insert seam, and also the ironing of the arm of outer garments, can be carried into effect on one machine.

An important feature of the invention resides in the fact that with an ironing press of the type mentioned earlier the lower plate is provided with a displaceable secondary shoulder shaping plate adapted to be pressed against the lower plate. With this arrangement, the secondary shoulder shaping plate may be so designed that it is inflatable on the outer end face.

The shape of the shoulder ironing press is such that it always permits a form of laying on which shall be true to shape and as a result the article of clothing can then always be subjected to the process while suspended or hanging. A simplified mode of operation is achieved, since it is always possible to effect a check from the exterior during the working step of the sleeve ironing. Furthermore, a substantial saving of time is achieved, due to the elimination of unnecessary manipulation time, since it is required that the garment be hung only once for each shoulder side for the ironing of the shoulders and sleeves and the setting of the sleeve seams. Furthermore, it becomes possible in this way to achieve a true-to-shape, suspended form of treatment, also in respect of the adjacent parts, such as the back, side and front parts, and the like, during the setting of the sleeve seams. The sleeve insert seam passes, during this procedure, between the lower shaping plate and the secondary shoulder-shaping plate and is ironed together to the necessary height due to the application pressure of the plates and then also by steaming and peripheral suction. In addition to the saving of time, there is also an additional saving inasmuch as it is no longer necessary to use further machines of a different type. This has the further advantage that less working space is required.

In addition to the arrangement permitting the pressing on of the shoulder shaping plate an additional feature of the invention is that the upper shape-ironing plate is provided with adjustable shaping components. In this way shoulders with puff-sleeves can be satisfactorily dealt with on the same ironing press.

The secondary shoulder shaping plate which is adapted to be pressed on may be secured on a slide which extends through the lower shoulder-shaping plate and on which a linkage provided on the rear of the shoulder-shaping plate is adapted to act. The secondary shoulder-shaping plate is preferably provided with its own steam inlet and outlet pipes and with a compressed air infeed and also with a steaming device. The secondary shoulder-shaping plate which is conveniently adapted to be pressed on is adapted to be locked in both its retracted and extended positions. Furthermore, the lower shoulder plate may be equipped with an adjustable sleeve depositing arrangement.

By way of example a preferred embodiment of the invention is shown in the accompanying drawings wherein:

FIGURE 1 is a front elevation of a shoulder ironing press having two upper plates, the illustration being generally diagrammatic;

FIGURE 2 shows a lateral view on the frame, carrying the lower plate, of the ironing press according to FIGURE 1;

FIGURE 3 is an enlarged broken view showing the lower shoulder plate with the shoulder-shaping member adapted to be pressed on and the steaming device;

FIGURE 4 is a cross-section taken on line IV—IV of FIG. 1;

FIGURE 5 shows a cross section taken along the line V—V of FIGURE 2.

The embodiment of the invention chosen for illustration herein is a shoulder-ironing press having a lower plate having the contour of the shoulder portion and two upper plates adapted to be pressed against said lower plate, the actuating framework for the second upper plate, which corresponds to that of the first, not being shown.

Relatively to a base 3, having a lower plate 4, there are on both sides of this frame parts 1, only the left-hand one being shown, said parts having a common table top 2 which is fast with the frame parts 1 and bears on the base 3. Articulated to the frame parts 1, by means of the levers 7 and 8, are the upper plates 5 and 6. Levers 7and 8 are shown only in fragmentary fashion for the reason that they are more completely disclosed in U.S. Patent No. 3,080,099 and these arms actually form no part of the instant invention. Each upper part is actuated by means of a linkage 9, 10 and 11 subjected to the influence of a spring 22 adapted to be adjusted by means of the adjusting handle 29. Disposed at the free end of the rod 11 is a pedal 15, the linkage elements 10 and 11 being accommodated within the casing 21. The upper plates 5 and 6 are provided with a steam inlet and steam outlet (not shown). The upper steaming is effected by means of the valve lever 33.

The lower plate 4 has connected with it a shoulder-shaping plate 4*c*. Furthermore, there is a secondary shoulder-shaping plate which is built up from the parts 4*a* and 4*b*. The part 4*a* is fast with the lower plate 4 whereas the secondary shoulder shaping plate 4*b* proper is adjustably arranged. To this end, the plate 4*b* can be carried by a slide 34 which extends through the shoulder shaping plate 4*c* and is displaceable in the longitudinal direction on the sliding bearings 35. The slide 34 is hollow and the steam feed pipe 36 and condensation return pipe 37 extend through the slide. Furthermore, there is also a compressed air feed pipe 38 and a steaming device 13. The secondary shoulder shaping plate 4*b* is hollow and has a perforated inner wall 4*b'* and its outer wall is closed by a perforated plate 39 which may carry elastic or resilient pad 40 or a covering which can be secured thereon. The garment may be clamped between this inner wall 4*b'* and part 4*a* as shown in broken line in FIG. 3. Since both 4*a* and 4*b* have openings, air or vapor under pressure may be supplied to this clamped port. For the actuation of the displaceable secondary shoulder-shaping plate 4*b*, there is a linkage consisting of an air cylinder 12 and a fork member 18, designed as an angle lever, which is pivotally mounted on the cantilever arm 14 and 14*a*. The fork member engages in articulated manner, at 18*a*, on the slide 34. The air cylinder 12 is articulated to the cylinder holder 12*a*, at 12*b*. Locking of the fork member 18 and therewith adjustment of the secondary shoulder-shaping plate 4*b*, can be effected by the set screw 18*b*.

The lower plate 4, with the shoulder-shaping member 4*c*, is provided with a feed pipe 24 and 26 for heating steam and an outward pipe 23 and 27 for removing condensation water. The control of the steaming device 13, of the secondary shoulder element 4*b*, is effected by the linkage 17*a*, 27 and 27*a*, via the valve 27*b*, 27*c*, and the pedal 17. For the control of the compressed air to the air cylinder, use is made of the valve 16*c*. Furthermore, there are two pipes 41 which lead to a source of negative pressure, the valves 30 being interposed The pedals 15, 16 and 17 are arranged in suspended position on the cross-member 1*a* connecting the frame parts 1. Fast on the base 3 is an adjustable depositing arrangement, secured by means of the retaining means 32*a*.

The upper shaping plates 5 and 6, provided with the heating plates 5*a* and 6*a* are equipped with a shaped member 19 which is mounted for displacement relatively to the plates 5 or 6 and can be secured in its position by means of a star-shaped knob 20. The shaped members 19 cooperate with the displaceable secondary shoulder-shaping plates 4*b*. They are intended mainly for the ironing true-to-shape of the sleeves, preferably of puff-sleeves.

Reference is made to the particular formation of shoulder shaping part 4*b* which acts in association with shaped member 19 which is provided on each upper plate 5 and 6 and which is adjustable. The lower side of this member 19 conforms to the upper side of shoulder shaping part 4*b* and the shoulder shaping portion of the garment is put therebetween.

FIG. 4 shows the upper plate 6 in cross section on line IV—IV of FIG. 1. In FIG. 3, there is illustrated the operation of shaped member 19 in connection with shoulder portions 4*c* and 4*b*. Member 19 is adjustable on the upper plate 6 or 5 so that it may be adapted to the thickness of the garment to be laid on the part 4C of the lower plate.

In the inoperative position, the upper plates 5 and 6 are wide open and the secondary shoulder-shaping plate 4*b* is extended to for example 40–50 mm. The processing of the shoulder portions of an outer garment may be effected in such manner that the sleeve is drawn on. As this is done, the other sleeves bear on the adjustable supporting plate 32 so as to guarantee entirely satisfactory abutment of the outer garment. By actuating the central left-hand pedal 16 to the first detent point, preferably in two stages, the secondary shoulder-shaping plate 4*b* is brought up by way of the machine parts 16*b* and 16*c*, 12 and 18 and is locked by the pawl 31. Such an effect can be exerted by means of the vacuum valve 30 (second detent point). The corresponding number of ironing strokes is effected during the individual operating stages. Between the two first-mentioned stages, by pressure of the foot on the central right-hand pedal 17, steaming can be provided out of the secondary shoulder-shaping plate 4*b* (first detent point) and the infeed of compressed air by actuating the hand of 26, for inflating the sleeve.

The ironing strokes are effected by lowering the upper plate 5 or 6, selectively and by hand, into abutment against the desired shoulder side. The actuation of the two pedals 15 to the left and to the right on the exterior permits the desired application pressure of the upper plates, the upper steaming being effected by actuation of the control handle 33. Similarly, suctional removal can be controlled in a corresponding manner.

A multiplicity of pressing plates operated simultaneously, or in sequential operation, with the shoulder-ironing press lower plate, which is shaped in the manner of a "half-bust," so that the shoulder portion and also the transition point of the sleeve in the breast and shoulder parts and furthermore the upper sleeve part can be ironed in finished condition in one working step. The shaping plates 4*a* and 4*b* are advantageously slightly curved on the opposite faces, perforated and covered with a covering of felt or other similar material.

The lower plate designed in accordance with the invention may also be used separately, i.e. without upper plate or upper plates, for example for the ironing of the sleeve insert seam or other shoulder portions of the garment.

I claim:

1. An ironing press for operation on the shoulder portions of garments and including a frame, lower and upper pressing plates carried by the frame, the latter being movable and adapted to be pressed against said lower plate, said latter plate adapted to underlie the shoulder section of a garment and whose upper section and opposed front and rear sections are shaped to substantially conform to the shape of the shoulder section of the human body, said lower pressing plate having a downwardly extending hollow shoulder shaping part provided with inner and outer walls and having openings in its outer wall through which air and vapor may pass, means for sliding the shoulder shaping part inwardly and outwardly of said lower pressing plate, conduits for said air and vapor extending through said sliding means, and means outside said lower pressing plate for moving the shoulder shaping part to an adjusted position.

2. The structure of claim 1 wherein the inner wall of the shoulder shaping part has openings therein.

3. The structure of claim 1 wherein said outer wall of the shoulder shaping part is provided with a resilient covering.

4. The structure of claim 1 wherein a vertical member extends upwardly from the frame and a plate is fixed at the top of said vertical member for supporting the shoulder section of the garment opposite from that being worked on.

5. The structure of claim 1, wherein the means for sliding the shoulder shaping part inwardly and outwardly consist in a through bore extending laterally through the lower pressing plate and a hollow element journalled for sliding movement in said bore, a linkage on one side of the lower plate controlling movement of the slide and the shoulder shaping part being provided with separate steam feed and condensation return pipes as well as with a pressure air feed pipe.

6. An ironing press according to claim 1, characterized in that means are provided for locking the shoulder shaping part in both its extended and retracted position.

7. An ironing press according to claim 1, characterized in that part of lower plate has a free front face of substantially oval contour.

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