

May 26, 1970

P. J. S. CORBY

3,513,573

TROUSERS PRESS

Filed Oct. 17, 1968

3 Sheets-Sheet 1

FIG. 1

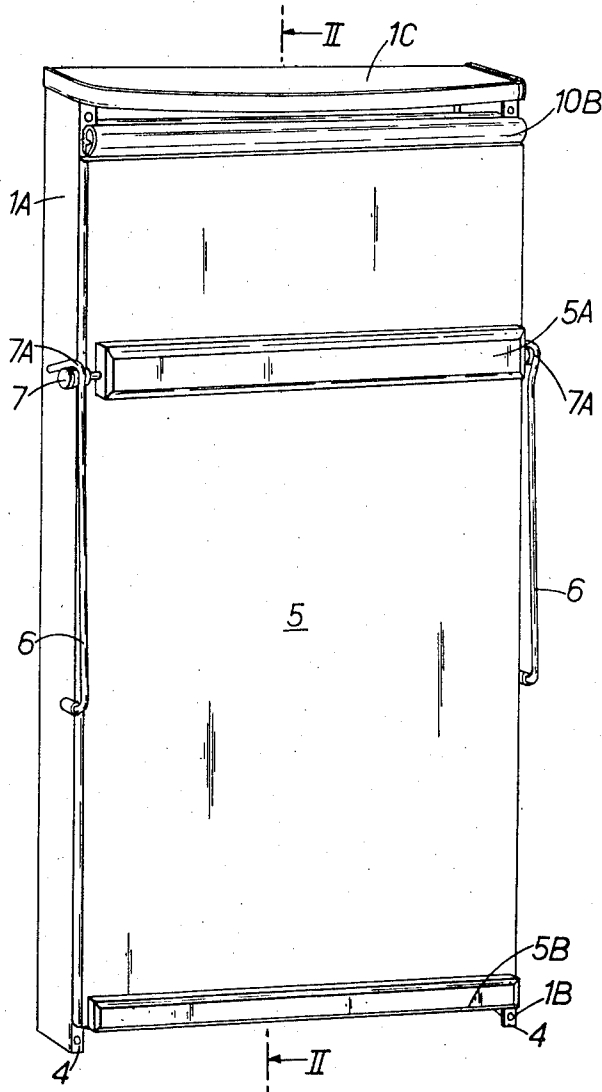
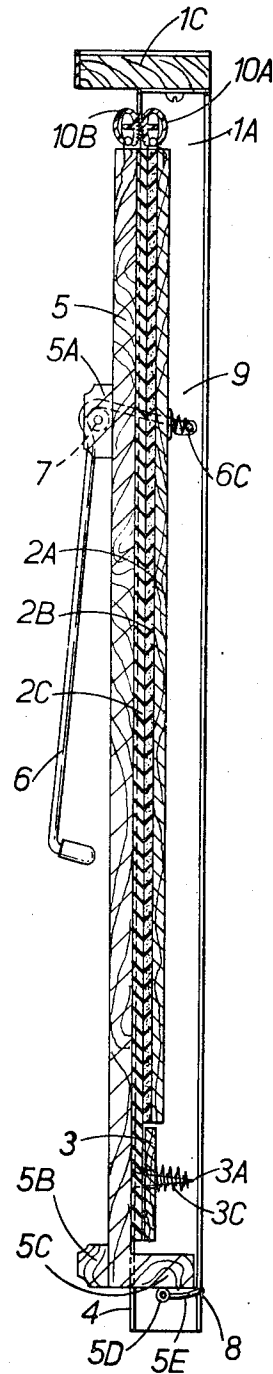


FIG. 2



May 26, 1970

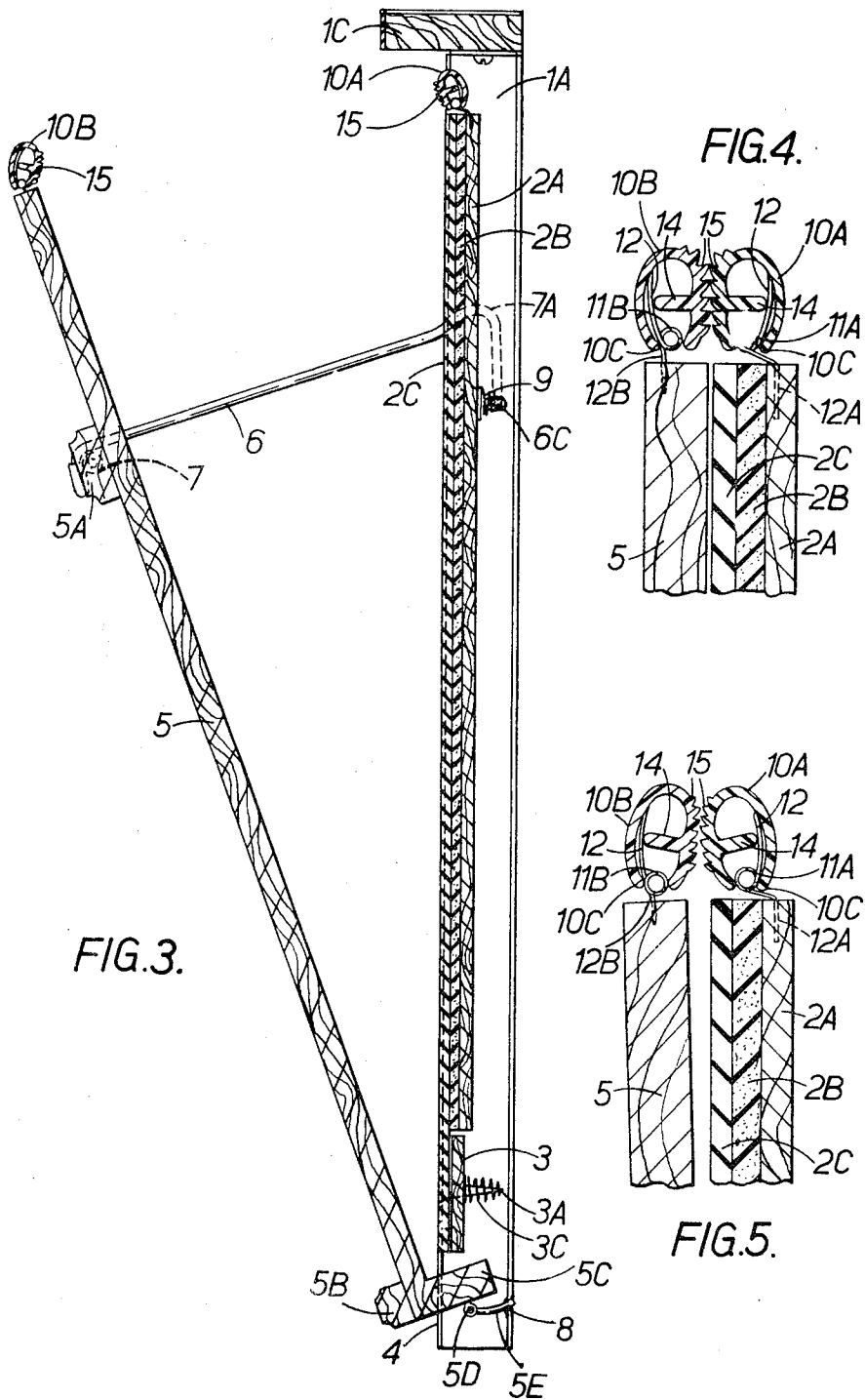
P. J. S. CORBY

3,513,573

TROUSERS PRESS

Filed Oct. 17, 1968

3 Sheets-Sheet 2



May 26, 1970

P. J. S. CORBY
TROUSERS PRESS

3,513,573

Filed Oct. 17, 1968

3 Sheets-Sheet 3

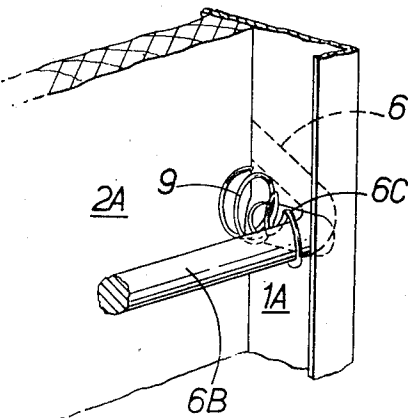


FIG. 6.

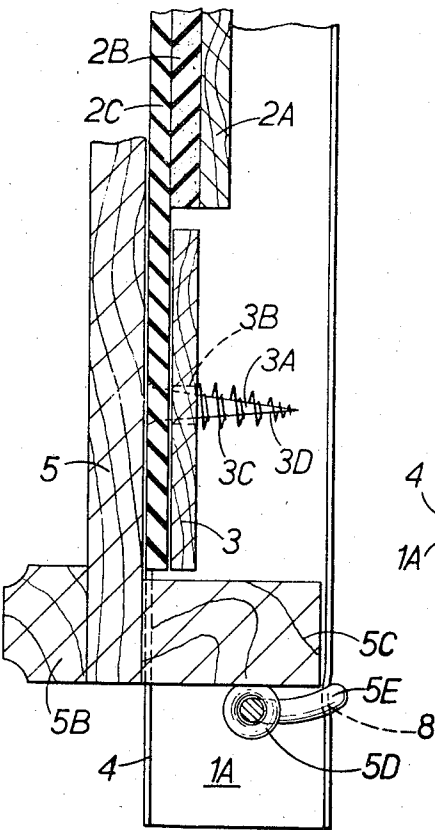


FIG. 7.

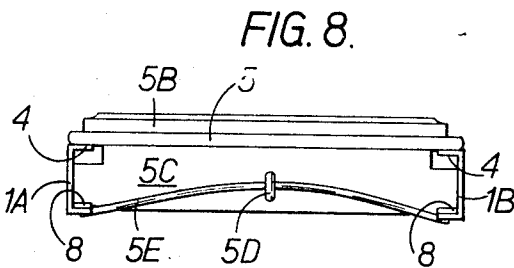


FIG. 8.

1

3,513,573

TROUSERS PRESS

Peter J. S. Corby, Windsor, England, assignor to Rondel Limited, Hamilton, Bermuda, a company of Bermuda
Filed Oct. 17, 1968, Ser. No. 768,371

Claims priority, application Great Britain, Oct. 23, 1967, 48,016/67

Int. Cl. A47j 51/00

U.S. Cl. 38—71

4 Claims

ABSTRACT OF THE DISCLOSURE

A trousers press has a flexible electrically heatable mat on the surface of one pressing member. The mat is compressible in such a manner that in use thicker portions of the trousers, for instance the side seams, will be accommodated between the facing surfaces of the two pressing members.

Field of the invention

This invention relates to a trousers press using electricity for heating. Such a press is disclosed in British Pat. No. 928,293.

Description of the prior art

It is known in a trousers press to provide for gripping and stretching the trousers before they are pressed. Thus in the initial stages of closing the press, the cuffs at the lower end of the trousers are first gripped by a cuff board, which comprises a separately relatively movable part of one of the two surfaces of the press. Also the upper end of the trousers is engaged by a movable stretcher board and with continued closing movement of the press the stretcher board causes the upper end of the trousers to be gripped between itself and one of the two surfaces of the press. The stretcher then moves and causes the trousers, gripped at each end, to be stretched. Finally the press closes on the stretched trousers and heat is applied to them, so that the combined effect of stretching, pressing, and heating should cause the trousers to be pressed and neatly creased.

It has been found by experience with the press disclosed in the prior patent that pressure was not always applied evenly over the trousers.

It is an object of this invention to avoid this disadvantage of the known trousers press. It is another object of this invention to provide a trousers press that is cheaper to make than the known trousers press.

Summary of the invention

According to this invention, a trousers press comprises two flat members having facing surfaces between which trousers are pressed, at least one of the surfaces having a flexible electrically heatable mat thereon, characterized in that the flexible mat is compressible in such a manner that in use thicker portions of the trousers, for instance the side seams, will be accommodated between the facing surfaces. Preferably the compressible mat forms a backing for the flexible mat. Thus by use of the compressible mat, variations of thickness of the trousers, particularly the increased thickness at the seams, can be readily accommodated, so that even pressure is applied over the whole of the trousers. In this way it is unnecessary to use one flat member made up of two separate and spaced parts, as has long been common practice, or to provide an elongated depression in one member as disclosed in British Pat. No. 928,293.

Brief description of the drawings

An embodiment of the invention will now be described by way of example, with reference to the accompanying drawings, in which:

2

FIG. 1 is a perspective view of a trousers press in accordance with the invention;

FIG. 2 is a section on plane II-II of FIG. 1, showing the press closed, but with the trousers omitted, for clarity;

FIG. 3 is similar to FIG. 2, but showing the press open;

FIG. 4 is an enlarged detail cross section of the pair of stretcher bars shown in FIG. 2;

FIG. 5 is similar to FIG. 4 but showing the stretcher bars in their positions as they engage and grip a pair of trousers;

FIG. 6 is an enlarged detail perspective view of part of the back of the press;

FIG. 7 is an enlarged detail cross section of part of FIG. 2, showing mounting of the cuff board; and

FIG. 8 is a bottom plan, with parts omitted.

Description of the preferred embodiment

Referring to the drawings, a trousers press has two metal side frame members 1A and 1B of channel section, which are connected at the top by a cross-member 1C. Fixed to and extending between the members 1A and 1B is a first rigid, flat, wooden member 2A on one face of which is held a resilient sheet 2B of foamed polyurethane plastics material, on which in turn is held a flexible sheet 2C of rubber in which are embedded electric wire heating elements (not shown). These heating elements preferably extend vertically.

A wooden cuff board 3 (FIGS. 2 and 7) is mounted on two screws 3A each fixed to, and extending rearwardly from the front flange 4 of a respective side member 1A, 1B. A hole 3B permits each cuff board to move rearwardly on its screw 3A against a compression spring 3C which is fixed at the region 3D to the respective screw 3A. In this manner the cuff board is movable rearwardly to accommodate, and at the same time grip the trousers cuffs (if any) when the press is closed. It will be seen that the flexible rubber sheet 2C extends over (but is not fixed to) the cuff board, whereas the resilient sheet 2B does not.

A second rigid, flat, wooden member 5 has two transverse reinforcing bars 5A, 5B and rearwardly extending hinge bar 5C at its lower end. Projecting downwardly from the hinge bar 5C is a hinge eye 5D, and extending through this eye 5D is a spring steel hinge bar 5E. The flat member 5 is hingedly connected by this arrangement to the side frame members 1A, 1B (as will be explained), so that it can be moved between the FIGS. 2 and 3 positions. Each of a pair of clamping and retaining arms 6 form part of a unitary structure, being connected by an integral cross-member 6B (FIG. 6) which extends through horizontal slots 6C, one in each side frame member. The arms 6 run over rollers 7 and have elbow portions 7A for clamping the press shut, in known manner.

The flat member 5 is hinged to the side frame members 1A, 1B in that the spring steel hinge bar 5E is bowed under tension (see FIG. 8) between the eye 5D and the frame members. Each end of the bar 5E is seated in a groove or depression 8 in a respective frame member, so that the effect is that the eye 5D is constantly drawn rearwardly (i.e. downwardly as viewed in FIG. 8 and to the right as viewed in FIG. 7). The lower end of the flat member 5 is thus also constantly drawn rearwardly, the eye 5D and bar 5E constituting a hinge connection. The upper part of the flat member 5 is drawn rearwardly in known manner by the clamping action of the arms 6. When the press is open (FIG. 3) the upper part of the flat member 5 is retained by the ends 7B of the arms.

When the press is closed (see FIG. 2 and 6) the first or rear flat member 2A is pressed towards the second or front flat member 5 (so that the front face of the flexible rubber mat and the rear face of the member 5 engage and press the trousers by two strong compression coil springs

9) each acting between cross-member 6B and flat member 2A, as is shown particularly in FIG. 6.

Referring now to FIGS. 4 and 5, a pair of stretcher bars 10A, 10B are respectively mounted on the upper ends of wooden flat members 2A and 5 by means of coil springs 11A and 11B. Each stretcher bar has at least two such springs, spaced apart along the length of the bar. Each spring has its upper leg 12 gripped within the hollow profile of the respective stretcher bar by a web 14. The lower leg 12A, 12B of each spring extends down into the respective member 2A, 5, the leg 12A being bent as shown. The coil springs 11A, 11B, are received between the lower edges 10C of the stretcher bars, and bias the bars towards the inner position shown in FIG. 3. In the closed (FIG. 4) position the bars press against each other against the force of the springs: in the FIG. 5 position the bars touch, for gripping the upper part of the trousers, ready for stretching.

The stretcher bars are preferably of a polystyrene and are slightly flexible to permit some degree of bowing so as to accommodate for the increased thickness of the trousers seams.

The inner face of each stretcher bar has, in cross-section, a series of somewhat upwardly directed teeth 15 for gripping the trousers.

In using the press, a pair of trousers is placed in the press in the FIG. 3 position. The front member 5 is then pushed back, with the arms 6 riding over rollers 7. When the front member reaches the FIG. 5 position, the stretcher bars, through their teeth 15 (which extend the full length of each stretcher bar in the form of ribs having the profile shown in FIGS. 4 and 5) engage and grip the upper part of the trousers; the lower end or cuffs of the trousers are already at this stage gripped between the lower end of member 5 and the rubber mat 2C over the cuff board 3, with the latter pushed back against the springs 3C.

On further closing of the press from the FIG. 5 toward the FIG. 4 position, the teeth 15 not only come closer together, but also—by virtue of the generally curved profile of the inner face of each stretcher bar and by virtue of the location of that face in relation to the springs 11A or 11B which constitute an approximate pivotal axis for the stretcher bar—move upwards. It may be said therefore that in moving from the FIG. 5 position to the FIG. 4 position the teeth 15 of the two stretcher bars execute as it were an upward rolling movement. And by this movement the trousers, held at the lower end by the cuff board, are stretched.

It will be seen from FIGS. 3, 4 and 5 that the stretcher bars are so mounted that they move in identical fashion, and that the two sets of teeth 15 move substantially along a bisecting plane between the inner face of member 5 and the exposed face of the rubber heating sheet 2C. In this way an even stretching pull is applied to both sides of the trousers.

When the press is closed in the position shown in FIGS. 1, 2 and 4, the member 5 is clamped and retained against the trousers and the rubber sheet 2C by the elbow portions 7A engaging over the rollers 7, in known manner.

The thickness and resilience of the sheet 2B is such as to permit the sheet 2C to flex to accommodate as necessary to various thicknesses of material of the trousers, particularly the zone of increased thickness where the seams extend longitudinally of the trousers.

The sheet 2B is heated, but no electrical connections or control means are shown, as these are well known.

Although it is preferred that the resilient sheet should be on the member 2A as described above, other arrangements are possible. For example the resilient sheet could be on the member 5, faced by a second flexible sheet, with the flexible heated sheet 2C directly on the member 2A.

I claim:

1. A trousers press comprising two flat members having facing surfaces between which trousers are pressed, at least one of the surfaces having a flexible electrically heatable mat thereon, characterised in that the flexible mat (2B, 2C) is compressible in such a manner that in use thicker portions of the trousers, for instance the side seams, will be accommodated between the facing surfaces, and a pair of stretcher bars (10A, 10B) for gripping between them the upper part of the trousers, each stretcher bar being movably mounted on a respective one of the two flat members (2C, 5).

2. A press according to claim 1 characterized in that the flexible mat comprises two layers:

- (i) a flexible electrically heatable layer (2C) and
- (ii) a compressible resilient layer (2B).

3. A press according to claim 2 characterised in that the compressible layer (2B) is disposed on one of the facing surfaces (2A) and the flexible layer (2C) is disposed on the compressible layer (2B).

4. A press according to claim 1 characterized in that the stretcher bars are movably mounted on the two flat members in such manner, during closing of the press, each engages a respective side of the trousers and is moved a distance equal to the distance of movement of the other until the press is fully closed, such movements of the stretcher bars including a component in a direction such that the trousers are stretched during closing.

References Cited

UNITED STATES PATENTS

1,498,654	6/1924	Hauptman	38—71
3,145,490	8/1964	Corby	38—71

PATRICK D. LAWSON, Primary Examiner