Oct. 10, 1950 A. ASTPHAN 2,525,111

PRESSING MACHINE

Filed May 17, 1949 2 Sheets-Sheet 1

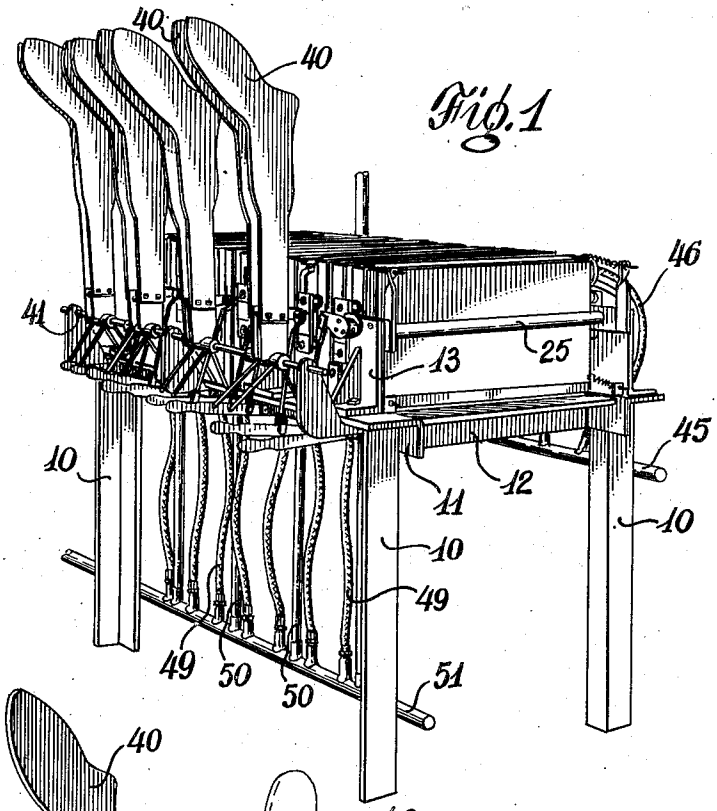


Fig. 1

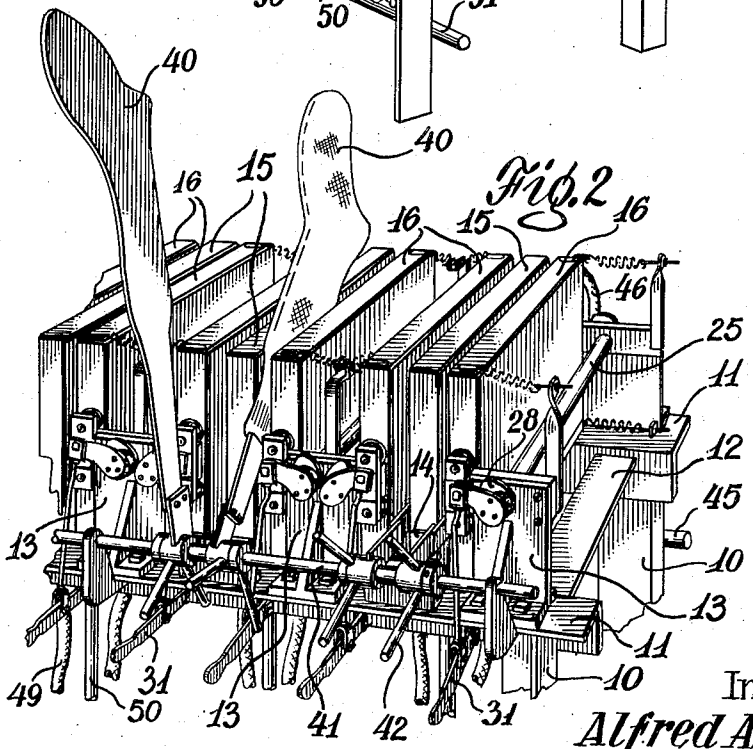


Fig. 2

Inventor
Alfred Astphan

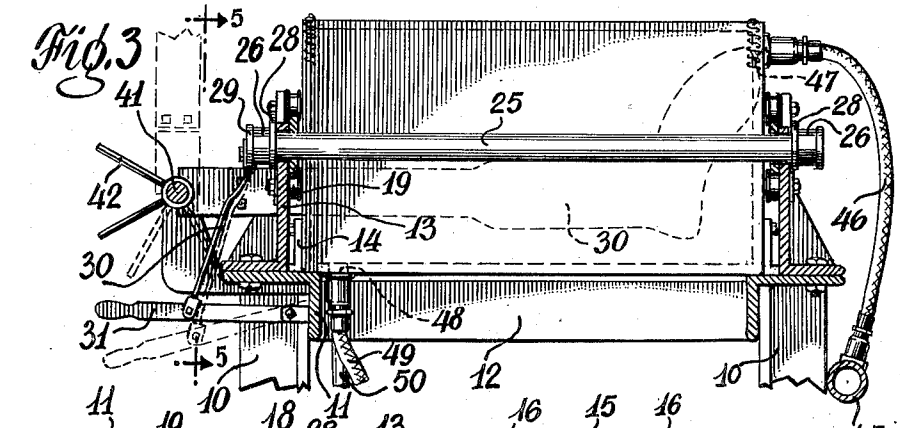
By Bolesc & Bastian

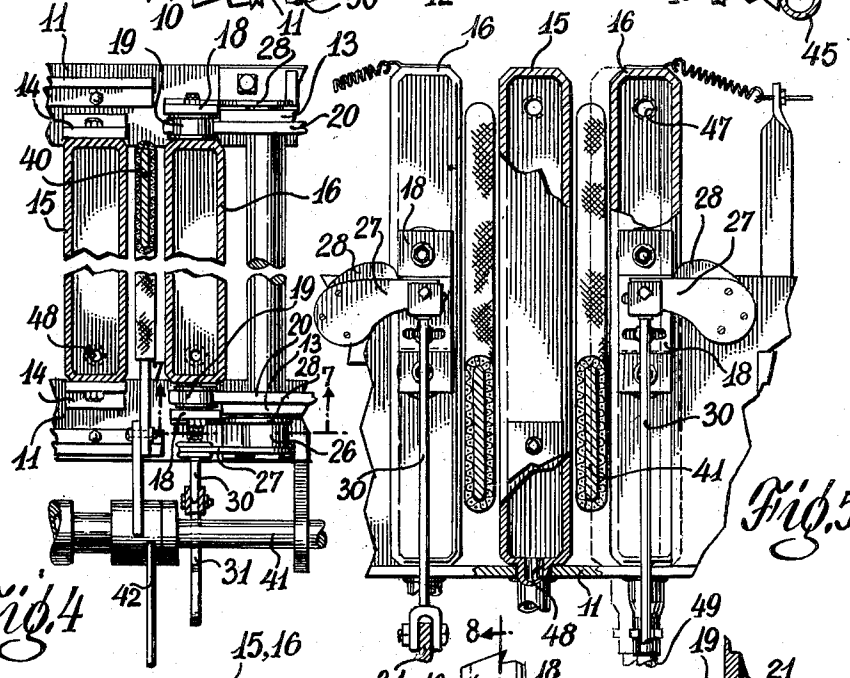
Attorneys

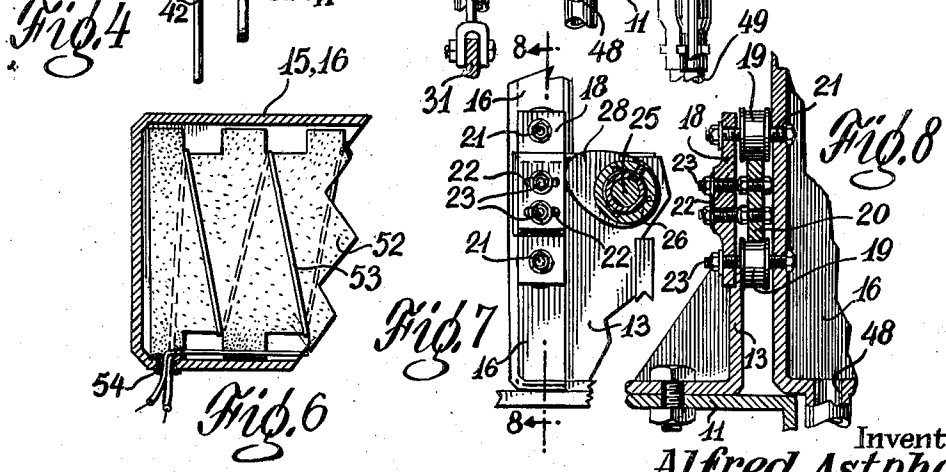
Oct. 10, 1950 A. ASTPHAN 2,525,111

PRESSING MACHINE

Filed May 17, 1949 2 Sheets-Sheet 2







Inventor
Alfred Astphan

By Robie & Bastier

Attorneys

Patented Oct. 10, 1950 2,525,111

UNITED STATES PATENT OFFICE

2,525,111

PRESSING MACHINE

Alfred Astphan, Joliette, Quebec, Canada

Application May 17, 1949, Serial No. 93,751

1 Claim. (Cl. 223—76)

1

The present invention relates to a pressing machine.

More specifically, this invention concerns a machine for pressing fabrics, or finished articles of clothing, the articles being placed over forms for the pressing operation and removed therefrom afterward. Such machines are particularly useful where a large number of similar goods must be pressed economically and rapidly; for example, in a clothing factory.

Naturally the advantages of such a machine have been recognized for some time, and devices of various types have been constructed. However, difficulty has been encountered in particular in devising suitable co-operation between the article-holding forms and the heated press. As things stand, there is demand for a machine wherein the forms are easily and quickly inserted in the press (those in operative position being left for a time while others are adjusted) and removed therefrom after a suitable interval.

The main object of the present invention is to provide an improved machine of the character described which is especially adapted for the mass production pressing of similar articles of fabric. The machine envisaged will turn out large numbers of articles with a minimum of labour and supervision.

Another important object resides in the provision of a machine as set forth above, the invention is shown in the annexed drawings, wherein:

Fig. 1 shows a perspective view of the machine when inoperative;

Fig. 2 shows a perspective view of the press proper with part thereof in operative position;

Fig. 3 shows an elevation view, partly in section, parallel to the press plates;

Fig. 4 shows a detail plan view, partly in section, taken longitudinally of a portion of the press;

Fig. 5 shows a detail elevation view, partly in section, taken longitudinally of a portion of the press;

Fig. 6 is a detail indicating plate construction for an alternative heating method; which is exceedingly simple in design and is readily understood and operated by anyone of normal intelligence.

As an example, and for purposes of illustration only, a preferred embodiment of Fig. 7 shows a section taken along the line 7—7 of Fig. 4, and

Fig. 8 is a section along the line 8—8 of Fig. 7.

Still another object is to provide such a machine which is usable for the pressing of a wide variety of articles of fabric, the article forms

2

being provided, if desirable, in interchangeable sets.

Yet another object is to provide a machine of the nature set forth which is relatively inexpensive to build and operate, and which is of durable construction.

Other objects and advantages will become apparent, or be further pointed out, in the description to follow.

Referring now to the drawings, wherein the same reference characters indicate corresponding parts throughout, the press proper is seen to be mounted in a rigid structure represented in this case by the posts 10, front and rear longitudinal beams 11 and crossbars 12 connecting the upper ends of the posts, and right-angled brackets 13 and 14 carried on the beams to support the press plates and controls.

The press includes, as usual, fixed plates 15 and parallel movable plates 16, the latter movable against the former to press articles of fabric arranged between. In a machine of this type, a plurality of plates are utilized and for maximum efficiency may be placed in sets of three, the outer plates of each set or group being movable inward against the middle fixed plate 15 in operation.

For greater convenience to the operator, the plates are arranged in parallel transverse the framework in upright position. The fixed plates 15 are secured between brackets 14. The outer plates of each group (movable laterally towards and away from plates 15) have spacedly secured to each end, centrally (see Figs. 7 and 8) an upright bar 18. Between the latter and the end of each plate 16, at the top and bottom of bar 18, is journalled a roller 19. This pair of rollers engages the projecting end of horizontal bar 20, one of which is secured across the top of each bracket 13 in order to support the plate 16 at each end for lateral movement. The rollers 19 may be rotatably mounted on bolts 21 connecting plates 16 with bars 18, and, if desired, the bars 18 may have horizontal slots 22 therethrough for an additional lateral-sliding connection with bar 20 as by bolts 23.

Considering the manner in which the outer plates of each group may be positively moved inward for the pressing operation, it is seen that corresponding to each plate 16. and outside the latter, a shaft 25 extends transversely of the press being journalled in brackets 13 and projecting out therefrom. Upon these shafts, and at each end, are keyed sleeves 26. The sleeves on the front ends of the shafts are provided at

their outer ends with a laterally projecting lever arm 27 and at their inner ends with a cam 28.

The rear sleeves need have only cams identical to 28 formed thereon, since all these cams are adapted to bear against the outer edges of adjacent bars 18 in order to force the latter, and hence the movable plates, inward for pressing.

A preferred method for positively displacing sleeves 26, thus rotating cams 28 and moving the outer plates, is best shown in Figs. 3, 4 and 5. Extending down from the free end of each lever arm 27, and pivoted thereto is a rod 30. This latter is coupled intermediate the length of a handle 31 which is in turn pivotally secured at its inner end relative to beam 11. As handles 31 are moved down, so is lever arm 27 and the cams are so shaped as to force plate 16 inward towards plate 15.

Between each fixed plates and its corresponding movable plate or plates it will be possible to insert articles of fabric for pressing purposes. For convenience in doing this, forms 40 are provided which may be of any particular shape or even in interchangeable sets for different types of articles. Those shown in the drawing are shaped to receive hosiery (say for the convenience of a manufacturer of socks and stockings) and are non-slidably pivoted at one end to a shaft 41 fixed spacedly and longitudinally in front of the press. Each form 40 is swingable in a vertical plane to either an operative position between a pair of co-operative plates or to an inoperative position remote from the press (preferably in the upright position of Fig. 1). The forms will preferably be of some durable metallic material, will be shaped so as to make it easy to apply or remove articles for which they are designed, and may be controlled by handles such as 42 with means for locking the form in its limiting positions.

It will be understood that for most effective pressing of the articles concerned, the plates 15 and 16 should be heated to an adequate temperature. This may be accomplished by any of the usual methods, steam or electric heating being usually found more suitable.

In Fig. 1, the steam inlet manifold is designated by 45 and has coupled thereto flexible hoses 46 leading to each of the plates. Inlet apertures 47 allow entry of steam into the interior of the hollow plates and they may thus be maintained at a desired high temperature. Outlets 48 are provided at the bottom of the plates, whence flexible tubes 49 (or rigid pipes 50 in the case of fixed plates) lead to an outlet manifold 51.

For electric heating, the plates may be constructed after the fashion shown in Fig. 6,

wherein a rigid sheet of insulation 52 inside a plate carries a heating coil 53 therearound, the terminals exiting preferably from the bottom of each plate at 54.

Obviously, from the foregoing, the present invention fulfills the objectives hereinbefore set forth. The machine is indeed capable of handling quickly and efficiently (for pressing purposes) large numbers of articles of fabric. Whilst simple in design, the machine is durable and easily handled. A principal feature is the arrangement of the article-holding forms relative to the plates. In operation, the machine attendant may place a pair of articles on forms, move the latter between a trio of plates, and actuate the outer plates for pressing. He may then continue down the line while the first group of plates finish their work, returning after an interval to open out the plates and forms, remove the articles, and begin the cycle again. No time is lost and no difficult operations requiring a high degree of skill are involved.

It will therefore be appreciated that I do not limit myself to the particular embodiment of my invention herein shown and described, since obviously various alterations might be made in the size, shape and arrangement of parts, within the scope of the subjoined claim, without departing from the spirit of the invention.

Having thus described my invention I claim:

In a machine of the character described for pressing fabric articles, at least one set of three co-operative plates each of which sets includes a central fixed plate and outer, parallel, laterally-movable plates, means for selectively and positively actuating said outer plates to take up an operative position pressing inward and an inoperative position spaced from the central plate, means for heating said plates, and a pair of article forms for each set of plates, said forms pivotally secured endwise of the plates, swingable to an operative position between and an inoperative position remote from said plates.

ALFRED ASTPHAN.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
1,887,255	Batchelder	Nov. 8, 1932
1,894,435	Zimarik	Jan. 17, 1933
2,103,909	Lipson et al.	Dec. 28, 1937
2,486,486	Lauzon	Nov. 1, 1949