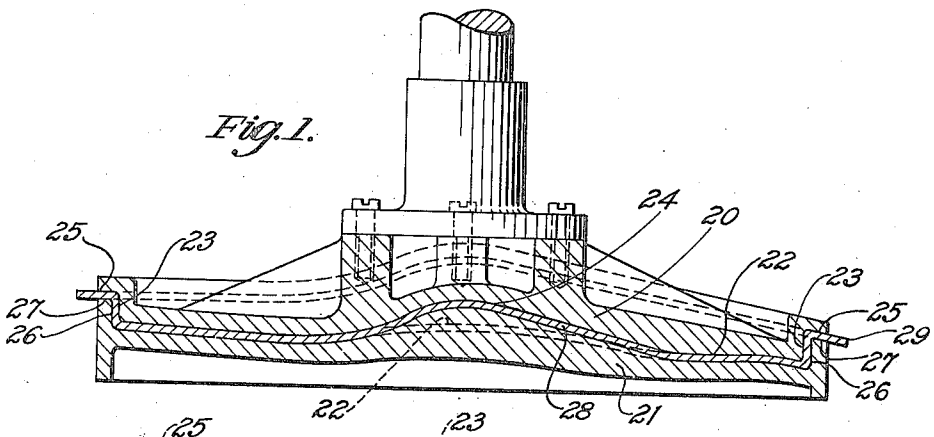
June 24, 1941. J. F. SMITH 2,247,101

SHOE PRESS AND SHOE PRESS PAD

Filed April 10, 1939 2 Sheets-Sheet 1

Fig. 1.



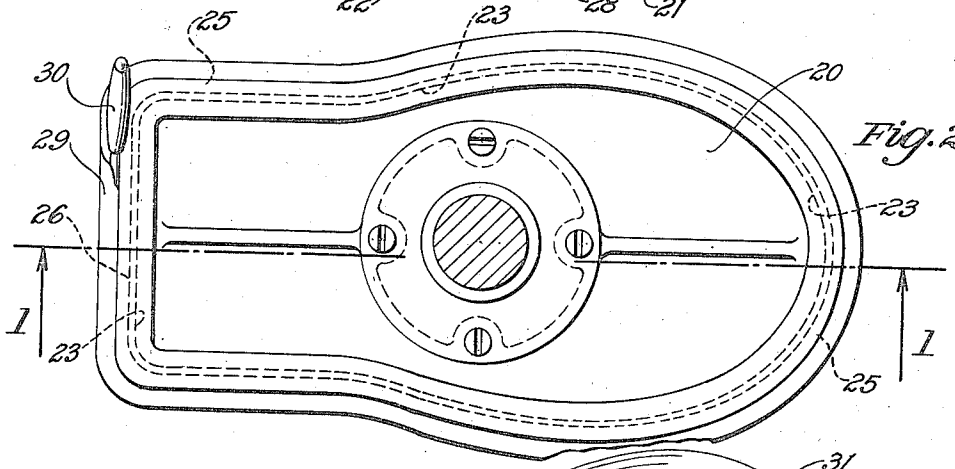
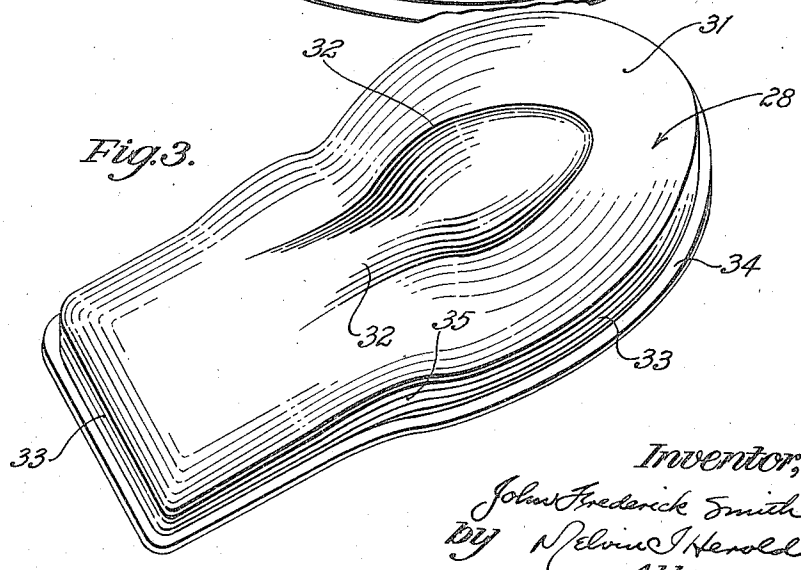


Fig. 2.

Fig. 3.



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June 24, 1941. J. F. SMITH 2,247,101

SHOE PRESS AND SHOE PRESS PAD

Filed April 10, 1939 2 Sheets-Sheet 2

Fig.4.

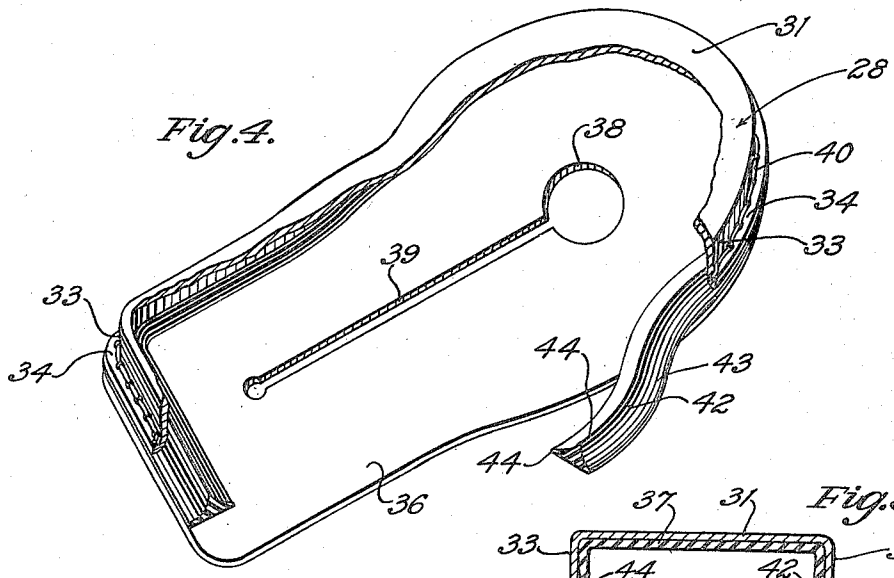


Fig.5.

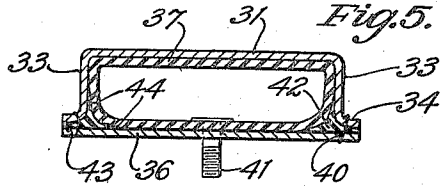


Fig.6.

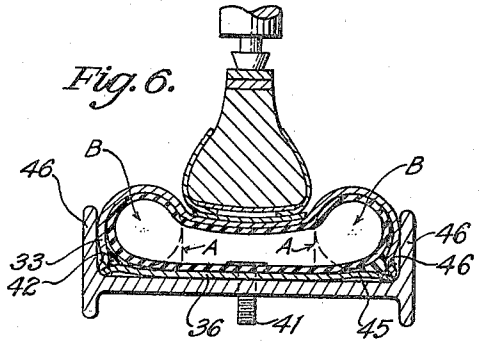


Fig.9.

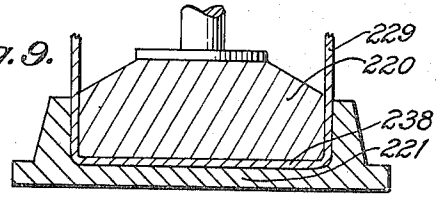
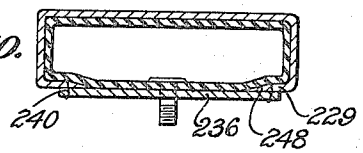


Fig.10.



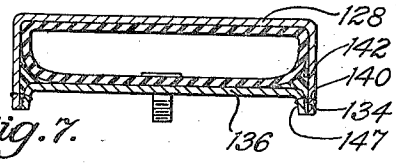
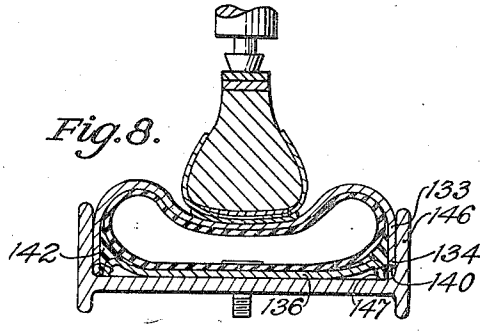


Fig.7.

Fig.8.



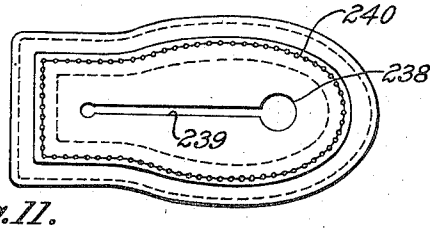


Fig.11.

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UNITED STATES PATENT OFFICE

2,247,101

SHOE PRESS AND SHOE PRESS PAD

John Frederick Smith, Quincy, Mass., assignor to Compo Shoe Machinery Corporation, Boston, Mass., a corporation of Delaware

Application April 10, 1939, Serial No. 266,987

22 Claims. (Cl. 12—38)

This invention relates to shoe presses of the kind used for cement sole attaching, sole conforming or leveling, channel laying, etc., and more particularly to the pressure pads used in such presses.

These pads have a pressure applying flexible diaphragm capable of applying pressure to a shoe bottom, and contain a fluid such as air, liquid, granules, or like flowable material. Diaphragm pressure is developed either by increasing the amount of fluid in the pad, as by inflation, or by confining a non-compressible fluid therein and pressing a shoe down against the diaphragm surface. The pads forming the subject of the present invention may be of any of these types, and are of the kind having a casing of leather or like tough, flexible but relatively inextensible sheet material enclosing a rubber pressure fluid containing bag or bladder.

Heretofore much difficulty has been experienced with leather shoe press pad casings through failure of the seams holding the parts of the casing together. In stitching these seams, if the stitches are put too close together, or if too thick a thread is selected in an effort to strengthen the stitching, then the leather is weakened by the awl holes and pulls through under pressure. If the stitches are spaced too much in order not to weaken the leather, then the stitching thread breaks. It is therefore desirable to reduce the number of seams to a minimum, and also to locate them in parts of the casing where the strain is or can be minimized. In an early design of leather casings, developed abroad, flat top and bottom sections are simply stitched together in face to face relation about their margins, so that only a single seam is employed. In the inflated casing this seam is located about midway of the height of the casing and is under considerable strain. A variant of this single seamed casing is a form having flat top and bottom sections in face to face relation, but spaced by a so-called "solid gusset" or welt. These forms, while possessing the advantage of using only a single seam, locate this seam where it cannot be readily supported or relieved by the press frame without sacrificing vertical expansibility of the shoe engaging diaphragm, and have the even more serious drawback of sacrificing or failing to provide for the advantages of tailoring or fitting the pad to its shoe bottom pressing function, which in a leather casing can be obtained through use of so-called "variable gussets."

The wrap required of a shoe pressing diaphragm varies with different shoes and with different parts of the same shoe, more wrap or vertical expansibility being needed at the highly curved shank than at other parts of the shoe, with an intermediate wrap at the forepart and a minimized wrap at the heel being desirable. There are many rubber pads specially contoured to account for the peculiarities of shoe bottoms, but these are not so well suited as relatively inextensible leather to inflation under high air pressures where the pad diaphragm is lifted up against the work, and are not so well suited as leather encased inflatable pads for use on many of the air inflated shoe press machines in common use. They are also relatively expensive and do not have to so marked a degree the ability of leather to become broken in to the work encountered in a given factory. Previous forms of inflatable leather casing pads in which special provision was made to account for the varied extents of wrap needed at different parts of the shoe utilized specially tailored side gussets and diaphragms, where greater fullness was preferably provided at the shank portion of the diaphragm and the diaphragm itself was held up to the work by variable side gussets having a maximum vertical height at the shank, as shown, for example, in the patents to William C. Card, Jr., No. 2,005,177, issued June 18, 1935, and No. 2,059,847, issued Nov. 3, 1936. These provide a leather casing which is well suited to fit the shoe, but have the disadvantage of requiring an added seam around the top edge of the casing which sometimes gave away under inflating strains.

It is an object of this invention to provide a shoe press pad having a casing of leather or like relatively inextensible sheet material having all of the advantages of a shoe fitting variable gusset type of leather casing together with the advantage of having only a single seam used in its construction, which is located at the bottom of the casing where it can be supported by the press frame.

Other objects are to improve the construction of leather encased inflatable shoe press pads generally so as to avoid or reduce failures and minimize the need for repairing or replacing them in the field, thus avoiding delays and inefficiency in the operation of the shoe press machine.

In addition to provision of improved pads, further objects of the invention are to provide methods of making improved casings having the above and other advantages, the steps of which can be carried out quickly and economically, and to provide an improved shoe press construction em-

bodying such pads and cooperating therewith to relieve pressure on the casing seam.

A further object is to provide improved shoe press pads which may be readily substituted for existing types without alteration of the associated shoe press frame.

Stated generally, these objects are attained by making a casing in which the top work engaging diaphragm together with the side and end gussets or sidewalls are all formed in unitary fashion from a single seamless sheet of leather or like flexible but relatively inextensible material which is molded under heavy molding pressure until it becomes set or distorted in dish- or box-like form. This molded sheet, in a preferred aspect of the invention, is shaped into form with sufficient material, and with its material so located and distributed, as to provide for varied wrap at different parts of the shoe. Thus the molded sidewalls are made of greater height at the shank area than elsewhere, and in addition the whole upper section of the leather casing is given a set shape approximately corresponding with the longitudinal and also the transverse contours of shoe bottoms. The molded section with its diaphragm and sidewalls, is capable of being completed by stitching a flat bottom section across its open side. To this end the terminal margins of the depending sidewalls preferably have a generally flat attaching flange molded thereon to which such a bottom sheet can be readily stitched.

This molding or shaping is carried out by means of casing shaped dies of suitable predetermined configuration, and by using such a die or shaping block, adequate material is drawn into the seamless upper part of the casing to reach up against the shoe at its shank and other curved parts without subjecting the material and its bottom seam to undue stretch and strain. This seam, being at the bottom of the casing, is braced, or rather the adjoining walls of the casing are braced, to some extent, by the adjoining press frame pocket so that some of the separating strain is taken off the stitched seam.

In carrying out the purposes of the invention, pad failures attendant upon the presence of seams in the casing are further suppressed by providing an interior filling bead in the crease formed between the depending molded sidewalls and the bottom section, which prevents the enclosed bag or bladder from getting pinched and tearing in such crease.

Such features, together with others more particularly described hereinafter, all contribute to fulfillment of the above objects as well as other objects of the invention which will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the features of construction, combination of elements, and arrangement of parts, which will be exemplified in the construction hereinafter set forth and the scope of the invention will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

Fig. 1 is a longitudinal vertical sectional view taken substantially along line 1—1 of Fig. 2 showing a casing molding apparatus used in practising the present invention;

Fig. 2 is a plan view of the molding apparatus of Fig. 1;

Fig. 3 is a perspective view showing the upper side of a molded casing section;

Fig. 4 is a perspective view similar to Fig. 3 showing a completed casing, parts being broken away better to show the interior construction;

Fig. 5 is a transverse vertical sectional view across a pad equipped with the casing of Fig. 4;

Fig. 6 is a fragmentary transverse vertical sectional view taken across a shoe press equipped with the pad of Fig. 5 and showing the latter in inflated condition;

Fig. 7 is a transverse vertical sectional view across a completed pad showing another form of seam construction;

Fig. 8 is a sectional view similar to Fig. 6 but showing a press equipped with the pad of Fig. 7;

Fig. 9 is a transverse vertical sectional view showing another form of casing molding apparatus;

Fig. 10 is a transverse vertical sectional view showing another form of pad in the construction of which the molding apparatus of Fig. 9 is utilized; and

Fig. 11 is a bottom view on a reduced scale of the pad shown in Fig. 10.

Referring more particularly to the drawings, and first to Figs. 1 to 6, there is shown a molding apparatus comprising a male die 20 and a complementary female die or matrix 21. These are designed to mold or shape leather having sufficient inherent moldability or strength to become set or pressed into a given self-sustaining shape. The best results are obtained with leather of good quality, a satisfactory type for the molded portion of the presently described casing being steer hide of the kind known as bag leather having a weight of around seven to eight ounces per square foot and a thickness of about eight irons. When such leather is subjected to hydraulic molding pressure between metal dies on the order of forty-five pounds per square inch it can be shaped into an open sided dish- or box-like form having angularly related walls disposed in well defined planes and separated by well defined corners and will keep this shape without tending to spring back to its initial sheet form to any pronounced degree. This shaping under pressure can be and preferably is facilitated by tempering the leather with any suitable agent usually employed for softening leather such as water or a mixture of water and a small amount of oil. This tempering liquid is applied just before molding in a quantity sufficient to moisten and soften the leather, which after molding dries to its normal moisture content in its imparted shape.

The male die 20 has the shape and configuration desired for the interior of the completed casing, being provided on its lower face with a diaphragm forming surface 22 bounded by upstanding side and end wall forming surfaces 23. The diaphragm forming surface 22 is undulant as illustrated in Fig. 1 so that it and the casing section molded thereby will generally conform with the longitudinal contours of shoe bottoms. Preferably, although not necessarily, the shank and forepart forming portions of this die surface are pocketed so as to conform in a general way with the transverse as well as the longitudinal shoe bottom contours. This pocketed portion is indicated at 24 where the casing engaging face of the die is shown rather deeper toward the center underlying the shank and forepart than is the remaining surrounding portion of the die face 22.

The side wall surfaces 23 terminate in an outturned flange portion 25 adapted to bear against the casing sheet near its terminal margins. The diaphragm engaging surface of matrix 21 corresponds with that of the die as do also the side wall engaging surfaces 26 which meet outwardly turned surfaces 27 opposing the flange surfaces 25. The outer perimeters of the male die flanges and of the matrix are preferably conterminous as illustrated so that they may be used as a pattern for trimming the excess leather or sheet material from the molded casing section. Such a section is shown pressed into shape in Figs. 1 and 2 where it is generally designated 28. The sheet of leather from which the shaped section 28 is formed is somewhat larger than the combined areas of the diaphragm and side and end wall portions, the excess being shown at 29 where it can readily be trimmed away by a hand knife 30 or other suitable tool which may be guided by the conterminous die and matrix perimeters.

After the application of pressure and the subsequent trimming of any excess, the molded upper casing section 28 is removed from the pressing dies. It will then have the shape illustrated in Fig. 3, being generally of dish- or box-like form having an open bottom side, not shown in Fig. 3, which is adapted later to be covered by a bottom section or closure which may be in the form of a flat sheet of leather or other relatively inextensible sheet material such as laminated fabric. The upper section 28 comprises a diaphragm 31 having the longitudinal contours of shoe bottoms and also, when the dies are thus configured, a pocket 32 at the shank and forepart portions. The diaphragm has depending side walls 33 which are integral therewith and with each other, the lower margins of these side walls terminating in an outwardly turned attaching flange 34 against which the bottom section may subsequently be stitched. The diaphragm is, in a sense, generally horizontal and the side walls generally vertical or normal to the diaphragm, the attaching flange being also generally horizontal or parallel with the plane of the diaphragm, the longitudinal curvature of which it follows with some fidelity except at the shank part of the casing. The side walls 23 on either side of the shank engaging portion of the diaphragm are preferably made of greater vertical height than elsewhere, as indicated at 35. This increased height is obtained through suitable shaping of the forming dies, and provides for greater fullness of the casing material at the shank portion than elsewhere, there being an excess in this area due both to the increased height of the side walls and the pocket in the shoe engaging area. The vertical heights of the remaining parts of the side walls are dimensioned in accordance with the wrap desired in the given type of casing being made, the side wall height at the forepart desirably being less than that at the shank, but somewhat higher or fuller than that around the heel of the casing, this latter portion being the thinnest and having the least vertical expansibility of any portion of the entire casing. In a sense, it will be seen that the male die acts as a shaping block or form over which the casing material can be drawn and trimmed so that just the proper amount is drawn into the upper casing section and distributed thereover to give the desired tailored effect to the completed casing so that it may wrap to varied degrees at different parts of the shoe.

In completing the casing, a bottom section 36 (Fig. 4) is fastened to the attaching flange 34. Before this is done, the interior pressure fluid containing bag or bladder 37 (Fig. 5) is preferably assembled within the molded upper casing section. The bottom section 36 has an opening 38 therein accommodating the air supply and discharge conduit of such bag when the latter is of the inflatable type and also has a slit 39 to allow the bag to be replaced if wanted. This slit 39 in a completed casing is held closed by suitable lacing preferably of the metallic type comprising intercalated loops threaded by a holding wire and known in the trade as an "alligator" fastener. The specific slit fastener is not illustrated in the drawing, it being understood that any suitable type for the purpose can be provided.

Any suitable form of fastening means can be employed to attach the bottom section 36 and flange 34 together, such as wire staples, wire lacing, rivets, etc., but preferably this fastening comprises a stitched seam 40 made of ten to twelve strand linen thread arranged in stitches running about four or five to the inch if the stitching is done on a machine. It is even more desirable, however, to hand stitch this seam with a double thread so that two threads go through each awl hole. Generally speaking, the stronger the threads, the farther the awl holes may be spaced apart, and with a hand stitched seam these preferably would never be put any closer together than four or five to the inch.

The interior bag or bladder 37 is of elastic distensible rubber having an air or liquid supply conduit 41 communicating with its interior. In order to prevent this bladder from working into the crease between the side walls 33 and the bottom section 36 along the interior of the seam between these two parts, such a crease or fillet is preferably filled with a protective bead 42 of rather soft rubber. This bead has an outwardly extending anchoring strip 43 adapted to fit between the attaching flange 34 and the outer margin of the bottom section in position to be caught and anchored by the stitching of the seam 40 or other fasteners employed. Interiorly of the casing, this pad has flaring tapered or attenuated wings 44 respectively adapted to lie against and merge smoothly with the adjacent interior walls of the casing. When this bead is in place the inflated bladder cannot become pinched in the seam crease and this avoids one cause of puncture which has been encountered heretofore.

In Fig. 6 the pad thus far described is shown in inflated condition in a press having a pad accommodating pocket 45 dimensioned snugly to receive the casing and having upstanding sidewalls 46 which preferably reach well above the seam 40 which is located at the bottom edge of the casing. When a shoe is in place over the pad and the bladder is inflated, the action of the air pushes down the portion of the bottom section 36 directly underlying the shoe flat against the bottom of the press base pocket 45. The marginal parts of the pad lying outside the shoe will upon the application or increase of air pressure tend to force this relatively unconfined part of the pad into a circular section or as indicated in Fig. 6 the part of the bottom of the casing directly underlying the shoe and located within the dotted lines designated "A" is held flatly and firmly against the press frame as the distribution of inflating pressure reaches a static equilibrium throughout the pad, while the outlying marginal portions designated "B" assume a generally cylindrical or circularly sectioned form under pressure.

This puts the seam 40 under a separating strain because of the tendency of the bottom wall 36 and side walls 33 to flatten out along the arc of a circle. This tendency is circumvented at least to some extent through the supporting action of the upstanding press base side walls 46 which engage the side walls of the casing and prevent the separating strain on the seam from being as much as it would be if the pad were entirely unconfined at its edges. The seam being located at the bottom of the casing is thus positioned between two rigid supporting walls comprising the bottom and sides of the press base pocket and is therefore better able to be relieved in the above described manner than would be a top seam of the kind heretofore employed in stitched leather casings having separately inserted side gussets. Thus the provision of a seamless upper casing section not only adds strength as compared with these previous casings through elimination of a seam, but eliminates that seam which provided the most trouble and the greatest number of failures.

This supporting action of the press frame can be used to even more advantage if the molded casing is made up in the way shown in Figs. 7 and 8. Here the leather casing comprises an upper section 128 which may be generally similar to the molded casing 28 in all respects except that the terminal margins of its side walls instead of being flanged outwardly simply continue downwardly to provide attaching faces 134 at their lowermost edges. The bottom section 136 is also made of moldable leather and has its margins turned downwardly in the form of attaching flanges 147 which may be formed by molding between dies, turning on a folder, or in any other convenient manner. The downturned flange 147 and its facing margin 134 together provide an outwardly projecting stitching area which, like that described in the preceding form of casing, is readily accessible from the outside of the casing for stitching operations which may be carried out either by machine or by hand. As shown, a stitched seam 140 passes through this attaching area and also preferably catches and anchors a filling bead 142 having the same construction and purpose as the previously described bead 42.

The action of this casing under inflation in a press is indicated in Fig. 8. Here, because of the direction of the attaching flange in the vicinity of the same, the press base side walls 146 can engage snugly against the casing side walls 133. While the outer part of the casing lying outside of the shoe contacting area will under air pressure tend to assume a circular section and place the seam 140 under considerable strain, this is largely circumvented by the press base side and bottom walls which hold the casing side and bottom walls nearly in their initial positions and by firmly supporting them take a considerable component of the seam straining force.

Another form of casing in which cause for failure is obviated by eliminating any seams from the upper part of the casing and using only a single seam located at the bottom of the casing where the straining forces are smaller and can be largely cared for by the supporting press frame is shown in Figs. 9 to 11. Here an upper casing section 238 is molded between dies 220 and 221 until it has an open sided dish- or box-like form comprising diaphragm and side wall portions which may be like those in the previously described types of casings. A considerable excess terminal margin 229 is retained on the lower part of the side walls and is adapted to be wiped or folded over to form a part of the casing bottom. This infolded portion 229 may be trimmed and skived as shown at 248. A bottom section 236 in the form of a flat sheet of leather or equivalent material which is of less extent than the upper casing diaphragm is lapped over the inturned bottom attaching flanges 229 and fastened thereto by a seam 240. This bottom section has a conduit accommodating opening 238 and a slit 239 which is adapted to be closed by a suitable lacing or fastening, and this slit and opening give access to the interior of the casing to the horn of a stitching machine when the lap joint is being sewn at 240. Here the only seam in the casing is located well under the casing bottom where it is held down against the press frame bottom and is not subjected to any material separating strain. It is virtually impossible for this form of casing to fail at the seam.

With all of the described forms provision is made to secure the benefits of previous teaching with respect to the desirability of initially fitting the casing to the work and allowing a different wrap at different parts of the shoe while at the same time substantially eliminating the failures previously encountered with inflatable leather encased pads because of tearing or stitching breaking at the seam joining the pad sections. Because of the generally improved strength of pads constructed in accordance with this invention they are useful not only with an air inflated type of press but with other flexible pressure applying diaphragm types such as those in which the pad bag or bladder contains a non-compressible fluid and in which pressure is developed by pressing the sole of the shoe down against the pad diaphragm.

Since certain changes may be made in the above construction and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A shoe press pad comprising, a casing having an upper section in the form of a unitary sheet of sufficient size to include an upper work engaging diaphragm and depending integral and continuous sidewalls extending entirely around the edges of said diaphragm, said casing in its initially manufactured condition having its sidewalls occupying well defined planes depending angularly from said diaphragm and meeting each other and said diaphragm along continuous integral corners, a separate bottom section of less area than said upper section and approximately commensurate in size with said diaphragm, a row of stitching joining said bottom section to the lower edges of said sidewalls, and a pressure fluid containing bag within said casing.

2. A shoe press pad comprising, a casing having an upper section of flexible leather having

sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section in its initially manufactured condition when inert and prior to being loaded with a pressure fluid and assembled with an associated press frame being shaped to have an undulant upper diaphragm generally conforming with the longitudinal contours of shoe bottoms and integral sidewalls permanently distorted into depending angular relation with respect to said diaphragm, a bottom casing section of less extent than said upper section joined to the lower parts of said sidewalls along the bottom edge of the casing, and a pressure fluid containing bag within said casing.

3. A shoe press pad comprising, a casing having an upper section of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section in its initially manufactured condition when inert and prior to being loaded with a pressure fluid and assembled with an associated press frame being shaped to have an undulant upper diaphragm generally conforming with the longitudinal contours of shoe bottoms and sidewalls integral with said diaphragm disposed in depending angular relation with respect thereto, said sidewalls being of greater height opposite the shank portion than at other portions of the casing, a bottom casing section of less extent than said upper section joined to said sidewalls along the bottom edge of the casing, and a pressure fluid containing bag within said casing.

4. A shoe press pad comprising, a casing having an upper section of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section in its initially manufactured condition when inert and prior to being loaded with a pressure fluid and assembled with an associated press frame being shaped to have an undulant upper diaphragm generally conforming with the longitudinal contours of shoe bottoms, sidewalls integral with said diaphragm and with each other disposed in depending angular relation with respect to said diaphragm, attaching flanges integral with the lower edges of said sidewalls and disposed approximately parallel with the plane of the diaphragm, a bottom casing section of less extent than said upper section having its margins disposed adjacently to said flanges, means fastening said flanges and bottom section together along the bottom edge of the casing, and a pressure fluid containing bag within said casing.

5. A shoe press pad comprising, a casing having an upper section of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section in its initially manufactured condition when inert and prior to being loaded with a pressure fluid and assembled with an associated press frame being distorted into an open sided dish- or box-like form having a work engaging diaphragm and integral sidewalls disposed angularly with respect thereto, attaching flanges integral with the lower edges of some of said sidewalls and disposed angularly with respect thereto so as to be approximately parallel with the plane of the diaphragm, a bottom casing section of less extent than said upper section having margins adjacent said flanges along the bottom edge of the casing, a seam joining said bottom section and flanges, and a pressure fluid containing bag within said casing.

6. A shoe press pad comprising, a casing having an upper section of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section in its initially manufactured condition when inert and prior to being loaded with a pressure fluid and assembled with an associated press frame being distorted into a self-sustaining open sided dish- or box-like form having a work engaging diaphragm and integral sidewalls disposed angularly with respect thereto, the terminal margins of said sidewalls providing an attaching surface, a bottom section of less extent than said upper section having its margins disposed flatly adjacent said attaching surface and projecting therewith outwardly from the body of the casing to provide a stitching flange accessible for through stitching said sections together from the outside of the casing, stitching joining the terminal margins of said sidewalls and the adjacent margins of said bottom section along the bottom edge of the casing, and a pressure fluid containing bag within said casing.

7. A shoe press pad comprising, a casing having an upper section of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section in its initially manufactured condition when inert and prior to being loaded with a pressure fluid and assembled with an associated press frame being distorted into a self-sustaining open sided dish- or box-like form having a work engaging diaphragm and integral sidewalls disposed angularly with respect thereto, the terminal margins of said sidewalls being turned angularly outwardly to provide an attaching face, a bottom section approximately coextensive with said diaphragm and having an outer margin disposed flatly beneath the attaching face of said sidewalls, fastening means joining the margins of said bottom section and said outwardly turned attaching face, and a pressure fluid containing bag within said casing.

8. A shoe press pad comprising, a casing having an upper section of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section in its initially manufactured condition when inert and prior to being loaded with a pressure fluid and assembled with an associated press frame being distorted into a dish- or box-like form having a work engaging diaphragm provided with a pocketed area generally corresponding with the contours of shoe bottoms, said upper section also having integral sidewalls depending angularly from said diaphragm, a bottom casing section of less extent than said upper section attached to the lower margins of said sidewalls along the bottom edge of the casing, and a pressure fluid containing bag within said casing.

9. A shoe press pad comprising, a casing having an upper section of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section in its initially manufactured condition when inert and prior to being loaded with a pressure fluid and assembled with an associated press frame being shaped to have an undulant upper diaphragm generally conforming with the longitudinal con-

tours of shoe bottoms and being pocketed at the shank and forepart engaging portions to approximate the lateral as well as longitudinal contours of shoe bottoms, said upper section also having sidewalls integral therewith and with each other depending angularly from said diaphragm, a bottom casing section of less extent than said upper section attached to the lower margins of said sidewalls along the bottom edge of the casing, and a pressure fluid containing bag within said casing.

10. A shoe press pad comprising, a casing having an upper section of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section in its initially manufactured condition when inert and prior to being loaded with a pressure fluid and assembled with an associated press frame being shaped to have an undulant upper diaphragm generally conforming with the longitudinal contours of shoe bottoms and being pocketed at the shank and forepart engaging portions to approximate the lateral as well as longitudinal contours of shoe bottoms, said upper section also having sidewalls integral therewith and with each other depending angularly from said diaphragm, said sidewalls being of greater height opposite the shank engaging portion of said diaphragm than elsewhere, a bottom casing section of less extent than said upper section attached to the lower magins of said sidewalls along the bottom edge of the casing, and a pressure fluid containing bag within said casing.

11. An upper casing section for a shoe press pad comprising a sheet of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said section in its initially manufactured condition when inert and prior to being assembled with its remaining associated pad structure having a fuller width of material at its shank engaging portion than elsewhere and being distorted into a self sustaining open sided dish- or box-like form having an undulant work engaging diaphragm generally conforming with the longitudinal contours of shoe bottoms and having sidewalls depending in angular relation from said diaphragm and integral therewith and with each other, said sidewalls having greater height opposite the shank engaging portion of said pad than elsewhere.

12. An upper casing section for a shoe press pad comprising a sheet of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said section in its initially manufactured condition when inert and prior to being assembled with its remaining associated pad structure having a fuller width of material at its shank engaging portion than elsewhere and being distorted into a self sustaining open sided dish- or box-like form having an undulant work engaging diaphragm generally conforming with the longitudinal contours of shoe bottoms and having sidewalls depending in angular relation from said diaphragm and integral therewith and with each other, said sidewalls having greater height opposite the shank engaging portion of said pad than elsewhere, the terminal margins of said sidewalls comprising overturned integral flanges presenting downwardly facing attaching surfaces adapted to have a casing section secured thereto.

13. A shoe press pad comprising, a casing having an upper section of flexible leather having sufficient inherent moldability and strength substantially to retain a shape imparted thereto under molding pressure, said upper section having an open sided dish- or box-like form comprising a work engaging diaphragm and sidewalls integral with said diaphragm depending in angular relation therefrom, a bottom casing section having downwardly depending marginal flanges disposed in flat relation adjacent the depending terminal margins of said sidewalls and forming therewith a projecting stitching flange area, a line of stitching joining said flanges and the adjacent margins of said sidewalls, and a pressure fluid containing bag within said casing.

14. A shoe press pad comprising a casing having an upper section formed of a sheet of leather having sufficient area to form a work engaging diaphragm and additional integral sidewalls depending from the sides and ends of said diaphragm, a bottom section in the form of a sheet of less extent than said upper section, a fastening seam joining the margins of said bottom section with the terminal margins of said sidewalls along the bottom edge of the casing, and a pressure fluid containing bag within said casing.

15. A shoe press pad comprising a casing having an upper section formed of a unitary sheet of flexible leather having sufficient area to form a work engaging diaphragm and additional integral sidewalls depending from the sides and ends of said diaphragm, a bottom section in the form of a sheet approximately coextensive with the diaphragm portion only of said upper section, a fastening seam joining the margins of said bottom section with the terminal margins of said sidewalls along the bottom edge of the casing, and a pressure fluid containing bag within said casing.

16. A shoe press pad comprising, a casing having an upper section formed of a unitary sheet of flexible leather having sufficient area to form a generally horizontal work engaging diaphragm, additional generally vertical integral sidewalls depending from the sides and ends of said diaphragm, and generally horizontal attaching flanges extending integrally from the lower parts of said sidewalls, a bottom section in the form of a generally horizontal sheet of less extent than said upper section, a fastening seam joining the margins of said bottom section with said attaching flanges along the bottom part of the casing, and a pressure fluid containing bag within said casing.

17. A shoe press pad comprising a casing having an upper section formed of a unitary sheet of flexible material having sufficient area to form a work engaging diaphragm, additional integral sidewalls depending from the sides and at least one end of said diaphragm, and inturned attaching flanges underlying said diaphragm, a bottom section of less extent than said upper section, a fastening seam joining the margins of said bottom section with said inturned flanges along the bottom of the casing, and a pressure fluid containing bag within said casing.

18. A shoe press pad comprising a casing made of leather or like sheet material having its top, sides, ends, and the marginal portion of its bottom all formed from an integral seamless sheet, a bottom casing sheet stitched to said first named sheet along a seam disposed beneath the casing, and a pressure fluid containing bag within said casing.

19. A shoe press pad comprising a leather casing having top, side, end and bottom walls, said casing being thicker at its central shank engaging area than at its ends, said top, side and end walls comprising a unitary integral sheet stitched to said bottom section along a single seam located at the bottom edge of the casing, and an inflatable rubber pressure fluid containing bag within said casing.

20. A shoe press pad comprising a casing formed of different sections fastened together along a stitched seam forming a crease in the interior of the casing, a protective bead stitched in with said seam and having tapered wings overlying the adjacent casing sections to present a smooth bladder engaging surface at said seam, and a pressure fluid containing bladder within said casing.

21. A shoe press pad comprising a casing formed of different sections, a stitched seam joining said sections, a protective bead having an anchoring strip sewed in with the stitching of said seam and having wings overlying the interior casing sections on either side of said seam and forming a non-pinching bladder engaging surface, and a fluid pressure containing bladder within said casing.

22. A shoe press pad comprising a casing formed of an upper section and a lower section, a stitched seam joining said sections in flat face-to-face relation forming a crease or fillet in the interior of the casing between the joined sections, a protective bead having an anchoring strip disposed between said joined sections and sewed in with the stitching joining them, said bead being configured to occupy said crease to prevent a bladder from pinching therein, and a pressure fluid containing bladder within said casing.

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