

Oct. 13, 1964

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3,152,364

PRESS

Original Filed April 18, 1960

5 Sheets-Sheet 1

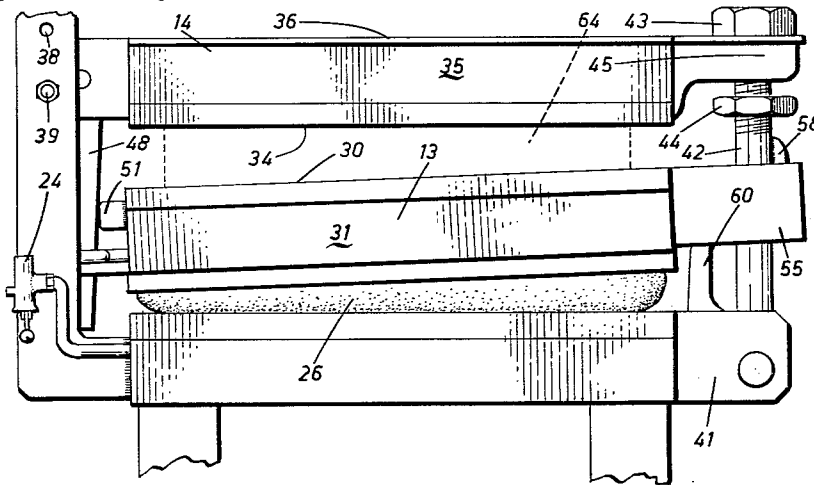


FIG. 3

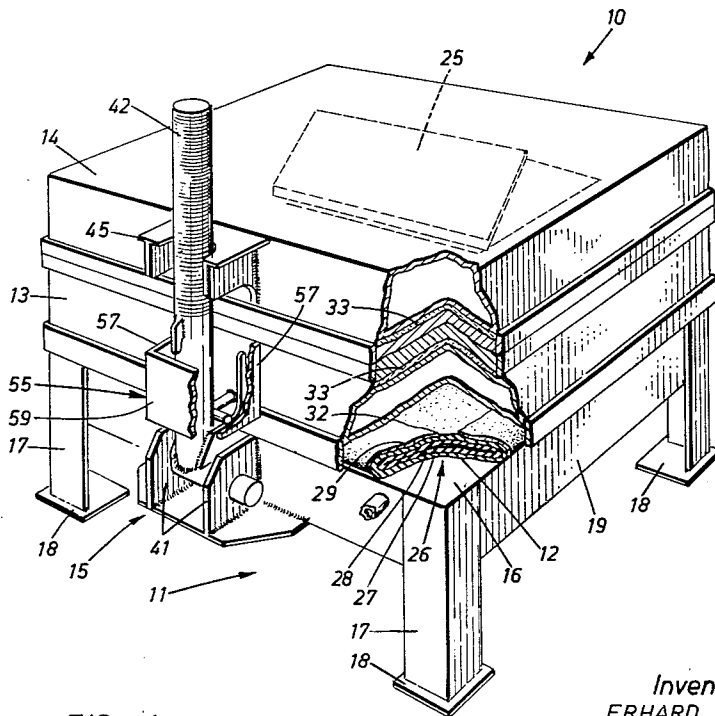


FIG. 1

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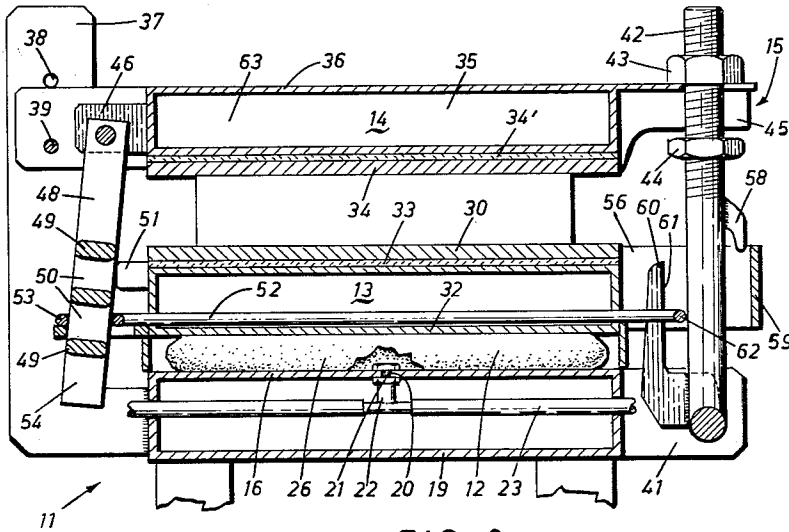


FIG. 2

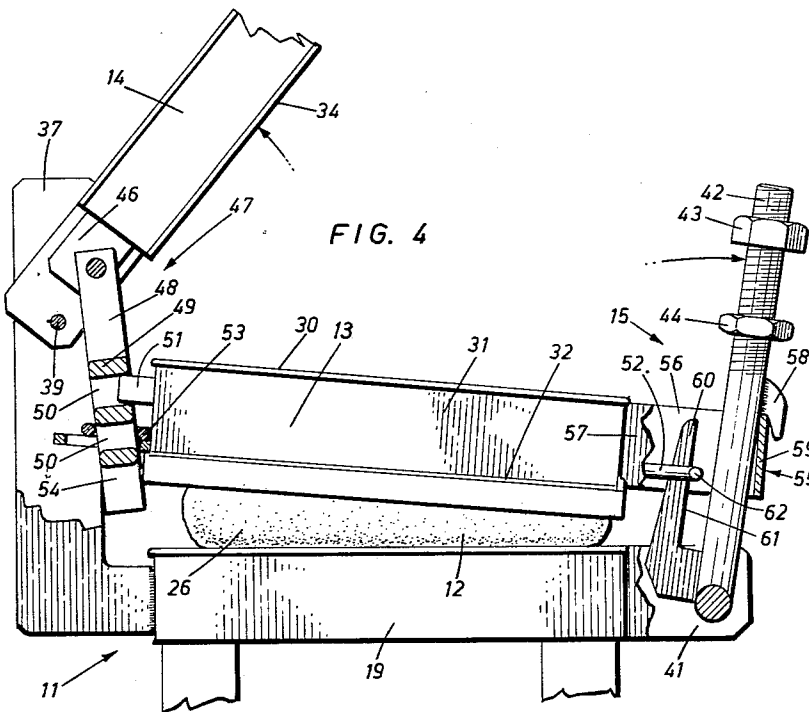


FIG. 4

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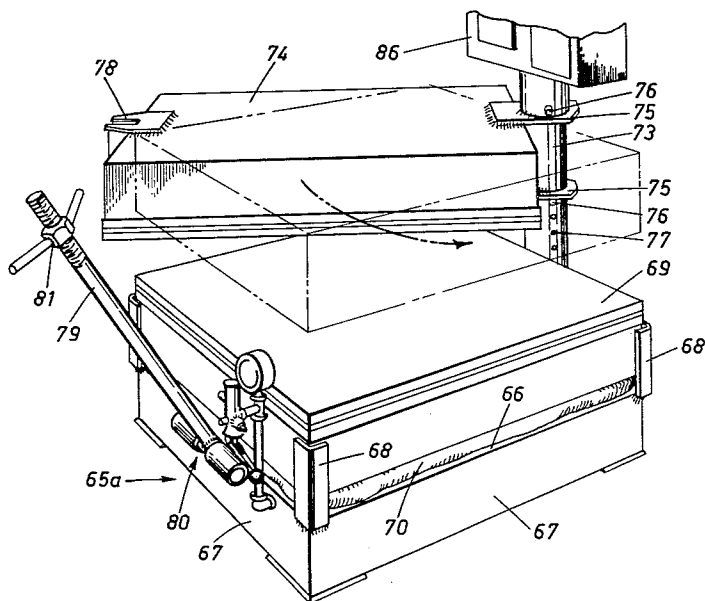


FIG. 6

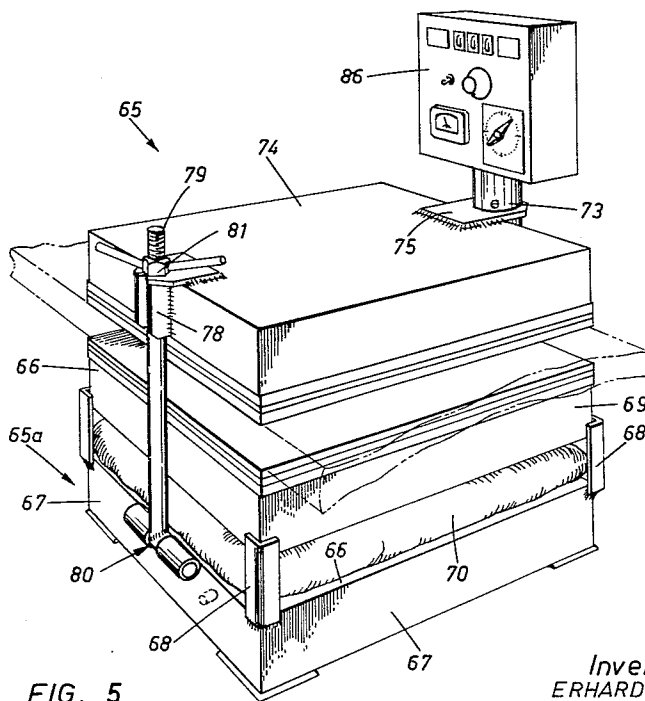


FIG. 5

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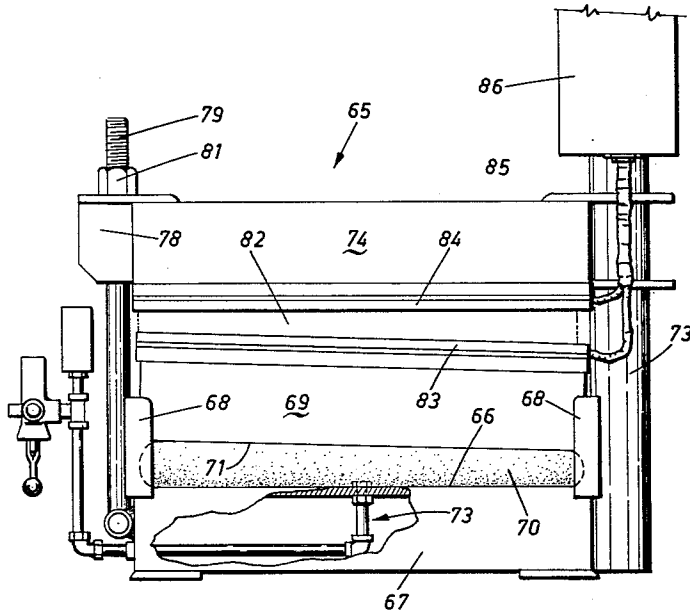


FIG. 7

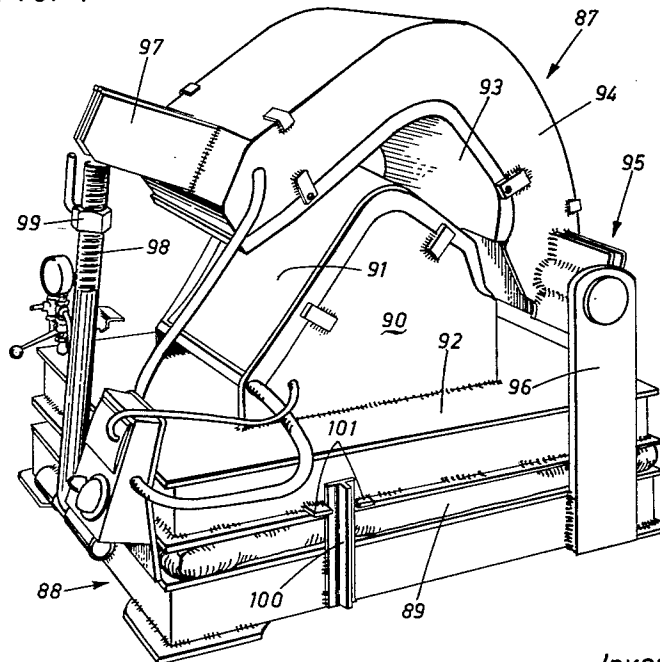


FIG. 8

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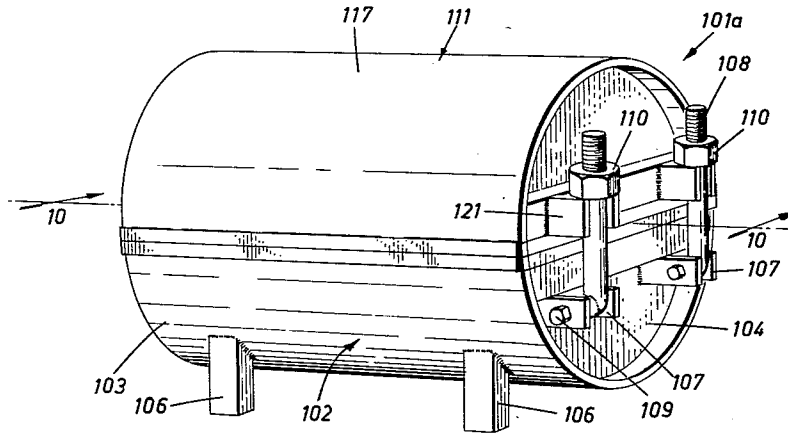


FIG. 9

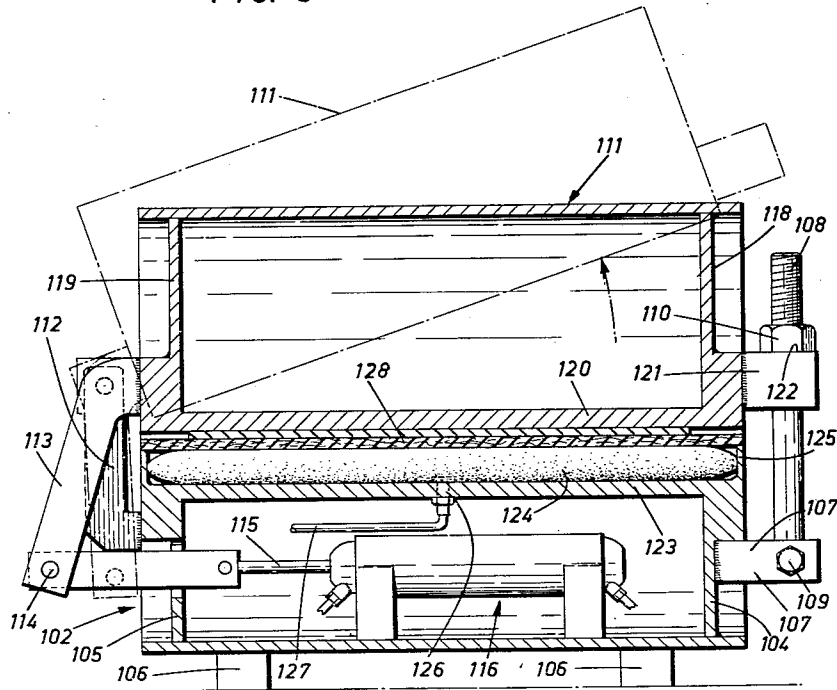


FIG. 10

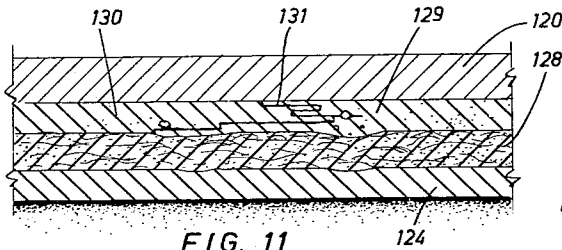


FIG. 11

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3,152,364
PRESS

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Continuation of application Ser. No. 22,850, Apr. 18,
1960. This application May 20, 1963, Ser. No. 286,437
6 Claims. (Cl. 18—17)

This invention relates to improvements in press construction and operation, and more particularly to presses used in vulcanizing operations.

This present application is a continuation of application Serial No. 22,850, filed April 18, 1960, now abandoned.

The principal object of this invention is to provide a press which eliminates conventional mechanical, hydraulic or piston type pressure-applying apparatus, all of which are costly, in favour of a simplified pressure-applying system which is not only more economically manufactured, serviced and repaired, but is essentially a light weight construction which makes the press readily portable.

Another very important object of this invention is to minimize manual adjustment or labour on the part of the press operator.

Another important object is to provide a press of universal application in that the press can utilize platens of various sizes and surface and edge configuration or platens which are heated or cooled, and which will give maximum performance and efficiency over a long period and will withstand abuse necessary to its effective operation.

The principal feature of this invention resides in providing in a press, an upper fixed platen and a lower movable platen, the lower movable platen having inflatable pressure-applying means thereunder, inflatable to displace the movable platen upwardly towards the upper fixed platen under inflation, and under deflation permitting the lower movable platen to descend under gravity.

More particularly, the principal feature of the invention resides in providing a press having a lower platform formation upon which an inflatable pressure-applying member is mounted, the pressure-applying member being constrained to expand substantially solely in a vertical direction, a lower movable platen formation arranged in overlying abutting relation to the inflatable pressure-applying member and being adapted to be displaced uniformly upwardly under inflation of the inflatable member towards an upper fixed platen arranged in overlying relation to the lower movable platen, and reversely under deflation.

Another feature of this invention resides in providing a press in which the upper platen formation is supported for swinging movement about a vertical axis to permit the press operator either for the purpose of inspection or adjustment or insertion of a piece of work to swing the upper platen about its axis to one side of the lower platen.

Another feature of this invention resides in providing another embodiment of a press in which the upper platen is supported for pivotal movement about a substantially horizontal axis whereby the upper platen is adapted to be swung from a position overlying the lower platen upwardly to an inclined angle, and in particular, the upper platen is provided with a link formation at one side of its axis of pivot which link is adapted to be connected to the lower platen so that under displacement of the lower platen, the upper platen is swung upwardly about its horizontal axis of pivot.

These and other objects and features will be found in the following specification to be read in conjunction with the sheets of drawings in which:

FIGURE 1 is a perspective view of one embodiment

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of a press constructed in accordance with the invention; FIGURE 2 is a vertical mid-sectional view of the press of FIGURE 1;

FIGURE 3 is a side elevational view of the press of FIGURE 1, illustrating press operation with a piece of work having unequal thickness;

FIGURE 4 is a view similar to FIGURE 2 but illustrating the operation of raising the upper platen;

FIGURE 5 is a perspective view of another embodiment of a press constructed in accordance with the invention;

FIGURE 6 is a further perspective view of the press of FIGURE 5 showing the upper platen displaced in relation to the lower platen;

FIGURE 7 is a side-elevational view partly broken away, of the press of FIGURE 5;

FIGURE 8 is still another embodiment of a press constructed in accordance with the invention;

FIGURE 9 is a perspective view of still another embodiment of a press constructed in accordance with the invention;

FIGURE 10 is a vertical mid-sectional view taken along the lines 10—10 of FIGURE 9; whereas,

FIGURE 11 is an enlarged view in vertical mid-section of the platens of FIGURE 10 as applied to a piece of work, with the apparatus broken away.

In FIGURE 1, the press 10 includes a base or platform formation 11, and overlying inflatable pressure-applying assembly 12 which is surmounted by a lower platen formation 13. Supported from the rear of the base 11 and in overlying relation to the lower platen formation 13, is an upper platen formation 14 which is adapted to be releasably anchored forwardly by a locking device 15.

Base 11 is constructed of steel plate of suitable gauge and is preferably an all-welded construction. The base 11 includes a generally horizontal plate 16 which is provided with legs 17 at each corner in the form of steel angles and with feet in the form of steel plates 18. Plate 16 is preferably reinforced with a transversely-extending steel webbing abutting its undersurface, which is concealed by the depending skirt members 19.

Plate 16 is provided with a central aperture 20 fitted with a suitable coupling 21, coupling 21 in turn being provided with a T-connector 22, one branch of the T communicating with a source of compressed air through a conduit formation 23 and a valve mechanism 24, and the other branch leading to a remote visual indicating apparatus 25 located on the upper surface of platen formation 14. The upright branch of the T-connector 22 leads to an inflatable pressure member 26 which under inflation and deflation is adapted to raise and lower the lower movable platen formation 13, respectively.

The inflatable pressure member 26 consists preferably of a single inflatable chamber defined by overlying walls 27, 28 of vulcanized rubber joined together at their peripheral edges, the inflatable chamber being constrained preferably by a layer or layers 29 of non-extensible fabric at least over the bounding edges thereof and over at least one broad surface to control ballooning so that expansion of the pressure member takes place substantially solely in a vertical direction. The inflatable pressure members of co-pending application Serial No. 828,103, filed July 20, 1959, now patent No. 3,031,719, are examples of the types of pressure members that can be employed in the press 10.

A valve mechanism 24 is preferably a quick-acting three-stage device of the type illustrated in FIGURES 5, 6 and 7, co-pending application Serial No. 850,962, filed November 4, 1959 now Patent No. 3,029,066.

Overlying inflatable pressure member 26 and substantially co-extensive therewith is lower platen formation 13

consisting of a lower work-engaging platen 30. It will be appreciated that the lower platen may be constituted by a steel plate where only pressure is to be applied to a work piece. In view of the important application of the press in vulcanizing operations, the platen 30 is preferably formed from cast aluminum which is a good conductor of heat, the platen having integral current-conducting elements such as those sold under the trade mark "Cal-Rod."

The platen 30 is mounted upon a support formation consisting of a depending surrounding wall 31 and a lower pressure-member-contacting plate 32. Plate 32 and surrounding wall 31 can be constructed to define a cavity into which the inflatable member 26 expands under inflation. Preferably, lower plate 32 is planar to insure uniform application of pressure under inflation of the pressure member 26.

In an installation utilizing a heated platen, the lower platen 30 or heated platen, is preferably insulated from the support portion by underlying layers of asbestos 33 or other suitable material as indicated in FIGURE 1.

The upper platen formation 14, as best seen in FIGURES 2, 3 and 4, consists of a platen 34, an upstanding surrounding supporting wall 35 which is surmounted by an upper plate 36. In the application of the press to vulcanizing operations, the upper platen 34 is preferably of cast aluminum machined to provide a planar work surface and having integral current-conducting elements, not shown, to provide the heat necessary for vulcanizing.

It will also be appreciated that where cooling of the upper and lower platens is desirable, integral conduit formations can be cast into the platens for the circulation of a cooling fluid.

In a manner similar to the arrangement of the lower platen formation, heated upper platen 34 is insulated by layers of asbestos sheeting preferably from its supporting structure.

In FIGURE 2 the upper platen formation 14 is illustrated as being supported on a pair of upstanding J-shaped members 37 which are welded to the base 11 in parallel aligned relation. The members 37 are provided with a plurality of spaced vertically aligned holes 38 into which elongated pivot pin 39 of an upper platen support formation 40 is journaled. In this manner upper platen formation 14 is swingably supported about a horizontal axis above the lower platen formation 13 and is adjustable vertically to accommodate the thickness of a work piece.

Mounted between a pair of apertured lugs 41 at the front of base 11 and centrally thereof is a pivotal threaded post formation 42 which is provided with an upper clamping nut formation 43 and a lower locating nut 44. As best seen in FIGURE 2, lower nut formation 44 provides an upper bearing surface for a forwardly-extending U-shaped socket formation 45 carried by the upper platen formation 14, whereas the nut 43 is adapted to bear down upon the upper surface of the U-shaped socket formation to clamp the upper platen formation 14 against upward displacement under the advancement of lower platen formation 13.

With reference to FIGURES 2, 3 and 4, the press 10 is illustrated as being equipped with a mechanism for elevating the upper platen formation 14. In the embodiment illustrated, upper platen formation 14 is provided with a rearwardly-extending lug formation 46 centrally of its rearward side to which is pivotally appended a link formation 47 constituted by a pair of steel bars 48 joined together by transversely-extending portions 49 to define a plurality of vertically-spaced sockets 50. Extending rearwardly of the lower platen formation 13 is a lug formation 51 which is aligned with the sockets 50 of the depending link formation 47 and is adapted to be engaged in the sockets 50 upon movement of the link formation 49 toward the rearward side of the lower platen formation 13.

As seen in FIGURES 2, 3 and 4, a latching device operable from a position in front of the press is provided for actuating the link formation 47. This device comprises

a horizontal rod 52 mounted to slide in a guideway through lower platen formation 13 and provided at its rearward end with a ring formation 53 of a size and configuration to slidably receive lower end 54 of the link formation 47. It will be readily seen that each socket 50 will be engaged with the lug 49, upon movement of the rod forwardly, depending upon the position of pivot pin 39 in aligned holes 38.

At the front of the press, the lower platen formation 13 is provided with a horizontal U-shaped guide formation 55 which presents to the threaded post formation 42 substantially parallel vertical guiding surfaces 56, 57.

Vertical post 42 carries a projection unit in the form of a downwardly-extending hook 58 which is adapted to engage over the transverse portion 59 of the U-shaped guide formation 55 when the post 42 is moved forwardly, as seen in FIGURE 4.

On the opposite side of the upright post formation 42 and at its base, the post is provided with a pair of upright hooks 60 whose inner surfaces 61 are arranged in substantially parallel relation to the axis of the post. The horizontal rod 52 of the latching device is provided with a transverse rod portion 62 which is located behind the hooks 60, as best seen in FIGURES 2, 3 and 4.

As illustrated in FIGURE 2, when an object such as an unvulcanized length of conveyor belt, indicated at 63, is to be placed between the platens of the press and is of uniform thickness, the pivot pin 39 of the upper platen formation 14 is located in the appropriate aligned holes 38 of the support members 37 at the rearward side of the press, and as well, lower nut 41 is positioned and upper nut 42 turned in the direction to clamp the upper platen formation 14 firmly in place. Upon the introduction of compressed air into the inflatable pressure member 26 and by reason of its controlled inflation, lower platen formation 13 is moved uniformly upwardly to compress the piece of work 63 between the upper and lower platens 34 and 30, respectively.

It will be readily appreciated because of the large area of contact between the lower platen formation 13 and the inflatable pressure member 26, substantially compressive forces can be developed. For example, in a press having a platen measuring 12 inches by 30 inches and under an applied fluid pressure of 100 pounds per square inch, there is developed in the press an effective force of 36,000 pounds or 18 tons.

In the position of FIGURE 2, it will be readily appreciated that the lower platen formation 13 is unobstructed and free to move upwardly, and downwardly, this movement being guided by the surfaces 56, 57 of the U-shaped guide member 55 located forwardly of lower platen formation 13.

With reference to FIGURE 4 of the drawings, a piece of work 64 having a non-uniform thickness is illustrated mounted between the upper and lower platens 34, 30. In this instance the thickness of the work piece 64 is increased from the forward edge to the rearward edge. It will be readily appreciated that because of the tolerances between associated parts of the press, the lower platen formation 13 is substantially free to tilt to accommodate the variation in thickness of the work piece 64 and that the inflatable pressure member 26, because of its yieldability and expansibility, will accommodate the tilting while simultaneously exerting uniform pressure throughout the area of the work piece 64.

When it is necessary to raise the upper platen formation 14, the clamping nut 43 is released and the upright post 42 is swung forwardly out of engagement with the U-shaped socket 45 of the upper platen formation 14. By this movement, as seen in FIGURE 4, hook formation 58 is engaged over the upper edge of transverse portion 59 of guide formation 55 and at the same time, the rod 52 is moved axially forwardly by reason of the camming action of the inner surfaces 61 of the upright hooks 60 on transverse rod portion 62. The axial movement of the

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rod 52 brings a socket 50 of the link formation 47 into registration with lugs 51, providing a link connection between the upper platen formation 14 and the lower platen formation 13.

Under inflation of the inflatable member 26, by reason of the interengagement of the hook 58 and upper edge of the U-shaped guide formation 55, the forward portion of the lower platen formation 13 is prevented from moving uniformly upwardly with the rearward portion and consequently the rearward portion is canted upwardly as best seen in FIGURE 4. This amplification of the movement of the lower platen has the practical effect of causing the upper platen formation 14 to swing about its pivot pin 39 as illustrated in FIGURE 4. The upper platen formation 14 is quickly lowered into place by moving the valve device to the position whereupon pressure member 26 is emptied of the compressed air.

FIGURES 5, 6 and 7 of the drawings illustrate an alternative embodiment of the invention and in particular, emphasize the simplicity of apparatus constructed in accordance with the invention. Essentially, the press 65 of FIGURES 5, 6 and 7 comprises a base 65a which is constituted by an upper generally planar plate 66 having a surrounding wall formation 67. The corners of the base 65a are provided with upwardly extending angle members 68 to guide the lower platen formation 69 under vertical displacement. As in the case of the press 10, overlying the base 65a is an inflatable pressure member 70 which engages the undersurface 71 of the lower platen formation 69 and under inflation is adapted to displace it upwardly in the manner described in connection with press 10.

The press 65 of FIGURE 5 differs from that illustrated in FIGURE 1 in that connected to the base 65a at the rearward side and extending substantially vertically upwardly is a tubular formation 73 which is adapted to support the upper platen formation 74. Upper platen formation 74 is provided with rearwardly extending apertured spaced lugs 75 in parallel relation whose apertures are of a size and configuration to slidably engage upstanding tubular formation 73 in sliding fit. The lugs 75 are adapted to be positioned by a pin 76 engaging in one of a series of vertically aligned apertures 77 through the tubular formation 73.

Mounted at the front of the upper platen formation 74 is a U-shaped socket 78 which is adapted to receive an upstanding threaded post formation 79 pivoted as at 80 from the base 65a and provided with a locking nut 81.

When the work piece is to be released from the press 65, the clamping nut is loosened and the post 79 withdrawn from the socket 78. As will be appreciated from FIGURE 6, the upper platen formation 72 may then be swung to a position at one side of the lower platen formation as indicated in FIGURE 6.

The platens 83 and 84 of the press 65 are illustrated as having conductors 85 connected thereto for the purpose of supplying current to heating elements incorporated in the platens. As in the case of press 10, the platens are preferably of cast machined aluminum. Conveniently, the upper end of the tubular upright 73 can be used to support visual indicating apparatus 86.

In FIGURE 7, a side elevation of the press 65 of FIGURE 5 is illustrated, showing the wall formation 67 of the base 65a broken away to expose the conduit formation 73 through which compressed air is supplied to the inflatable pressure member 70. Also, this view illustrates how the lower platen formation 69 may tilt within its guide members 68, to accommodate a work piece 82 of non-uniform thickness.

In FIGURE 8 of the drawings, there is shown still another embodiment of a press 87 constructed in accordance with the invention, comprising a base 88, an overlying inflatable pressure member 89, a lower platen formation 90 including an irregularly-shaped platen 91 upstanding

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from the surface thereof on a support formation 92. Upper platen 93 of upper platen formation 94 is of complementary configuration to lower platen 91. Upper platen formation 94 is arranged to swing about a pivot formation 95 on a horizontal axis, between two upstanding support formations 96 mounted on opposite sides of the base 88. Upper platen formation 94 is provided with a forwardly-extending spaced projection 97 defining a socket to receive an upstanding pivotal rod 98 threaded to co-operate with a clamping nut 99 to lock the upper platen formation 94 in overlying relation to the lower platen formation 90 in the same manner as described in connection with press 10 of FIGURE 1 and press 65 of FIGURE 5.

Suitable guiding members 100 are provided at the side of the base 88 which are adapted to engage between horizontal projections 101 of the lower platen formation 90 to maintain vertical registration of the lower platen formation and supporting base and upper platen formation.

The operation of press 87 is substantially the same as that of press 10.

Turning to the press indicated at 101a in FIGURE 9, it is seen that the overall configuration is cylindrical. This cylindrical arrangement, it has been found, affords the greatest strength with the lightest construction and so renders the unit portable.

The lower platform 102 comprises a generally semi-cylindrical structure including annular wall 103, front end and rear end walls 104 and 105, respectively, mounted upon lugs 106. The front wall 104 is provided with spaced aligned lug formations 107 which pivotally support the threaded posts 108 on pins 109 to swing from an inclined position to a substantially upright position as will be appreciated from FIGURES 9 and 10. The threaded posts 108 are provided with co-operative threaded locking nuts 110 to secure the lower platform formation 102 and the upper platen formation 111 against separation during press operation.

The upper platen formation 111 is pivotally mounted for swinging movement upon upstanding J-shaped support members 112 secured to the rear wall 105 of lower platform formation 102. As indicated in FIGURE 10, the swinging movement is accomplished by means of a depending arm 113 secured to the upper platen formation 111 which by means of a pivot pin formation 114 at its lower end is connected to a piston rod 115 of preferably a compressed air operated piston and cylinder apparatus generally designated at 116.

The upper platen formation 111 comprises a part annular wall 117 and front end and rear end walls 118 and 119, respectively. This structure supports therebeneath an upper platen 120.

Upper platen 120 may be provided with integral heating elements or a conduction system for conducting cooling fluids in the same manner as in the previous embodiments. For purposes of clarity, neither the heating elements nor conduits have been illustrated in the drawings.

Connected to the front end wall 118 are a pair of spaced U-shaped socket formations 121 which are arranged to register with the upstanding threaded posts 108, the U-shaped socket formations 121 providing upper bearing surfaces 122 which are adapted to be engaged by the threaded locking nuts 110.

The lower platform formation 102 is provided with an upper generally horizontal plate 123 upon which a generally flat-lying inflatable pressure member 124 is disposed, the plate having an upstanding peripheral wall formation 125 therearound to define a recess which substantially contains the inflatable pressure member. Plate 123 is provided preferably with an aperture 126 centrally, through which connection is made by means of a conduit formation 127 between the inflatable pressure member 124 and a source of compressed fluid. Overlying the inflatable pressure member and in abutment therewith is a lower platen

formation 128 which preferably is constructed of integral resistance elements which are connected to a source of electric potential preferably embedded in a matrix of asbestos and vulcanized rubber which ordinarily could be utilized in the vulcanizing operations as a heating pad. The lower platen formation 128 is yieldable throughout its extent to applied pressure.

The purpose of providing a yieldable lower platen 128 is that under inflation of the pressure member 124, itself being yieldable, the platen 128 will conform itself to any discontinuity in the work which is placed between the platens of the press. It will be appreciated that, for example, where two sections of a conveyor belt are to be joined together by vulcanization, indicated at 129 and 130 respectively, in FIGURE 11, certain imperfections may occur in surfacing the area of the joint designated at 131. It is also possible that in preparing the surfaces of the sections 129, 130 dust or discrete particles may be deposited, which will have the effect of holding the surfaces to be joined together apart. Upon the application of pressure to the work, utilizing a press having rigid platens with planar surfaces, the deposited dust or particles will effectively hold the platens of the press at a greater distance apart than would occur if the dust or the particles were not present. In other words, the particles form "highs" and in so doing, keep the surfaces to be vulcanized together, apart. A poor joint is the result and, of course, is unsatisfactory.

Because of these limitations in presses having rigid platens, in the foregoing circumstances a person having great skill must be employed to make these connections to insure that not only are the surfaces to be joined substantially co-extensive but free of any imperfection.

The embodiment of the press illustrated in FIGURES 9 to 11 substantially overcome the limitations of the devices now available in that by virtue of the yieldability of the lower platen 128, under displacement by the yieldable pressure member 124, the lower platen 128 conforms itself around any imperfection and effectively brings into contact the opposing surfaces of the sections 129 and 130 to be vulcanized together.

In the particular embodiment illustrated in the drawings, the upper platen formation is shown as a generally planar member having a planar surface. This surface is rigid to maintain planar disposition of the belt which normally has a broad expanse.

It will be appreciated that the combination of the yieldable lower platen 128 and the yieldable inflatable pressure member 124 will permit a relatively unskilled employee to operate the press and produce thoroughly satisfactory results. Moreover, less emphasis needs to be placed on the paring and cleaning operation of the belt sections to be joined together.

It will be readily appreciated that the principal features of the embodiments of presses constructed in accordance with the invention have been illustrated and described, whereas in the structure of presses variations may be undertaken by those persons skilled in the art without departing from the spirit and scope of the invention as defined in the appended claims.

What I claim is:

1. In a press, a lower platform formation; a lower platen formation arranged in overlying relation to said lower platform; and upper platen formation overlying said lower platen formation in spaced substantially parallel relation thereto; means for supporting said upper platen formation on said lower platform formation to permit a swinging movement of said upper platen formation about a horizontal axis from a substantially horizontal position upwardly to an inclined position, said supporting means comprising a pair of spaced aligned members upstanding from said lower platform formation above the side thereof, said upper platen being provided with pivot means journaled into said spaced members, broad flat-lying expansible means disposed between said lower plat-

form formation and said lower platen and constituting the sole means of supporting said lower platen formation on said lower platform formation, said inflatable means being substantially coextensive with said lower platen and expansible and collapsible substantially solely in a direction to move said lower platen towards and away from said overlying upper platen formation respectively, said lower platen formation under inflation of said inflatable expansible means being floatably supported thereon and capable of shifting inclinably and titlably out of parallelism with said overlying upper platen formation, releasable locking means on the side of said platform formation opposite to said pair of spaced aligned members, for releasably locking said platform formation and upper platen formation against separation under inflation of said inflatable means and resultant displacement of said lower platen formation, said releasable locking means comprising a threaded post formation, mounted on said platform formation to swing from a substantially vertical position outwardly to an inclined position, said upper platen formation having a U-shaped socket formation adapted to receive said threaded post formation with said post formation disposed vertically and said upper platen formation arranged in overlying substantially parallel relation to said lower platen formation, said threaded post having a first threaded nut adapted to support said U-shaped socket from below and a second threaded locking nut adapted to bear upon said U-shaped socket formation from above, link means for releasably connecting said upper and lower platen formations, said upper platen formation adapted, upon being connected to said lower platen formation by said link means and upon inflation of said inflatable means to be displaced upwardly in unison with said lower platen formation and swung about its horizontal axis of pivot to an inclined position, and means to secure the lower platen formation against displacement on the side opposite to the link connection, whereby under inflation of said inflatable means the movement of the side of the lower platen formation to which the link means is connected is amplified, resulting in an amplification of the swinging movement of said upper platen formation.

2. A press according to claim 1 wherein said link means is controlled by means carried by said threaded post formation and actuated by the movement of said threaded post formation from the upright position to an outwardly-inclined position, said control means comprising a slidable rod formation slidably connected at one end to said link means and at the other end to said threaded post formation, said slidable rod being mounted in a substantially horizontal guideway in said lower platen formation.

3. A press according to claim 1 in which said connection between said threaded post formation and sliding rod comprises a guide formation carried by said threaded post and said rod formation is provided with a transverse portion engaging in said guideway, said rod having an axial extent such that under forward movement of said threaded post formation, said link means is connected between said lower platen and said upper platen formations and upon movement of said threaded post to a vertical position, said link means is disconnected from at least one of said platen formations.

4. A press according to claim 1 in which said link means is pivotally carried by said upper platen formation, said link means having a plurality of vertically-spaced sockets and said lower platen formation having projecting lug means engageable within said sockets over the range of vertical adjustment of said upper platen formation.

5. In a vulcanizing press the combination comprising: a first platen having a work-engaging surface; a second platen having a work-engaging surface, said platens being movable one relative to the other; an inflatable pressure member supporting said second platen, said member being coextensive with said second platen and extensible and collapsible to move said second platen towards and away from said first platen; means adapted to supply fluid to

said inflatable member, means adapted to permit movement of said first platen into and out of a work-engaging position overlying said second platen, means adapted to secure said first platen in said work-engaging position, said second platen being of flexible material to conform to the adjacent surface of a work-piece and said second platen including heating elements embedded therein.

6. The combination as claimed in claim 5 wherein the flexible material of said second platen is comprised of vulcanized rubber, impregnated with asbestos.

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