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SLEEVE SEAM LOCATER
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1. This invention relates to pressing machines, and more particularly to a press for articles of relatively different sizes or lengths, wherein the machine is actuated and then automatically adjusts for the relative size or length of the article being pressed.

The sleeve portions of garments may vary in length from one garment to another in a run of garments being pressed. This condition necessitates the exercise of a considerable amount of skill on the part of the operator of the machine in order to press the entire sleeve of the garment and produce a quality product. Heretofore several types of machines have been presented to overcome this condition. One type provides for the operator to place the sleeve over a form, press a first portion of the sleeve, move the form with the pressing members, and then press a second portion or remaining portion to fully finish the sleeve. Another type of press provides for the operator to dress the sleeve over the form, manually move a movable device to a location corresponding to the length of the sleeve as determined by the position of the shoulder seam on the form, and then actuate the machine into operation by a separate movement. Each of the above types of machine requires the operator to exercise a considerable amount of skill to insure a quality finish of the sleeves. Additionally, labor on the part of the operator may result in neglecting to position, or properly position the members of the machine to provide a quality finish of the sleeves. Further, a considerable amount of operator time is lost in moving the elements of the machine according to the length of a sleeve dressed on the machine.

Accordingly, a prime object of this invention is to provide means for automatically controlling the entire operation of a sleeve press according to the length of the sleeve placed thereon.

Another object of this invention is to provide means for automatically carrying out the operations of the sleeve press in response to actuation of the control.

It is a further object to provide a sleeve press which reduces the requirement of skill on the part of the operator.

Still a further object of the present invention concerns the provision of means for controlling the operation of a sleeve press requiring but a single actuating movement to initiate the sequential operation of the machine.

Another object of the present invention is to provide a control for a pressing machine for locating the shoulder seam of a sleeve and for causing the actuation of means operable to properly position the sleeve-supporting elements between the pressing elements whereby only that portion of the sleeve between the cuff and the shoulder seam will be pressed.

Other objects and advantages will become apparent in the following specification and drawings.

In carrying out the above and other objects, there is provided a sleeve press comprising a pair of pressing heads, a form mounted for movement toward and away from said pressing heads, means for projecting a plurality of reference indicators against the form for gauging the length of a sleeve placed on the form, and actuating means for positioning said form at different elevations relative to the pressing members.

In the drawings:

FIGURE 1 is a perspective view of a pressing machine utilizing an embodiment of the invention.

FIGURE 2 is an elevation of the machine of FIGURE 1, with portions cut away to illustrate the invention.

FIGURE 3 is a front elevation of the machine of FIGURE 1.

FIGURE 4 is an enlarged sectional view of a portion of the invention.

FIGURE 5 is an enlarged perspective view of a portion of the invention.

FIGURE 6 is a schematic illustration of the invention.

Construction

Essentially, the pressing machine is constructed according to the machine disclosed in the Patent Number 2,420,818 to Ernest Davis, and comprises a frame or cabinet 11, a table 12, sleeve forms 13 and 14 mounted on the table 12, expander blades 16 and 17 in the forms 13 and 14 respectively, actuator means 18 and 19 for the expanders 16 and 17 respectively, a pair of pressing heads 15 for each sleeve form 13 or 14, means for moving the table 12 and forms 13 and 14 toward and away from the pressing heads 15, means for positioning the forms 13 and 14 at different elevations relative to the pressing heads 15, and a control means for actuating the sequential operation of the machine, generally designated at 18.

With specific reference to FIGURES 1 to 3, the cabinet or frame 11 of the machine substantially encloses all but the table 12 and the forms 13 and 14. FIGURE 1 and 2 illustrate the forms as being positioned in a loading position, so that the operator of the machine may dress the sleeves 38 of a shirt on the forms. Parallel links 26 and 27 are pivotally fastened to the table 12 as at pivots 29. A crosshead 25 is mounted for vertical movement on any vertical member 31; and the links 26 and 27 are pivotally fastened to the crosshead 25 as at pivots 30. Stops 28 may be positioned within the cabinet 11 to limit the forward movement of the links 26 and 27, and thus define the loading position of the table 12 with the forms 13 and 14 thereon.

A fluid pressure cylinder 55 is pivotally fastened within the cabinet or frame 11, and the piston rod 84 thereof may be connected pivotally to one of the links 26 or 27, as illustrated in FIGURE 2. Operation of the cylinder 55 by fluid pressure applied therein moves the parallel links 26 and 27, the table 12, and thus the forms 13 and 14 from a loading position as shown in the solid lines in FIGURE 2 to a pressing position between the pressing heads 15 as shown in the broken lines. Operation of the cylinder 55 in a reverse direction moves the forms 13 and 14 from the broken line position, or pressing position, to a loading position, where the link 26 rests against stops 28.

The pressing machine 10 also includes means for positioning the forms 13 and 14 at different elevations relative to the pressing heads 15. The operating means for this includes the substantially vertical, or upright, member 31. Member 31 may be a post, or may be a frame member, whichever is convenient. A fluid pressure cylinder 57 is attached at one end to the post 31, and the piston rod 85 of the cylinder 57 is connected to the crosshead 25. Operation of the cylinder 57 by applying fluid pressure therein through line 93 raises the crosshead 25, thus raising or elevating the forms 13 and 14 mounted on table 12 which is supported on the links 26 and 27.

The forms 13 and 14 are conventionally known in the art, and comprise the substantially upright portion 13 or 14. Inasmuch as the forms are alike in every respect, description of one will be given. The form 13 may be heated from within by any suitable means and may be provided with a padded exterior as is well known in the art. An expander may be provided, comprising an expander blade 16 and the actuator arm 18 therefor. Such
expander arms are also conventionally known in the art. As is usually done, the expander blade 16 is normally in the reference position shown in FIGURE 1. Operation of the actuator arm 18 will release the spring pressure or fluid pressure retaining means, thus releasing the expander blade 16 to substantially the position shown in broken lines in FIGURE 2. Thus, with a sleeve 38 dressed on the form 13, actuation or release of the expander blade 16 is done in the same fashion as smooth adjustment of the sleeve during the pressing operation between the pressing heads 15.

The pressing heads 15 are also conventionally known in the art and may be formed as a pair of coacting pressing heads for each sleeve form. Fluid pressure operating means in the form of a diaphragm 23 is operated to pivot the heads 15 about the pivot 24 to effect a close movement about the form 13 when the form 13 is in position between the heads 15. The heads 15 closed about the form 13 with a shirt sleeve 38 thereon effects the pressing of the sleeve in the conventional manner.

With reference now to FIGURE 1, there is diagramatically illustrated the positions 1, 2, 3 and 4 of the form 13. When the operator of the machine places a shirt sleeve over the form 13, actuates the cuff clamp 21 by means of operating handle 22 to clamp the cuff section and the sleeve from about the upper end of the form 13, she then stretches the sleeve, or otherwise smooths the sleeve downwardly over the form 13, expanding the expander 16 to hold the sleeve taut over the form. With the sleeve 38 in the above-described position on the form 13, the shoulder seam thereof lies at or adjacent to one of the positions 1, 2, 3 or 4 as graphically shown in FIGURE 1. It will become apparent that a shirt having a short sleeve will lay with the shoulder seam thereof substantially near position 1 or 2, while a shirt having a relatively longer sleeve will lay with the shoulder seam near position 3 or 4. Similarly, the shoulder seam of a shirt having a medium-length sleeve will be in a position near positions 2 or 3. FIGURE 2 illustrates an example of a shirt sleeve 38 where the shoulder seam 39 lies substantially in position 1. FIGURE 5 illustrates a sleeve 38 having the shoulder seam 39 adjacent position 2. Position 40 of the shirt may be part of the body portion of the shirt. In impacting a proper finish to the sleeve 38 of the shirt, it is desirable to press that portion of the sleeve between the cuff and the shoulder seam 39, while not pressing the body portion 40. Thus, it becomes necessary to elevate the table 12 supporting the sleeve form 13 on different elevations relative to the pressing members 15 according to the position occupied by the shoulder seam 39 on the form 13.

A control for initiating the sequential operations of the sleeve press and for positioning the form 13 with respect to the pressing heads 15 is provided which includes the control box 20. The disposition of one embodiment of the control box 20 is shown in FIGURES 1, 2 and 3. The box 20 is mounted on the frame or cabinet 11 of the machine to project a plurality of references or reference indicators against the form 13. In the embodiment shown, four references are used for determining the location of the shoulder seam 39. However, it will become obvious that more or less reference points may be used according to the requirements of the machine. In FIGURE 5, the control box is shown as being equipped with a plurality of reference projectors 41, 42, 43 and 44, which correspond with the form positions 1, 2, 3 and 4. Each projector is connected to a beam of a different elevation relative to the pressing members 15 and may comprise a light bulb and socket therefor, and suitable lens means or the like to effect projection of a reference. Thus, projector 41 may direct a beam of red light, for instance; 42 a beam of blue light; 43 a beam of green light; and 44 a beam of yellow light. The beams may be focused into a dot or spot of light directed for exactly locating positions 1, 2, 3 or 4. On the other hand, the reference beams may be substantially wide, so as to indicate zones 1, 2, 3 or 4. Thus, should a seam 39 be located in a given zone, such indication will be made by the projector 44. Operation of the actuator 45 will effect the extension of the actuator arm 46 to the position shown in FIGURE 1. Operation of the actuator arm 47 will effect the smooth adjustment of the sleeve during the pressing operation between the pressing heads 15.
source S. After the diaphragm 23 has been operating for a predetermined period of time for pressing the sleeves, the timer 53 opens the valve 50 therein, releasing the pressure through line 102 to effect closing of the valve 50. This action exhausts fluid pressure from line 103 and the diaphragm 23 to open the pressing heads 15.

Valves 50 and 52 are substantially alike in construction and operation, and a description of valve 50 will suffice for each. Fluid pressure is received constantly to the interior of the valve body through line 90. Valve elements 69 and 73 are pivoted on one end of the connecting rod 74 interiorly of the body. A plunger 71 bears against the valve element 73 through one end of the valve body. A duct 70 is formed through the valve body from the interior thereof, between the valve elements 69 and 73. A diaphragm actuator assembly is formed on or near the valve body and contains the diaphragm 76 and plunger 75 bearing against the resilient diaphragm 76. The duct 70 communicates with the pressure side of the diaphragm 76 in the diaphragm assembly. Line 100 leads from the diaphragm 76 to the timer 53 through an orifice 68. An operating lever 77 is pivotally mounted, with each end in communication to operate the plunger 71 and the plunger 75 of the valve 50. The lever 78 of the actuator 5 is pivotally mounted so that the end thereof opposite the key actuator 5 bears against the lever 77 adjacent the plunger 71 which operates the valve elements 73 and 69. In FIGURE 6 the valve 50 is illustrated in the closed position, which is the normal position due to the pressure in line 90 and any suitable spring against valve element 69. Operation of the actuator 5 by depressing the key portion causes the end of lever 78 to bear inwardly against the upper end of lever 77 and to thence push the plunger 71 into the valve body. Valve element 73 on one end of the connecting rod 74 is thus caused to seat against its valve seat, and the element 69 on the opposite end of the rod 74 is moved away from its valve seat to admit fluid pressure from line 90 around the valve element 69. Fluid pressure is thus admitted through a port into line 91 to operate the position lock cylinder 58 and the ball shuttle valve 54. Pressure is also admitted through the duct 70 to bear against the diaphragm 76 and force the plunger 75 outwardly against the lower end of the lever 77. This constant outward pressure against the lower end of the lever 77 maintains the upper end of the lever in its inward position (not shown) with the valve elements 69 and 73 in the open new position. Pressure is also admitted through line 100, and orifice 68 to the timer 53. After a predetermined period of time, the timer opens a valve therein to exhaust the pressure from line 100, thus releasing the pressure against the diaphragm 76. The spring urging against the valve element 69 moves the valve elements and rod 74 to the normally closed position, moving levers 77 and 78 to the position shown in FIGURE 6. This action moves valve element 73 from its seat, permitting the pressure in line 91 to escape through the exhaust port 72 in the valve body, at which time the position lock cylinder is then deactivated and the piston 86 returns to the "in" position. A manual release or exhaust valve 51 is provided for immediate release of the pressure in line 100 by means of the communicating branch line 101. Should for any reason, it become necessary or desired to remove exhaust valve 51 and the diaphragm 23 before the action of the timer 53, the operator lifts the end of lever 85, opening the conventional exhaust valve 51. Release of the pressure in lines 100 and 101 thus permits the valve 50 to return to the normally open position.

FIGURE 6 also diagrammatically illustrates the valve 79, which is the valve operated by levers 77 and 78 for position number 2. Valve 79 is the same as valve 50, and therefore the description of valve 50 will suffice. Operation of the actuator 6 opens the valve 79 to admit fluid pressure into line 95 to the position lock cylinder 59. Pressure is also admitted through branch line 96 to the end of the shuttle valve 54 opposite the end connected to branch line 92. Pressure in line 96 will thus move the ball shuttle 66 to the opposite end of the valve in 54 and pressure will be admitted through line 93 to the form raising cylinder 57 as described hereinabove. An automatic release line (not shown) is also connected to the timer 53 from the valve 79 similarly as the line 100 from valve 59.

Thus, from FIGURES 4, 5 and 6, it will become apparent that there is provided or included with the control for the sequential operation of the machine, a plurality of projectors for reference indicators to indicate the position of the shoulder seam on the form. There is also included an actuator (5, 6, 7 or 8) and a valve for each projector. No matter what number of projectors are used, there is a corresponding actuator for the control of the press. Inasmuch as the valve for each actuator is like another, description of valve 50 for actuator 5 will suffice.

It is obvious that there is provided a shuttle valve 54 for each pair of actuator valves, such as valves 50 and 79. The valves (not shown) for actuator keys 7 and 8 have a separate shuttle valve (not shown) for connecting them to the forms raising cylinder 57. Similarly, the timer 53 is also connected to each of the other valves for the actuator keys 7 and 8.

The self locking valve 52 for actuating the diaphragm 23 is like valve 50 in construction and operation. A lever 53 is pivoted mounted to the cabinet or frame of the machine, and has a cam roller or the like 82 thereon. When the form transfer cylinder 55 moves the form and table 12 to a pressing position, the edge of the table 12 will occupy a position substantially like that shown in FIGURE 6, adjacent the lever 53. As the table 12 is moved to the limit of its rearward travel into pressing position, the edge of the table will engage the lever 83, moving the lever backwardly. The roller 82 will swing along the path shown in the broken line, substantially to the broken line position. In moving through its arc, lever 80 will be depressed, opening valve 52, and admitting pressure from line 90 into line 103 and thence to the diaphragm 23. Pressure will also be admitted through line 102 to the timer 53. The diaphragm assembly 81 on the valve 52 will keep the valve 52 in the open position until the timer releases similarly to the operation of the valve 50. The portion of the lever 83 which supports the roller 82 is independently movable with respect to the lever 83, so that when the table 12 returns to a loading position and releases the lever 83, the roller 82 will ride over the lever 80, so as to prevent accidental actuation of the valve 52.

Each of the position lock cylinders is like another. A position lock cylinder is provided corresponding to the number of projectors for reference indicators. Port line 94 on each position lock cylinder 58, 59, 60 or 61 is connected to the form transfer cylinder 55 through the orifice 57, whereby actuation of any position lock cylinder will cause operation of the form transfer cylinder 55 when the piston of the lock cylinder passes the port line 94. When the pressure is released in line 91, 95, 97 or 98, the piston in the particular position lock cylinder drops below the port line 94 and connection is cut, and the line 94, orifice 57 and cylinder 55 exhausts to the atmosphere above the piston in the position lock cylinder.

Operation

In describing the operation of the machine and the control therefor, it will be assumed that the complete operation has been completed, and that the elements of the machine are in the position substantially as shown in the solid line portions of the drawings. The operator first dresses a sleeve on the form 13, as in FIGURE 2, and while holding the cuff around the cuff block at the upper end of the form, actuates the cuff.
clamp handle 22 to clamp the cuff securely about the cuff block by means of clamp 21.

Actuation of the expander control lever 18 releases the expander blade 16 from its position within the form 13 to stretch the sleeve taut on the form 13, at which time the operator also grasps the lower end of the sleeve adjacent body portion of the garment to pull the sleeve smooth down over the form 13.

It will be noted from FIGURES 1, 2, and 5, that the shoulder seam of the sleeve will occupy a position substantially at or adjacent to one of the positions 1, 2, 3 or 4. Let it be assumed that the seam is adjacent position 1 as in FIGURE 1. This position is indicated in that projector 41 is projecting a reference indicator against the sleeve on the form 13, and the seam 39 of the sleeve 38 lies within the zone indicated by the projector 41.

The operator then depresses key actuator 5, opening valve 59. It should be noted at this point that both sleeve forms may be controlled by the same control.

That is to say, although description of the form 13 and adjacent apparatus is given, the description also applies to the form 14 and associated apparatus. Following the operator's actuation of actuator 5, the control completely and automatically carries out the sequential operation of FIGURE 4 and 5.

Thus, valve 59 is self-locking, and remains open as governed by the timer 53. Fluid pressure is supplied through line 91 to the position lock cylinder 58, raising piston 86 and pivoting the position lock 62 to a position to be engaged by the latch 52 on the crosshead 25. Pressure is admitted through branch line 92 to the shuttle valve 54, through orifice 67, line 93, to the forms raising cylinder 57. The piston rod 85 of the cylinder 57 is retracted into the cylinder and the crosshead 25 is thus lifted upwardly toward the position lock 62 until the latch 52 engages the lock 62. This halts further upward movement. Thus, the crosshead occupies position 1B (FIGURE 2) corresponding to the position 1 on the form 13. As the crosshead is raised at a controlled speed, the piston 86 of the cylinder 58 has passed the port line 94 connection, admitting pressure through line 94 and orifice 87 into the form transfer cylinder 55. Since full pressure is admitted through line 94, the pressure on the one side of the piston in the cylinder 55 overcomes the reduced pressure on the other side from line 90 and pressure reducer 56, retracting the piston rod 84 into the cylinder 55. This actuates a feed transfer of the parallel links 26 and 27, table 12, and forms 13 and 14 from a loading position to the pressing position as shown by the broken lines in FIGURE 2. This form transfer may occur substantially at the same time as the lifting of the cross head 25. However, there will be a slight time delay due to the effect of the various orifices in the control to prevent overlap of the operations that will cause malfunction of the control.

When the table 12 reaches its pressing position (FIGURE 2), it is seen that the form 13 is in a pressing position so that the lower edge of the pressing heads 15 corresponds to position 1A on the form 13, which is substantially the position or location of the seam 39 of the sleeve 38.

Completion of the transfer of the table 12 to the pressing position (FIGURE 6) places an edge of the table as at 1D adjacent to the lever 83, to open the self-locking valve 52. Pressure is thus admitted from line 90 through line 103 to the diaphragm 23 to effect the pressing of the sleeve 38 on the forms 13 and 14 by the pressing heads 15. Pressure is also admitted through line 102 to the timer 53. Following a predetermined period of pressing time, the timer opens the electronic valve 50 to exhaust the fluid pressure in lines 102 and 100. However, due to the orifice 68 in line 100, the escape of pressure in line 100 occurs at a slower rate than the escape of pressure in line 102.

Pressure release in the diaphragm assembly 81 permits valve 52 to open, exhausting pressure from line 103 and diaphragm 23, and the diaphragm 23 releases the pressing heads 15, which open. By this time, sufficient pressure has released from line 100, and valve 50 automatically opens to exhaust pressure from line 91.

Pressure is simultaneously released in line 92, shuttle valve 54, and line 93 from the forms raising cylinder 57, which then begins to lower to the bottom position.

Pressure also exhausts from cylinder 55 through line 94, port connection of line 94 into the position lock cylinder 58. The pressure through the pressure reducer 56 then forces the piston in the cylinder 58 outwardly at a rate so as to maintain a constant pressure-flow of fluid through line 94. The pressure in line 94 then maintains the piston 86 in the upward position until the forms transfer cylinder 55 has moved the forms to the forward, or loading position. Continued exhaust of fluid pressure in line 91 permits the downward movement of the piston 86 in cylinder 58, opening the position lock 62, and the complete control and machine assume the position as at the beginning of the operation.

It will be noted that, should the sleeve seam 39 occupy the position in zone 2 of the form 13, actuation of the actuator 6 will open self-locking valve 79, supplying fluid pressure through line 94 and ports 100 and 102. Position lock cylinder 59 is actuated, and the crosshead will raise to position 2B, the transfer of the forms will place the form so that the lower edge of the pressing heads 15 will be in position 2A, and the table 12 will engage the lever 83 at position 2D. Also, the pressure in line 96 will move the ball shuttle 66 to shut off the connection of line 92.

Similarly, the control is substantially the same as described for positions 1 and 2. Thus, actuation of actuator 7 when the seam is in position 3 (FIGURE 5) moves the forms position 3A, the table to position 3D, and the crosshead to be locked in position 3B by position lock 64 and cylinder 60. Position 4 will also use the same shuttle valve (not shown) as position 3, but will actuate position lock 65 by cylinder 61 through line 98, the crosshead will occupy position 4B, the forms position 4A, and the table will engage the lever 83 at position 4D as shown in FIGURE 6.

The emergency release lever 88 for exhaust valve 51 is provided at each position, as shown in FIGURES 5 and 6. It is well known that carelessness on the part of the operator may result in improper motions and danger to parts of the machine. It is of the utmost importance that the operator be familiar with the correct methods of operating the machine. This is particularly true during the transfer of the forms from the loading position to the pressing position, where the bosom of the garment may catch on a corner of the machine. Should this condition arise, the operator merely raises the lever 88 corresponding to the actuator key which was actuated, and the fluid pressure in the control is immediately released, permitting the valve 50 or the like to open, whereupon the operation ceases, and the forms return to the loading position.

Thus it becomes apparent that in carrying out the objects of the invention there is provided a sleeve press including the pair of pressing heads, a form which is mounted for movement toward and away from the pressing heads, and which is mounted for positioning at different elevations relative to the pressing heads, and a control for controlling the operation of the machine, whereby the form or forms are positioned relative to the pressing heads.

The control comprises a means for projecting a plurality of reference indicators against the form, or against a sleeve opening form, a valve or actuating means corresponding to each of the reference indicators and connected to the source of power for the machine, a position locking means corresponding to each valve, a power means for raising the form to different elevations, a form transfer means for moving the form toward and away
from the pressing heads, and a valve operated in response to movement of the form toward the pressing heads for operating the diaphragm and the diaphragm and the pressing heads. A timer means connected to the actuating means and the second valve releases the pressure in the control following a predetermined period after actuation.

An article dressed on the form determines the actuating means to be operated for positioning the form at different elevations relative to the pressing heads.

It is understood that, although one form and one pair of pressing heads has been disclosed, the control is operable for all the pressing heads in the machine, and for all of the forms.

While a specific embodiment of the invention has been disclosed, it is to be understood that the invention is not to be limited to the embodiment shown, but is to be construed as fairly falls within the scope of the appended claims.

I claim:

1. A sleeve press comprising a form, an expander carried by said form, a pair of pressing heads coinciding with said form, a table supporting said form, said table being mounted for moving said form to a position in contact with said pressing heads and then away from said pressing heads, means for positioning said form at different elevations relative to said pressing heads; said means comprising a second means for positioning a plurality of reference indicators against an article dressed on said form, and separate actuators corresponding to each of the reference indicators.

2. A sleeve press including a pair of pressing heads, a form mounted for movement to a position in contact with said pressing heads and then away from said pressing heads, said form being mounted for movement to different elevations relative to said pressing heads; indicat- ing means mounted to project a plurality of reference indicators against an article on said form, deplac- ing means corresponding to each of the reference indicators for initiating operation of said sleeve press and power means responsive to said actuating means for positioning said form at different elevations relative to said pressing heads.

3. A sleeve press comprising a pair of pressing heads, a form mounted for movement to a position in contact with said pressing heads and then from said pressing heads, first means projecting a reference indicator against said form, a source of fluid pressure, means operable by said fluid pressure for positioning said form at different elevations relative to said pressing heads, said second means including a cylinder for raising said form, a position locking means to operatively engage said second means, and an actuator comprising a control valve corresponding to said first means, said valve being operable to control said position locking means and said second means.

4. In a sleeve press including a pair of pressing heads and a form mounted for movement to a position in contact with said pressing heads and then away from said pressing heads; a control for positioning said form at different elevations relative to said pressing heads comprising first means projecting a plurality of reference indicators against said form, a valve corresponding to each of the indicated position of each of said reference indicators, a source of fluid pressure, power means for raising said form to different elevations relative to said pressing means, a position locking means corresponding to each of said reference indicators, one of said position locking means being actuated by its corresponding valve and said power means being actuated by said one valve for raising said form to a position relative to said pressing heads.

5. In a sleeve press including a pair of pressing heads and a form mounted for movement to a position in contact with said pressing heads and then away from said pressing heads; a control for positioning said form at different elevations relative to said pressing heads comprising first means for projecting a plurality of reference indicators against said form, a source of fluid pressure, a plurality of valves connected to said source, each of said valves corresponding to a reference indicator, power means connected to said valves for raising said form, position locking means connected to each said valve, said power means and one of said position locking means being actuated by a corresponding valve for raising said form to a position relative to said pressing heads.

6. A control for a sleeve press having a pair of pressing heads and a form movable to a position in contact with said pressing heads and then away from said pressing heads; said control comprising means projecting a plurality of position reference indicators against said form; a plurality of valves, one each of said valves corresponding to one each of said reference projecting means; power means connected to said valves for raising said form to different elevations relative to said pressing members; a plurality of position locking means, one each of said position locking means being connected to each of said valves; whereby actuation of one of said valves operates said power means and one of said position locking means for raising said form into position relative to said pressing heads.

7. A sleeve press comprising a pair of pressing heads, a form movable to a position in contact with said pressing heads and then away from said pressing heads, power means for operating said press, and a control for raising said form to different elevations relative to said pressing heads; said control comprising a plurality of means projecting a series of reference indicators against said form, a valve corresponding to each said reference projecting means and connected to said power means, a position locking means connected to each said valve, power means for raising said form to different elevations connected to each said valve, one of said valves being actuated to operate said form raising means and one of said position locking means; form transfer means actuated in response to actuation of said one of said position locking means for moving said form toward said pressing heads, and a second valve operable in response to movement of said form toward said pressing heads for operating said pressing heads.

8. A sleeve press comprising a pair of pressing heads and a form mounted for movement to a position in contact with said pressing heads and then away from said pressing heads, a control for positioning said form at different elevations relative to said pressing heads comprising first means for projecting a plurality of reference indicators against said form, means for raising said form to different elevations corresponding to the positions of the reference indicators, an actuating means corresponding to each reference indicator, and locking means corresponding to each actuating means for locking said form at a position corresponding to a selected reference indicator.

References Cited in the file of this patent

UNITED STATES PATENTS

2,727,661 Strike ........................ Dec. 20, 1955
2,839,231 Strike ........................ June 17, 1958