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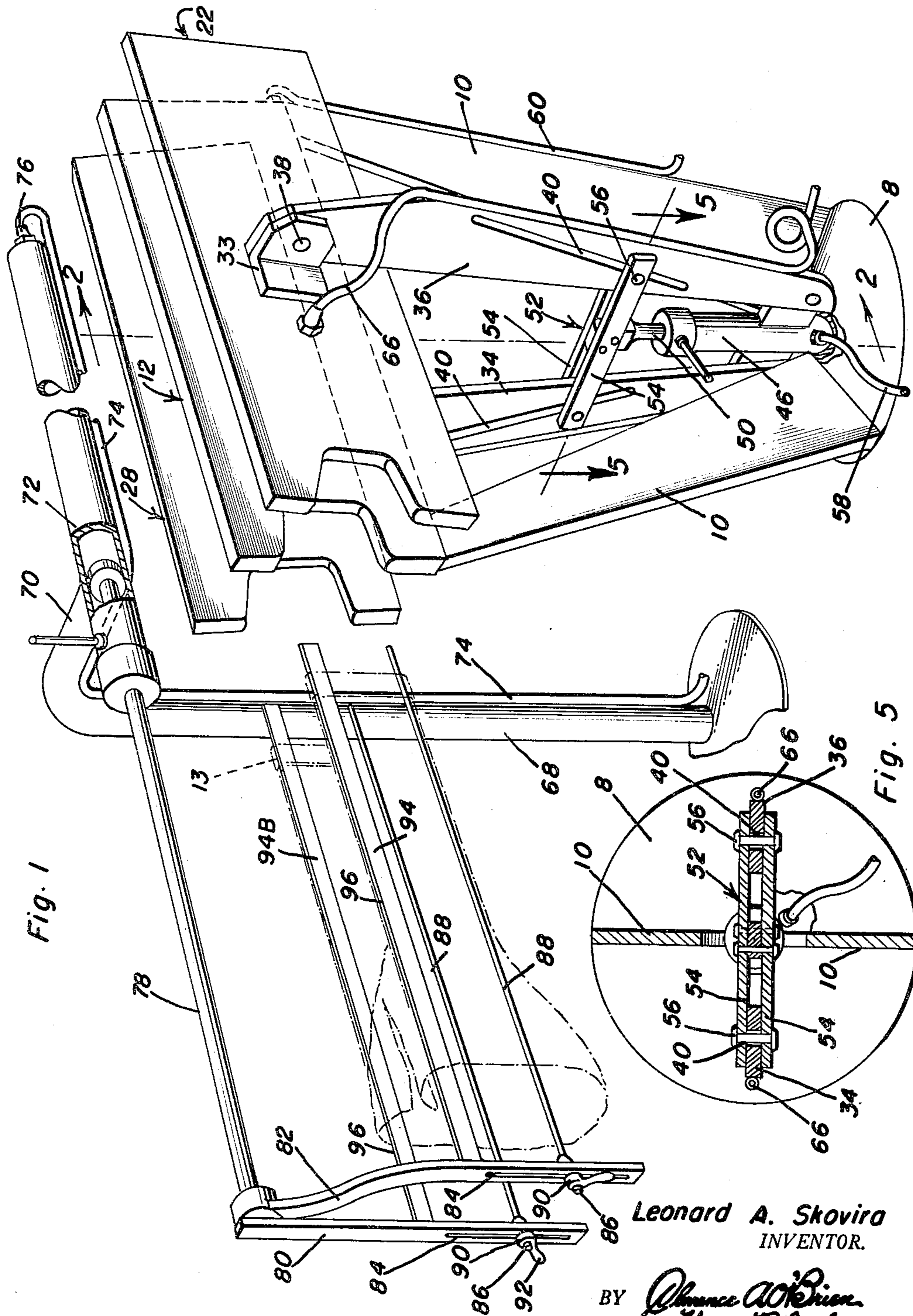
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TROUSERS PRESSING MACHINE

Filed Aug. 12, 1957

2 Sheets-Sheet 1



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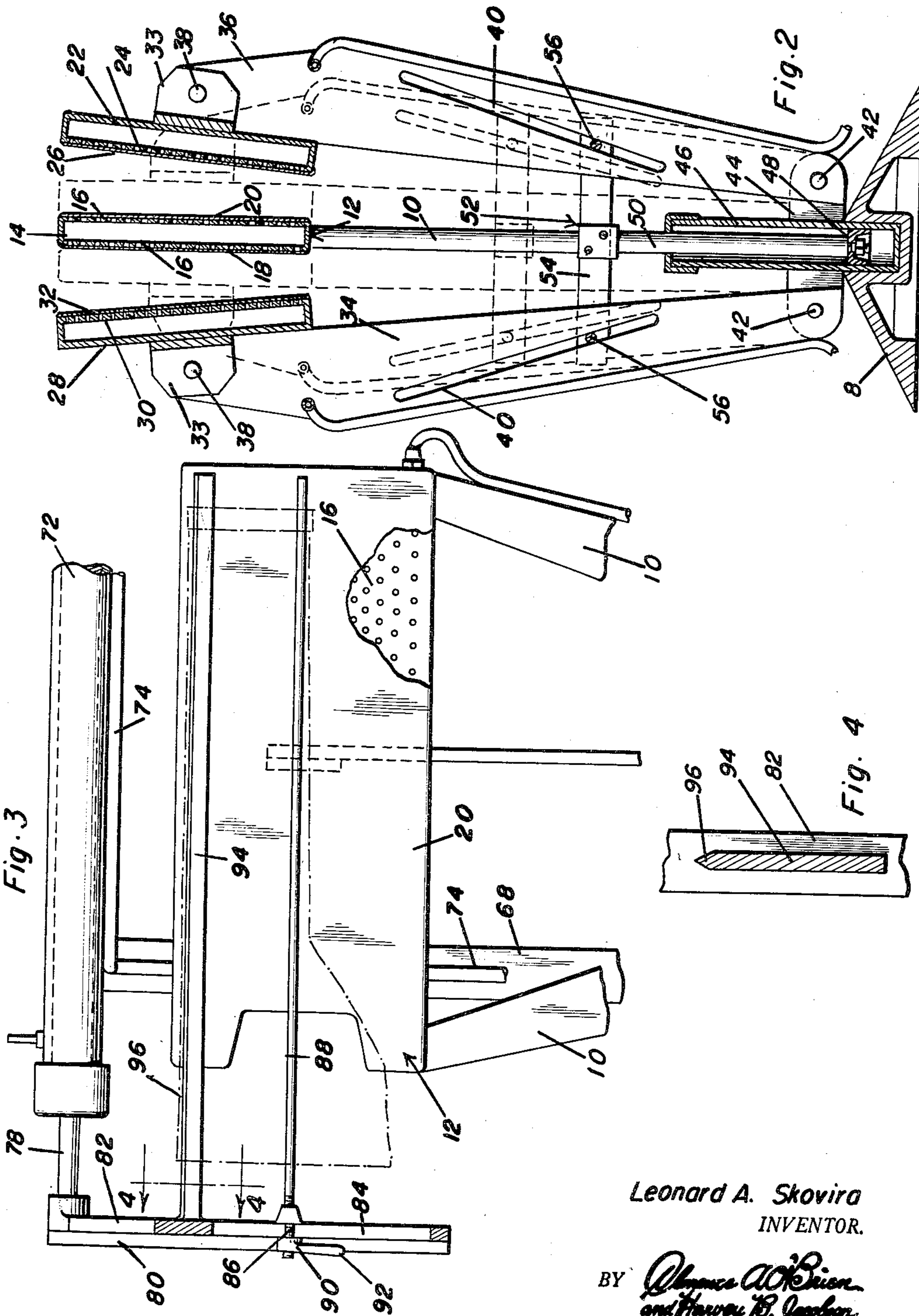
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2,994,978

## TROUSERS PRESSING MACHINE

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The present invention relates to certain new and useful improvements in a machine or apparatus through the medium of which both legs of a pair of men's trousers may be simultaneously creased and pressed whereby to in this manner expedite and increase the user's output of work and to, accordingly, save valuable time, labor and, what is also important, effect a monetary saving for all concerned.

The invention herein shown, described, and claimed has been devised and reduced to practice with a view toward meeting the production and work requirement demands for an advanced, but practical, time and labor saving trousers pressing machine. As is generally well known, trousers pressing machines currently in use are characterized by a suitable base or support, atop which a horizontal head or buck is fixedly mounted, the upper or top portion of said buck having an appropriate padded trousers leg supporting and pressing surface in a horizontal plane parallel, or approximately so, to the floor or other support surface for the base. A handle-equipped companion head or buck, similarly constructed, is carried by hinged lever means and its underneath side or surface is moved in an arcuate path of movement toward and from the fixed buck, thus providing, simply described, a trousers press.

It is common knowledge that skilled and highly paid pressers are required to turn out acceptable work. Not only this, a good job involves a minimum of six steps; namely three creasing and pressing operations for each trousers leg. Manifestly then, when an employer loses a good presser and hires someone else, his efforts to please discriminating and hard-to-please customers may be fraught with unforeseen difficulties, not to consider the time and monetary factors involved. It follows that there has long existed a need for fool-proof pressing machines capable of functioning properly at the hands of unskilled workers. Therefore, the chief objective here is to provide just such a machine, one which is capable of fully and properly pressing both trousers legs at the same time, a machine which overcomes the difficulties, and many others, above touched upon.

In carrying out a preferred embodiment of the invention two relatively fixed stands are provided. One stand is equipped with a centralized fixedly mounted head or buck and this is located and sandwiched between a pair of companion relatively movable steam manifolds or bucks which function as pressers and move toward and from the intervening manifold or buck so that when the legs of a given pair of trousers are caused to straddle the center buck and are pressed against opposite lengthwise sides or surfaces thereof by the simultaneously movable bucks, the desired single-action two-way pressing job is accomplished.

As to the other or second stand this serves to support a cylinder in which a piston is reciprocable, said piston constituting a part of a movable carriage, and said carriage being provided with properly paired leg supporting bars whereby to in this manner provide a means to render the carriage effective as the trousers are brought into position between the bucks and are then withdrawn so that the steaming and pressing step may be completed.

It is an object of the invention to structurally, functionally and otherwise improve upon steaming and pressing machines especially those which are primarily adapted for expeditiously creasing and pressing trousers and, in doing so, to provide a construction which will

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better and more effectually fulfill the manufacturing requirements and economies of manufacturers and the labor saving and economy needs of pressers who have to do the job and to, in addition, promote monetary savings for the proprietor of a dry cleaning establishment or the like.

In carrying out a preferred embodiment of the invention a pair of levers are hingedly mounted at their lower ends on the base of the first named stand, have their intermediate portions slotted and their upper ends hinged to the hollow bucks or movable presser heads, there being a crosshead operatably mounted on a piston with the members of the crosshead operatively connected with the slotted portions of the levers to bring about the desired operation.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the same:

FIG. 1 is a perspective view of a trousers steaming and pressing machine constructed in accordance with the principles of the present invention and showing the presser heads in their open position ready to receive the trousers legs which are to be positioned and pressed;

FIG. 2 is a section on the vertical line 2—2 of FIG. 1 looking in the direction of the arrows;

FIG. 3 is a view with parts broken away and parts in section and which may be described as a fragmentary side view and wherein the upper portions of the respective stationary and movable units of the machine are shown, the carriage being in its trousers pressing position;

FIG. 4 is a section on the vertical line 4—4 of FIG. 3 looking in the direction of the arrows and with the scale exaggerated; and

FIG. 5 is a section on the horizontal line 5—5 of FIG. 1.

Briefly summarized, a preferred embodiment of the invention is characterized by a first stand or unit having a horizontal base, uprights attached to and rising in a vertical plane from said base, a suitably elongated hollow pressing head bridging and fixedly mounted atop the uprights with its longitudinal axis horizontal and provided with trousers legs pressing surfaces at opposite sides thereof in a fixed vertical plane. One end portion of the head is unobstructed and allows the legs of the trousers to straddle and occupy lengthwise pressing and creasing positions against the pressing surfaces. These pressing surfaces are appropriately perforated and the perforations are cloth-covered, as usual. A suitable conduit is communicatively connected with the head. A first presser buck is located and operatively supported on one side of said head and has a lengthwise pressing and creasing surface arranged so that it is swingable or movable toward and from the complementary pressing surface. A second presser buck is located adjacent and has a pressing surface operable toward and from the other side of said head. Each movable buck is hollow and the pressing surface thereof is apertured and suitably cloth-covered. Means cooperating with the base and buck is provided for simultaneously moving the bucks toward and from said head. A second stand is cooperatively associated with the first stand. Then, too, a trousers aligning and supporting and positioning carriage or rack is supported and located for cooperation at said one end of the head. Simple mechanical means slidably supports the carriage and permits it to be moved toward and from the adjacent cooperating end of the first named stand. This carriage has means thereon serving to initially locate the legs of the trousers with the legs straddling the pressing surface of the head, said means serving to suspend, hold and maintain the legs thus located until the two bucks simultaneously come

into play, after which said means may if desired, be retracted, leaving the trousers clampingly held between the head and bucks to complete the pressing step.

Referring now to FIG. 1 showing the principal parts of the two principal or primary units, the relatively stationary unit is denoted at the right and comprises the multiple buck steaming and pressing unit. The companion unit at the left is the movable carriage and trousers holding, lining up, positioning and withdrawable means. Considering the first unit, the base, which may be of suitable construction is denoted by the numeral 8. A pair of stationary arms or uprights 10 are attached to and rise upwardly in divergent relation from diametrically opposite sides of the base where the upper ends connect with a horizontal centrally positioned buck or head. This buck is denoted, as seen in FIG. 2, by the numeral 12 and comprises a hollow elongated generally rectangular head 14 the opposite vertical sides of which are flat and perforated at 16 and are exteriorly covered with a suitable fabric such as is employed on garment pressing bucks. The fabric sides, one to the left and one to the right, in FIG. 2 are denoted at 18 and 20, respectively. Opposed to these sides are similarly constructed but relatively movable hollow steaming and pressing heads or bucks. The one to the right in FIG. 2 is denoted by the numeral 22 and the inner plate is apertured at 24 and covered with fabric at 26. The buck or presser head at the left is denoted at 28, has a perforated face or side 30 covered with fabric 32. Both of these heads 28 and 22 are provided with L-shaped brackets 33 to the upper ends of which the left and right levers 34 and 36 are hingedly connected at 38. These levers are in alignment with each other and have elongated diagonal slots 40 therein. The lower ends of the levers are diametrically opposite each other and equidistant and circumferentially spaced from the diametrically opposite upstanding arms or uprights 10 where they are hingedly connected at 42 to outstanding ears 44 on adjacent but diametrically opposite sides of a suitable air cylinder 46. A piston 48 operates in the cylinder and in turn operates the piston rod 50 which piston rod operates a crosshead 52 of the type seen in FIG. 1. The crosshead bars are spaced apart and parallel as denoted at 54 and they straddle the intermediate slotted portions of the pivoted levers and have pins which are operatively joined with the levers by way of the slots 40, the pins being denoted at 56. A suitable air hose or line 58 (FIG. 1) is communicatively connected in any suitable manner (not detailed) with the air cylinder; a vacuum line conduit 60 is communicatively and suitably connected as shown with one end of the stationary buck or presser head 12. A suitable steam line or hose 66 is provided for each relatively movable steam presser head.

To bring about the desired trousers leg steaming and pressing result the movable bucks or heads 28 and 22 are spaced apart and also spaced from the opposite cloth covered pressing sides of the central manifold or buck 12. Therefore this may be said to be the starting or normal position of the steaming and presser unit and is aptly illustrated at the right in FIG. 1.

Taking up now the trousers supporting handling carriage, the base-supported standard or upright of the stand is denoted by the numeral 68 and it has a lateral arm 70 at its top joined integrally with a horizontal cylinder 72. A suitably functioning pressure and suction line 74 is connected to the right hand end of the cylinder at 76. The carriage comprises a rack or holder for a pair of trousers A, the trousers legs being denoted at B and C. A piston 78 is mounted for reciprocation in the cylinder 72 and is provided at its outer or left hand end with a pair of depending spaced rigid arms 80 and 82. These arms are properly shaped and positioned relative to each other and the lower end portions are provided with longitudinal slots 84. These slots serve to accommodate threaded end portions 86 of a pair of opposed parallel

rods 88. These rods extend through and beyond the lower portions of the trousers legs and are adjustable and held in a desired position by clamping nuts 90 having operating handles 92. The arms 80 and 82 are provided above the rods 88 with rigid trousers suspension and piloting bars or members 94 and 94B. These bars are straight and disposed in spaced parallelism and the upper edges are V-shaped as denoted at 96 in FIG. 4. Thus the front portions of the legs of the trousers are hung over and lined up for creasing on the knife-like creasing edges 96 and the rods 88 are, if desired, moved down or up and adjusted to tauten and stretch the trousers legs so that the trousers when once positioned on the carriage are ready to be shoved in-between the steaming and presser heads 22 and 28 and to take positions on opposite sides of the intervening stationary buck or head 12. By operating and causing the crosshead to come into play the slotted levers 34 and 36 are brought into play and consequently the desired pressing operation is achieved. Moving the crosshead down spreads the levers apart and moves the respective heads 12, 22 and 28 back to their normal ready-to-function position. The proper timing and operation of the trousers carriage and the trousers steaming and pressing unit makes it possible for a single operator (one who may be virtually without training or experience) to learn to do the job well, advantageously and economically.

It is to be understood that the cylinder 72 is commensurate in length with and is located directly above the stationary buck and that the trousers racking, aligning and locating members 88 and 94 occupy the position seen in FIGS. 3. Accordingly, the cylinders 72 and 46 may be selectively energized as desired by the operator in order to respectively bring the trouser carriage and movable bucks into and out of pressing positions whenever desired for pressing trousers.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A trousers steaming and pressing machine comprising, in combination, a stand having a horizontal base, uprights attached at their lower ends to and rising in a vertical plane but at an angle from said base, an elongated hollow stationary head mounted atop said uprights, a vacuum line communicatively connected with the hollow of said head, a first movable pressure buck operatively located and movable toward and from one side of said head, a second movable pressure buck located on the other side of the head and also movable toward and from it, each of said movable bucks being hollow, vertically disposed levers hingedly connected at their upper ends to their respective movable presser bucks and hingedly connected at their lower ends to said base, means for moving the levers toward and from each other, a supporting and positioning carriage for a pair of trousers, said carriage being supported in a position cooperative with adjacent ends of the head and said first and second bucks, said carriage having a pair of opposed parallel bars the upper edges of which are of knife-like form in cross-section, and a pair of adjustable and removable rods parallel to each other and operably supported beneath their respective bars and adapted to pass through the legs of the trousers and to support the legs for creasing, steaming and pressing requirements.

2. For use in supporting, pressing and creasing both legs of a pair of trousers at the same time; a pressing machine comprising a first stand having a horizontal base, uprights attached to and rising in a vertical plane from said base, an elongated hollow pressing head mounted

atop said upright with its longitudinal axis horizontal and having trouser leg pressing surfaces at opposite sides thereof disposed in fixed vertical planes, one vertical end portion of said head being disposed in a position which allows said legs to straddle and occupy lengthwise pressing and creasing position against their respective pressing surfaces, a cloth cover mounted on said pressing head, said pressing surfaces being perforated but suitably spanned by said cloth cover, a conduit communicatively connected with said head, a first presser buck located and operatively supported on one side of said head and having a lengthwise pressing and creasing surface movable toward and from one of said trouser leg pressing surfaces on said pressing head, a second presser buck located adjacent and having a pressing surface operable toward and from the other side of said head, each buck being hollow and the pressing surface thereof being apertured and cloth-covered, a second stand cooperatively associated with the first stand, a trousers aligning, supporting and positioning carriage supported and located for operation at said one end of said head, means slidably supporting the carriage and permitting it to be moved toward and from said first named stand, said carriage having means thereon serving to initially mount the legs of the trousers in spaced apart relation to each other for straddling the pressing surfaces of said head, mechanism cooperating with the base and bucks for moving the bucks toward and away from the pressing head including levers hingedly connected at upper ends to their respective movable presser bucks and hingedly connected at their lower ends to said base, means for moving the levers toward and from each other, said moving means comprising a crosshead, said levers having slotted portions and said crosshead having its end portions connected to the slotted portions of said levers for moving the levers simultaneously toward and from each other, and means for supporting and vertically raising and lowering said crosshead.

3. A trousers holding, lining up, pressing and creasing machine comprising, in combination, a first stand having a first horizontal base, a horizontal hollow head supported from said first base and fixed in a plane parallel to and above the plane of said first base, said head having vertical pressing surfaces, a first presser buck located on one side of said head and having a pressing and creasing surface movable toward and from one of said vertical surfaces, a second presser buck located on the other side of said head and likewise movable toward and from said other side, each of said bucks being hollow and one buck serving to press and crease one trousers leg and the other buck serving to press and crease the other trouser leg at the same time, means supported on said stand and operatively supporting the movable bucks so that they may be properly moved toward and from the intervening head, a second stand having a second base, an upright attached to and rising vertically from the second base, a horizontal cylinder supported by said upright, a piston mounted for reciprocation in said cylinder, arms attached to and depending at right angles from one end of the piston extending from the cylinder, and a carriage comprising a pair of opposed spaced parallel horizontal bars having knife-like upper edges carried by and extending at right angles from said arms and each disposed in a plane to move toward and from adjacent surfaces of said bucks, and rods mounted on said arms beneath each bar, for mounting a trouser leg between each bar and rod, said bars and rods being adjustably spaced so that the legs of the trousers may be drawn over the bars and rods for lining up and preparing the trousers for pressing and creasing, said cylinder being disposed above said head and said bars and rods being in spaced parallel relation to said head on either side of the head so that the carriage may be moved toward and from the head in such a manner that the respective trousers legs may be positioned on

opposite pressing sides of said head and between the head and cooperating bucks.

4. For use in supporting, pressing and creasing both legs of a pair of trousers at the same time; a pressing machine comprising a first stand having a horizontal base, a pair of spaced complementary uprights attached to and rising in a vertical plane from said base, a horizontally elongated hollow pressing head mounted atop said uprights and bridging the space between said uprights and having apertured cloth-covered trouser leg pressing surfaces, the position of the surfaces on said head being adapted to permit the trouser leg to straddle the head and occupy lengthwise pressing and creasing positions against said pressing surfaces, a conduit operatively connected with said head and communicating with the hollow portion of said head, a first presser buck located and operatively supported on one side of said head and having a lengthwise pressing and creasing surface movable toward and from the adjacent cooperating pressing surface, a second presser buck located adjacent and having a pressing surface operable toward and from the pressing surface at said other side of said head, said presser bucks being hollow and the pressing surfaces thereof being apertured, means cooperating with said base and bucks for simultaneously and operatively moving the bucks toward and from the head, a second stationary stand cooperatively associated with the first stand, a trousers aligning, supporting and positioning carriage supported and located for operation at one end of said head, means carried by said second stand slidably supporting the carriage and permitting it to be moved toward and from said first named stand, said carriage having leg-straightening and suspending means thereon serving to initially locate and properly line up legs of the trousers with the legs straddling pressing surfaces of said head, said means serving to suspend, hold and maintain the legs thus located until the two bucks simultaneously come into play.

5. The structure defined in claim 4 wherein said leg straightening and suspending means embodies a pair of opposed parallel bars the upper edges of which assist the user in suspending and lining up portions of the legs of the trousers which are to be creased, and a pair of adjustable rods parallel to each other and supported for optional use and operation directly beneath their respective cooperating bars, said bars and rods being adapted to pass lengthwise through the respective legs of the trousers and to straighten and prepare the legs for steaming and pressing after the legs have been placed in their intended position and clamped between the bucks and head.

6. A garment pressing machine comprising, base means, elongated presser head means having opposite parallel pressing surfaces fixedly mounted on said base means, presser buck means movably mounted on said base means for movement toward and away from the pressing surfaces on the head means, carriage means slidably mounted relative to said base means for movement toward and away from the presser head means in a direction parallel to said pressing surfaces, adjustable garment supporting means mounted on the carriage means for movement therewith, said supporting means projecting from the carriage means toward the presser head means in parallel spaced straddling relation to said pressing surfaces and moving means operatively connected to said carriage means and presser buck means to effect said movements of the carriage means and presser buck means.

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