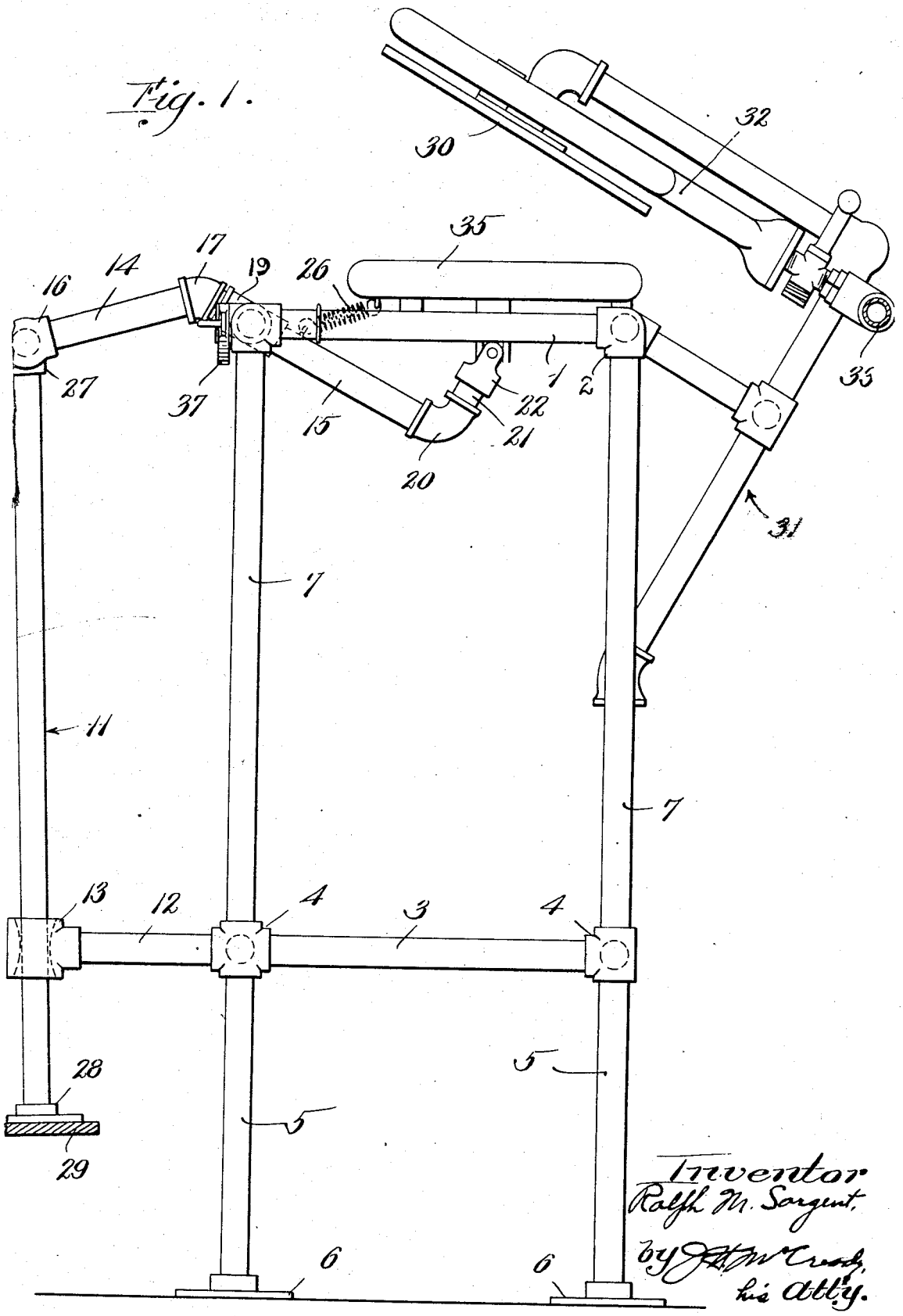
Sept. 1, 1931. R. M. SARGENT 1,821,670

IRONING MACHINE

Filed Aug. 4, 1928 4 Sheets-Sheet 1

Fig. 1.



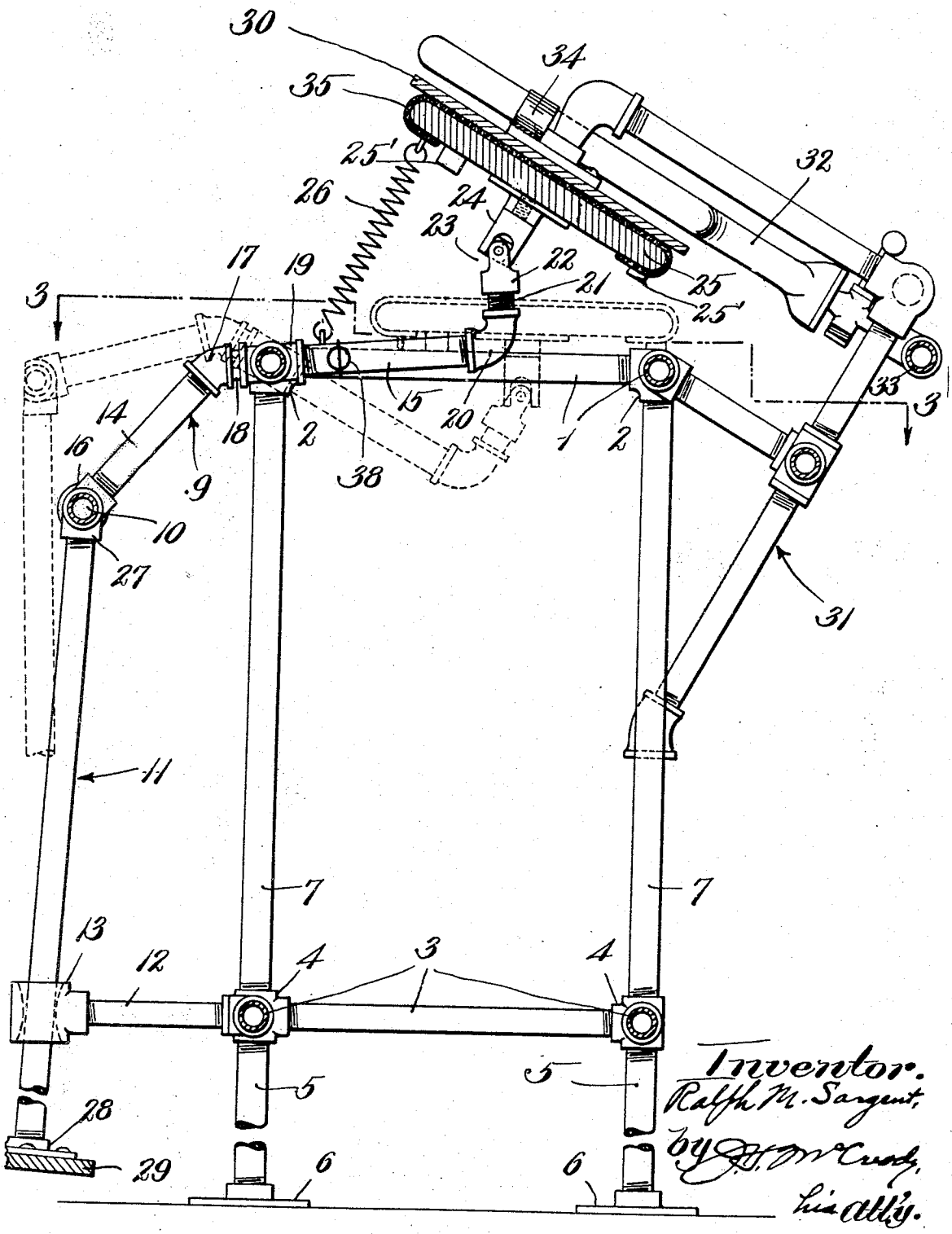
Inventor
Ralph M. Sargent
by J. H. McCready
his Atty.

Sept. 1, 1931. R. M. SARGENT 1,821,670

IRONING MACHINE

Filed Aug. 4, 1928 4 Sheets-Sheet 2

Fig. 2.



Inventor.
Ralph M. Sargent,
by [illegible] McCready,
his Atty.

Sept. 1, 1931. R. M. SARGENT 1,821,670

IRONING MACHINE

Filed Aug. 4, 1928 4 Sheets-Sheet 3

Fig. 3.

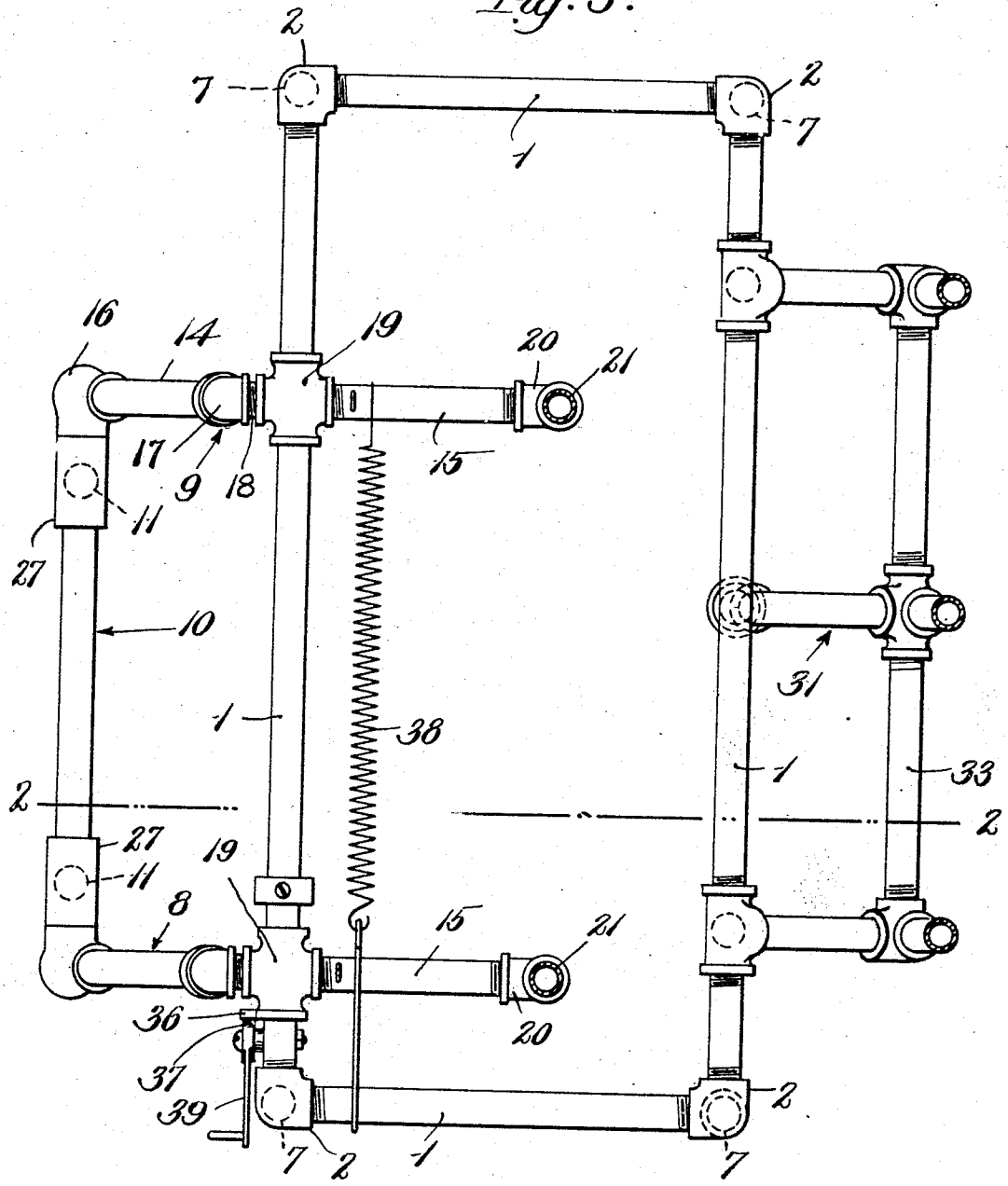
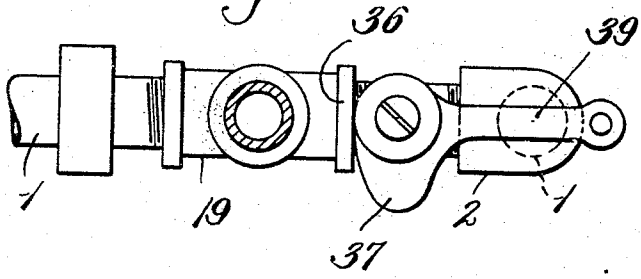


Fig. 5.



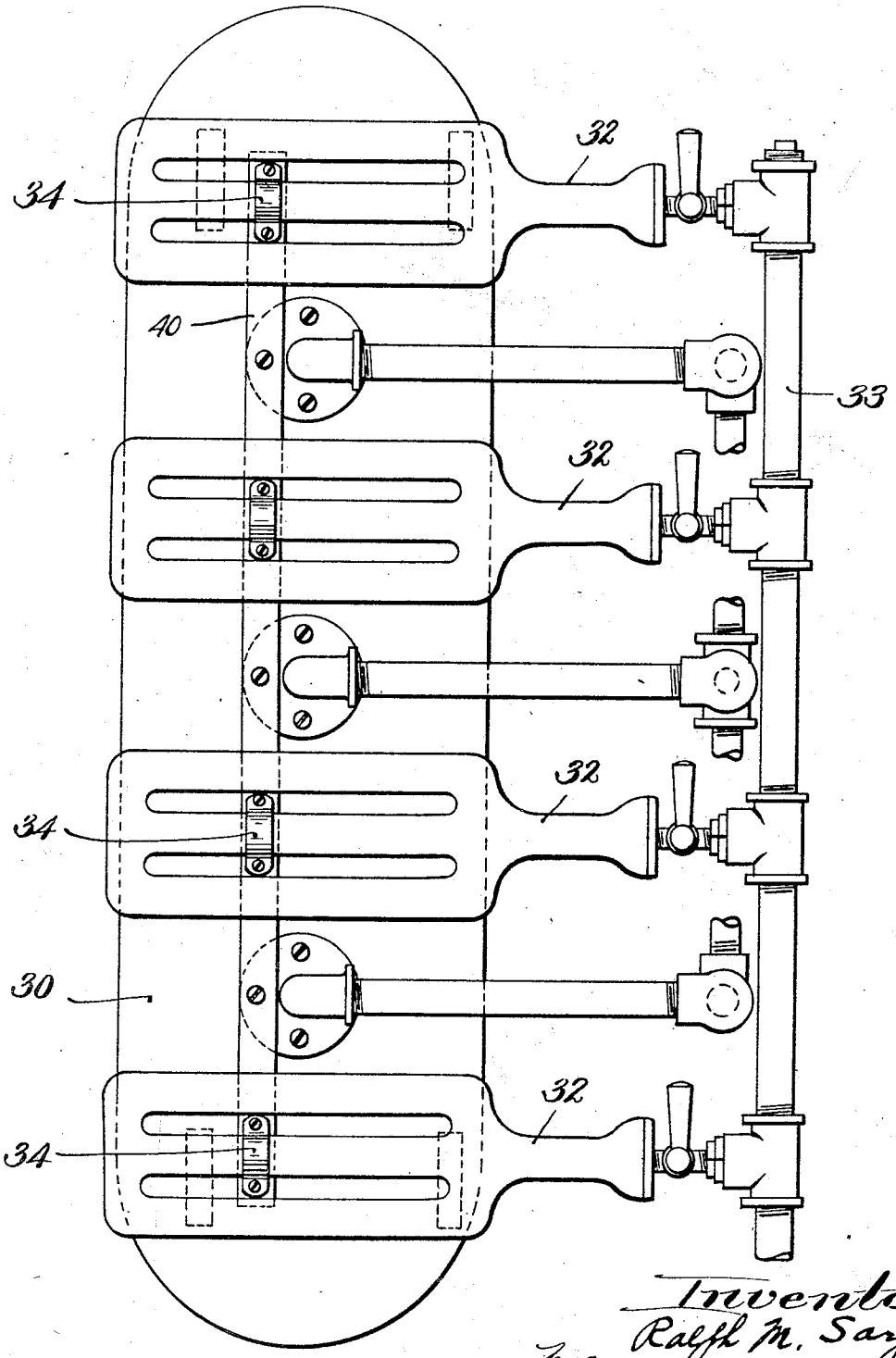
Inventor.
Ralph M. Sargent,
by J. H. McCready,
his Atty.

Sept. 1, 1931. R. M. SARGENT 1,821,670

IRONING MACHINE

Filed Aug. 4, 1928 4 Sheets-Sheet 4

Fig. 4.



Inventor.
Ralph M. Sargent.
By J. M. Cuddy
his Atty.

Patented Sept. 1, 1931

1,821,670

UNITED STATES PATENT OFFICE

RALPH MORRIS SARGENT, OF FRANKLIN PARK, MASSACHUSETTS

IRONING MACHINE

Application filed August 4, 1928. Serial No. 297,406.

My invention relates to pressing machines for operating upon cloth and like sheet material, and particularly to garment pressing machines such as are used in tailors' shops for pressing trousers, skirts and other cloth articles.

Garment pressing machines of the class referred to, as heretofore constructed, have been of bulky, heavy and comparatively expensive construction. They include a weighty pivotally supported heated head movable up and down, toward and from a work-supporting buck or bed, by means of a foot treadle. Owing to the heavy construction of the pivoted head and to its inertia, considerable muscular effort is required to operate it and its movements were correspondingly slow. Also, it is necessary to provide expensive swing joints in the conduit by which the heating agent is supplied to the movable head and these joints required constant attention and adjustment owing to the fact that they were subjected to continual wear. Furthermore, the head is usually heated by steam which necessitates an auxiliary steam generating plant with accompanying heat losses and much annoyance from leaky joints.

This invention aims to obviate the objectionable features above mentioned and to devise a machine of this type which can be manufactured more economically, will be more convenient to use, and will require less attention to maintain it in operation.

The nature of the invention will be readily understood from the following description when read in connection with the accompanying drawings, and the novel features will be particularly pointed out in the appended claims.

In the accompanying drawings,

Figure 1 is a side elevation of a garment pressing machine constructed in accordance with my invention;

Fig. 2 is a transverse sectional view of the pressing machine shown in Fig. 1 with some of the parts shown in section on line 2—2 of Fig. 3;

Fig. 3 is a section on line 3—3 of Fig. 2;

Fig. 4 is a plan view of the head hereinafter described; and

Fig. 5 is a fragmentary detail hereinafter described.

The pressing machine shown in the drawings has a stationary heated head 30 and a cooperating buck or work support 25 mounted to move toward and from said head. A considerable part of the machine may conveniently be made from standard piping and pipe fittings and such a construction has been shown in the drawings, although it will be understood that this is not an essential feature of the invention.

The frame of the machine herein shown includes a top rectangular section 1 consisting of lengths of piping connected at the corners by three-way elbows 2, and a bottom rectangular section 3 of the same dimensions likewise consisting of lengths of piping connected at the corners by four-way T's 4. To each four-way T 4 is connected the upper end of a post section 5 the lower end of which is provided with a flange fitting 6 serving as a foot to rest upon the floor to which it may be secured if desired. Also, each four-way T 4 is secured by a post section 7 to one of the three-way corner elbows 2 located directly above it.

The buck 25 is supported by two levers 8 and 9, both fulcrumed upon one of the side bars of the upper frame section 1. The outer ends of these levers are rigidly connected together by a cross-bar 10 so that the two levers must move together when swung on the side bar. On the bar 10 are pivotally mounted the upper ends of a pair of links 11 the lower end portions of which extend loosely through guides 13 provided at the outer ends of arms 12 projecting from and constituting parts of the frame of the machine.

Each of the levers 8 and 9 consists of two sections or lengths of pipe 14 and 15, an elbow 16 at the outer end of the pipe length 14, and to which the adjacent end of cross-bar 10 is rigidly connected, an elbow 17 at the inner end of pipe length 14, a nipple 18 connected with the elbow 17, and a four-way T 19 with which the nipple 18 and the pipe

length 15 are connected, said T being slidably and rotatably mounted upon the side bar of the top frame section 1. An elbow 20 threaded into the inner end of pipe length 15 is connected by a nipple 21 to the end member 22 of a three-part universal joint 23. The other end member 24 of each universal joint 23 is secured rigidly to the underside of a buck or work support 25 which normally occupies a position resting upon the top of frame section 1 as shown in Fig. 1. To one side of this buck 25 are connected the upper inner ends of a pair of springs 26 the opposite ends of which are fastened to the levers 8 and 9 so they normally hold the buck 25 in a horizontal position, the buck being provided with lugs 25′ to rest on the frame when it is in its horizontal or work receiving position.

In order to swing the levers 8 and 9 for the purpose of moving the buck toward or from the head 30, a foot board or treadle 29 is provided and is connected to the levers by the links 11—11, each consisting of an upright length of pipe. The upper ends of these links are connected by T's 27—27 to the cross bar, while their lower ends are provided with flanges 28—28 which are fastened to the treadle 29.

Normally the weight of the buck 25 holds it in its lowered horizontal position where it rests upon the top frame section 1, the treadle 29 at this time occupying an elevated position as shown in Fig. 1.

The head 30 preferably has a nickel-plated polished flat metal plate of approximately the same length and width as the buck 25 to engage the work. As shown in Fig. 1 this head plate is rigidly supported in a rearwardly inclined position immediately above the buck 25 but leaving ample room to place and smooth the work on the buck. As herein shown, the head plate 30 is rigidly secured to a bracket 31 forming an integral part of the main frame of the machine, and this bracket also may be made up entirely from lengths of pipe and pipe fittings.

The head may be heated by steam but preferably gas burners 32 are provided immediately above the plate 30 which are connected with, and supported at the rear ends by, a gas supply pipe 33. Adjacent their front ends the burners 32 are fastened by straps 34 to a bar 40 to which the plate 30 is secured. The gas outlets of burners 32 are upon the lower sides of the latter so that the burner flames impinge upon the upper side of the head plate. The stationary mounting of the head avoids the use of swivel connections in the conduits which feed the gas or steam to the head and thus provides a construction which obviates serious objections to the machines heretofore used commercially.

Provision is also made for relatively reciprocating the head and the buck while the work is held in contact with the plate 30. For this purpose one of the fulcrum or hub T's 19 is made with a laterally projecting abutment arm 36 that is yieldingly held against a cam 37, Figs. 3 and 5, by a spring 38, one end of said spring bieng fastened to the lever 9, and the opposite end thereof being secured to the top frame section 1. The cam 37 is provided with a handle 39 so that the cam may be operated manually to reciprocate the buck laterally and thus to move the garment or other article of work bearing against the plate 30 in a direction parallel to the lower face of the plate. A collar 40 on one of the frame members 1 is arranged to engage one of the T's 19 to limit the movement of the buck in a direction away from the cam 37 in the event that the spring 38 is disconected from the buck for any reason.

In operating the machine the garment is spread out upon the buck 25, which is preferably provided upon its upper side with a felt or cloth cover 35, and then the operator steps on the pedal 29 thereby swinging the levers 8 and 9 in a direction to raise the buck 25 and the garment into position against the lower face of the head plate 30. After raising the buck, as just described, the buck, together with the garment upon it, may be reciprocated in directions parallel with the lower face of the head 30 by swinging the crank handle 39, movement thereof in one direction being effected by the cam and in the opposite direction by the spring 38. Thus the machine operates to both press and iron the garment. As the buck is raised its rear side reaches and engages the head in advance of the front side thereof thereby causing the garment to be first gripped at the rear side of the buck, thus affording opportunity for the operator to stretch and smooth out the garment if necessary before the outer side of the buck is swung up to the limit of its movement in that direction. The universal joints which connect the levers with the buck enable the buck to rock relatively to the levers to fit itself properly against the head. This is important due to the nature and variety of the work which must be handled in a machine of this type.

The buck 25 is preferably made of wood covered or padded as described and may be brought up in position against the head by pressure applied by means of the foot. In reciprocating the buck the work slides freely under the face of the plate without any substantial tendency to wrinkle due to the fact that the work engaging face of the plate is smooth and polished, while the work engaging surface of the buck is of fabric which compels the work to move with it.

The invention thus provides a machine which can be manufactured economically, is easy to operate, and with which a large variety of work can be handled.

While I have herein shown and described a typical embodiment of my invention, it will be understood that the invention may be embodied in other forms without departing from the spirit or scope thereof.

Having thus described my invention, what I desire to claim as new is:

1. A machine of the character described comprising a head and a buck, means for heating said head, means supporting said head in a fixed rearwardly and downwardly inclined position above said buck, supporting levers operable to raise said buck into pressing position against said head, and joints connecting said levers with said buck and functioning to permit said buck to move relatively to said levers to fit itself to said head when brought into engagement with the latter.

2. An ironing machine comprising a head, a buck, means for heating said head, means for supporting said head in a fixed rearwardly and downwardly inclined position above said buck and spaced substantially therefrom, and supporting mechanism for said buck operable to raise said buck into position to carry the work against said head, said mechanism including means enabling said buck to rock to fit itself against the head when it is brought into engagement therewith.

3. An ironing machine comprising a head, a buck, means for heating said head, means for supporting said head in a fixed rearwardly inclined position above said buck and spaced substantially therefrom, supporting mechanism for said buck operable to raise the buck from a substantially horizontal work receiving position into an inclined position against said head, said mechanism inincluding joints enabling said buck to rock to fit itself against the head, and means for returning said buck to its substantially horizontal position when it is moved out of contact with the head.

4. An ironing machine comprising a head, a buck, means for heating said head, means for supporting said head in a fixed rearwardly and downwardly inclined position above said buck and spaced substantially therefrom, supporting mechanism for said buck operable to raise said buck into position to carry the work against said head, said mechanism including means enabling said buck to rock to fit itself against the head when it is brought into engagement therewith, and means operable to produce a relative reciprocating motion of said buck and head while the work is pressed between them to iron the work.

5. An ironing machine comprising a head, a buck, means for heating said head, a machine frame including means for supporting said head in a fixed rearwardly and downwardly inclined position above said buck and spaced substantially therefrom, supporting mechanism for said buck operable to raise the buck from an approximately horizontal work receiving position into an inclined position against said head, springs for swinging said buck away from its inclined position when it is lowered, and stops cooperating with said springs to hold the buck in said approximately horizontal position, said mechanism including joints enabling said buck to rock to fit itself against the head.

RALPH MORRIS SARGENT.