

A. T. HAGEN.
 WORK CLAMP FOR IRONING BOARDS.
 APPLICATION FILED FEB. 23, 1905.

999,219.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

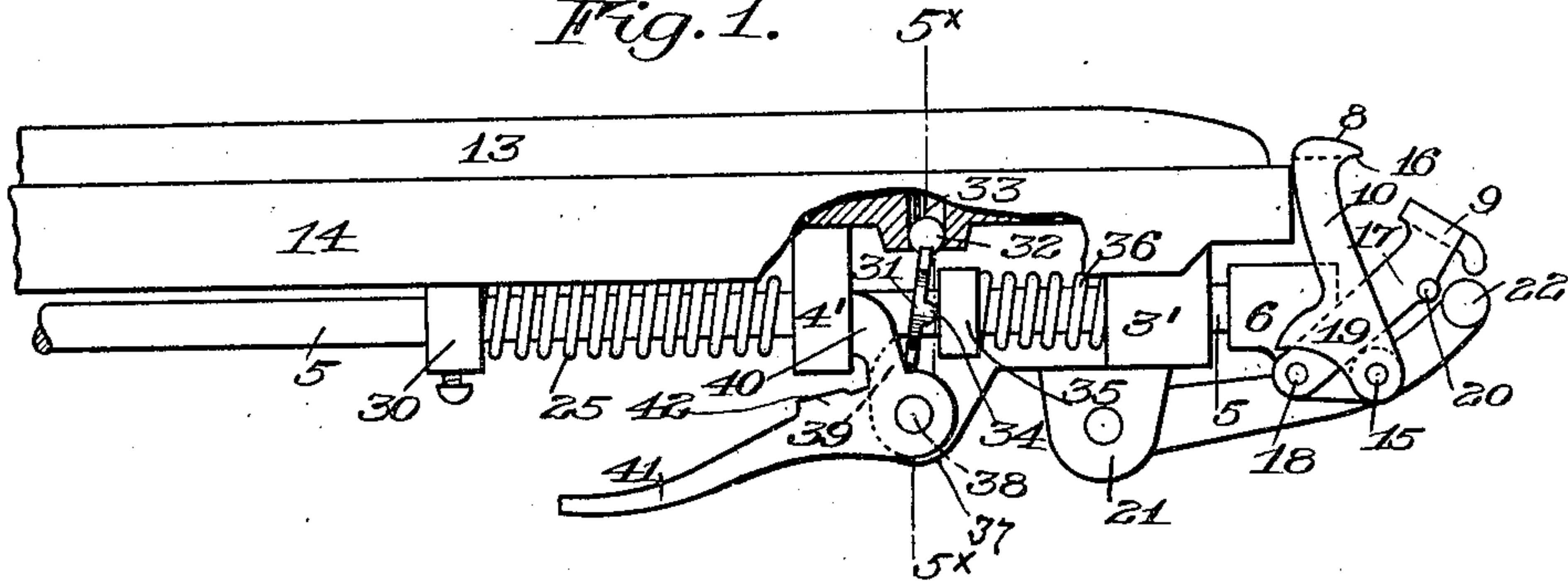


Fig. 2.

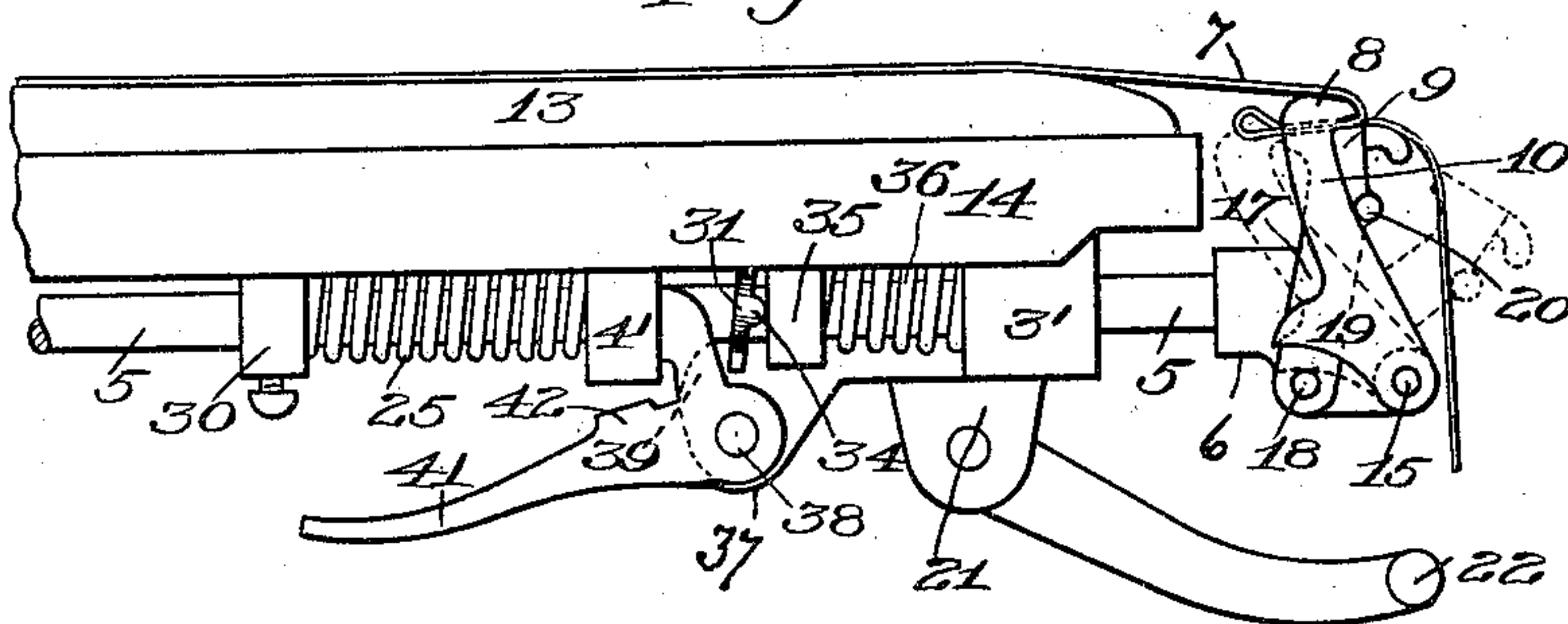
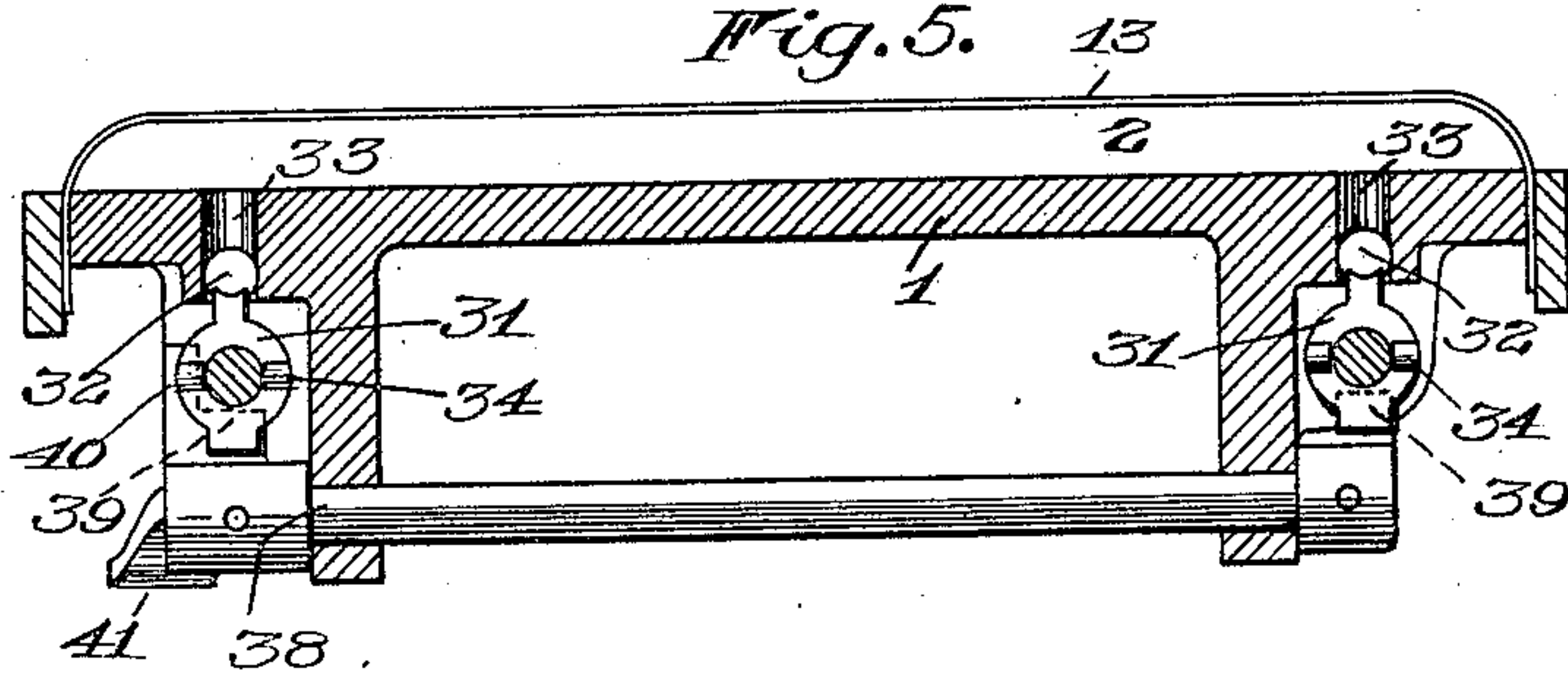


Fig. 5.



Witnesses

Walter B. Payne
 W. H. Lanning

Inventor

Arthur T. Hagen

By

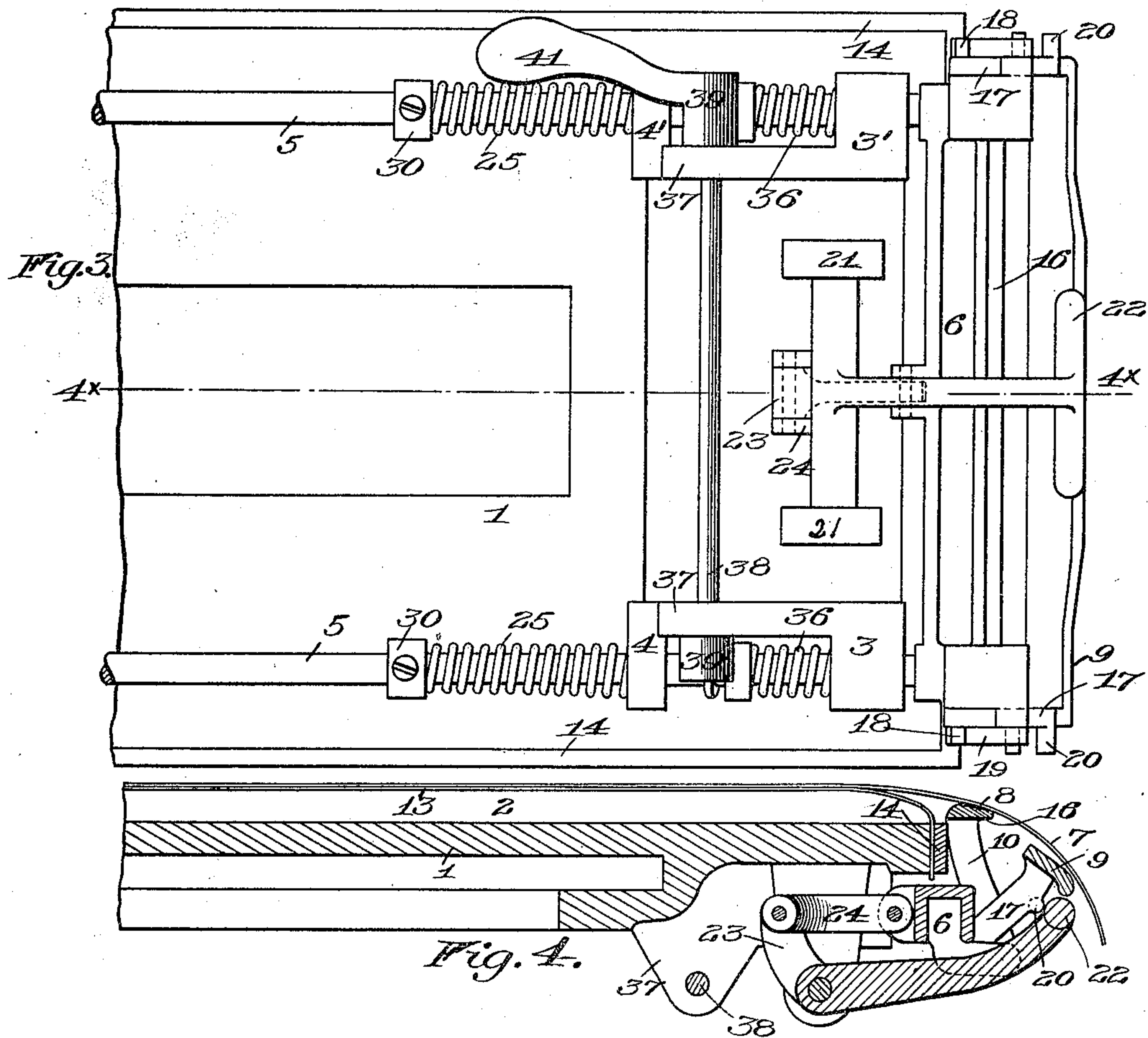
Frederick J. Church
 His Attorney

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2 SHEETS-SHEET 2.



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 J. H. Linn

Inventor

Arthur T. Hagen

By

Fredrick J. Church
 His Attorney

UNITED STATES PATENT OFFICE.

ARTHUR T. HAGEN, OF ROCHESTER, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO AMERICAN LAUNDRY MACHINERY COMPANY, OF CINCINNATI, OHIO, A CORPO-
RATION OF OHIO.

WORK-CLAMP FOR IRONING-BOARDS.

999,219.

Specification of Letters Patent.

Patented Aug. 1, 1911.

Application filed February 23, 1905. Serial No. 246,861.

To all whom it may concern:

Be it known that I, ARTHUR T. HAGEN, of Rochester, in the county of Monroe and State of New York, have invented certain
5 new and useful Improvements in Work-Clamps for Ironing-Boards; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings,
10 forming a part of this specification, and to the reference-numerals marked thereon.

My present invention has for its object to provide a work clamp for ironing boards adapted to engage the edge or one end of a
15 garment, or work piece, which is so constructed that as the clamp is moved relatively to the board, to stretch the garment thereon, the force of the gripping action of the parts of the clamp will be increased, and
20 my invention has for its further object to provide suitable means for adjusting the clamping device and holding it in operative position when moved outwardly relatively to the board.

To these and other ends the invention consists in certain improvements and combinations of parts all as will be hereinafter more fully explained, the novel features being
25 pointed out in the claims at the end of the specification.

In the drawings: Figure 1 is a side elevation of one end of an ironing board showing clamping and operating devices constructed in accordance with my invention applied thereto. Fig. 2 is a similar view of said
35 parts illustrating their operation. Fig. 3 is a bottom plan view of the ironing board and the parts thereon. Fig. 4 is a vertical sectional view taken on the line 4×4× of Fig. 3. Fig. 5 is a section on line 5×—5× of Fig. 1.

Similar reference numerals in the several figures indicate similar parts.

The ironing board to which the clamping and operating devices are applied may be
45 of the usual or any preferred construction, the form illustrated comprising the bed or base 1 on which is the pad 2 provided with a covering 13, removably secured at its edges by a removable frame 14. On the lower side
50 of the bed and preferably at one end thereof near one of the side edges of the board, are downwardly-projecting lugs 3 and 4, and similarly situated near the other edge thereof are similar lugs 3' 4'. These lugs are
55 perforated and guided therein are rods 5 to

the outer ends of which is attached a head, or support, 6 projecting beyond the end of the ironing board and carrying the work clamp. The latter comprises generally jaws adapted to engage an end, or one edge, of
60 a garment, or work piece, indicated by 7, resting upon the padded surface of the board and secured at its opposite end by any suitable means. In the present embodiment of my invention I have illustrated the
65 clamp as composed of two jaws 8 and 9, pivotally connected to the support 6 and adapted to revolve on different pivotal centers, as will be further explained. These jaws extend parallel with the end of the ironing
70 board and in length are nearly equal to the width of the board, as shown in Fig. 3. The jaw 8 is supported at its ends on arms 10, journaled on pins 15, and normally resting in engagement with the end of the ironing
75 board, as shown in Figs. 1 and 4, so that the end of the board forms a stop normally holding said jaw with its clamping surface 16 in a substantially horizontal position. The jaw 9 is supported upon similar arms
80 17, which overlap or cross the inner sides of the arms 10, and are secured to the support 6 by journal pins 18, the ends of which project beneath a finger, or extension, 19 on the arms 10 to limit the movement of the
85 jaw 8 when the support 6 is moved outwardly on the ironing table. The arms 17 are provided with laterally-extending lugs 20 which also arrest the movement of the
90 coöperating jaw member, if the latter is accidentally rotated out of engagement with the end of the ironing board, when said jaws are disengaged and the rearward movement of the jaw 9 is limited by the hubs on
95 the arms 10, as shown in Fig. 1. The crossing of the supporting arms and the pivoting of the jaws on separate centers of movement causes them when rotated to describe arcs of intersecting circles so that when they are brought into engagement, and rotated si-
100 multaneously in one direction, they will be drawn tightly into engagement, but when rotated in the opposite direction they will be quickly released, and a very short relative movement of one of the jaws will separate
105 it from the other and provide a wide space in which the fabric of the article operated upon may be readily inserted by the operator.

Located between the bars 5 and pivoted 110

on lugs 21, on the bed 1, is a bell crank lever having the outer operating end, or handle 22, projecting beyond the clamping devices, and provided with the inner end 23, connected by a link 24 with the head or support 6. A downward movement of the handle 22 will move the head or support, with the clamping devices thereon outward, relatively to the board, against the action of retracting devices such as coil springs 25, surrounding the rods 5, and located between collars 30 thereon and the guiding lugs 4, 4'.

In order to hold the support in adjusted position locking devices are provided which automatically engage the rods 5, and in the present instance these are formed by perforated plates, or washers, 31 depending from the bottom of the bed 1 to which they are loosely connected by a ball head 32 working in a socket 33. On one face of each washer, at each side of the aperture therein, is provided a small boss 34 against which bosses engage collars 35, loosely mounted on the rods 5 and impelled in one direction by coil springs 36, operating against the lugs 3 and 3', to cant the locking devices and cause the edges of the apertures therein to clamp opposite sides of their respective rods. This arrangement of the parts permits the clamping devices to be moved outwardly to stretch a garment or work piece on the ironing board, as shown in Fig. 2, and to hold it in this position until a completion of the operation thereon. Extending transversely beneath the ironing board, and supported in the lugs 37, is a rock shaft 38, having at its ends releasing fingers 39, resting in rear of each of the washers 31 and normally held in proximity thereto by means of a stop finger 40, formed on an operating handle 41, also attached to the shaft, said finger being arranged to cooperate with the lug 4' to limit the movement of the shaft in one direction, the movement of the latter in the other direction being limited by an abutment 42, on the handle, which also engages the lug 4' when the shaft is rotated to release the locking devices.

The clamping and operating devices constructed in accordance with my invention are simple and comprise but few parts which are easily formed and readily assembled. The arrangement of the jaws which I have shown enables a firm grip to be maintained on the work piece, irrespective of its thickness, which can be immediately released when the tension on the work piece is removed. Moreover, the amplitude of movement afforded the jaws and the location of one of them beneath the other affords a wide space, when they are disengaged, in which the work piece may be inserted.

I claim as my invention:

1. The combination with an ironing board,

of a support movable relatively thereto, a clamp mounted on the support, movable relatively thereto having a pair of jaws, at least one of which is pivoted to move to increase its grip when the support is moved relatively to the board, and means for moving the support relatively to the board.

2. The combination with an ironing board and a support movably mounted thereon, of cooperating jaws attached to the support on different pivotal centers and movable toward each other as strain is placed on them by the goods on the movement of the support and means for adjusting the support on the board.

3. The combination with an ironing board and a support movable thereon, of a clamp comprising a pair of upright arms pivoted to the support at their lower ends and having a clamping surface connecting their upper ends, and a second pair of arms pivoted at their lower ends on a center different from the first named arms and having a clamping surface connecting their upper ends and cooperating with that on the first named arm, the clamping surfaces being arranged to move toward each other when the support is moved to place tension on the goods to be stretched.

4. In a garment clamp, the combination with a support and two arms crossing each other and pivoted to the support having cooperating clamping ends, a stop for holding one of the arms in operative position and means for moving the stop and support relatively when the clamping ends of the arms are in engagement.

5. In a garment clamp, the combination with a support and arms pivoted to the support and having clamping ends moving in different arcs, of a stop engaging one of the arms and means for effecting a relative movement between the arm and the stop to disengage them.

6. The combination with an ironing board, a support having a rod guided on the board and cooperating clamping jaws on the support, of means for adjusting the support relatively to the board in one direction, a retracting device moving it in the opposite direction, a locking device automatically engaging the rod and means for releasing the latter.

7. The combination with an ironing board, a support adjustably mounted thereon and cooperating clamping jaws on the support, of means for moving the support relatively to the board in one direction, a device for retracting it, automatic locking mechanism for holding it in adjusted position and means for disengaging the locking device.

8. The combination with an ironing board, a support having a rod guided on the board and clamping jaws on the support, of a lever for moving the latter outwardly, a spring

for returning it, a device for locking the rod and means for releasing the locking device.

9. The combination with an ironing board, a support having a rod guided on the board and clamping jaws on the support, of means for moving the latter outwardly, a spring for retracting it, a locking device movably mounted on the board and cooperating with the rod to hold it in adjusted position and a lever pivoted on the board and engaging the locking device.

10. The combination with an ironing board, a support having a rod guided on the board and clamping jaws on the support, of means for moving the latter outwardly, a spring for retracting it, a locking device pivoted on the board and engaging opposite sides of the rod, a spring for operating it in one direction and a releasing lever cooperating with said device to operate it against the tension of said spring.

11. The combination with an ironing board, a support having a rod guided on the

board and clamping jaws on the support, of a pendant locking device on the board embracing opposite sides of the rod, a spring for cramping it against the rod, and means for moving the support and rod outwardly, means for returning said parts to normal position and a releasing device cooperating with the locking device to move it into inoperative position.

12. The combination with an ironing board, a support, rods on the latter guided on the board and clamping jaws on the support, of springs for moving the rods inwardly beneath the board, a lever pivoted to the board and connected to the support for moving it outwardly, locking devices engaging the rods and releasing mechanism supported on the board and cooperating with said devices.

ARTHUR T. HAGEN.

Witnesses:

G. WILLARD RICH,

RUSSELL B. GRIFFITH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."