(No Model.)

J. STONE & M. GARDNER.

APPARATUS FOR SHAPING CORSETS.

No. 383,416. Patented May 22, 1888.

Fig 3.

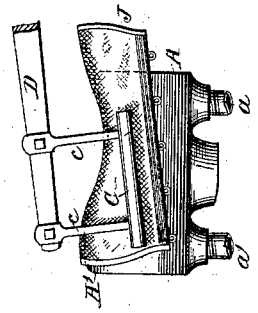


Fig 4.

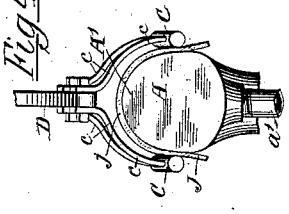


Fig 2.

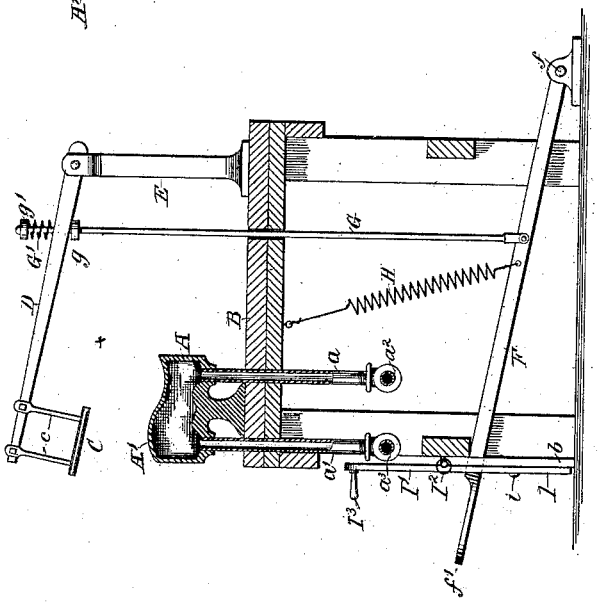
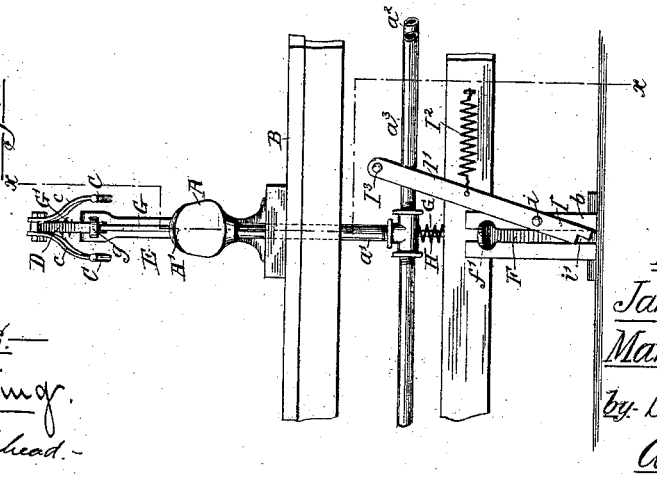


Fig 1.



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UNITED STATES PATENT OFFICE.

JAMES STONE AND MARSHALL GARDNER, OF AURORA, ILLINOIS.

APPARATUS FOR SHAPING CORSETS.

SPECIFICATION forming part of Letters Patent No. 383,416, dated May 22, 1888.

Application filed February 10, 1887. Serial No. 227,225. (No model.)

To all whom it may concern:

Be it known that we, JAMES STONE and MARSHALL GARDNER, both of Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Corset-Formers; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a novel machine or apparatus employed in the manufacture of corsets for the purpose of giving the final form to the busts of the corsets in finishing the latter.

The invention consists in the matters hereinafter described, and pointed out in the appended claims.

An apparatus embodying our invention consists, in its main or principal features, of a heated form-block, over or in contact with which the bust portions of the corsets are placed after having been previously wet or dampened, together with means for holding the corsets in place upon the said form-block until they have been dried by the heat thereof, whereby the said bust portions are caused to take and retain the desired rounded shape.

In the accompanying drawings, illustrating our invention, Figure 1 is a front elevation of an apparatus embodying the same. Fig. 2 is a sectional elevation of the said apparatus, taken upon line *x x* of Fig. 1. Fig. 3 is a detail side elevation of the form-block and holding devices, illustrating a corset in place upon the form-block. Fig. 4 is a front view of the parts shown in Fig. 3.

As illustrated in the said drawings, A is the form-block, herein shown as mounted upon or attached to a bench or table, B, adapted to support said block at a height convenient for the placing of the corsets thereon by an attendant. Said block A may be heated in any desired or preferred manner—as, for instance, by gas-jets applied thereto; but as herein shown it is cast hollow and connected with steam-supply exhaust-pipes *a a'*, connected with suitable steam pipes or mains, a^2 a^3, adapted to supply a number of similar form-blocks arranged upon a single bench or table. The said form-block A is shaped upon its upper and side faces in a manner suitable to give an outwardly-rounded form to the bust parts of the corsets.

C C are movable clamp-bars, adapted to engage opposite sides of the form-block A in such manner as to bind or clamp the bust portions of the corset over said form-block. Said clamp-bars are sustained by means of spring-arms or supports *c c*, in such manner as to press against the form-block for the purpose stated, the said spring-arms being desirably attached to a movable arm or support, D, adapted to actuate the clamp-bars and to sustain the latter when they are free from the form-block. The said spring arms allow the clamp-bars to move or spring laterally as they are brought against the sides of the form-block, and cause the said clamp-bars to act with a spring-pressure in holding the corset in place upon the form-block.

In the particular construction of the parts herein illustrated the clamp-bars C C are connected, by means of the spring-arms *c c*, to the free end of a horizontally-arranged arm, D, which is pivoted at its opposite end to a standard, E, upon the table B, and is adapted to swing in a vertical plane, so as to allow said clamp-bars C to be moved vertically toward and from the form-block when the said lever is swung about its point of pivotal support.

In connection with the arm D thus arranged any suitable device may be employed for sustaining the arm with the clamp-bars C C free from the form-block, so as to allow the corset-sections to be conveniently placed thereon, and means may also be provided for holding the arm at the downward limit of its movement and in position to retain the clamp-bars C C in engagement with the form-block. Devices are herein shown for actuating said lever by means of a treadle or foot-lever, in order that both hands of the operator may be free for placing the corset upon the form-block, in connection with means for holding the arm both in its elevated position and in position with the clamp-bars engaged with the form-block, said devices being constructed as follows:

F is a treadle pivoted at *f* to a stationary support and having its end *f'*, to which the foot is applied, extended forward of the table or support D, upon which the form-block is mounted, to a point in front of the form-block, as clearly shown in the drawings, Figs. 1 and 2. The treadle F is connected with the arm D by a vertical rod, G, and a spring, H, is applied to sustain the treadle normally in its elevated position, the said spring H, as illustrated

in the drawings, being of spiral form and attached at one end to the top of the table B and at its opposite end to the treadle. The rod G is connected with the said treadle F and the arm D in such manner that when the treadle is in its elevated position the free end of the arm D will be elevated, and the clamp-bars C thereon will be sustained free from the form-block. The clamp-bars are engaged with the block by a downward pressure upon the said treadle F, which acts to depress the free end of said arm D, and to thereby press the said clamp-bars C against the sides of the form-block. The position of the parts when the clamp-bars are depressed and engaged with the form-block is clearly shown in Figs. 3 and 4, in which J indicates one of the sides or halves of a corset, which is held in place upon the form-block, with its bust portion *j* placed and drawn tightly over the outwardly-rounded part A′ of the form-block.

As herein shown and preferably constructed the upper end of the rod G passes through and has sliding connection with the arm D, and said rod G is provided below the arm with a nut or collar, *g*, by which the arm is lifted, and at its upper end above the arm with a nut or collar, *g′*, between which nut or collar and the top of the arm is located a spiral spring, G′, affording an elastic connection between the rod and lever. The purpose of this said spring G′ is to allow the rod G to yield downwardly without moving the lever D in case any great resistance is afforded to the passage of the clamp-bars C over the form-block, thereby avoiding liability of tearing or injuring the corset in case the clamp bars C C become caught upon the corset, or if from any other cause they are prevented from sliding smoothly over the corset as they are brought downwardly into contact with the side of the form-block.

For the purpose of holding the clamp bars in place after they have been depressed so as to engage the corset upon the form-block, I have herein shown a detent, I, as arranged to engage the foot lever or treadle F, so as to hold the latter from rising after it has been depressed. Said detent I is herein shown as formed by or upon a vertically-arranged lever, I′, pivoted at *i* to an upright, *b*, of the table B, and provided at its lower end with a notch, *i′*, adapted to engage the said treadle F. A spring, I^2, is desirably applied to hold the said detent-lever I′ with its lower end in position to engage the foot-lever, and said lever I′ is preferably provided with a handle, I^3, in position convenient for the operator, whereby the detent-lever may be moved for releasing the foot-lever when it is desired to release the corset-section from the form-block. It will of course be understood that the bust portion of one-half or section of the corset will be shaped or dried at one time by a machine made as above set forth. In factories or other places where corsets are made in quantities a number of machines of the character shown will be employed, so that a plurality of half-corsets may be undergoing the drying process at once.

The main feature of our invention is embraced in a construction comprising a form-block, together with two clamps or clamp-bars connected with each other, or with a suitable support, by a yielding or elastic connection, whereby the said clamps or clamp-bars may be placed and held in engagement with the form-block for the purpose of holding a corset stretched over the said block in the manner above set forth, and a device or apparatus embracing these main features of construction is, therefore, herein claimed as our invention without restriction to the particular features of construction in other parts of the machine illustrated. The machine shown, however, embraces several features of novelty, whereby improved results are produced, which are also herein claimed as part of our invention.

We claim as our invention—

1. The combination, with a form-block and two vertically-movable spring-clamps or clamp-bars located normally above the form-block and adapted to engage the latter when depressed, of a pivoted arm sustaining said clamp-bars, a treadle connected with the arm for depressing the latter and forcing the clamp-bars into engagement with the form-block, and a spring connected with the treadle for lifting the arm and clamp-bars, as set forth.

2. The combination, with a form-block and two spring-clamps or clamp bars, of a pivoted arm sustaining said clamp-bars, a treadle, a rod attached to the treadle and having sliding connection with the arm, and a spring engaged with the said rod and the arm, whereby a yielding pressure is applied to the latter, substantially as described.

3. The combination, with a form-block and two vertically-movable spring-clamps or clamp-bars located normally above said form-block and adapted to engage the latter when depressed, of a pivoted arm, D, supporting said clamps, a treadle, F, a rod, G, connecting the treadle with said arm, a spring applied to hold the free end of the arm at the upward limit of its movement, and a detent, I, constructed to engage the said treadle, substantially as described.

4. The combination, with a form-block and two spring-clamps or clamp-bars, of a movable support for said clamps, a treadle connected with said support, a spring applied to lift the said support, and a spring detent lever, I′, provided with a notch, *i*, at its lower end for engagement with said treadle, substantially as described.

In testimony that we claim the foregoing as our invention we affix our signatures in presence of two witnesses.

JAMES STONE.
MARSHALL GARDNER.

Witnesses:
T. BROWN,
D. ILIFF.