(No Model.) 2 Sheets—Sheet 1.

S. MOE.

SHIRT STRETCHER.

No. 592,160. Patented Oct. 19, 1897.

Fig. 1.

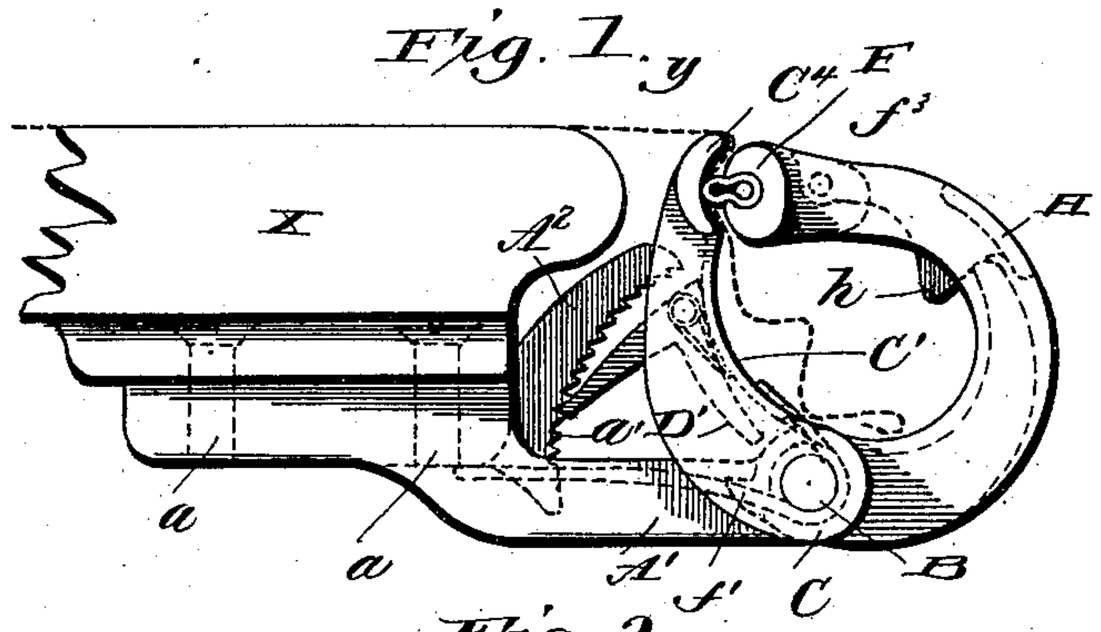


Fig. 2.

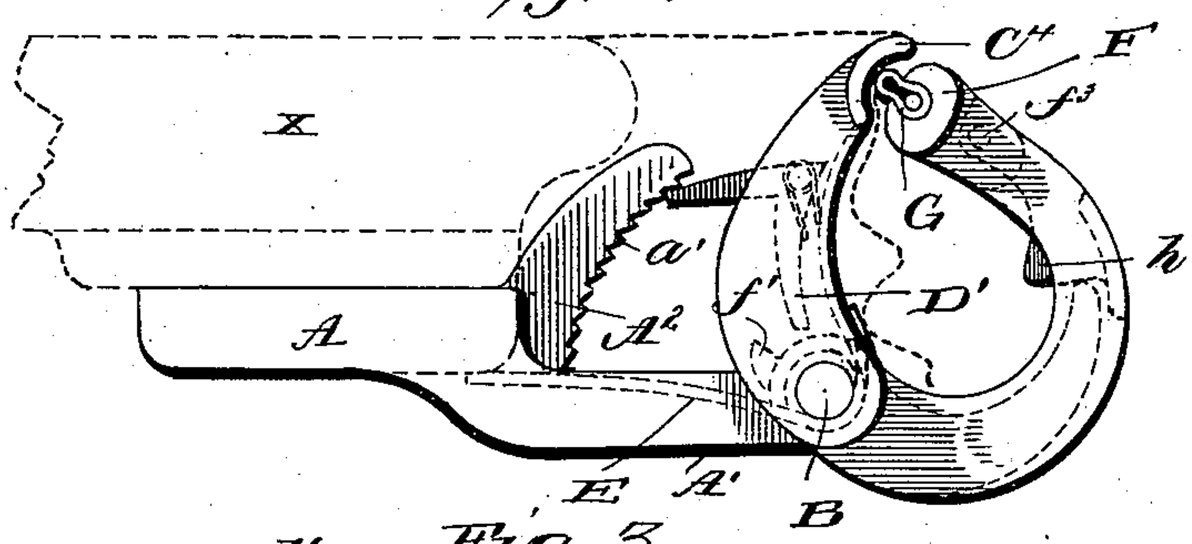


Fig. 3.

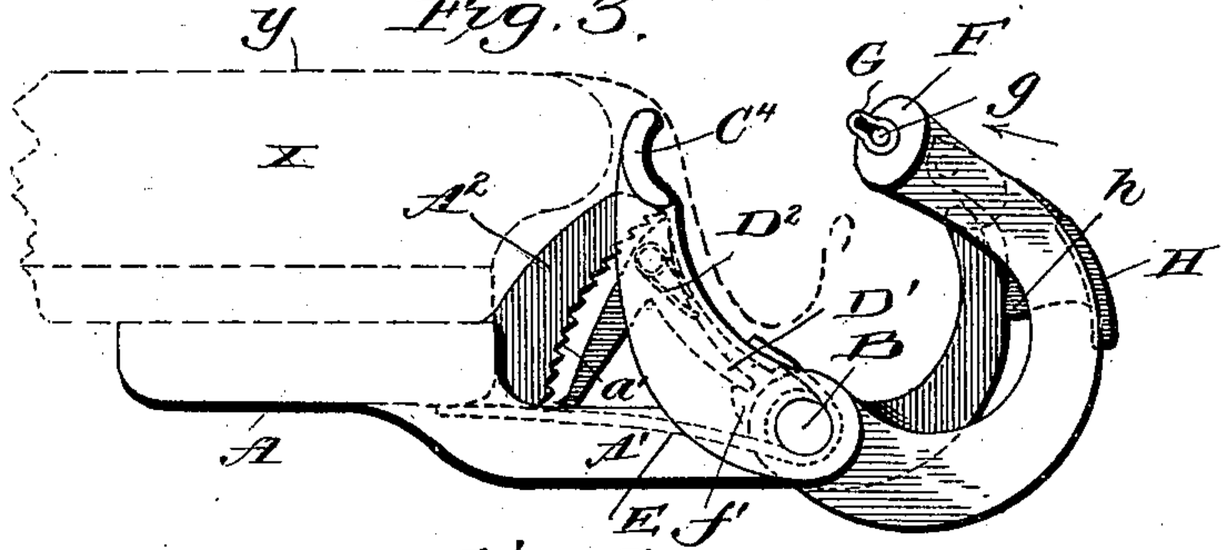
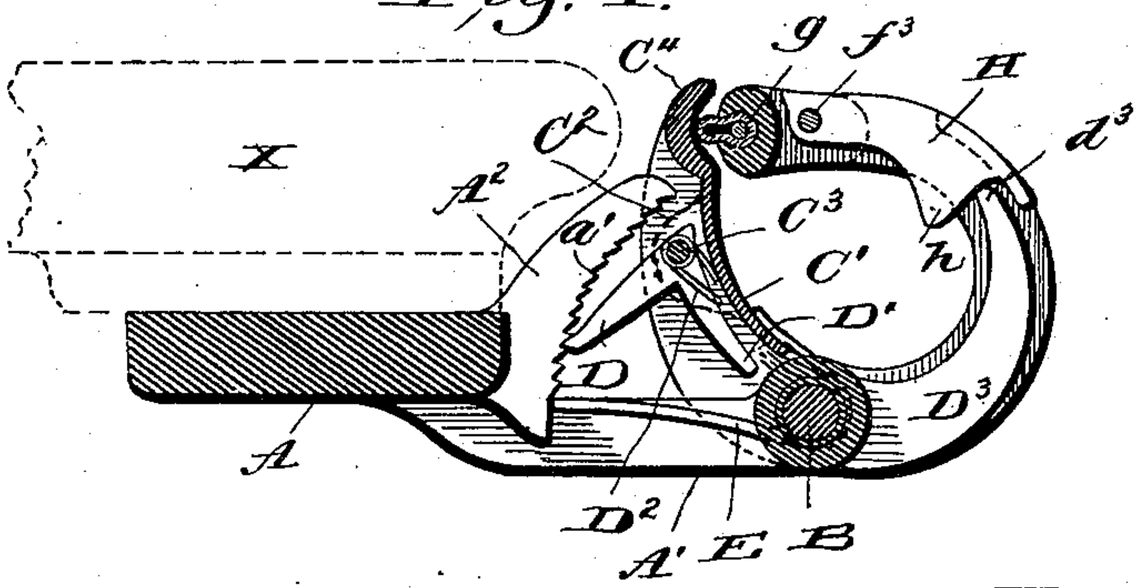


Fig. 4.



Witnesses:
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E. A. Bond

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by E. B. Stocking
Atty.

(No Model.) 2 Sheets—Sheet 2.

S. MOE.

SHIRT STRETCHER.

No. 592,160. Patented Oct. 19, 1897.

Fig. 5.

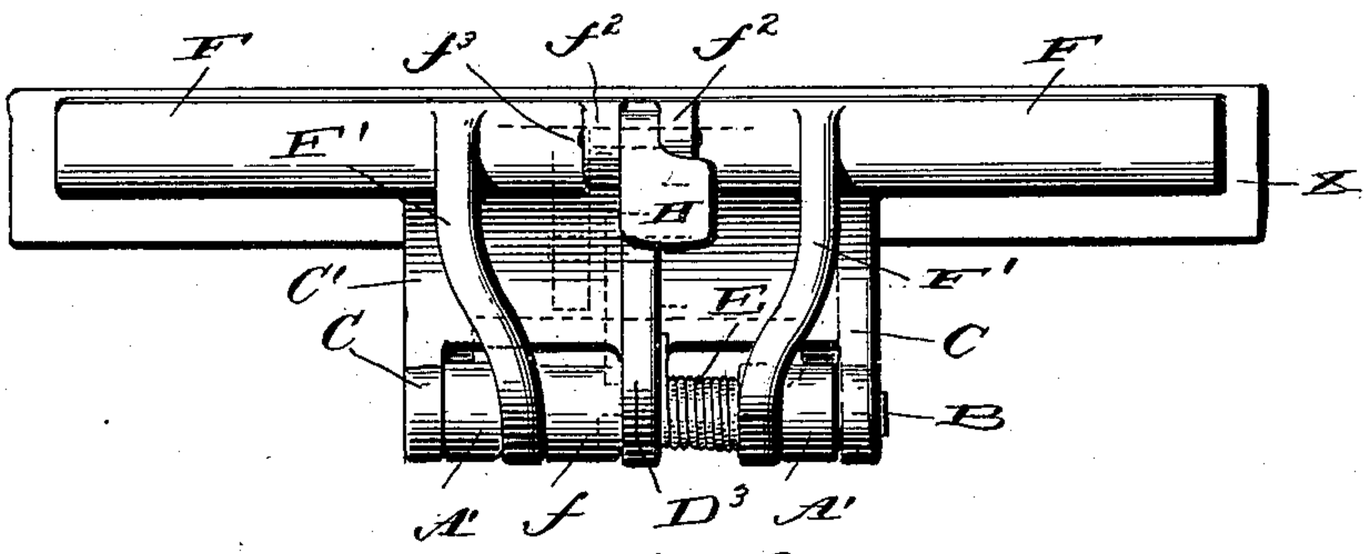
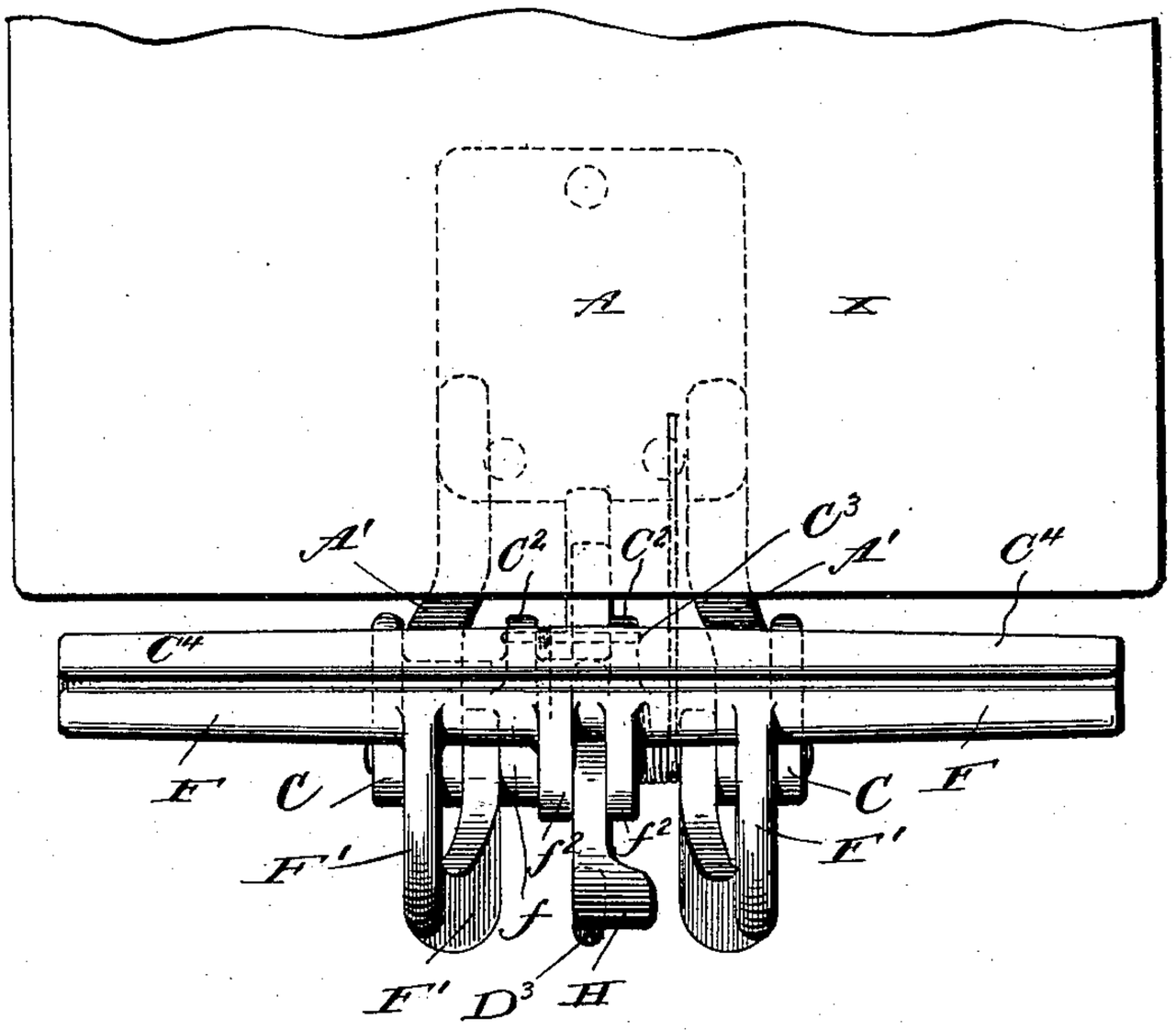


Fig. 6.



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UNITED STATES PATENT OFFICE.

SIVERT MOE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE TROY LAUNDRY MACHINERY COMPANY, LIMITED, OF SAME PLACE.

SHIRT-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 592,160, dated October 19, 1897.

Application filed January 14, 1896. Serial No. 575,529. (No model.)

To all whom it may concern:

Be it known that I, SIVERT MOE, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Shirt-Stretchers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in devices for stretching shirts upon a bosom-board; and it has for its object, among others, to provide a simple and cheap device readily attached to an ironing-board, by which the shirt may be readily clamped and stretched, and which, after the same has been ironed and the shirt disengaged from the clamp, will automatically return to its normal position, ready to be again used. The clamping-jaws are mounted for movement independently of each other, to admit of the reception and clamping of the body of the shirt, and afterward movable together on the same support to tighten the shirt on the bosom-board; and when the shirt has been ironed and then disengaged from the clamping-jaws the latter return to their positions.

The clamping and stretching device forming the subject-matter of this application is designed to be used in conjunction with suitable neck-clamping devices on the same board.

Other objects and advantages of the invention will appear, and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of the specification, and in which—

Figure 1 is a side elevation of my improvement and the parts shown in the position they assume when the shirt has been clamped. Fig. 2 is a like view showing the position of the parts after the shirt has been stretched. Fig. 3 is a similar view showing the parts in their normal position ready to receive the shirt and before the clamping-jaws are brought together to clamp the same. Fig. 4 is a substantially central vertical longitudinal section with parts in the position in which they are seen in Fig. 1. Fig. 5 is an end elevation, and Fig. 6 is a top plan.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates a plate or casting adapted for attachment to the under side of an ironing board or table or other support X in any convenient manner—for instance, by screws *a*, as indicated in Fig. 1 by dotted lines. Projecting from this plate or casting are the arms A′, and extending centrally from the outer edge of this plate or casting is the inclined curved arm A^2, the under face of which is toothed or notched, as seen at *a*′, to constitute a rack with which is adapted to engage a pawl, hereinafter described.

B is a rod or shaft supported in ears at the outer ends of the arms A′, and on the outer ends of this shaft or rod beyond the ears of the said arms A′ are sleeved the arms C, carrying the curved plate C′, which, upon its rear face, is formed with lugs or ears C^2, in which is held a shaft or pin C^3, on which is pivotally mounted the pawl D, one end of which is beveled or pointed, as seen best in Figs. 1 and 4, to engage the rack-teeth *a*′ of the arm A^2 on the plate or casting A, and this pawl is formed with an arm D′, which is, in this instance, shown as curved to conform to the curvature of the rear face of the curved plate C′. A spring D^2 is arranged around the pivot of this pawl to act upon the pawl to keep it normally in engagement with the rack. The curved plate C′ has a centrally-disposed forwardly and upwardly extending arm D^3, having an opening to receive the shaft or rod B, and the upper end of this curved arm D^3 is rounded, as seen at d^3.

E is a spring coiled around the shaft or rod B, with one end secured to or bearing against the under face of the plate or bracket A, as shown, and its other end secured to or adapted to bear against the front side of the curved plate C′, as shown. The upper end of the said curved plate is formed with the transverse extension C^4, forming one of the clamping-jaws, and upon its front face it is concaved or formed with the longitudinal groove or curved depression, as seen in Figs. 1 to 4,

inclusive, and into which the shirt-body is designed to be pressed and clamped by the other jaw, as will hereinafter appear.

F is the other jaw, carried by the curved arms F′, which are sleeved upon the shaft or rod B, so as to move freely thereon. The inner or rear face of this jaw has secured therein in any suitable manner the rubber or other yielding or elastic web or strip G, as shown, and which is adapted to press against the shirt-body and force and hold it in the depression of the jaw C^4, as indicated in Fig. 1, with a yielding pressure, so as to prevent injury of the article being operated upon. In this instance the elastic strip is shown as tubular in form and compressed within the recess in the jaw or clamped by a rod or wire *g*, as clearly seen in Figs. 1 to 4, inclusive, but it is evident that other means may be employed for holding this strip in place. The hub or sleeve *f* of one of the arms F′ is extended or lengthened and upon its rear side is formed with a lug *f′*, in line with the arm D′ of the pawl, so as to actuate the same at certain periods of the operation of the device, as will be hereinafter more fully set forth. The jaw F is formed upon its front with the lugs or ears f^2, in which is held a pin f^3, upon which is mounted for pivotal movement the lever or thumb-piece H, which has depending from its under face the lug *h*, which is tapered, as shown, and is in line with the curved arm or projection D^3, extending forwardly from the curved plate C′, as seen best in Fig. 4.

It will be understood that the two jaws C^4 and F are mounted for independent pivotal movement upon their support or shaft.

With the parts constructed and arranged substantially as hereinbefore set forth the operation is as follows: With the parts in the position in which they are seen in Fig. 3, the shirt Y being placed upon the bosom-board and the neck held or clamped in any suitable manner, the tail portion of the shirt is brought down over the jaw C^4, as shown, the portion beyond that acted upon by the clamps being received in the space between and below the clamping-jaws, as indicated by dotted lines, and then the jaw F is moved in the direction of the arrow in Fig. 3 and its clamping edge or strip engaged with the shirt, and, as the jaw is pressed toward the jaw C^4, the shirt is firmly bound between the two jaws, and then by pressure upon the lever or thumb-piece H the tapered face of the depending portion or lug *h* is engaged upon and over the upper rounded end of the curved arm or extension D^3, as seen in Fig. 4, and, as the lever is pressed upon the extension D^3, the jaw F is forced more firmly against the shirt and into the recess or depression of the jaw C^4, and the parts are locked and the shirt clamped, as indicated in Fig. 1. When this is done, the two jaws and their arms are bound together as one, and are then moved together outward by pulling upon the arms or upon the jaws, and the shirt thus stretched. As the clamps are moved outward the pawl engages in the rack, as indicated in Fig. 2, and thus holds the parts against retrograde movement, Fig. 2 showing the position of the parts when the shirt has been stretched and ready to be ironed. After the shirt has been ironed and it is desired to remove it from the board all that is necessary to do is to pull upward upon the lever or finger-piece H until its depending lug is disengaged from the end of the curved arm D^3, and, when this is done, the jaw F drops away from the other jaw and the lug *f′* is brought into engagement with the arm D′ of the pawl and forces the same against the curved plate C′, and thus throws its outer end out of engagement with the rack, when the spring throws the plate C′ and its jaw away from the jaw F back to its normal position, that seen in Fig. 3. It will thus be seen that the return of the parts to their normal position is practically automatic as soon as the thumb-piece or lever is actuated to disengage the same from the curved arm.

Modifications in detail may be resorted to without departing from the spirit of my invention or sacrificing any of its advantages.

What is claimed as new is—

1. A shirt-stretching mechanism comprising independently-pivoted jaws, one of which is provided with a device for retaining the closed jaws in an adjusted position and the other of which jaws is provided with means for releasing said retaining device.

2. A shirt-stretching device comprising jaws, one of which is a gravitating jaw, said jaws being pivotally mounted on a common pivot for independent or synchronous movement, and a pivoted device carried by one of said jaws, and means on the other for coöperation therewith to cause said jaws to move in unison; substantially as described.

3. In a shirt-stretching device, the combination of oppositely-disposed jaws, pivotally mounted for movement independent of each other, means carried by said jaws for connecting them to move in unison, and a rack-and-pawl mechanism for holding the jaws in their adjusted position; substantially as described.

4. The combination with the jaws mounted for independent pivotal movement, of a pivoted lever carried by one jaw, and a projection movable with the other jaw and located upon the opposite side of the axis from the jaw itself whereby the pivoted lever of the other jaw is adapted to wedge against said projection, substantially as specified.

5. The combination with the jaws mounted for independent pivotal movement, of a pivoted lever carried by one of said jaws, a projecting arm carried by the other jaw for engagement with said lever, and a rack-and-pawl mechanism for holding the parts in their adjusted position; substantially as described.

6. The combination with the jaws mounted for independent pivotal movement, of a piv-

oted lever carried by one of said jaws, a projecting arm carried by the other jaw for engagement with said lever, a rack-and-pawl mechanism for holding the parts in their adjusted position, and means for actuating said pawl to separate the jaws; substantially as described.

7. The combination with the jaws mounted for independent pivotal movement, of means, a portion of which is movable with each jaw for causing the same to move together, and a rack-and-pawl mechanism, and releasing devices carried by and movable with said jaws for separating the same; substantially as described.

8. The combination with the jaws mounted for independent pivotal movement, of a lever pivotally mounted on one of the jaws, a curved arm carried by the other jaw for engagement with said lever, a fixed rack, a pawl carried by one of the jaws for engagement therewith, and means carried by the other jaw to disengage the said pawl from its rack; substantially as described.

9. The combination with the jaws mounted for independent pivotal movement on a common shaft, of means for locking the jaws together to move in unison, and means for automatically returning the same to their normal position when disconnected; substantially as described.

10. The combination with the jaws mounted for independent pivotal movement on a common shaft, of means for locking the jaws together to move in unison, means for automatically returning the same to their normal position when disconnected, and a pawl-and-rack mechanism for holding the same in their adjusted position; substantially as described.

11. The combination with the jaws mounted for independent pivotal movement, of a rack, a pawl pivotally mounted on one of the jaws, and having an arm, and a lug carried by the hub of the other jaw in line with and adapted to move said arm; substantially as described.

12. In a shirt-stretching device, a jaw having a longitudinal recess, combined with a tubular yielding strip having a portion thereof in said recess, and a rod inserted within said strip and compressing the same within the recess; substantially as described.

13. The combination with the jaws mounted for independent pivotal movement, of a rack, a pawl pivotally mounted on one of the jaws, and having an arm, and a lug carried by the hub of the other jaw in line with and adapted to move said arm, and means for locking said jaws together to move in unison; substantially as described.

14. In a shirt-stretcher, the combination of jaws pivotally mounted upon a common shaft for movement independent or synchronous, pivoted means on the one jaw engaging means on the other for binding them together to move in unison, and means on the one jaw engaging means on a fixed part for holding the jaws in their clamped adjusted position about their pivot; substantially as described.

15. In a shirt-stretcher, the combination of jaws pivotally mounted upon a common shaft for movement independent or synchronous, pivoted means on the one jaw engaging means on the other for binding them together to move in unison, means on the one jaw engaging means on a fixed part for holding the jaws in their clamped adjusted position about their pivot, and provision whereby when the jaws are disconnected their holding means are automatically thrown out of operative position; substantially as described.

16. In a shirt-stretcher, a casting formed with horizontal arms, and a toothed bar disposed centrally between said arms, a shaft held in said arms, jaws pivotally mounted upon said shaft for independent movement, means carried by one of the jaws for engagement with coöperating means on the other jaw for locking them together, and a pivoted pawl carried by one of the jaws for engaging the toothed bar to hold the jaws in their adjusted position; substantially as described.

17. In a shirt-stretcher, a casting having horizontal arms adapted to receive a shaft, and a centrally-disposed curved arm toothed upon its under side, combined with a movable jaw supported on a shaft held in said arms, and a pivoted pawl carried by said jaw to engage said toothed arm; substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

SIVERT MOE.

Witnesses:
GEORGE C. ROBERTS,
H. H. HORR.