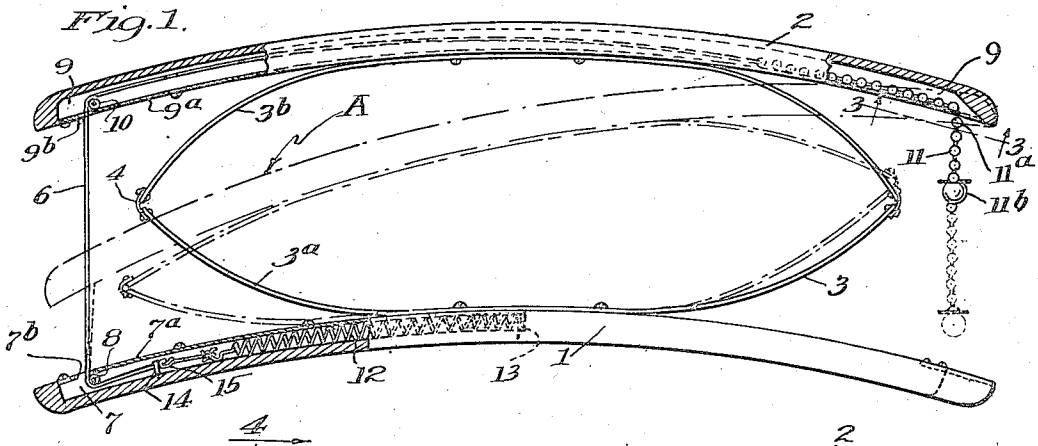
May 5, 1936. C. C. JACKSON 2,039,596

SLEEVE FORMER

Filed May 6, 1933 2 Sheets-Sheet 1

Fig. 1.



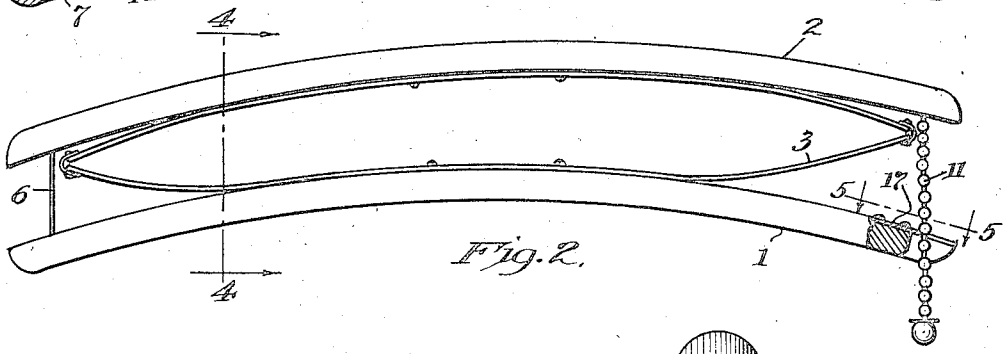
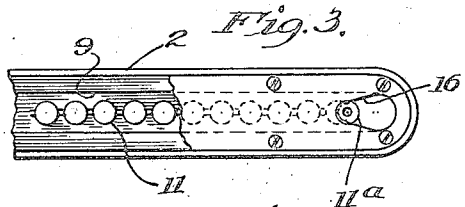


Fig. 2.

Fig. 3.



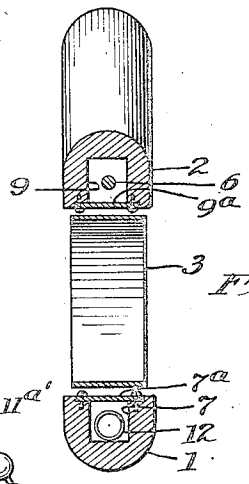


Fig. 4.

Fig. 7.

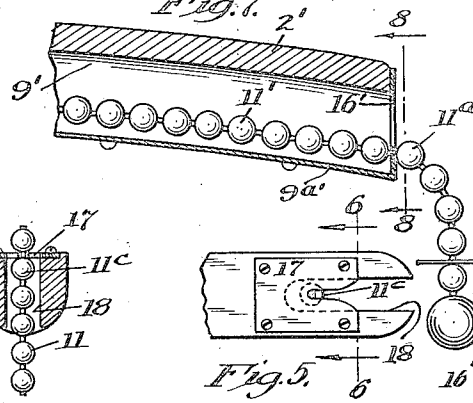
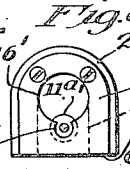


Fig. 6.

Fig. 5.

Fig. 8.



INVENTOR
Clarence C. Jackson

BY Arthur P. Knight and Alfred W. Knight

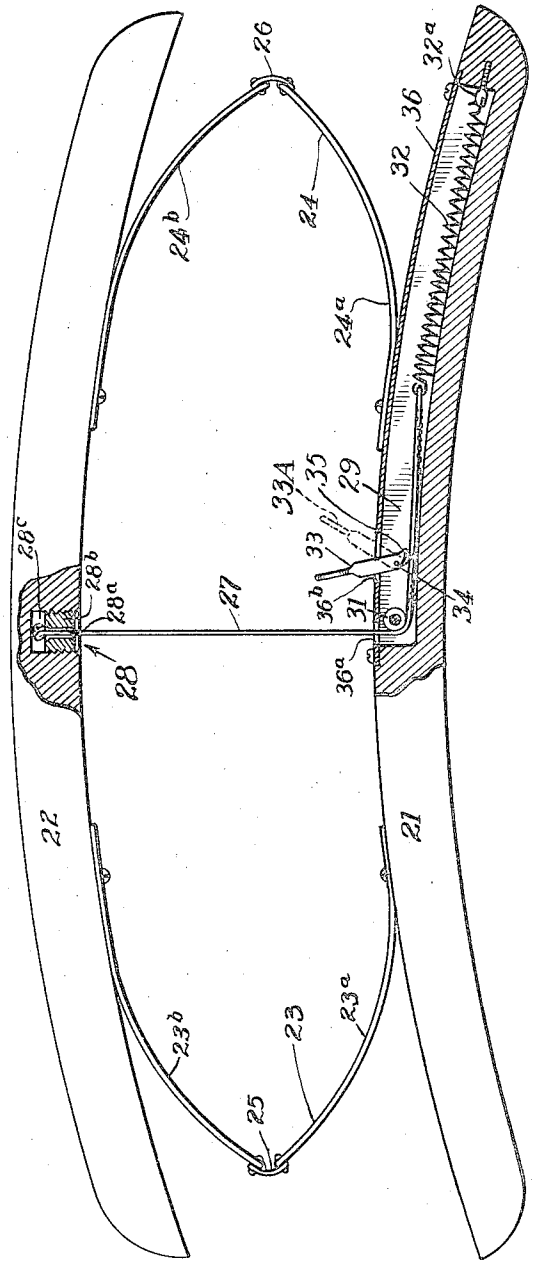
ATTORNEYS

May 5, 1936. C. C. JACKSON 2,039,596

SLEEVE FORMER

Filed May 6, 1933 2 Sheets-Sheet 2

Fig. 9.



INVENTOR.
Clarence C. Jackson,
BY Arthur P. Knight and
Alfred W. Knight
ATTORNEYS.

Patented May 5, 1936 2,039,596

UNITED STATES PATENT OFFICE

2,039,596

SLEEVE FORMER

Clarence C. Jackson, Whittier, Calif., assignor to S. H. Davis, Omaha, Nebr.

Application May 6, 1933, Serial No. 669,733

6 Claims. (Cl. 223—63)

This invention is directed to the art of garment forming and particularly to a device for forming a sleeve or the like. Devices of this general type are commonly used for forming or stretching garment sleeves, in the making or pressing of garments.

The principal object of the invention is to provide a sleeve forming device which is adapted for obtaining an outward extension of a sleeve or the like, which is spring-biased to extending position, and which is provided with means for limiting the outward extension thereof.

A further object of the invention is to provide a device which may be easily manually inserted and removed from a sleeve, and which requires the use of but one hand, so that the other hand may be used to guide or hold the sleeve into which or from which the device is to be inserted or removed.

According to the preferred embodiment, a further object of the present invention is to provide a sleeve forming device which may be inserted within a sleeve so as to stretch or extend the same to its full dimensions and which may be adjusted so that a substantially uniform extension of said sleeve is obtained throughout its length.

A further object of the preferred embodiment of the invention is to provide a device of the character described which is adapted for obtaining a resilient outward extension of a sleeve or the like, and which is provided with means for limiting the outward extension thereof at either one end of the device or the other, or both ends, at the discretion of the operator.

Sleeve-formers have been previously suggested which comprise two arcuate forming members placed in parallel relation with one another and provided with spring means tending to hold the two elements spaced apart. To this extent, the sleeve-former of the present invention is quite similar to prior devices of this sort. The sleeve-formers previously used, however, required that the operator use both hands in compressing the spring means to reduce the lateral dimensions of the device so that it could be inserted within a sleeve into operating position. This required a certain agility on the part of the operator to hold the garment and insert the device without employing the assistance of another operator or some form of holding device. With the device of the present invention, either or both ends of the device may be constricted or reduced in lateral dimensions and fixed in a desired position so that the device may be handled with one hand and the other hand left to handle the garment.

Previously suggested devices of the character described have, in addition to the above-expressed limitation, been incapable of regulation of the degree of outward biasing of the forming members, so that, for example, when a tapering sleeve is being extended for the purpose of removing wrinkles and the like, the small end of the sleeve is subjected to a stronger stretching than is the larger end, due to the unequal compression of the spring means, and in some cases this increased stretching must be prevented to avoid injury to the garment. It has been common practice for the operator to insert the device through the sleeve and then grasp the ends of the members which project from the smaller end of the sleeve with one hand, and reduce the biasing action of the spring. This is an objectionable procedure in view of the fact that the garment is usually passed through a stream of wet steam to effect removal of the wrinkles while being stretched or formed, and this necessitates that the operator pass his hand through the stream of steam with the garment.

The preferred embodiment of the present invention provides for positive control or limitation of the stretchings or extension of the garment, at either or both ends of the device, so that the amount of lateral extension of the garment may be regulated according to the wish of the operator and without requiring the same to be held in place manually.

The device of the present invention may comprise two elongated forming members provided with spring means biasing said members laterally outwardly from each other and normally holding the same in a certain spaced relation, said members being preferably of arcuate shape, and so disposed that the concave side of one member is faced toward the convex side of the other member in what may be described as a parallel relation, whereby the general outline of the device may conform to the arcuate shape of the conventional form of sleeve with which garments are customarily provided. It will be apparent that the device of the present invention may be provided with substantially straight forming members, if desired, or with forming members of any other desired configuration, without departing from the spirit of the invention. The present invention provides means for limiting the relative spacing of the forming members, and such means may comprise a tension member secured to both forming members and adapted for adjustment in any one of a plurality of

selected or desired positions of relative spacing of said forming members. The preferred embodiment of the present invention further comprises means for obtaining compression of the spring means so that the outward extension of said members with respect to one another may be controlled at will, and such means are preferably disposed at one end of the device so that control of such extension is within easy reach of the operator. The control means is preferably adapted for control of the extension of the device at either longitudinal end thereof, that is, is adapted for decreasing the lateral extension of either end of the device independently of the extension of the other end, or adapted for control of both ends thereof, so that the entire device is decreased in lateral extension.

The device of the present invention, in its preferred embodiment, comprises a pair of similarly shaped, more-or-less arcuate, forming members which are placed in parallel relation, with two spring members secured together at their ends and also secured to the opposing inner faces or edges of the respective forming members in position to obtain a resilient separation thereof, and means for compressing the spring members by application of force at either or both ends of the forming members, said compressing means being preferably of such character as to allow of positive positioning of said forming members with respect to outward separation thereof while permitting further compression of said spring members to cause said forming members to be moved toward one another.

The accompanying figures of drawings illustrate certain embodiments of the invention, and referring thereto:

Fig. 1 is a partly sectional side elevation of a preferred form of the device in full-extended position, with a position of partial-extension indicated in dot-dash lines;

Fig. 2 is a similar view of the device, showing the same in a position of partial-extension throughout its length;

Fig. 3 is a detail of a portion of the device, taken on line 3—3 in Fig. 1;

Fig. 4 is a transverse view of the device, taken on line 4—4 in Fig. 2;

Fig. 5 is a view of a portion of the device taken on line 5—5 in Fig. 2;

Fig. 6 is a sectional view taken on line 6—6 in Fig. 5;

Fig. 7 is a sectional view of a modified form of the invention, showing a modified form of positioning means;

Fig. 8 is a view thereof, taken on line 8—8 in Fig. 7;

Fig. 9 is a partly sectional side elevation of an alternative form of the invention.

Referring to Figs. 1 to 6 of the drawings, the preferred form of the present invention may comprise two forming members made of wood or some comparable material which will be referred to for purposes of description as an inner member 1 and an outer member 2. These members are preferably of the arcuate shape of a sleeve. A spring 3 is provided, which may comprise an inner leaf 3*a* and an outer leaf 3*b* formed in a bow shape by securing the respective ends together in some suitable manner, as by means of clips riveted to said leaves as at 4. The leaves 3*a* and 3*b* are preferably so formed as to assume a rest position with the members 1 and 2 at a suitable separation, for example, following the general proportions shown in Fig. 1.

This construction provides for a resilient outward thrust to be applied to the members 1 and 2 upon compression of the spring 3 by an inward pressure on the outward edges of said members, as by manual deformation of the spring to the position A shown in dot-dash lines in Fig. 1. According to the present invention, means are provided for compressing the spring 3 so as to cause the members 1 and 2 to assume a separation less than normal, and such means may comprise a tension-cable 6 or other flexible tension member disposed within a slot 7 at one end of the member 1, for example the left-hand end as shown in the drawings, and extending over a roller or the like 8 outwardly towards the corresponding end of the member 2, into a slot 9 in said member 2 over a roller 10 and thence extending longitudinally through said slot to and through the opposite or right-hand end of said member and terminating in a flexible pull-member having means for holding the same in any desired position, such as a bead-chain 11.

The slots 7 and 9 are provided with covering means such as a strip of metal or the like, as shown at 7*a* and 9*a*, respectively, which may be secured to the members by means of screws or the like, and said cable may extend through suitable apertures in said strips, as at 7*b* and 9*b*, respectively.

The cable 6 is preferably secured to the member 1 through a tension member such as a spring 12, which is secured to the member 1, as at 13 at the inner end of the slot 7, and said cable is also preferably provided with means for limiting the outward extension of said spring, which means may advantageously comprise a staple or the like 14 which is secured within the slot 7 and through which the cable 6 passes, there being a knot or the like provided as at 15 adapted to engage with said staple upon sufficient extension of the spring 12.

The spring 12 is not required to be very strong, and is principally for the purpose of taking up any slack in the tension-cable 6 which would ordinarily result from compression of the members 1 and 2 other than through the agency of said cable.

The opposite end of the cable which terminates in the bead-chain 11 is provided with means for securing said cable in any desired position of extension through the slot 9, and such means may comprise means for engaging one of the beads of the bead-chain 11 as by means of a slot 16 provided in the strip 9*a* at the right-hand end of the member 2. Said slot is sufficiently wide at its outer end to provide for free passage of the chain therethrough, but is smaller at its inner end so that a portion of the chain between two adjacent beads may slip into the slot and provide for positioning said chain; referring to Figs. 1 and 3, a bead 11*a* is shown as engaged by said slot and held in position. It will be seen that, independent of the relative spacing of the members 1 and 2, the spring 12 will serve to maintain the cable 6 in tension so that the chain will be crowded into the narrow portion of the slot 16. The chain 11 may be provided with an enlarged end portion 11*b*, for the purpose of preventing the chain from being pulled into the slot 9 due to the action of the spring 12.

Referring specifically to Fig. 1, it will be seen that when the device is held in the left-hand, for example, as by grasping the right-hand portion (as shown in said figure) of the inner member 1, and the chain 11 is pulled through the slot 16

by grasping said chain with the right-hand, the spring 12 due to the tension in the cable 6 will be extended until the knot 15 engages the staple 14, and any further pulling of the chain 11 will cause the cable 6 to be drawn along the slot 9 and the distance between the left-hand ends of the members 1 and 2 diminished. A position such as shown at A may thus be assumed. When it is desired to cause the device to persist in the assumed position, the chain 11 may be allowed to slip into the inner or narrow portion of the slot 16 and be engaged therein as above described.

To provide for compression of the right-hand end of the device, I employ means for securing the ends of the members in spaced relation, so that the device can be brought into and secured in some such position as indicated in Fig. 2. It will be understood that the positions shown in Figs 1 and 2 are merely illustrative, and that the device can be completely compressed if desired so as to occupy a minimum lateral space. The above mentioned means for compressing the right-hand end of the device may advantageously comprise holding means disposed on the right-hand end of the member 1, such as a slotted plate 17 secured as by means of screws to the member 1 as shown in Figs. 2, 5 and 6, and adapted to engage a bead, for example 11c, Figs. 5 and 6, the outer end of said member being provided with a slot 18 large enough to allow free passage of the beads of the chain 11.

When the device is used as a sleeve-former, the following procedure may be employed, as an example: The member 2 may be first caused to be brought to the position shown at A Fig. 1, by pulling the chain 11 through the slot 16. It will be further comprehended that the device when in compressed position is stable in itself and may be handled with one hand without tending to alter the spaced relation of the members 1 and 2. The device may be thus inserted with one hand into a sleeve and the other hand employed to adjust the sleeve in the desired position. After insertion of the former into a sleeve the bead-chain may be released from 17 and the left-hand ends of the device then adjusted to the desired degree of separation by adjusting the positioning of the bead-chain at the slot 16, after which the right-hand ends may be adjusted. It is thus seen that the sleeve, supported by the sleeve-former, may be passed through a stream of steam, without requiring that the operator pass his hand through the steam in view of the fact that the small end of the device is positively fixed with regard to extension of the sleeve at that point and it is not necessary that the operator grasp the former at that point as has been hitherto necessary.

When it is desired to release the sleeve from the grasp of the sleeve-former, the chain 11 may be pulled through the slot 16 to any desired extent to obtain sufficient compression of the left-hand ends of the device, then employed to compress the right-hand ends by engagement with the plate 17, and the device freely withdrawn from the sleeve.

While the above specific embodiment of my invention is the form I prefer to employ, it will be understood that the device of the present invention is not limited to the specific construction herein shown, as numerous modifications thereof may be apparent to one skilled in the construction of such devices. For example, an alternative form of positioning means on the outer member is shown in Figs. 7 and 8, which may comprise an outer member 2' provided a slot 9' extending through the right-hand end thereof, and a strip 9a' extending over the end of said slot as at 9a''. A bead-chain 11' is disposed in the slot 9' and extends through a suitable slot 16' in the portion 9a'', and said slot 16' is provided with a narrow portion 16'' adapted to receive a portion of the chain between two adjacent beads 11a' and engage one of the beads. This construction provides for easy release of the chain from engagement by the slot-portion 16'' by upward pressure with the thumb or finger on the lower side of the projecting chain 11', forcing the chain into the slot 16' through which it may pass freely.

The modification of the invention shown in Fig. 9 provides for selective positioning of the forming members with respect to the outward spacing thereof, and referring thereto, the numerals 21 and 22 designate inner and outer forming members provided with thereto-secured springs 23 and 24, each of which may consist of inner and outer leaves 23a, 23b, 24a, and 24b respectively, joined at their respective ends as by means of riveted clips as shown at 25 and 26 respectively. As set forth in connection with the description of the preferred form of the invention, these springs are so formed as to assume a rest position with the members 21 and 22 at a suitable separation.

The means for selectively positioning the forming members at any desired position of outward separation may comprise a tension cable 27 secured to the central portion of one of the forming members 22 as at 28 and passing into a slot 29 in the other member 21 over a roller 31 and secured to said member at the outer end of said slot through a tension spring 32 which may be secured to the member 21 by a screw 32a. Upon manual compression of the springs 23 and 24, the tension cable 27 will be drawn further into the slot 29 by means of the spring 32 so that no slack will form therein, and means are provided for securing said cable in any desired position in said slot. Such means may comprise a compression lever 33 pivotally mounted to the member 21 within the slot 29, as at 34. The lever 33 is provided with a foot-portion 35 of such shape and disposition as to engage said cable and force the same into frictional engagement with the bottom of the slot 29 when moved to locking position, as shown in dot-and-dash lines at 33A. When it is desired to cause the device to assume a more extended position, the lever 33 may be moved to release the cable 27. The lever 33 and the foot portion 35 thereof are preferably so arranged that when in locking position the tension on the cable 27 provided by the springs 23 and 24 will cause the engagement of the cable to persist, that is, act in a direction to increase the engagement rather than to decrease said engagement.

The cable 27 may be secured to the member 22 in any suitable manner, as by being passed through and tied in back of an opening 28a in a screw-plug 28b which is screwed into a hole 28c in said member. The slot 29 may be provided with suitable covering such as a metal strip 36 secured to the member 21 as by means of screws, and suitable apertures 36a and 36b may be provided for the cable 27 and the lever 33, respectively.

This form of the invention may be employed in substantially the same manner as the preferred form of the invention, but does not pro-

vide for separate adjustment of the two ends of the device.

I claim:

1. A sleeve-former comprising: two forming members disposed in parallel relation; spring means secured to said members and resiliently biasing the same outwardly from one another in spaced relation; compressing means operatively engaging said members at one end thereof for compressing said spring means to cause inward movement of said members toward one another at said one end; positioning means operatively associated with said compressing means and disposed on one of said members at the end thereof opposite said one end for positively positioning said members with respect to outward spacing thereof at said one end; and additional positioning means operatively associated with said compressing means and disposed on the other of said members at the end thereof opposite said one end for positively positioning said members with respect to outward spacing thereof at the opposite ends thereof.

2. A sleeve-former as set forth in claim 1, said compressing means comprising a tension cable secured to one of said members at one end and operatively associated with the other of said members; and said first-named positioning means comprising means secured to said tension cable cooperating with means secured to said other member.

3. A sleeve-former comprising: two forming members disposed in parallel relation; spring means secured to said members and resiliently spacing the same outwardly from one another; tension means secured to both of said members, extending transversely therebetween, and resiliently engaging one of said members; and means for fixing said tension means in position to limit the outward spacing of said members.

4. A garment stretcher consisting of two body members having their outer edges adapted to engage and stretch a garment into which they are inserted, spring means therebetween and normally and yieldingly moving said members apart, one of said members having a chamber therein, a cord attached at one end to the other body member and connected in the chamber of the one body member, with spring means therein for taking up and letting out said cord as said body members move apart or are moved together, and locking means for locking said parts in different positions of expansion.

5. A sleeve former comprising two elongated forming members; spring means secured to said members and resiliently biasing the same outwardly from one another; a flexible tension member extending transversely between said forming members and secured to one of said forming members; a tension spring connecting said tension member to the other forming member; and means pivotally mounted on said other forming member and movable into position to engage and hold said tension member and thereby limit the outward spacing of said forming members.

6. A sleeve former comprising two elongated forming members; spring means secured to said forming members and resiliently biasing the same outwardly from one another; a flexible tension member secured to one of said forming members at a position intermediate the ends thereof and extending transversely across between said forming members and operatively engaging the other forming member at a position intermediate the ends thereof, said tension member having a portion extending longitudinally within and resiliently secured to said other forming member; and means on said other forming member to engage and hold said tension member in different positions of outward spacing of said forming members.

CLARENCE C. JACKSON.