Aug. 19, 1930. G. LOCKE 1,773,538

SHIRT HOLDING DEVICE

Filed Sept. 17, 1927

Fig. 1.

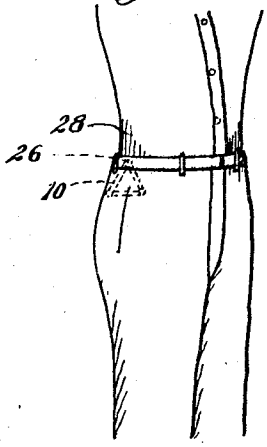
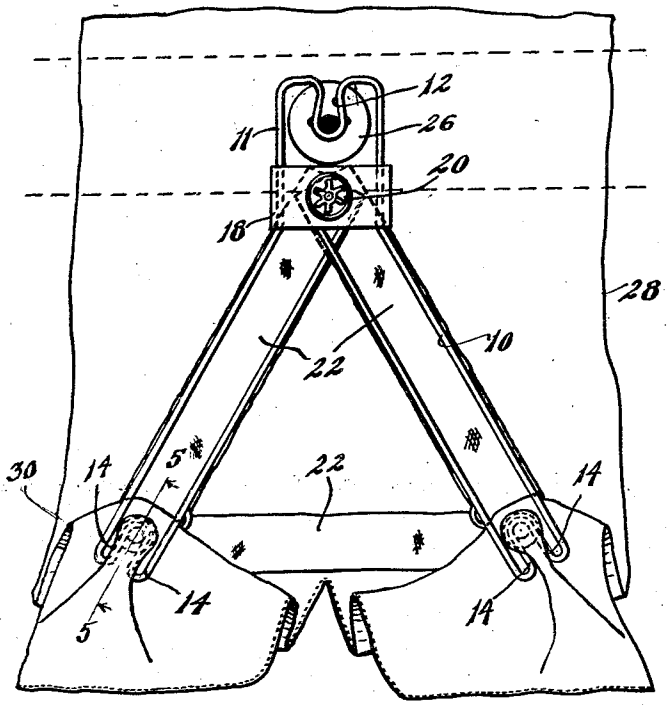


Fig. 2.



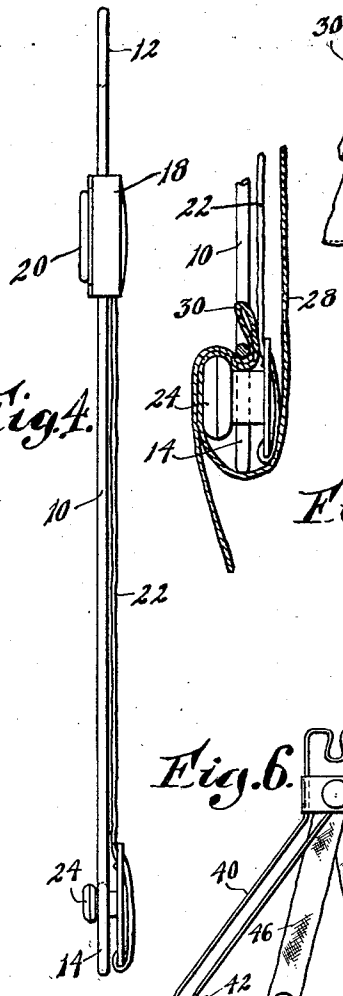


Fig. 4.

Fig. 5.

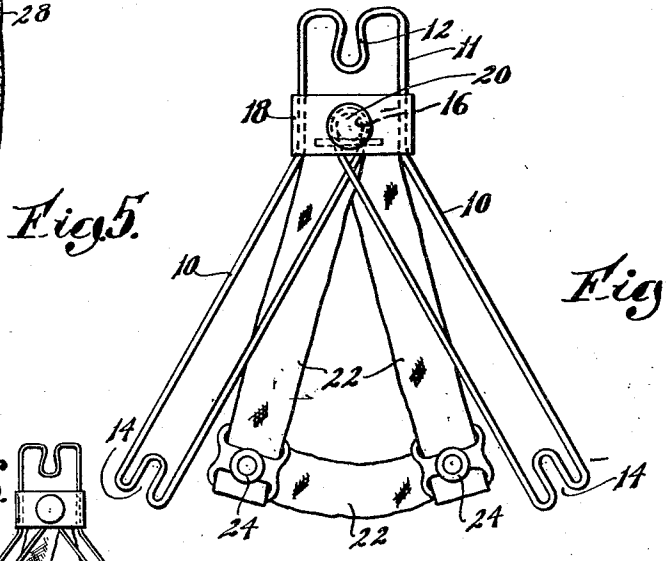
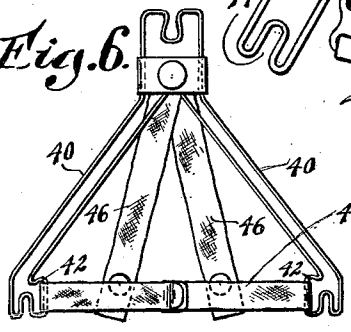


Fig. 3.

Fig. 6.



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SHIRT-HOLDING DEVICE

Application filed September 17, 1927. Serial No. 220,145.

This invention relates to improvements in shirt holding devices. More particularly it relates to devices which are insertable between shirt and trousers for holding the shirt down. For this purpose yieldability and flexibility are needed, with a certain measure of stiffness, so that all varieties of body movements of the wearer may be executed freely, without restraint due to the shirt fastening and without danger of tearing the shirt.

It is an object of the invention to improve upon prior devices intended for this use, both by making the engaging means effective and by providing resilience sufficient to let the clothing yield and to cause return of the clothing to normal position when any bending of the wearer has ceased. One feature is to mount the shirt holders so that they can move in conjunction with the movements of the wearer's body, they being arranged over the hips and having small rotary motion about a single pivot. An important feature is that the engagement with the shirt is distributed over a considerable area of the cloth thereof, so that the pull of the gripping means on the shirt is aided by a friction drag which minimizes the danger of tearing the cloth. Another feature resides in having an elastic strut for carrying the main thrust, in holding down the shirt, and in avoiding too great stiffness thereof, which otherwise would be necessary if the device were to do its work, by providing an auxiliary elastic tie for resisting deformation of the device as a whole and tending to return the device to normal shape after such deformation. It is, moreover, an important feature to provide for producing compact and durable devices at small and commercially practicable cost.

These ends are gained by employing a combination wire and rubber elastic structure in which the wire is formed into a flexible frame of inverted Y shape, having a trunk so short that the Y may almost be called an inverted V, wherein the prongs of the Y are capable of being bent upward toward the trunk, thus yielding to vertical stresses when the wearer bends his body; and an elastic band is connected between the prongs, acting directly to oppose their being spread, and indirectly to oppose elastically their said bending toward the trunk. This combination of prongs and rubber elastic makes a sort of elastic triangle, one point of which is at the base of the Y or V, each point of which triangle carries a button engaging shirt or trousers. Each branch of the Y, terminating in one of said points, has a fork or U-crevice formed at its end, adapted to receive one of said buttons, which is especially arranged for engaging the shirt; and the point at the base of the Y has a fork or U-crevice formed to engage under and press upward against the usual suspender button at the hip of the wearer's trousers, inside the waist band. When so engaged the bottom of this U bears upward against the threads which hold said suspender button in place. The buttons for engaging the shirt are preferably rubber covered and adapted to act like hose supporters, being covered by a portion of the shirt which is to be engaged and then slipped into said U with the shirt held between the button and the limbs of the U in the customary manner. Further details of construction and the operation of the device will be explained hereinafter. The fastening being applied to that button of the trousers which is over the hip of a wearer, the device as a whole will be maintained in position by its own state of flexure with a gentle pressure upward against the trouser button, and downward against the shirt forward of the hip and downward against the shirt to the rear of the hip. Upon any bending movement of the wearer the device can rock about the single trousers button with which it is associated, and either prong of the Y can yield upward elastically, or sidewise elastically, returning when the stress is passed.

It is intended that the patent shall cover by suitable expression in the appended claims, whatever features of patentable novelty exist in the invention disclosed.

In the accompanying drawings:

Figure 1 illustrates a device, embodying features of the invention, in use;

Figure 2 is a side elevation of the shirt holder seen in Figure 1, seen as if a section

were made through the threads which fasten the suspender button 26 to the inner face of the trousers, and showing bights of the shirt gripped tight by the holder;

Figure 3 is an elevation of the holder per se;

Figure 4 is a side elevation thereof;

Figure 5 is a section on line 5—5 of Figure 2; and

Figure 6 is an elevation of a modified form.

Referring to the drawings, the flat frame is of inverted Y-shape, reasonably stiff, yet capable of yielding flexibly so that each branch 10 can bend outward and upward in the plane of the Y. The trunk 11 is formed with a U-end 12, and each branch 10 likewise is formed with a U 14 at its end, these U's being to receive the necks of the fastening buttons 26, 24. Preferably, the frame is made from a single piece of wire, bent into the shape illustrated, so that two portions of the wire lying parallel, half an inch or so apart, constitute each branch 10. This wire is represented as having a loop 16 at each end, which loops come together at the trunk. The trunk is very short, so that the bottom of its U 12 is close to the vertex of the angle between the branches 10, so that it is in effect practically at or near the vertex of the inverted V formed by the branches of the Y. A band 18 of metal or other suitably stiff material, passes around the trunk of the inverted Y at this vertex, and a rivet 20, or the like, passes through the band and through the superimposed loops 16, which are encased by the band, so that this single fastening holds all together in the specified shape.

This same fastening holds the two ends of a band 22 of elastic material which may be formed as a triangle. This is arranged back of frame 10, with the upper point of the triangle, which is made by junction of the ends of the elastic band, located between the wires and encased by the band 18, and secured by the rivet 20. The other two points of the elastic triangle are made by folds in the band 22, the band being there threaded through a perforated plate or slide which carries a button 24 adapted to be engaged by the U at the end of the Y-branch with which it is associated. When the triangle is stretched to bring the respective buttons 24 into position to be engaged by the U-ends of the branches of the Y, the elastic side limbs of the triangle hold the buttons in the U's; and the lower side of the triangle, which extends from one button 24 to the other, holds the branches of the Y elastically against spreading.

In Figure 1 the device is seen as it may be arranged in operative position, placed over the hip, between shirt 28 and trousers, with the U 12 at the trunk of the inverted Y engaging under the usual suspender button 26 inside the waist band of the trousers, and with the branches of the Y extending downward, one forward and one rearward. A bight 30 of shirt 28 may be drawn up around the lower portion of the elastic triangle, over a button 24, and the triangle then may be stretched to bring the neck of the button, thus covered, into position to slide into the U end of its particular Y-branch. The U clamps the shirt around the button, somewhat as is customary with hose supporters; and the button is kept in the U by elasticity of the side band 22, which remains under slight tension, pulling endwise against the end of the wire branch of frame 10, which constitutes a strut that cannot yield endwise further than is permitted by the button 26 with which the base of the Y is engaged.

The other button being likewise covered by a bight of shirt and clamped by the U end of its associated Y branch, there will be a secure grip holding the shirt down at points forward and back of the hip of the wearer. The shirt will maintain the device as a whole in operative position, because its engagements with the buttons 24 can be made at such positions on the shirt that the engaging of the U 12 under trousers button 26 places the branches 10 under slight flexure. This flexure bends the lower ends of the Y upward, each branch of it becoming curved to whatever degree may happen to be occasioned by the particular place where the wearer happens to have made the engagement between button and shirt. As the stress is applied upward while the particular branch of Y to which it is engaged lies at an inclination to the vertical, the resisting effort of the Y is a combination of endwise thrust and a lateral bending, the branch being elastic in its nature because the wires making the frame are elastic, and can bend in the plane of the Y. This bending involves a spreading of the two branches; and this spreading calls into play the elasticity of the bottom member of the elastic band triangle 22. This action can occur at either branch, and simultaneously at both branches, of the Y, when the device is adjusted to position by the wearer; and the action can continue or vary to suit circumstances occasioned by any and all bending of the body or limbs of the wearer; and upon the relaxation of such a bending the elasticity of the wires tends to straighten them and the elasticity of the lower band 22 cooperates to draw them back from their spread position. By the device of introducing this horizontal band into the combination a degree of strength of elasticity for the return is obtained without making the wires as large and as stiff as would otherwise be required to get the same power of return, thus avoiding a degree of stiffness which might be injurious to the cloth or uncomfortable to the wearer, or heavy and expensive to manufacture. At all times the device as a whole is held against the sus-

pender button 26 but can rock about the threads of this button as a single pivot, to cooperate with the body movements of the wearer. One of these devices being arranged at each side over the hips, the shirt is effectively and comfortably held from creeping up out of the trousers. It is an important advantage of the invention that the holding devices may be worn without hampering free movement of the wearer's body and without damage thereby to cloth. The compact structure together with the laterally yielding, flexible strut characteristics and elastic tie for restoring the curved strut to straightness make the device exceedingly practical. And the arrangement whereby it can be supported on one and only one of the customary suspender buttons of trousers, using that one which is located at the hip, lets it rock with the body and eliminates the discomfort which would result if both buttons were used or if the strut were not capable of bending easily toward front or back of the wearer's body.

The device seen in Figure 6 is somewhat modified in form. In this case the U-end of each downward extending arm 40 has its wire bent so as to form a loop 42, and an elastic band 44 is connected across the pair of loops to resist elastically the spreading of arms 40, and to return them to normalcy after any such spreading. The button-carrying elastic strips 46 hang freely without their ends being connected together, and each button may be covered by a fold of shirt and brought to position to slip into a U as heretofore has been described.

I claim as my invention:

1. Holding means for a shirt in trousers comprising a relatively stiff member and a flexible elastically stretchable element paralleling said member, at the top secured thereto, and at its lower end hanging free and having a button; said member having a forked upper end adapted to engage under a trousers button at the waist-band of trousers, and having a forked lower end adapted to clamp a bight of shirt between itself and the said button of the elastic element; the said element being of a length to hold its said button elastically in the fork.

2. Holding means for a shirt in trousers comprising interconnected forks respectively opening upward and downward, and an elastic element extending between said forks and having a button for engaging in the downward fork; said forks and elastic element being adapted for insertion between shirt and trousers with the upward fork engaging under a trousers button at the waist-band of the trousers, and the downward fork and its said button clamping a bight of shirt between themselves.

3. Holding means for a shirt in trousers comprising an inverted Y member having a forked upper end adapted to engage under a trousers button inside the waist-band of trousers, with the securing threads of the button between the prongs of the fork; and a spreading elastic element beside said member, secured thereto at the trunk of the inverted Y and having buttons at its lower portions; there being button engaging means on each branch of the inverted Y adapted to cooperate with one of said lower buttons to clamp a bight of shirt.

4. Holding means for a shirt in trousers comprising a yieldable wire member of inverted Y-shape, and a triangular elastic element beside said member and secured thereto at the trunk of the inverted Y and having its lower ends free and provided with shirt engaging buttons; said inverted Y having a U-crevice opening upward at its trunk and a U-crevice opening downward at the end of each branch of the Y; and said trunk U being adapted to engage under a trousers button inside the waist-band of trousers, and each said branch U being adapted to clamp a bight of shirt between itself and the adjacent button on the elastic element.

5. Holding means for a shirt in trousers comprising a wire member with two depending branches each with a U formed at its end; and an elastic element secured at the trunk of said member, depending with buttons; said wire member and elastic element being adapted for insertion between shirt and trousers with the upper end of said member engaging under a trousers button inside the waist-band of the trousers, and with each branch of said member cooperating with a button of said elastic element to clamp a bight of shirt; and with the engagement of said wire movable about the securing threads of said trousers button in conjunction with body movements of the wearer.

6. Holding means for a shirt in trousers comprising a wire member with two depending branches; and an elastic element secured at the trunk of said member, depending with buttons and having a portion resisting elastically the spreading of said buttons; said wire member and elastic element being adapted for insertion between shirt and trousers with the upper end of said member engaging under a trousers button inside the waist-band of the trousers, and with each branch of said member engaging a bight of shirt and a button of said elastic element.

7. Holding means for a shirt in trousers, comprising an elastic strut, adapted at its top to engage trousers and at its bottom to engage shirt; the said strut being provided with arms spreading obliquely downward for engaging the shirt, whereby an upward pressure of shirt tends to spread said arms further; and an elastic tie extending horizontally between said arms, resisting their spreading.

8. Holding means for a shirt in trousers, comprising an elastic strut, adapted at its top to engage trousers and at its bottom to engage shirt the said strut composed of an elastic triangle having a top point adapted to engage a button on trousers and two bottom points each with button adapted to engage the shirt, each side of the triangle having an element capable of being extended elastically; and there being between the top and bottom buttons a button-engaging strut capable of being spread laterally thereby to yield vertically when under compression as a strut.

9. Holding means for a shirt in trousers, comprising an elastic strut, adapted at its top to engage trousers and at its bottom to engage shirt; the said strut composed of an elastic triangle having a top point adapted to engage a button on trousers and two bottom points each with button adapted to engage the shirt, each side of the triangle having an element capable of being extended elastically; and there being between the top and bottom buttons a button-engaging strut capable of being spread laterally thereby to yield vertically when under compression as a strut; said extensible three sides of the triangle comprising a single strip of elastic webbing folded at two triangle corners.

10. Holding means for a shirt in trousers, comprising an elastic strut; having its top formed with a free, vertical recess, opening upward, adapted for a single, pivotal button-engagement of trousers; and having spread arms at its bottom, yieldable laterally, with means at the end of each said arm for separate engagement of the shirt; the said strut being rotatable around its said pivotal engagement and being yieldable elastically to vertical stresses compressing it.

Signed at Quincy, Massachusetts, this second day of September, 1927.

GUYON LOCKE.