(No Model.)

E. M. BEAR.

Clasp.

No. 233,964. Patented Nov. 2, 1880.

Fig. 1.

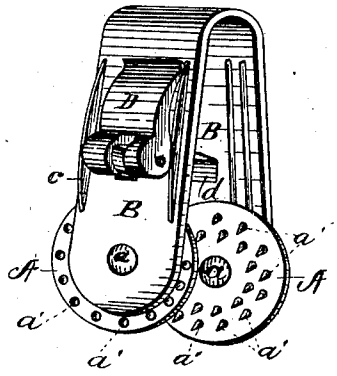


Fig. 2.

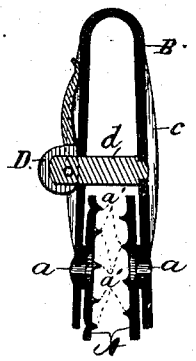


Fig. 3.

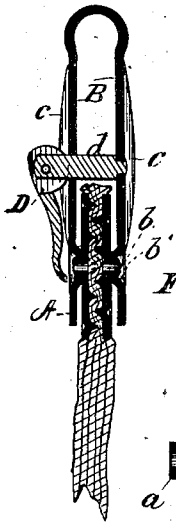


Fig. 4.

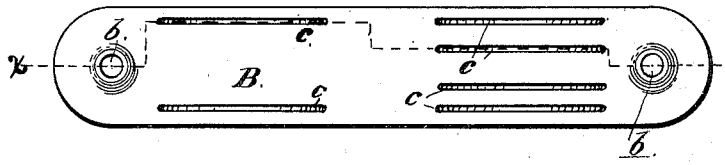


Fig. 5.

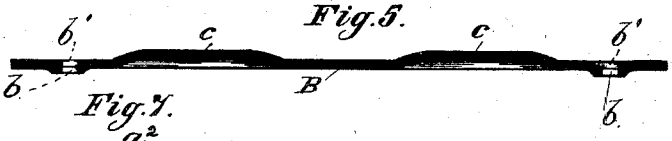


Fig. 6.

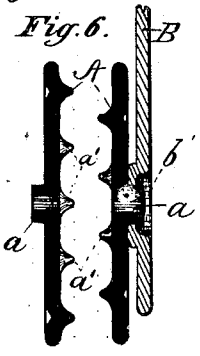


Fig. 7.

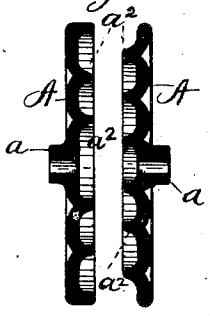


Fig. 8.

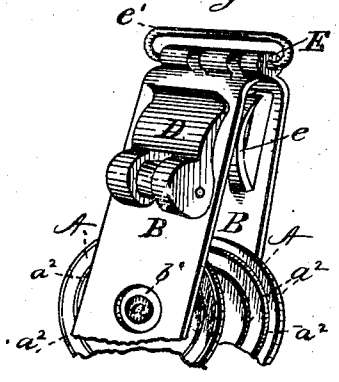
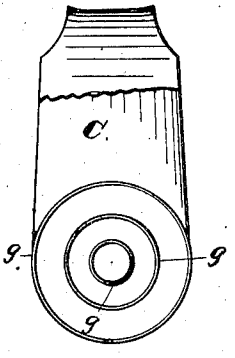


Fig. 9.



Fig. 10.



WITNESSES:

Charles Barnes,

M. T. Edelen.

INVENTOR:

Emanuel M. Bear,

By W. R. Edelen,

his ATTORNEY.

UNITED STATES PATENT OFFICE.

EMANUEL M. BEAR, OF OIL CITY, PENNSYLVANIA.

CLASP.

SPECIFICATION forming part of Letters Patent No. 233,964, dated November 2, 1880.

Application filed August 4, 1880. (No model.)

To all whom it may concern:

Be it known that I, EMANUEL M. BEAR, of Oil City, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Clasps for Supporting Garments; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in devices for supporting garments, and is the means of especial benefit as regards convenience and health.

The great objection to buttons is, they may not be in the proper location on the garment to accommodate the wearer with ease and comfort. They are also very inconvenient on account of constantly dropping off unexpectedly, and especially when the wearer may not have the appliances to immediately replace them; but clasps of various forms have heretofore been used. Many of these clasps consist of a piece of elastic sheet metal bent over in the middle of their length, with a ring or other means to retain together the arms thus formed. Some of these clasps have also been provided with semi-spherical plates pivoted to each arm of the bent clasp. Other clasps have been formed with lugs projecting from their sides, to which lugs an eccentric-lever has been pivoted, and I do not consider such clasps as my invention, but will briefly mention here the distinct features thereof.

My invention consists in clasps for suspenders provided with pivoted plates having projecting rings, or rings of points, the rings of one plate of a pair being made to enter in the recess between the rings of the other plate, in combination with a cam pivoted to a pin projecting from one arm of the clasp through the center of the other, as will hereinafter be described in connection with the drawings, and then pointed out in the claims.

In the drawings, Figure 1 represents a perspective view of my improved clasp or button substitute. Fig. 2 represents a section of the improved clasp with the disks open. Fig. 3 represents a sectional view with the clasp closed and the disks clutching a piece of fabric. Fig. 4 represents the blank for the clasp, provided with corrugations. Fig. 5 represents a sectional view of the blank, taken through the line *x* of Fig. 4. Fig. 6 represents an enlarged view of the disks, showing the method of meshing the teeth and also of securing the rivets to the clasp. Fig. 7 represents another enlarged view with the clutches on the disk formed of annular rings. Fig. 8 represents a clip provided with a hinge-joint, and the disks provided with annular clutching-rings. Fig. 9 represents a section of a clasp having annular rings struck through the metal. Fig. 10 represents a front elevation of a clasp broken away to show the rings.

The letters A A indicate the annular disks, which are provided with pivots or rivets *a a*, struck out of the solid metal, and projecting sufficiently so as to be flanged or riveted to the clasp B through the holes *b b* formed in the countersunk portion *b' b'*. Solid rivets can be employed for securing the disks to the clasp or clip.

The disks are provided with a number of projections or points, *a' a'*, which are forced through the body of the metal by means of a die adapted to the purpose. These points *a'* are so arranged in rings on the disks that each ring will enter about midway between each other and not strike their face edges or points, thus firmly securing any kind of fibrous material without in the least straining or rending any of the strands thereof. The annular rings a^2 formed on the disks (shown at Figs. 7 and 8) can be substituted for the points heretofore described, and work equally as well.

The clasp B is provided with corrugations *c c*, for giving greater strength to the material, thus allowing said clasp B to be made of much lighter metal, and yet sufficiently strong for the purposes designed.

The countersunk portion *b' b'* prevents the projecting rivets *a a* from catching the wearing-apparel of the wearer, and it also assists in strengthening the clasp.

The clasp is opened by its own resiliency and closed by means of an ordinary cam-lever, D, hinged to a pin, *d*, riveted to one of the branches of the clasp B and passing through

an opening cut in the central portion of the other, though any other suitable device can be employed for closing the clasp.

The clasp shown at Fig. 8 is provided with a hinge, E, and a spring, *e*, struck out of the solid material of said clasp B. The rivet holding the hinge E is bent over and forms a loop, *e'*, for securing the short suspender-strap. A hinged clasp is very convenient when using unusually thick fabric, as it allows the clasp to open considerably compared with a solid spring-clasp.

At Figs. 9 and 10 are different views of the same device. The clasp C has annular rings *g* struck through and projecting beyond the face of the clasp C, for clutching the fabrics.

The pivoted disk can be of any convenient contour other than annular, if necessary, without changing the spirit of my invention. Also, the gripers or clutching devices on the faces of the disks can be of any convenient design or contour for securing the garment, such as serrated, pointed, or scalloped.

When using my improved clasp I employ six clasps, which take the place of the buttons commonly used. The clasp is opened, as shown at Fig. 2, and passed down on opposite sides of the fabric, when the cam is thrown down and the material secured, as represented at Fig. 3. The disks, as constructed with pivots, remain stationary on the garment, while the clasp can oscillate in any direction and not rend or tear the fabric of the garment.

Having thus described my invention, that which I claim as new, and desire to secure by Letters Patent, is—

1. Clasps for suspenders provided with pivoted plates having projecting rings, or rings of points, the rings of one plate of a pair being made to enter in the recess between the rings of the other plate, in combination with a cam pivoted to a central pin, substantially as shown and described.

2. In a clasp, the combination of two plates, B, hinged together, looped hinge-pin *e'*, and disks provided with projecting rings, or rings of points, that pass between each other, with central pin, *d*, and cam-lever pivoted to said pin, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EMANUEL M. BEAR.

Witnesses:
W. R. EDELEN,
GEORGE ROSS.