F. P. BARNEY.

LINK CUFF BUTTON.

APPLICATION FILED AUG. 26, 1910.

991,819. Patented May 9, 1911.

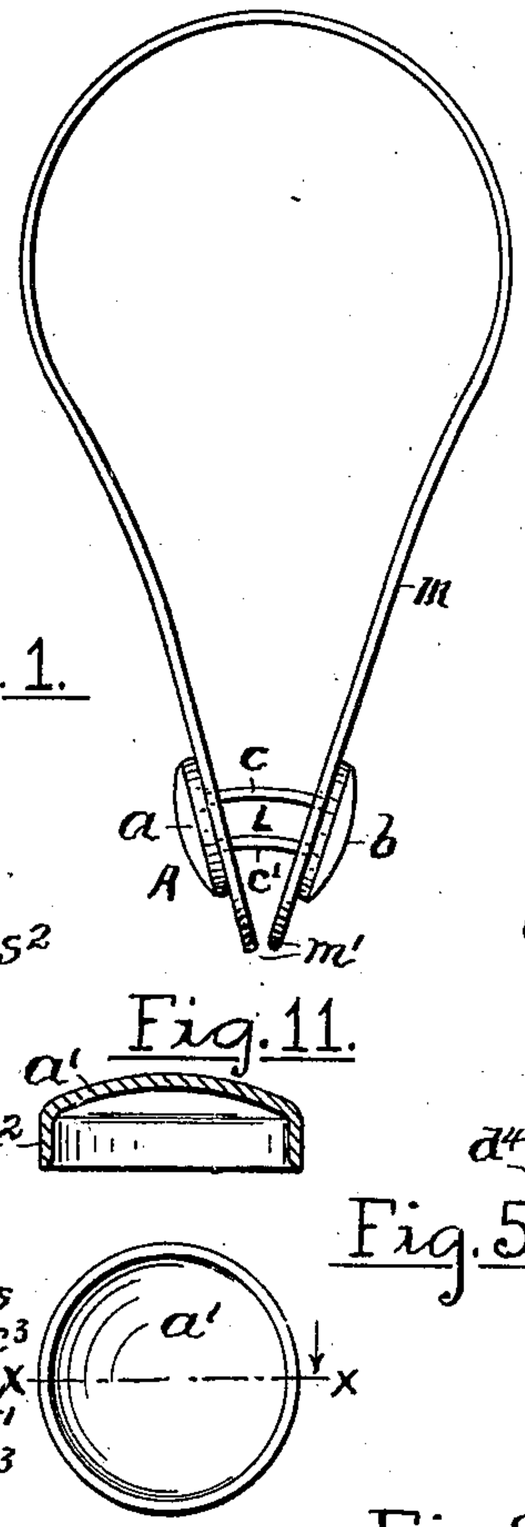

Fig. 1.

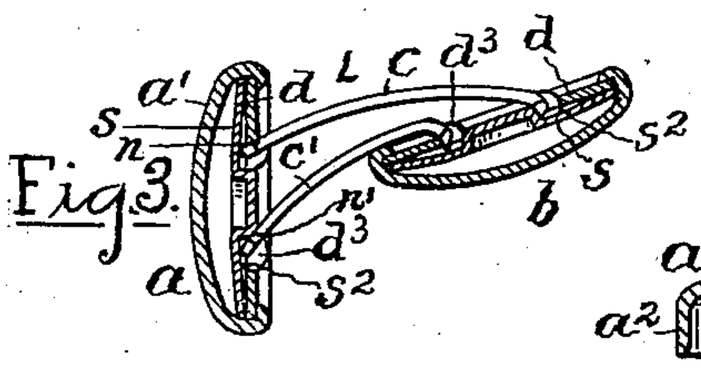

Fig. 3.

Fig. 11.

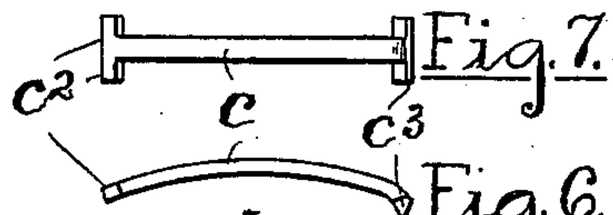

Fig. 7.

Fig. 6.

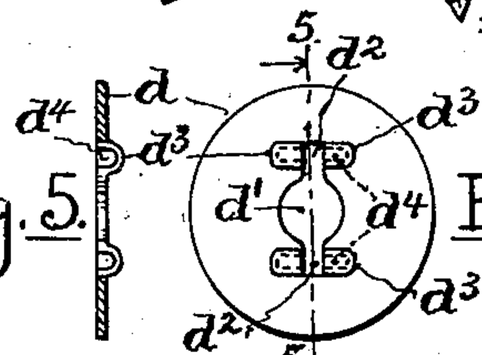

Fig. 5.

Fig. 4.

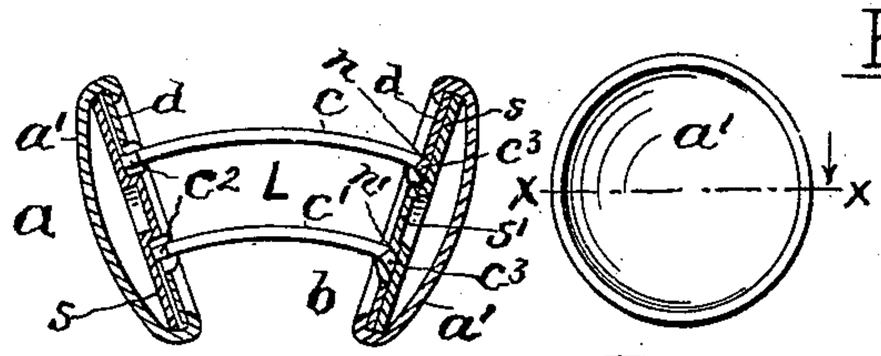

Fig. 2.

Fig. 10.

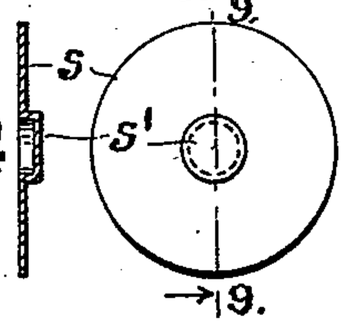

Fig. 9.

Fig. 8.

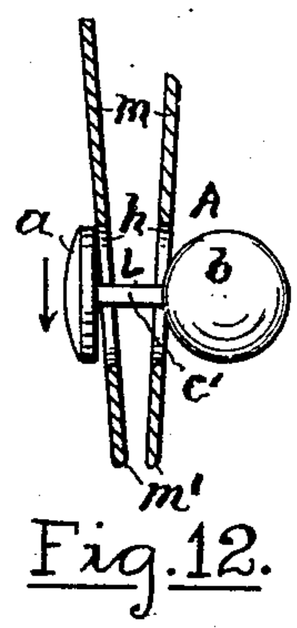

Fig. 12.

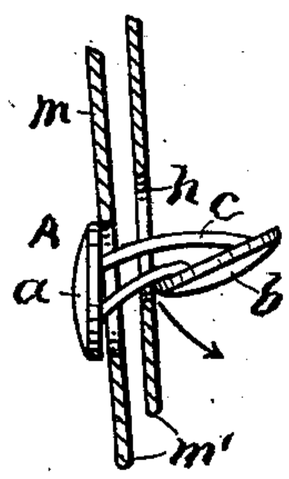

Fig. 13.

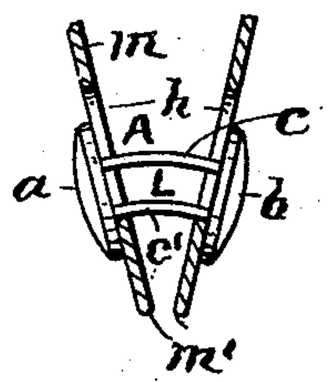

Fig. 14.

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By Geo. H. Lemington,
Atty.

UNITED STATES PATENT OFFICE.

FRANK P. BARNEY, OF CHARTLEY, MASSACHUSETTS, ASSIGNOR TO JOSEPH H. TIDD AND WINTHROP L. TIDD, OF TAUNTON, MASSACHUSETTS, COPARTNERS AS FIRM OF WINTHROP MANUFACTURING COMPANY, OF ATTLEBORO, MASSACHUSETTS.

LINK CUFF-BUTTON.

991,819. Specification of Letters Patent. Patented May 9, 1911.

Application filed August 26, 1910. Serial No. 579,120.

To all whom it may concern:

Be it known that I, FRANK P. BARNEY, a citizen of the United States, residing at Chartley, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Link Cuff-Buttons, of which the following is a specification.

My invention relates more particularly to link cuff-buttons, and it consists essentially in the novel construction and combination of parts arranged to produce a solderless link cuff-button having a laterally expansible post or link member proper, jointed to and connecting both the head members, all as hereinafter set forth and claimed.

The object of this invention is to produce a simple and inexpensive non-separable cuff fastening, capable of being readily attached to and disconnected from the cuff. The improved button herewith is so devised that the act or operation of positioning it in the button-holes of the cuff for use causes the link or connection thereof to automatically expand or open in a lateral direction, thereby converting it from a relatively narrow, easily insertible link to a comparatively wide one, incapable of turning in the button-hole.

In the accompanying sheet of drawings, Figure 1 represents a top plan view of my improved link button, normally attached to a bendable cuff or analogous article of wearing apparel. Fig. 2 is a corresponding view of the button, in enlarged scale, the two head members being in section and the cuff omitted. Fig. 3 represents the connecting post or link in the closed or contracted position, and showing the then relative position of the head members, the latter being in section. Fig. 4 is a plan or face view of the back disk of the button head. Fig. 5 is a transverse sectional view of it, taken on line 5 5 of Fig. 4. Figs. 6 and 7 represent, respectively, a side elevation and plan view of one of the bar members of the link. Fig. 8 is a face view of the spring disk, employed in connection with the said back disk and link members. Fig. 9 is a transverse sectional view of it, taken on line 9 9 of Fig. 8. Fig. 10 is an elevation of the cup-shaped shoe or cap member, adapted to receive the said back and spring disks. Fig. 11 is a transverse sectional view of the same, taken on line x x; and Figs. 12, 13 and 14 represent various positions of the button while it is being attached to the cuff, the latter being in section, longitudinally of the button-holes.

A, again referring to the drawings, designates my improved link cuff-button as a whole; a and b, the respective head members, and L, the expansible and contractible link jointed to and connecting the said two heads. The button may be made of precious metal, plated stock or other suitable metal. The head members may be alike or they may vary in form, size and ornamentation, if desired. That is to say, in the latter case, when the button is mounted in the cuff, the outer head may be the larger and more ornamental one, and the companion or inner head the smaller one.

In the drawing both head members, a and b, of the button are represented as being substantially alike in size and construction. Each, as drawn, consists of the outer cup-shaped shell or cap a^1, the sheet-metal back disk d and the thin, flat spring-disk or plate s. The two disks are superimposed, disk d being uppermost, and positioned in the cap and secured in place by turning or rolling over the outer edge of the flange a^2 of the cap in any suitable or well-known way.

The disk d, Figs. 4 and 5, has a central aperture d^1 in open communication with the oppositely disposed narrow, lateral recesses d^2. The metal at the opposite edges of each recess is upswaged at d^3 to produce the two short alining bearings d^4; these latter open into the corresponding recess and are adapted to freely receive the pivot or pintles of the link member.

The link proper, L, as before stated, consists of the two small curved narrow bars or connections c and c^1 of unequal length, c^1 being the shorter one. Each end of the link members is provided with oppositely arranged pintles, having a polygonal form cross-sectionally. I prefer to make the pintles c^2 of the connections mounted in the head a square, the pintles c^3 at the opposite ends being, say substantially triangular in shape. The end portions c^3 of the connections may be bent somewhat abruptly, as indicated in the drawing.

In assembling the several members of the device the pintle-ends c^2 of the two bars, c, c^1, are first passed through the opening d^1 of disk d and moved outward in the recesses d^2 until the pintles enter the respective bearings d^4, followed by placing the spring-disk s flatwise against the disk d, the raised circular center part s^1 at the same time filling the hole d^1. The thus superimposed members d and s and the two interposed bars are next positioned in the cap a^1 and the whole secured therein by turning over or bending the cap's flange a^2. I would state that while the drawings represent the two heads a and b as being substantially alike, the head a may be considered as the front or outer one, since it carries the pivot-ends c^2 of the bars c, c^1. Fig. 2 represents the thus completed head. The construction of the companion or back head b is substantially the same as just described with respect to head a, except that it has the pivot-ends c^3 of the two bars mounted therein, as shown in said Fig. 2. This figure represents the button in the open or normal position, the bar members of the link being fully expanded laterally and parallel with each other. The action of the springs s, in coöperation with the adjacent plane faces of the respective pintles contacting flatwise therewith serve to prevent the link from accidentally flexing or contracting.

The manner of operation is as follows: The button head b is first swung inwardly at substantially right angles to the face of the front head member a, thereby contracting or narrowing the link part, as represented in Fig. 3, and then inserted through the registering button-holes h of a cuff m. Fig. 12 shows the corresponding arrangement of the button A in the ends of the cuff. The button is next turned in the buttonhole bodily 90° in the arrow direction (Fig. 12), it then appearing substantially as shown in Fig. 13. A slight pressure upon the cuff, as in laterally separating its ends, operates to swing or tip the head b outwardly (see arrow Fig. 13) until it assumes the normal position, the link at the same time automatically expanding in a lateral direction. Figs. 1, 2 and 14 show the corresponding or normal position of the several members. Of course, in thus tipping the head b, the movement causes the bars to separate to their normal limit.

It may be stated that since the curved inner bar c^1 is shorter than the other or outer member c, the act of swinging the link rearwardly operates to move the pivot end c^3 of bar c^1 somewhat nearer the front a, consequently the head b will be moved from its former plane (shown in Fig. 2) and stand at a materially different angle. Figs. 2 and 3 represent the button in the correspondingly expanded and contracted positions. In thus contracting the link the pintles of the respective bars are moved axially so as to stand cornerwise with respect to the plane of the disks d and s, thereby temporarily increasing the tension of the disks s by springing the latter outwardly and producing a space s^2 between each pair of disks, as indicated in Fig. 3.

In order to prevent the members c, c^1 of the link from swinging too far or past the proper normal position, the pivot ends c^3 of the bars mounted in the head b are constructed so as to abut the adjacent edges of the recess d^2 and the center portion s^1 of the parts d and s, respectively, as indicated in Fig. 2 at the points n and n^1. The pivot ends c^2 mounted in the head a are in turn and in like manner adapted to engage the corresponding portions of its parts d and s, and thus limit the rearward movement of the link L when the latter is contracted, as indicated in Fig. 3.

What I claim as my invention and desire to secure by United States Letters Patent is:—

1. As a new article of manufacture, a non-separable link cuff-button, comprising a pair of button head members, a post or link proper jointed to and connecting both the said heads, the said link portion consisting of a pair of narrow bar members independently hinged to and connecting said heads, whereby the act of manipulating the button, as in attaching it to a cuff, causes the link to automatically expand or open in a lateral direction.

2. In a link cuff-button, the combination of a pair of button-heads, a pair of bent bar members, constituting the link proper, independently hinged to and connecting the button-heads, and means coöperating with the latter and link arranged to prevent the heads from being moved to a position parallel with each other.

3. In a link cuff-button, the combination of a pair of button heads, a pair of laterally separated independent parallel bar members of unequal length constituting the link proper, having their outer ends independently hinged in said button heads, and springs mounted in the latter and bearing against the said end portions of the bars.

4. In a link cuff-button, the combination of a pair of button heads, a laterally expansible, spring-pressed post or link proper, having its ends pivotally mounted in both of the heads, whereby it is capable of angular movement with respect to the heads, and means for limiting the degree of such movement.

5. In a link cuff-button, the combination of a pair of button heads, a pair of laterally separated, light curved bar members of un-

equal length, constituting the link proper, interposed between, independently hinged to and connecting the heads, whereby both the bars may be angularly moved or swung concurrently with respect to the heads, and means for limiting the degree of said movement.

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

FRANK P. BARNEY.

Witnesses:
GEO. H. REMINGTON,
CALVIN H. BROWN.