Nov. 21, 1950 J. R. ANDRUS 2,531,244

GARMENT CLASP

Filed Oct. 23, 1945

FIG. 1

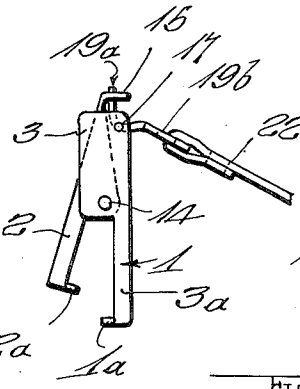



FIG. 2

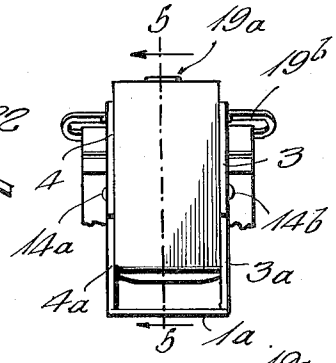



FIG. 3

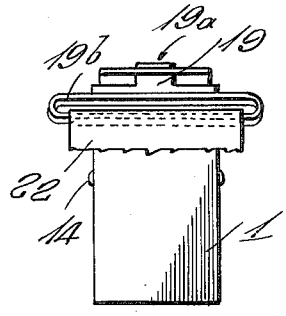



FIG. 4

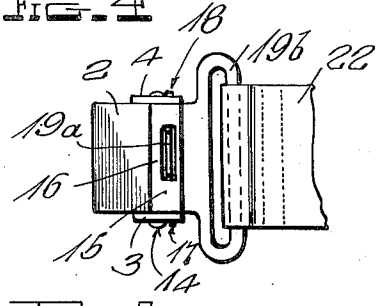



FIG. 5

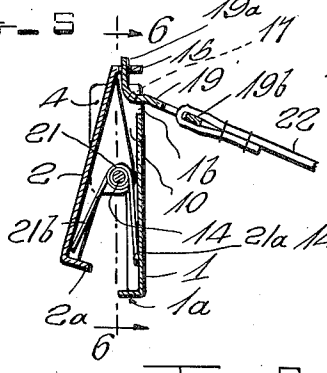



FIG. 6

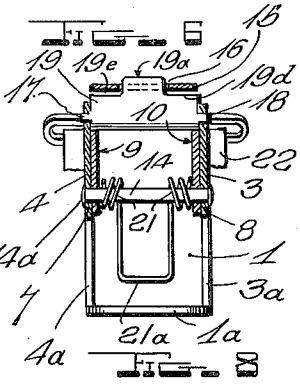



FIG. 8

FIG. 7

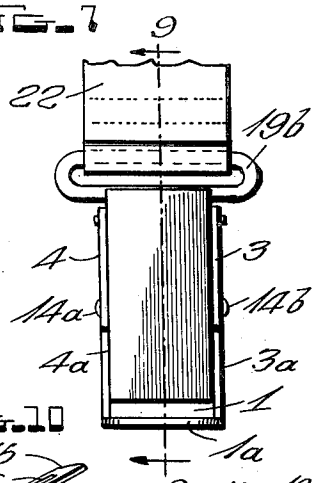
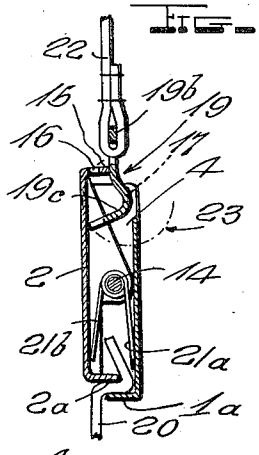



FIG. 9



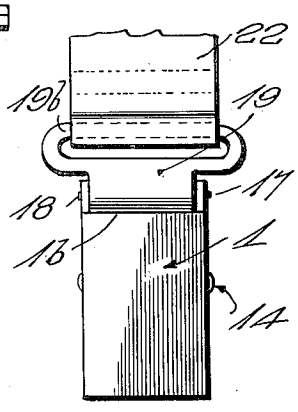
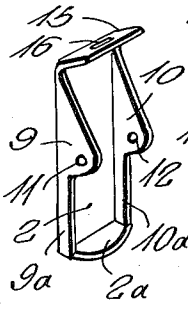




FIG. 10



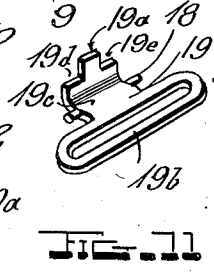




FIG. 11

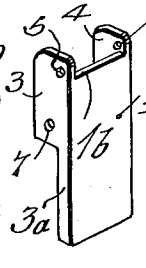



FIG. 12

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## GARMENT CLASP

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Application October 23, 1945, Serial No. 623,906

2 Claims. (Cl. 24—250)

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My invention relates broadly to garment clasps and more particularly to an improved construction of cam-operated clasp for garments.

One of the objects of my invention is to provide an improved construction of garment clasp formed from a minimum number of parts which may be inexpensively stamped from sheet metal on a mass production scale for forming a highly practical construction of garment clasp.

Another object of my invention is to provide a construction of garment clasp including a pair of pivotally connected clasp members having spring ends therebetween normally tending to urge the clasp members to open position and including a cam-shaped actuator connectable with a garment suspension member for positively moving the clasp members to closed position.

Still another object of my invention is to provide a construction of garment clasp including a pair of pivotally connected clasp members, one of which terminates in an inwardly directed end portion which is apertured to receive a tongue member which is pivotally mounted with the other said clasp members whereby the two clasp members may be guided to closed position for gripping the edge of a garment therebetween.

Still another object of my invention is to provide a construction of two-part garment clasp in which coacting parts are pivoted relative to each other with a garment suspension member pivoted to one of the parts having cam-shaped terminus thereon operative between the parts of the clasp for positively moving the parts of the clasp to closed position for gripping the edge of a garment.

Other and further objects of my invention reside in the construction of cam-shaped actuator for a garment clasp as set forth more fully in the specification hereinafter following by reference to the accompanying drawings in which:

Figure 1 is a side elevational view of the garment clasp of my invention with the parts thereof illustrated in open position for disengagement from a garment; Fig. 2 is a front elevational view of the garment clasp with parts shown in the position illustrated in Fig. 1; Fig. 3 is a rear elevational view of the garment clasp with parts shown in the position set forth in Figs. 1 and 2; Fig. 4 is a top plan view of the garment clasp in the position illustrated in the preceding figures; Fig. 5 is a central vertical longitudinal sectional view taken on line 5—5 of Fig. 2; Fig. 6 is a fragmentary longitudinal sectional view taken substantially on line 6—6 of Fig. 5 with certain of the parts shown in section and certain of the parts illustrated in elevation; Fig. 7 is a front elevational view of the garment clasp with parts illustrated in closed position for engaging a garment between the clasp members; Fig. 8 is an elevational view looking at the rear of the garment clasp as illustrated in Fig. 7; Fig. 9 is a vertical sectional view taken substantially on line 9—9 of view 7; Fig. 10 is a perspective view of one of the clasp members of the garment clasp; Fig. 11 is a perspective view of the cam actuator which operates intermediate the clasp members of the garment clasp; and Fig. 12 is a perspective view of the coacting clasp member of the garment clasp.

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My invention is directed to a simple construction of garment clasp which is readily adapted to mass production at low cost for producing a construction of garment clasp which is highly practical, durable and efficient in use. I have developed the garment clasp of my invention after extensive experimentation in an effort to secure a sturdy construction of garment clasp having a minimum number of parts of a construction which insures relatively long life. The wear on the parts is inappreciable and the action of the garment clasp is positive. The cam actuator which connects with a garment suspension member operates between a pair of coacting clasp members for positively moving the clasp members to open position assisted by a spring disposed between the clasp members and conversely, positively moving the clasp members to closed position for engaging a garment in opposition to the action of the enclosed spring.

Referring to the drawings in detail reference characters 1 and 2 designate the coacting clasp members comprising the garment clasp of my invention. Clasp member 2 is shaped to fit within clasp member 1. The clasp member 1 is provided at one end with a garment engaging lip directed substantially normal to the plane of the clasp member and extending toward a correspondingly formed engaging lip 2*a* on clasp member 2. The lip 2*a* extends in a plane substantially normal to the plane of clasp member 2 and is directed toward the clasp member 1 for effecting engagement of a garment which I have represented generally at 20, between the engaging lips 1*a* and 2*a* as illustrated in Fig. 9.

The clasp member 1 terminates in an edged portion 1*b* short of the ends of the side walls 3 and 4 which are coextensive with the clasp member 1. The side walls 3 and 4 project beyond the terminating edge 1*b* and are apertured at 5 and 6 for receiving the oppositely directed trunnions

or pins 17 and 18 on the cam member 19 for pivotally mounting the cam member 19 in position between the ends of the clasp members 1 and 2.

The side walls 3 and 4 of clasp member 1 project for a distance substantially embracing the opposite edges of clasp member 2 for approximately half the length thereof. The side walls 3 and 4 are shortened at 3a and 4a to facilitate the entry of the edge of a garment such as represented at 20, between the engaging lips 1a and 2a. The clasp member 2 has correspondingly foreshortened side wall portions 9a and 10a with coextensive angularly disposed side wall portions 9 and 10 which taper from a substantially central section of the clasp member 2 to the end thereof which is inturned at 15. The inturned end 15 of the clasp member 2 is provided with a rectangular aperture 16 therein, which serves as a guide for the aligned tongue 19a of the cam actuator 19, pivotally mounted between the clasp members 1 and 2 on the trunnions or pins 17 and 18, which extend through apertures 5 and 6 in side walls 3 and 4 of clasp member 1.

A transverse pin 14 extends through apertures 7 and 8 in the side walls 3 and 4 of clasp member 1 and through aligned apertures 11 and 12 in the tapered side walls 9 and 10 of clasp member 2 for pivotally connecting the clasp members 1 and 2.

A coil spring 21 has coiled portions thereof concentrically disposed about the transverse pin 14 with one loop of the coil spring, represented at 21a, bearing against the interface of clasp member 1 and the opposite ends of the coil spring 21, represented at 21b, yieldably engaging the interface of clasp member 2. The two portions, 21a and 21b of spring 21, tend to continuously urge clasp members 1 and 2 to open position in which the engaging lips 1a and 2a are spatially separated from engagement with the edge of garment 20.

The cam actuator 19 has a looped portion 19b at the end thereof through which the garment suspension member 22 is looped. The garment clasp is thus suspended with respect to the garment 20. The cam actuator 19 is shaped to fit within the recessed end of clasp member 1 immediately adjacent the terminating edge 1b. The cam-shaped actuator 19 is slightly curved at its central portion, represented at 19c, immediately adjacent the trunnions or pivot pins 17 and 18. The tongue 19a is coextensive with the curved portion 19c of the cam-shaped actuator and projects beyond the shoulders 19d and 19e thereof. The shoulders 19d and 19e serve as limiting stops with respect to the interface of the inturned end 15 of the clasp member 2 for restricting the movement of the cam actuator when moving the clasp members to open position, illustrated in Figs. 1–6. The tongue 19a follows a curved path, represented by dotted lines 23 in Fig. 9, in positively moving the clasp members 1 and 2 from the open position shown in Fig. 5 to the closed position shown in Fig. 9. In the course of this movement the tongue 19a is withdrawn from a projected position penetrating aperture 16, as represented in Fig. 5, to a position in which tongue 19a scrapes or moves along the interface of clasp member 2, serving as a cam for spreading the upper faces of the clasp members 1 and 2 while directing the engaging lips 1a and 2a of the clasp members 1 and 2 positively toward each other for clasping the edge of the garment 20 therebetween. The end of the tongue 19a engages the interface of clasp member 2 beyond the central pivot thereof on pin 14, thereby rocking clasp member 2 about pin 14 as a center and shifting the engaging lip 2a into overlapping relation with engaging lip 1a of clasp member 1 for gripping the garment 20. The pin 14 is riveted into position between the side walls 3 and 4 of clasp member 1, as represented at 14a and 14b. The side walls 9 and 10 of clasp member 2 are tapered from the center thereof toward the end thereof, thereby allowing the clasp member 2 to rock about pin 14 and separating the inturned engaging lips 1a and 2a by decreasing the spatial relation of the opposite ends of clasp members 1 and 2, which are thus permitted to collapse or telescope with respect to each other.

I have found the construction of the clasp of my invention very sturdy and practical and while I have described my invention in one of its preferred embodiments, I realize that modifications and changes may be made and I intend no limitations upon my invention other than may be imposed by the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States is as follows:

1. A garment clasp comprising a pair of jaw-like members each terminating in a garment-engaging gripping portion, side walls integral with said jaw-like members directed toward each other in overlapping relation, a pivotal connection between said side walls, the side walls of one of said members having a substantially uniform depth and the side walls of the other of said members being formed on a bias tapering toward the end thereof for allowing said members to be angularly displaced with respect to each other for spreading said jaw-like members at the garment-engaging gripping portion for receiving a garment to be supported therebetween, an angularly disposed integral end portion extending from the end of said second mentioned jaw-like member and projecting substantially beyond the end of said first mentioned jaw-like member, said angularly disposed integral end portion having a perforation therein immediately adjacent the terminating end thereof, a cam-shaped actuator pivotally mounted between the side walls of said first-mentioned jaw-like member and having a substantially curved tongue integrally connected therewith and variably extendable through and withdrawable from the perforation in the perforated end portion of said second mentioned jaw-like member with the terminating end of said tongue effecting sliding engagement with the inner face of said second mentioned jaw-like member in a direction toward the pivotal connection of said jaw-like member for moving said second mentioned jaw-like member to a stabilized position in which the bias tapering walls thereof abut with the inner surface of said second mentioned jaw-like member for controlling the opening and closing of said jaw-like members, said tongue operating to positively maintain said jaw-like members closed when said tongue is withdrawn from said perforation in said second mentioned jaw-like member and slides against the inner surface of said second mentioned jaw-like member, and spring means disposed between said jaw-like members.

2. A garment clasp comprising a pair of jaw-like members each terminating in a garment-engaging gripping portion, one of said jaw-like members having a pair of flat parallel side walls extending in a substantially medial position along said jaw-like member to one end thereof, the

other of said jaw-like members having a pair of flat side walls formed on a bias tapering from a substantially medial position of said jaw-like member to one end thereof, the end of said second mentioned jaw-like member projecting beyond the end of said first mentioned jaw-like member, means extending through said side walls for pivotally connecting said jaw-like members on an axis extending through a substantially medial line transversely of said side walls, spring means located on said axis and tending to yieldably spread the garment-engaging gripping portions of said jaw-like members, said second mentioned jaw-like member having the end portion thereof disposed in an angular direction toward the inner face of said second mentioned jaw-like member and being provided with a perforation adjacent the end thereof, a cam-shaped actuator extending between the side walls of said first mentioned jaw-like member and having a substantially curved tongue connected therewith, a pivotal mounting extending transversely of the curved portion of said curved tongue whereby said tongue is movable in an arcuate path with the tip thereof slidably engaging the inner face of said second mentioned jaw-like member in a translatory path approaching the pivotal connection of said jaw-like members for orienting said second mentioned jaw-like member with respect



to said first mentioned jaw-like member, said curved tongue being movable to a position in which the tip thereof penetrates the perforation in said angularly disposed end portion of said second mentioned jaw-like member for spreading said garment-engaging gripping portions of said jaw-like members as said cam-shaped actuator is angularly shifted to move the biased tapering edges of the side walls of said second mentioned jaw-like member toward the inner face of said second mentioned jaw-like member as an abutment and to a position in which the tip of the curved tongue is withdrawn from said perforation and establishes sliding engagement with the inner face of said second mentioned jaw-like member for maintaining the garment-engaging gripping portions of said jaw-like members in closed position.

JOHN R. ANDRUS.


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