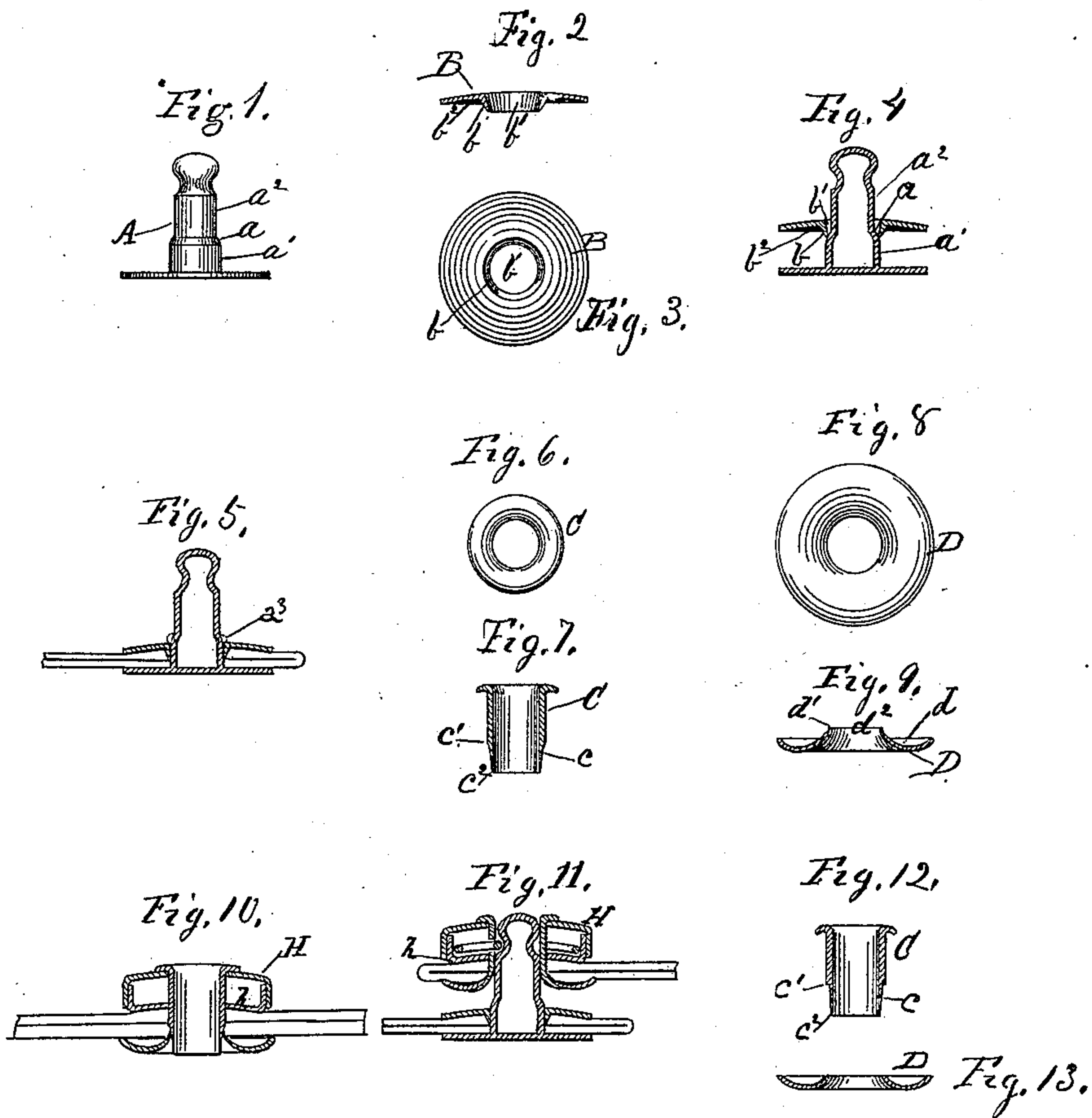


(No Model.)

E. PRINGLE.
BUTTON FOR GLOVES, &c.

No. 347,887.

Patented Aug. 24, 1886.



Witnesses

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UNITED STATES PATENT OFFICE.

EUGENE PRINGLE, OF GLOVERSVILLE, NEW YORK.

BUTTON FOR GLOVES, &c.

SPECIFICATION forming part of Letters Patent No. 347,887, dated August 24, 1886.

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To all whom it may concern:

Be it known that I, EUGENE PRINGLE, a citizen of the United States, residing at Gloversville, in the county of Fulton and State of New York, have invented certain new and useful Improvements in Buttons for Gloves, Shoes, &c., of which the following is a specification.

My invention relates to improvements in buttons for which Letters Patent were granted me July 4, 1882, and is intended to remedy certain defects and difficulties attending the attachment of the respective halves or portions of that button to the leather or fabrics they are applied to.

The objects of my invention are to provide with a slightly-concave washer an annular scraping-lip, which will surround its central hole, for co-operation with a gradually-tapering shoulder made with the coacting stud, to clear the side surfaces of the stud of the fabric or leather which heretofore gathered around the same, and to provide the entering end of the tubular rivet with an annular tapering outer surface, running from a shoulder down to the end of the same, for co-operation with a washer having a ring-form cavity in its upper side and around the central perforation, whereby the washer will be made to fit tightly on the entering end of the said rivet, and carry the leather or fabric heretofore gathering around the same forward as the washer is advanced on the rivet; and, also, to provide means by which the metal of the rivet will be more easily closed and clinched on the washer surrounding the rivet without leaving any material projection of the clinched portion of the rivet above the surface of the washer it is turned on. I attain these objects by the means illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of the improved stud. Fig. 2 is a sectional view of the coacting washer. Fig. 3 is a plan view of the same. Fig. 4 is a sectional view of the stud and washer when the latter is in place and before being secured. Fig. 5 is a sectional view of the same when secured in place with the leather or fabric. Fig. 6 is a plan view of the tubular rivet. Fig. 7 is a sectional view of the same. Fig. 8 is a plan view of the attaching-

washer. Fig. 9 is a sectional view of the same. Fig. 10 is a sectional view of the button-head, rivet, and washer when arranged together, and before the clinching of the rivet. Fig. 11 is a sectional view of all parts of the button when secured to the respective portions of a glove or boot, and Figs. 12 and 13 are sectional views of modified forms of rivet and washer which can be employed.

The same letters of reference refer to similar parts throughout the several views.

In the drawings, A is the stud, which differs from the stud employed by me in my former invention, in the form of the annular shoulder a , which is shown to be made with a gradually-tapering form from the lower end of the reduced middle section, a^2 , to the top of the base-section a' of the stud, while in my former invention this tapering form of shoulder is not used.

B is the washer, which is made to be slightly concave on its lower side, and has projected downwardly from the central opening, b' , the annular knife-edge lip b . The diameter of this annular knife-edge lip at its edge is slightly less than the diameter of the base portion a' of the stud A, so that when the washer is placed on the stud, as shown in Fig. 4, it will be prevented from freely passing down on the base portion a' of the same, while when forced down under pressure the knife-edge lip b will be expanded to the size of the base portion a' of the stud and scrape on its surface to clear the same from whatever leather or fabric which may gather around said base portion when the stud is pushed through the hole in the fabric or leather, or both, with which this stud is to be secured. This washer is secured from rising up on the stud by the metal of the annular tapering shoulder a of the same being clinched or burred down on the upper side of the washer by means of any suitable tool or machine, so that there will be produced the holding burr or clinch a^3 (shown by dotted lines in Fig. 5,) all around from the stud on the washer, to hold the latter down on the fabric between. By this part of my improvements I am enabled to use in leather smaller holes than heretofore required for the passage of the stud, as the edge of lip b scrapes the material down from the sides of the stud, and works between the metal of the stud and the

leather or fabric, and packs the latter wholly on the outside of said lip, while the concavity b^2 of the washer will receive this packed material as it is worked outwardly and upwardly by the action of lip b in its progress downward on the stud.

C is the button-head rivet which unites the button-head H with washer D. This rivet is made with a tubular form from its head, and has its entering end provided with the annular taper c , running down from shoulder c' to a knife-edge, c^2 , and the inner surface of the bore of this rivet is made uniformly parallel, as shown.

D is the washer which operates with rivet C for holding the button-head H secured with the leather or fabric of the glove or boot. This washer is made with a ring-form concavity, d , in its upper side, and has the upwardly-projected annular lip d' surrounding the central hole, d^2 , which hole is of diameter about the same as the outer diameter of the entering end of rivet C between shoulder c' and its knife-edge c^2 , so that the taper of the end of rivet C will enter hole d^2 far enough to catch with the same.

In securing button-head H to the fabric, rivet C is passed through the center of the button and through suitable hole made in the leather or fabric of the glove or boot. The washer D is then slipped on the tapering end of the rivet, when, with a suitable tool, the washer will be carried upon the said rivet, with its annular lip d scraping on the outer surface of the latter, and moving before it all the leather or fabric adhering to the rivet, and the tool will also operate with the tapering end portion of the rivet to clinch the same down on the washer, and this tapering end portion of the rivet will, by reason of its relative reduction of thickness, readily yield before the applied force of the tool and become smoothly and evenly seated in all portions on the lower side of the washer with the knife-edge of rivet, causing the joint between to be almost imperceptible and without material projection or ridge whatever. The ring-concavity d of the washer permits the leather or fabric to gather therein, while the outer margin edge of the washer will coact with the outer margin surface of the disk h of button-head H to make a bite all around on the leather or fabric, or both between and neighboring the sides of rivet C.

By my above-described improvements the said washers B and D can be more quickly applied to the respective coacting devices, as the leather or fabric will be prevented from working up between the edges of the holes of the respective washers and the surfaces of the respective coacting devices and to the outside of

said washers, as heretofore in the use of the old form of construction of said parts. Another advantageous result obtained is, that the clinching of the respective parts will be more readily effected without applying the degree of force heretofore required for clinching the parts together.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In devices for securing parts of separable buttons to gloves, boots, &c., the stud A, having at the upper termination of its base portion a' the annular tapering shoulder a , for co-operation with a washer having a central hole slightly smaller than said base portion a' , for the purposes and operations substantially as set forth.

2. In devices for securing the parts of separable buttons to gloves, boots, &c., the washer B, made with concavity b^2 in its lower side, and having the knife-edge form of annular lip b around the central hole, b' , in combination with stud A, having the annular tapering shoulder a running down to the base portion a' , which is slightly greater in its diameter than the central hole, b' , of said washer, substantially as and for the purposes and operations set forth.

3. In a separable button, the tubular rivet C, having its upper portion of body below its head made with heavy parallel walls, and its end portion opposite from the head made with the annular downwardly taper from shoulder c , whereby the upper portion of the said rivet between its head and shoulder c will be preserved unaffected when force is applied to the tapering portion below said shoulder for clinching the same down on the washer, substantially as set forth.

4. The combination, with tubular rivet C, having its lower end portion made tapering, of the washer D, provided with the ring-concavity, and having lip d' concentric to a central perforation which corresponds with the entering end of the tapering portion of said tubular rivet, substantially as and for the purposes set forth.

5. The combination, with button-head H, provided with a central orifice, and the washer D, having an upturned annular lip around its central perforation, of the rivet C, above described, having its upper portion fitting the orifice in said button-head, and the edge end of its tapering lower part fitting the central perforation of said washer, substantially as set forth.

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Witnesses:

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