

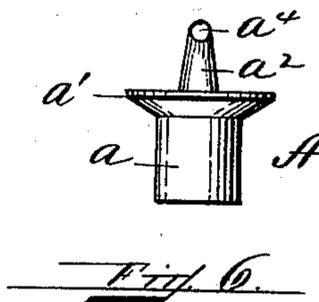
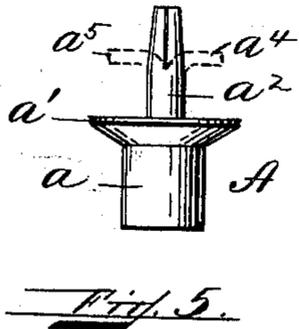
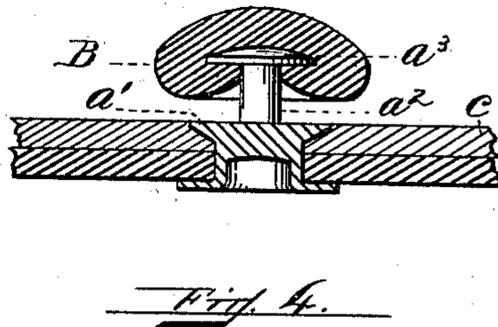
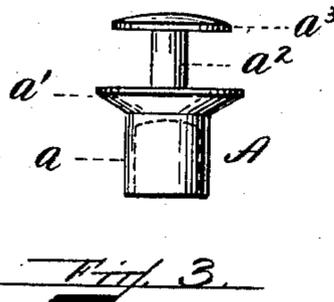
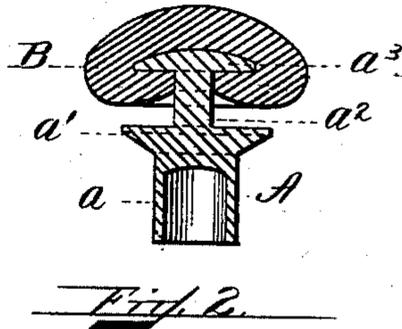
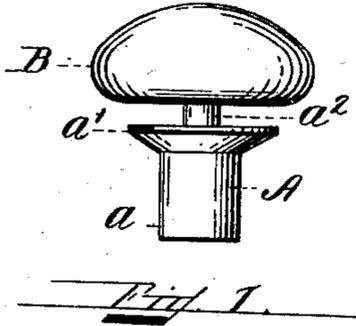
No. 757,025.

PATENTED APR. 12, 1904.

A. L. COLE.  
LACING BUTTON.

APPLICATION FILED NOV. 19, 1902.

NO MODEL.



*Witnesses:*  
E. A. Allen,  
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# UNITED STATES PATENT OFFICE.

ALBERT L. COLE, OF AUBURNDALE, MASSACHUSETTS.

## LACING-BUTTON.

SPECIFICATION forming part of Letters Patent No. 757,025, dated April 12, 1904.

Application filed November 19, 1902. Serial No. 131,930. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT L. COLE, of Auburndale, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Lacing-Buttons for Boots and Shoes and other Purposes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to the manufacture of lacing-buttons adapted to be inserted in boots, shoes, and gloves and in other leather and cloth work to receive the lacing-string or buttonhole or for such other purposes to which the invention might be applicable; and it consists, essentially, of a stud having a hollow tubular shank, one end being closed and having a shoulder or flange to secure the device to the material or fabric and an upper rounded neck which spreads at its upper end to form a flat head which is adapted to hold a semi-spherical button of composition, all to be hereinafter more particularly described.

In the accompanying drawings, showing my invention on a greatly-enlarged scale, Figure 1 represents a side elevation of the improved lacing-button. Fig. 2 is a vertical sectional view thereof. Fig. 3 is a detail view of the side elevation, showing the stud or rivet before the head is applied. Fig. 4 is a vertical sectional view of the lacing-button set in the material. Fig. 5 is a side elevation of a modified form of the stud or rivet before the head is applied. Fig. 6 is a side elevation of the same modification shown in Fig. 5, but viewed from a different angle and showing the neck split and bent down.

In carrying out my invention the rivet A is made by taking wire of a diameter just equal to the diameter of the rivet A at its widest portion—namely, at the shoulder  $a'$ —and in a rivet-making machine forming therefrom rivets having a lower rounded shank, a shoulder, a neck, and a flat head. The shank or body  $a$  of the rivet is of smaller diameter than the shoulder  $a'$  at its upper end, and above the shoulder  $a'$  is the neck  $a^2$  of small diameter, which at its upper end is spread or flattened out to form the flat head  $a^3$ . The shank  $a$  is made tubular by drilling out its center to a point just below the shoulder  $a'$ , and

the shell of the shank is made so thin that it may be easily spread and turned outward when it is being secured to a piece of leather or other material substantially in the same manner that eyelets or tubular rivets are now upset. After the rivet A has been completed the cap B is made of rubber composition, papier-mâché, celluloid, or any other suitable plastic material and molded around the head  $a^3$  of the rivet in the form of a button of mushroom-like shape—that is, (see Fig. 4,) the distances between the under surface of said button and the adjacent surface of said shoulder when measured along the line of radial curvature of said under surface decrease and then increase as said line approaches the shank. The sizes of and the relations between the shoulder, under surface, and shank are such that when a lacing-string or material in which a buttonhole is made is drawn into engagement with said surface and shank the outer portion of said lacing-string is compressed, fills the entering portion of said space between said surfaces, and prevents clothing—as, for example, the bindings of a woman's dress—from being caught on the under portion of said button, while the inner portion of said lacing or material, being relieved of compression by the greater space about the stem and having to be recompressed between said surface before said lacing or material and the button can be disengaged, tends to lock said lacing or material within the button, and thus prevents said disengagement. After the button has been hardened by drying or other means it may be enameled in any desired color. If desired, the cap or head B may be made of rubber composition and vulcanized until it is firm, yet so elastic that the edges of the cap will give and bend to a moderate degree should anything catch under the edge of the cap, thus preventing tearing the garments.

In Figs. 5 and 6 is shown a modified form of the stud or rivet A, in which the neck  $a^2$  is, instead of being flattened to form the head  $a^3$ , made longer and of diminishing diameter, as illustrated in Fig. 5. The neck  $a^2$  is then split from the top for about half its length, and the two parts  $a^4$  and  $a^5$  are bent over in opposite directions in such a way as to form,

with the neck, a T. In Fig. 5 the neck is shown as being split, and the prongs  $a^4$  and  $a^5$  are shown by the dotted lines in their final horizontal position. Fig. 6 shows the prongs  $a^4$  and  $a^5$  bent downward, but viewed from one side and end onto the prong  $a^4$ .

It is obvious that the method of attaching the head or button to the rivet or stud may be varied to suit the size of the button or its use, and the size and shape of the button may be changed to conform to its use.

The great advantages of my lacing-button are that it may be used either as a lacing-stud or as a button and that it will not wear out or tear garments coming in contact with it.

Obviously my invention can be embodied in many different forms without departing from the spirit thereof, and I desire to claim my invention in the broadest manner legally possible.

What I claim is—

1. As a new article of manufacture, a lacing-button, made up of a securing member or body having a shoulder; a neck, and a head, covered with plastic material, which, when hardened, has a smooth surface; the outer portion of said surface adjacent to the surface of the shoulder, being oblique to that of the shoulder and forming with said latter surface, a space between said shoulder and said head-covering, adapted to be filled by a lacing-string or the like, that part of said adjacent surface of the head-covering, not covered by said lacing or

the like, having an obliquity that permits garments to rub over said exposed part without catching thereon.

2. A lacing-button consisting of a body provided with a shoulder; a centrally-disposed neck; and a head with a covering of plastic material, which, when hardened, has a smooth surface, said head and covering forming a button, the under surface of said button having toward the neck, a curvature approaching, and then receding from, the adjacent surface of the shoulder; said surfaces and said neck being designed and proportioned to be adapted to be engaged by a lacing or the like; the outer part of said lacing or the like being compressed and filling the entrance to the space formed between said shoulder shank and head-covering; and the portion of said surface, uncovered by said lacing or the like, having such obliquity as to prevent garments catching thereon; while the inner part of said lacing or the like, expanding in the space about the neck, thus by offering resistance to compression, tends to retain the lacing or the like in the grip of the lacing-button.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 11th day of November, A. D. 1902.

ALBERT L. COLE.

Witnesses:

A. I. CRAWFORD,

A. L. HODGDON.