

(No Model.)

W. H. SMIDT.

SHOE LACING STUD AND METHOD OF MAKING THE SAME.

No. 434,959.

Patented Aug. 26, 1890.

Fig. 1.



Fig. 2.

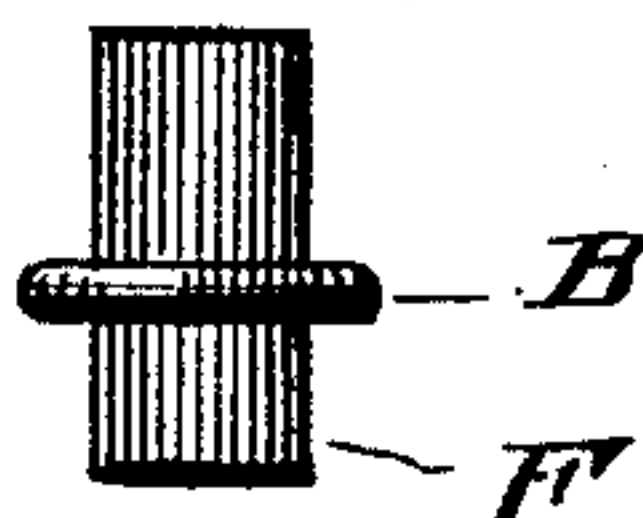


Fig. 3.



Fig. 4.



Fig. 5.

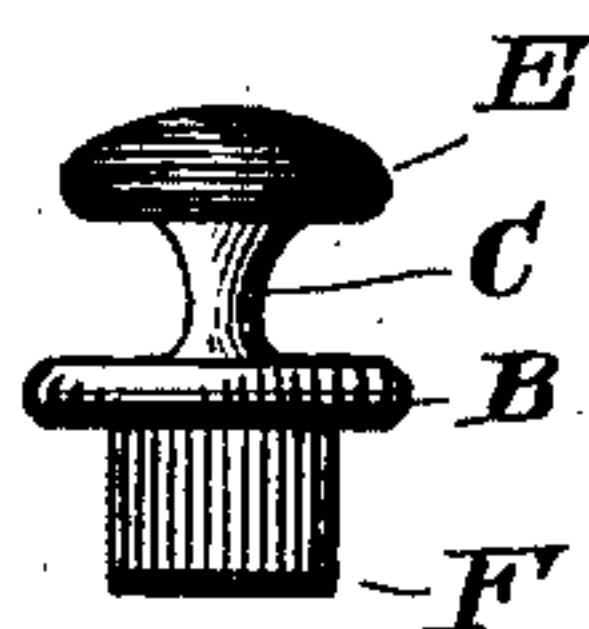
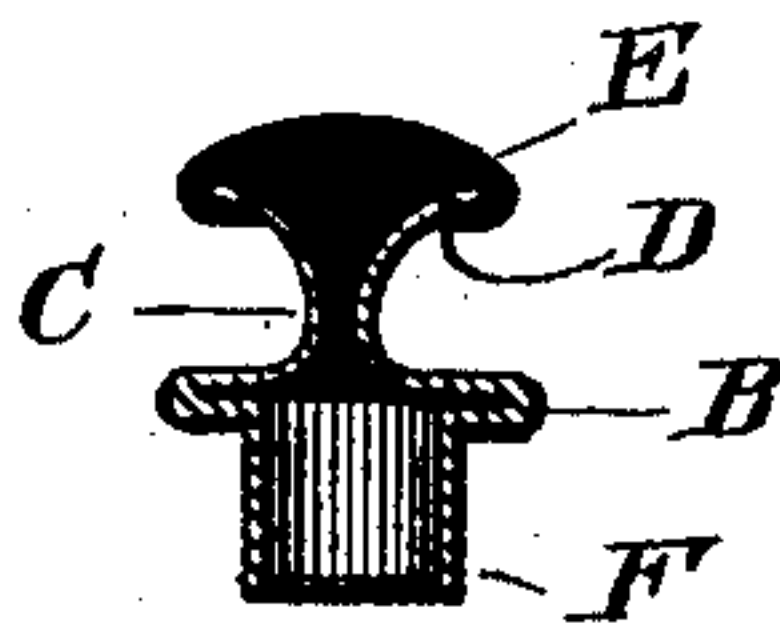


Fig. 6.



WITNESSES:

J. A. Finch -
Chas. E. Smith

INVENTOR

William H. Smidt

BY

T. W. Smith Jr.

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM H. SMIDT, OF NEW YORK, N. Y.

SHOE-LACING STUD AND METHOD OF MAKING THE SAME.

SPECIFICATION forming part of Letters Patent No. 434,959, dated August 26, 1890.

Application filed June 24, 1890. Serial No. 356,560. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. SMIDT, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Shoe-Lacing Studs and the Method of Making the Same; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in the manufacture of shoe-lacing studs, and has for its object to provide a simple, durable, and economical stud and at the same time to so shape the latter that the operation of setting it within a shoe-upper will be greatly facilitated.

In the accompanying drawings, Figure 1 is an elevation of the blank from which my stud is formed; Fig. 2, a similar view showing the shape of the blank after the first operation; Fig. 3, an elevation of the completed stud prior to covering the head; Fig. 4, a central vertical section of the stud shown at Fig. 3; Fig. 5, an elevation similar to Fig. 3, but showing the head of the stud covered with a suitable pyroxyline material; and Fig. 6 a central vertical section of the stud shown at Fig. 5.

Similar letters denote like parts in the several figures of the drawings.

Heretofore it has been the common practice to make these studs by turning up from a solid rod and then bending the head into position; also a similar article, called a "lacing-hook," has been made from a flat sheet-metal blank by bending up into the desired shape, the tubular setting-eyelet being drawn from the stock of the blank. It has furthermore been essayed to make a lacing-hook from a tubular blank closed at one end by offsetting said blank and then bending the head into shape; but this last construction lacks the all-important feature of a circumferential flange at the top of the eyelet, without which the hook cannot be properly "set" within a shoe-upper.

My improved stud is made from a short tubular shell open at both ends, such shell being denoted by A at Fig. 1. The stock of

this shell is first thrown up at or about the center part, after the manner of swaging, so as to present a flange B, as shown at Fig. 2. The stock above the flange is then compressed circumferentially so as to form the diminished neck C and overhanging head D. (See Fig. 3.) The stud thus formed is tubular with a hollow open head, as will be understood by reference to Fig. 4. The stud is completed by forcing within and over the edges of said head a mass of pyroxyline material. (Denoted by E in Figs. 5 and 6.)

The lower end of the shell beneath the flange forms the setting-eyelet F, by means of which the stud is secured within the shoe-upper.

It will be readily seen that by making the studs from open-ended shells I am enabled not only to provide the setting-eyelet F, but also to afford a head which is admirably adapted to receive and retain the covering of pyroxyline material; also, although I use thin shells in the manufacture of this stud, the inward circumferential compression of the upper end of the shell affords great strength to the neck C.

In setting my improved stud it is not necessary to preserve a particular position within the shoe-upper, as is the case with the hooks and studs generally used, wherein the necks are eccentric with respect to the heads, for in my studs the necks and heads are concentric and the shoe-lace can be caught by the head at any point circumferentially beneath the same. However, this last-named peculiarity of my improved stud is not deemed to be important as far as novelty is concerned, since the neck may be formed eccentric with respect to the head, the gist of my invention resting in the broad idea of a stud having an eyelet, a setting-flange, a neck, and an open head, all formed from a single tubular shell open at both ends.

I wish it to be distinctly understood that this stud is made open at the head for the express purpose of receiving and retaining an enveloping mass of pyroxyline material, the advantages of the latter being to present a finished surface and to prevent the unsightly appearance of the metallic head, and I there-

fore do not wish to be understood as claiming a metallic hook or stud wherein the head is closed.

What I do claim as new, and desire to secure by Letters Patent, is—

- 5 1. A shoe-lacing stud having a tubular setting-eyelet and a hollow open head, both formed from a tubular shell open at both ends, substantially as set forth.
- 10 2. A shoe-lacing stud having a tubular setting-eyelet, a circumferential flange at the top of said eyelet, a diminished neck, and a head surmounting said neck, all formed from a tubular shell open at both ends, substantially as shown and described.
- 15 3. A lacing-stud formed from a tubular shell open at both ends and having a tubular setting-eyelet, a flange extending circumferentially around the latter, a diminished neck, and an overhanging head, substantially as set forth.

4. The method of making shoe lacing studs from tubular sheet-metal shells open at both ends, consisting in first swaging said shells at or about the center, whereby a circumferential flange is formed, and then compressing the shell immediately above said flange, whereby a diminished neck and an overhanging head are formed, substantially as set forth.

5. The method of making shoe-lacing studs from tubular sheet-metal blanks, consisting in first forming a flange circumferentially around the blank, and subsequently shaping the upper part of the blank to afford a diminished neck and an overhanging head, substantially as shown and described.

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

WILLIAM H. SMIDT.

Witnesses:

J. P. FINCH,
F. W. SMITH, Jr.