

(No Model.)

F. E. BENTON.
LAST BLOCK FASTENER.

No. 590,719.

Patented Sept. 28, 1897.

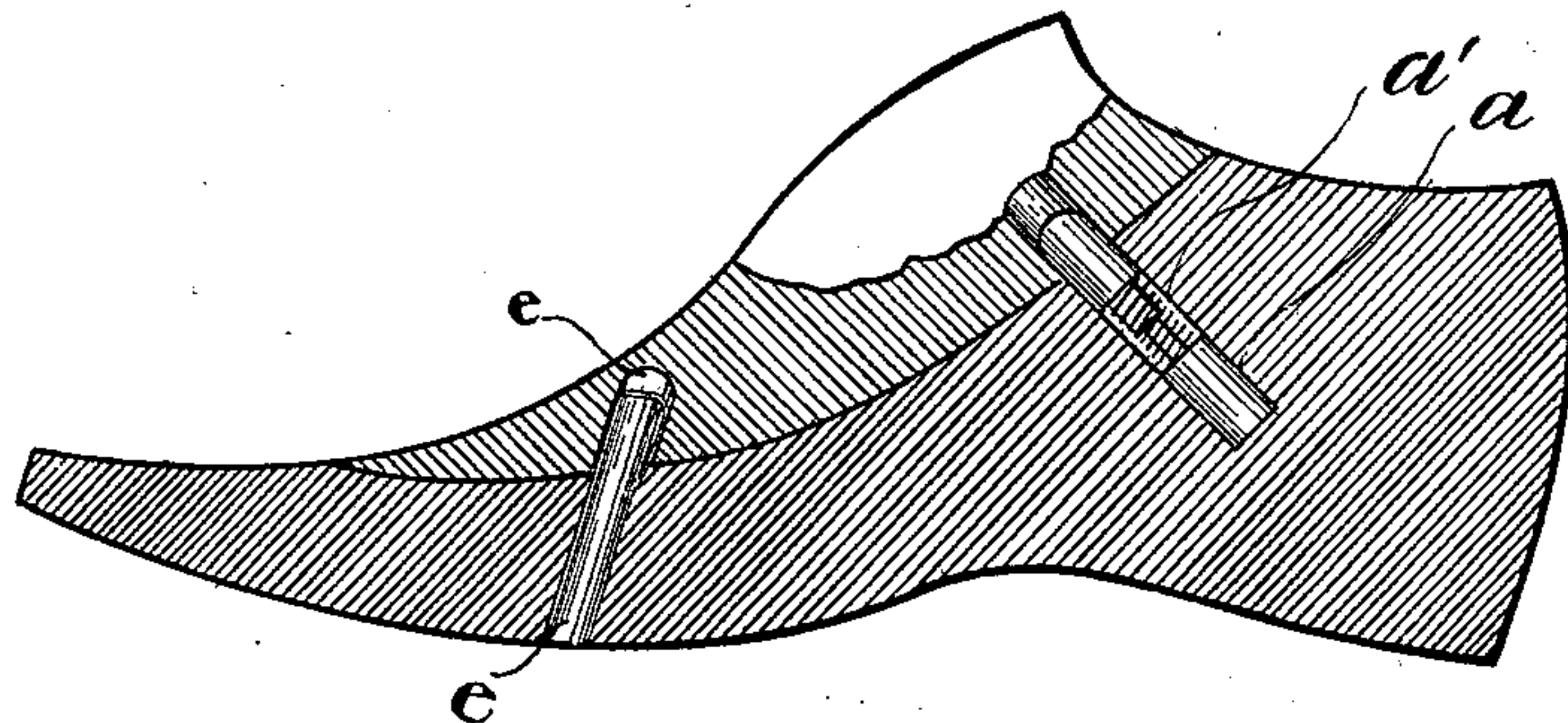
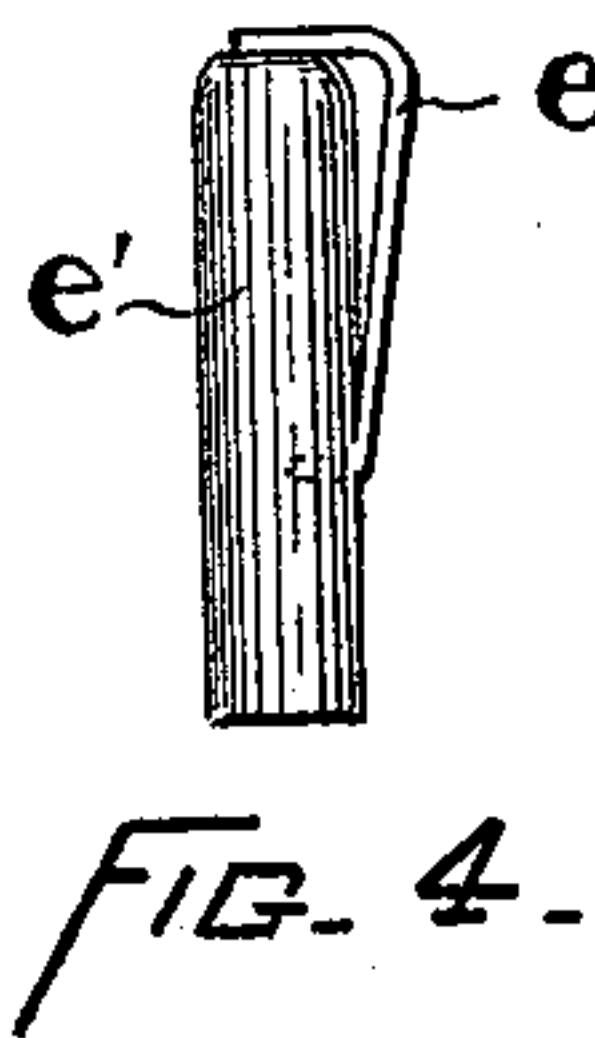
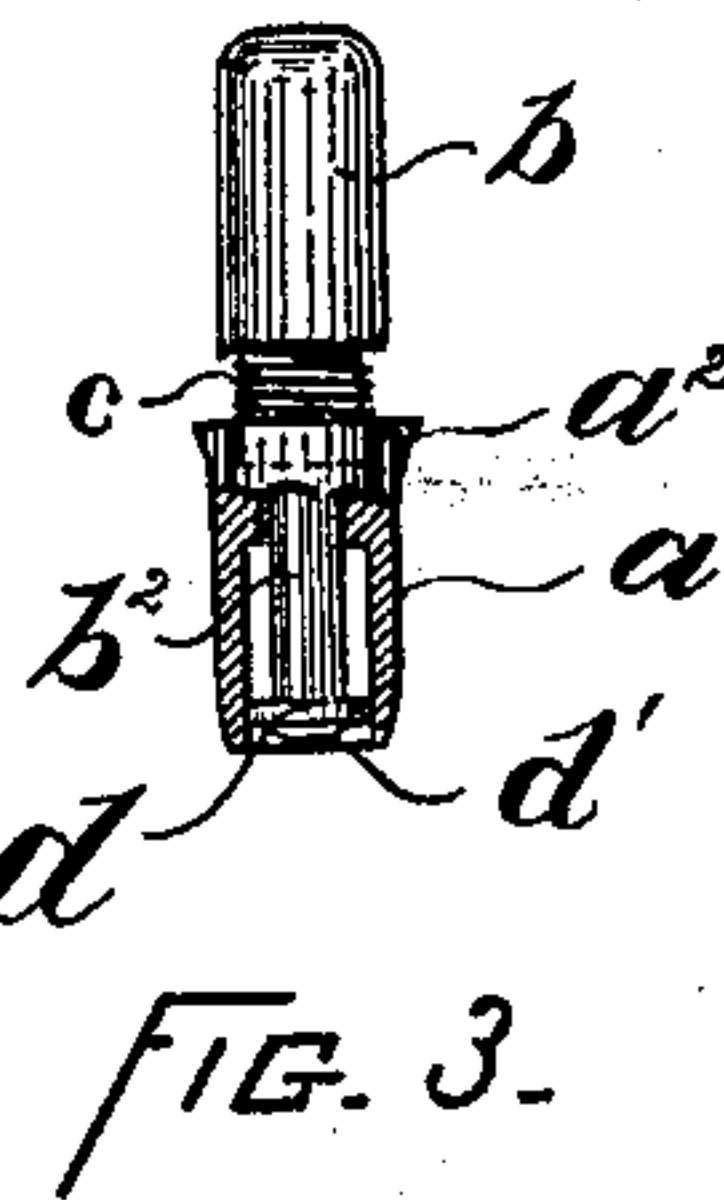
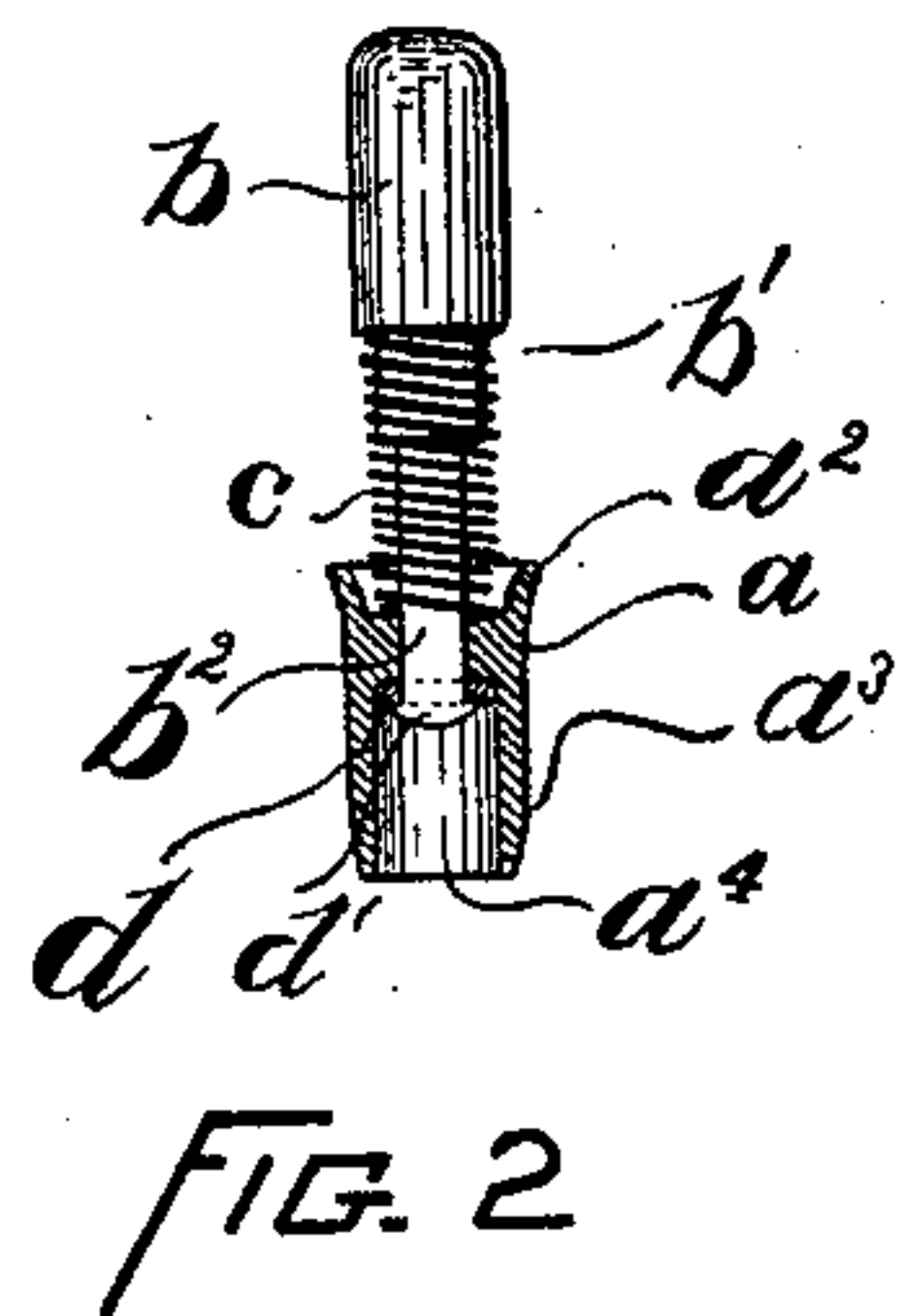


FIG. 1.



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LAST-BLOCK FASTENER.

SPECIFICATION forming part of Letters Patent No. 590,719, dated September 28, 1897.

Application filed April 9, 1897. Serial No. 631,416. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS E. BENTON, of Stoughton, county of Norfolk, State of Massachusetts, have invented an Improvement in Last-Block Fasteners, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to improve the construction of last-block fasteners; and it consists in certain details of construction, as will be hereinafter described and claimed.

Figure 1 shows a longitudinal section of a last having fasteners for the last-block embodying this invention; Fig. 2, a detail of one of the last-block fasteners in its extended position; Fig. 3, a similar view showing the fastener compressed as it will be before removing the last-block, and Fig. 4 a detail of the last-block fastener employed at the forward or toe end of the last-block.

The last shown in Fig. 1 is or may be of any well-known or suitable construction, having its block removed on a curved line of severance. The last-block has two fasteners, one at each end. The fastener at the rear or heel end of the block will first be described.

a represents a bearing-block adapted to be driven into a socket a' , bored in the last, it having a central hole through it and having at its upper end an upwardly-extended flange or rim a^2 , which forms a recess at the upper end of said bearing-block, and having at its lower end a similar flange or rim a^3 projecting downward for a considerable distance and forming a recess a^4 at the lower end. In order that said bearing-block may be firmly held in the socket a' , it will be made as large as or slightly larger than the socket, and the upper edge of the flange or rim a^3 may be made slightly flaring, as shown.

b represents a pin or stud the head of which is made considerably smaller in diameter than the bearing-block a^3 , and beneath said head a reduced shoulder b' is formed, and beneath said reduced shoulder b' a reduced stem b^2 is formed, the latter fitting yet sliding freely in the hole in the center of the bearing-block a .

A spiral spring c encircles the reduced shoulder b' and stem b^2 of said pin b , the upper end

of which bears against the under side of the head of the pin and the lower end of which bears upon the bottom of the recess formed at the upper end of said bearing-block by the rim a^2 . By end pressure upon the head of the pin or stud b the spring c will be compressed until the reduced shoulder b' bears upon the bottom of the recess formed at the upper end of the bearing-block a by the rim a^2 , as shown in Fig. 3.

In assembling the parts of the fastener the reduced stem of the pin b , with the spring thereon, is inserted through the central hole in the bearing-block, and then a washer d is placed on said stem, and then the lower end of said stem is upset, as at d' , and when thus assembled the fastener is ready for use. The washer d is of substantially the same diameter as the internal diameter of the recess a^4 , and as the spring-pressed pin b is moved in and out said washer will follow along in said recess like a piston and will guide and steady the pin with a tendency to prevent said pin from bending.

The fastener is driven into the last by striking it upon the head of the pin with a hammer or other tool, when the reduced shoulder b' will strike upon the bearing-block a , the spring being compressed and uninjured, while the upper edge of the rim a^2 will be used more particularly as a means of holding the bearing-block in place, and as said fastener is driven into the last there is no danger of bending the stem b^2 because it is guided and steadied at its lower end. When the fastener is driven into the last, its head projects and is adapted to enter a socket in the last-block, as usual, and the fastener will be manipulated to remove the block in any usual manner. The spiral spring c is made large enough to encircle the reduced shoulder b' , and said reduced shoulder b' is made long enough so that when brought to bear upon the bearing-block said spring, although compressed, will not be injured.

The shoulder b' beneath the head of the pin, which is made quite a good deal larger in diameter than the stem, strengthens the pin at the junction of the stem and head and thereby lessens the liability of the stem bending at this

particular point when upsetting the end of the stem or when driving the fastener into the hole in the last.

A hole is bored up through the last into the block at its forward or tow end, producing a socket e at such point, and a dowel e' projects up through said hole in the last, having a flat spring e^2 at the end, and said flat spring e^2 is bent in a manner such, for instance, as shown in Fig. 4, wherein it will be seen that one end of said spring may be fastened to the dowel a short distance below its end and its opposite end may overlie the end of the dowel, the spring bulging between its ends along the side of the dowel. The dowel having a spring at the end is adapted to enter the socket e in the last-block, and said spring is designed and intended to accommodate slight variations in the position of the last-block on the last, which variations are sometimes required to compensate for slight variations in the position of the fastener at the other end of the block.

I claim—

1. In a last-block fastener, the bearing-block a having a hole through it, and a pin b having a head, a reduced shoulder b' beneath it, and a reduced stem b^2 beneath said shoulder, and a spring c encircling said shoulder and stem between the head and bearing-block, said spring being large enough to encircle said shoulder b' , and said shoulder being long

enough to strike upon the bearing-block, when said spring is compressed, substantially as described.

2. In a last-block fastener, a bearing-block having a hole through it and adapted to be driven into a hole in the last, and having at its lower end a guideway a^4 , a pin b having a stem which passes through a hole in said bearing-block, a washer on said stem contained in said guideway which is made of suitable shape and size to follow along said guideway and serve as a guide for the lower end of the pin, and a spring encircling said stem between the bearing-block and head of the pin, substantially as described.

3. In a last-block fastener, a bearing-block having a hole through it and having an upwardly-projecting flaring flange or rim a^2 , and a pin b having a head, a reduced shoulder b' beneath it, and a reduced stem b^2 beneath said shoulder, and a spring c encircling said stem and shoulder and interposed between the head of the pin and the bearing-block, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANCIS E. BENTON.

Witnesses:

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