

No. 639,990.

Patented Dec. 26, 1899.

J. JAPIOT.  
LAST.

(Application filed Dec. 22, 1897.)

(No Model.)

Fig. 1.

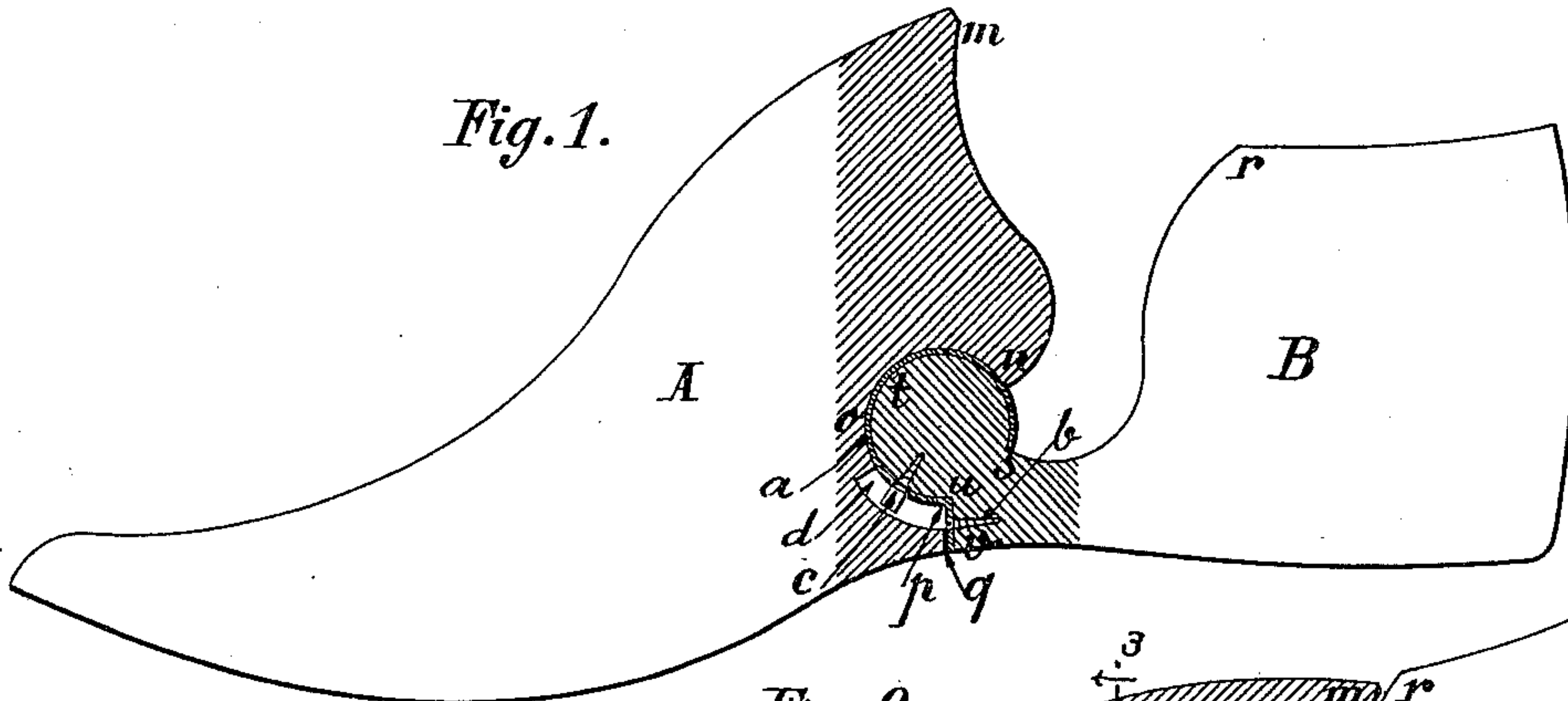


Fig. 2.

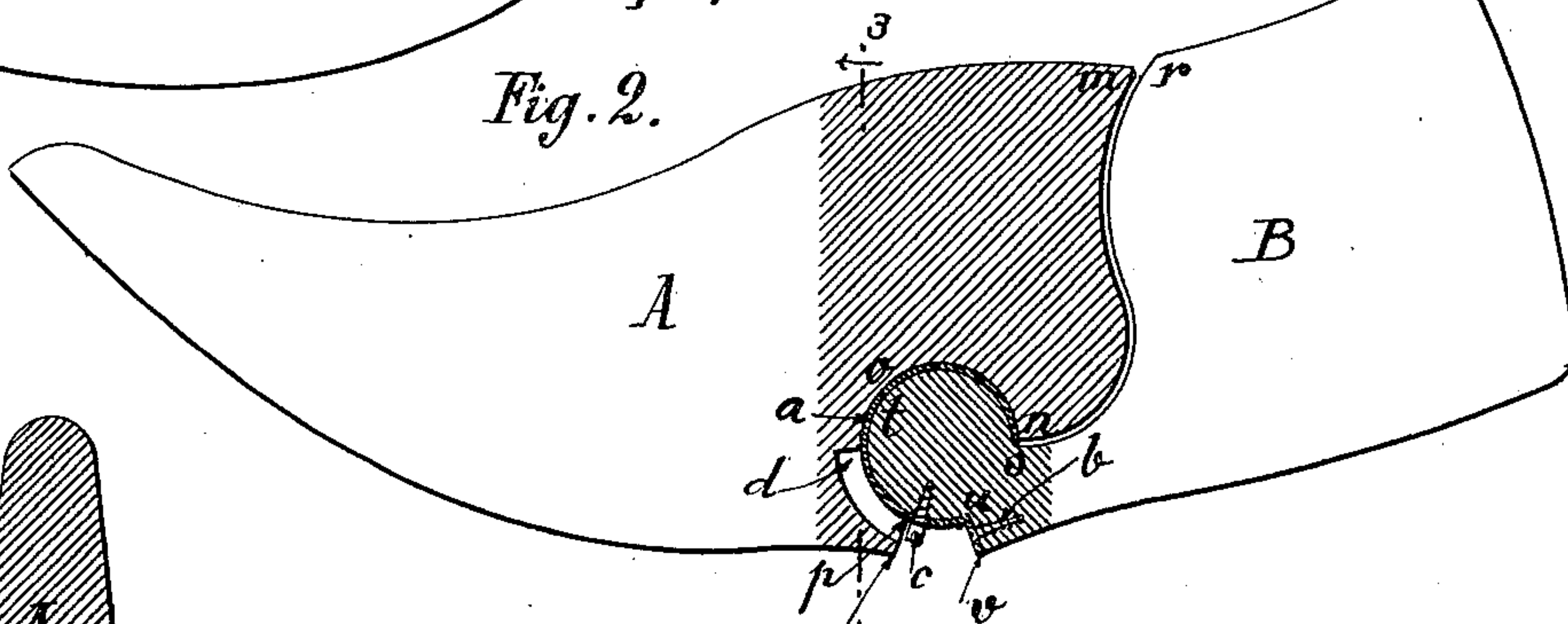


Fig. 3.

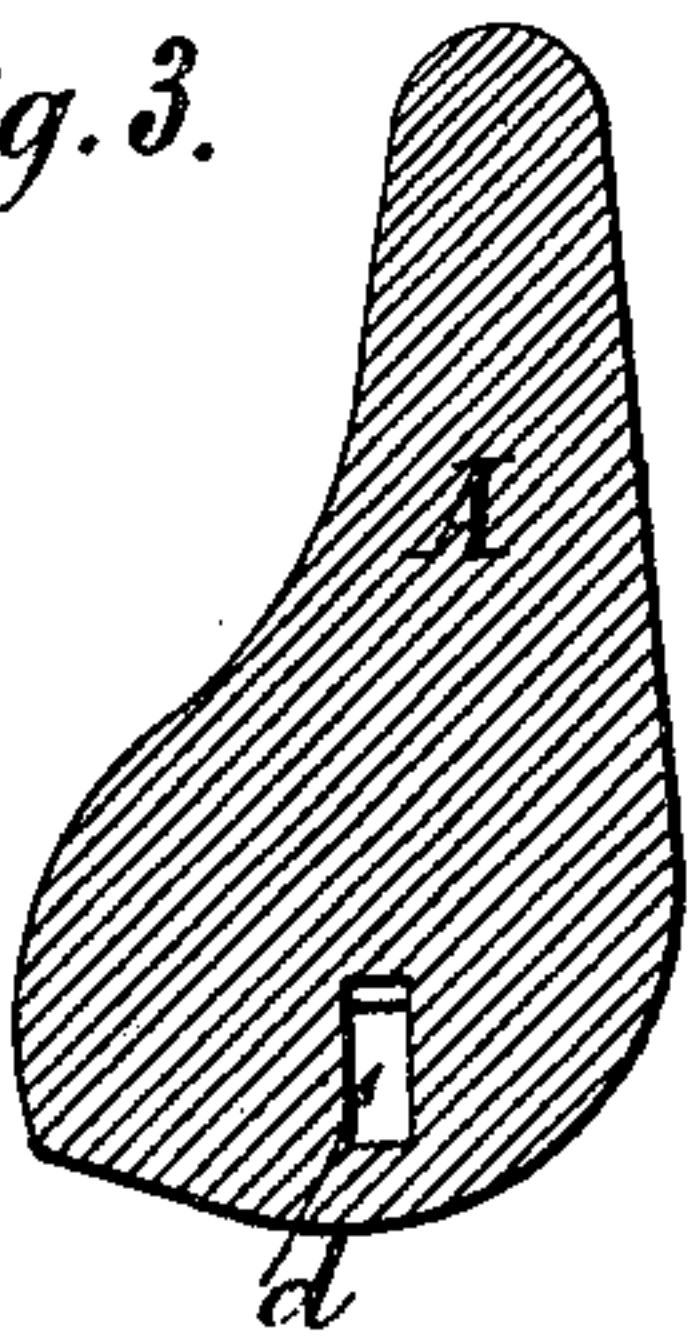


Fig. 4.

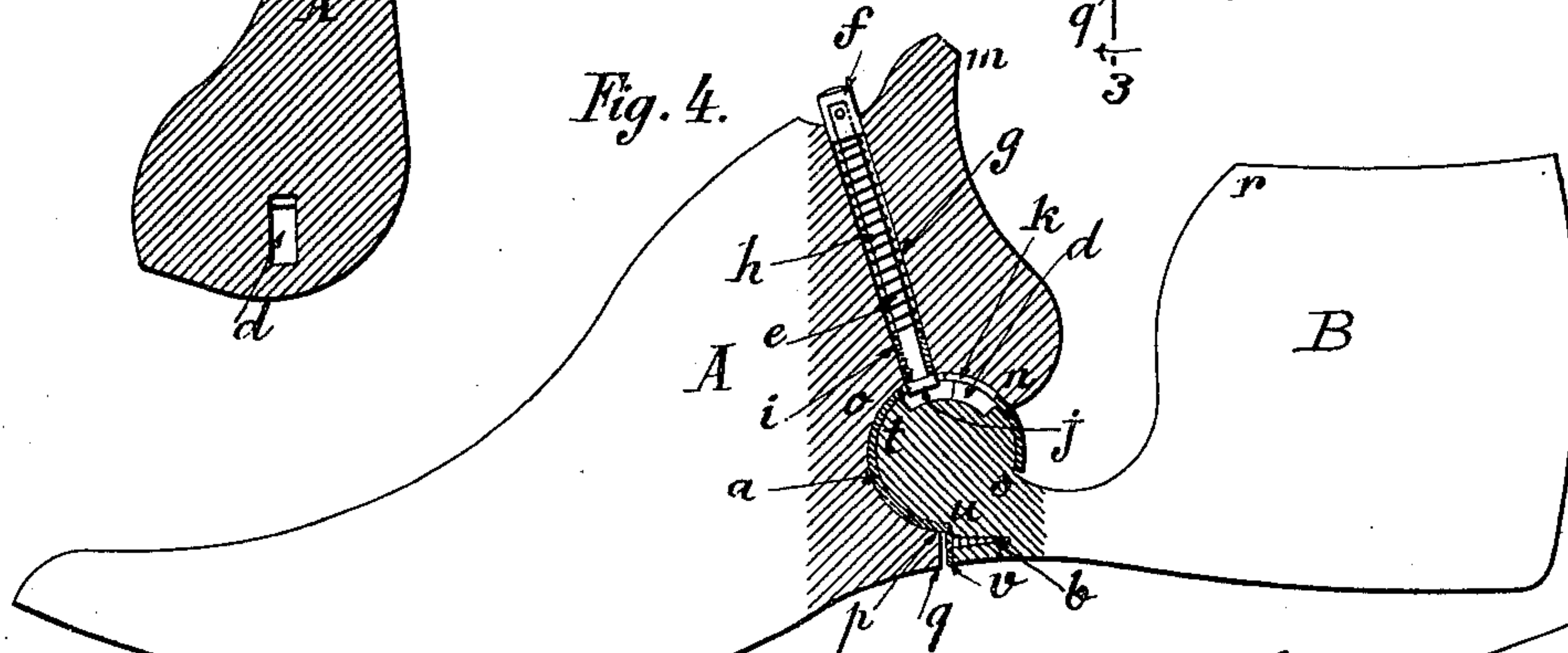
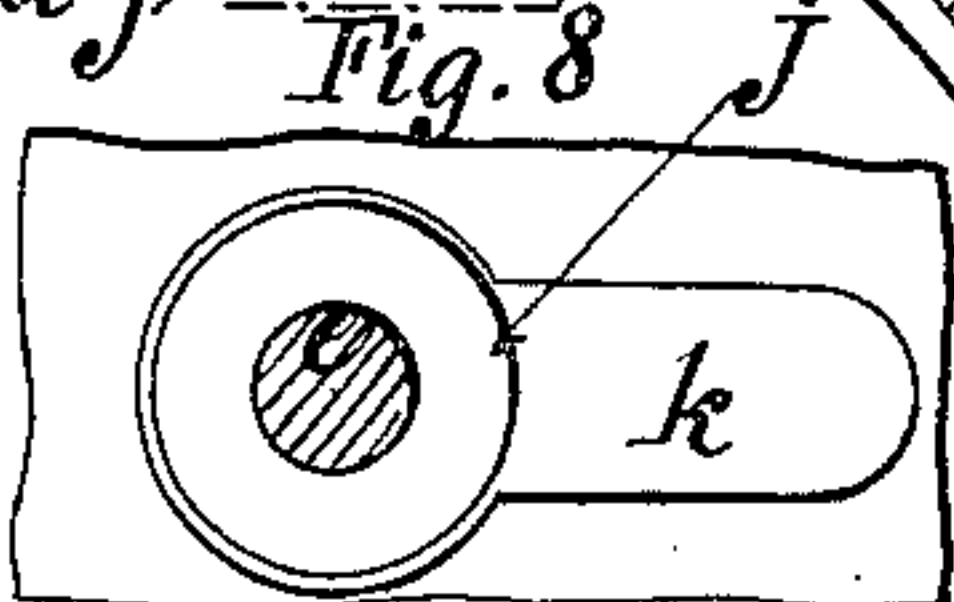
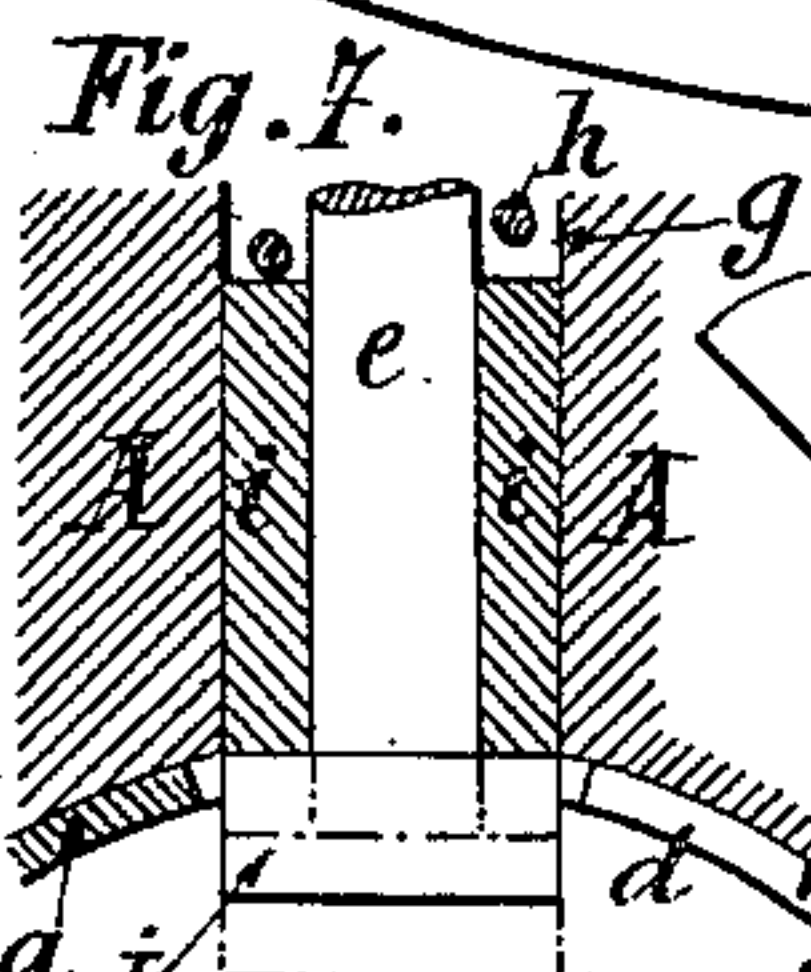
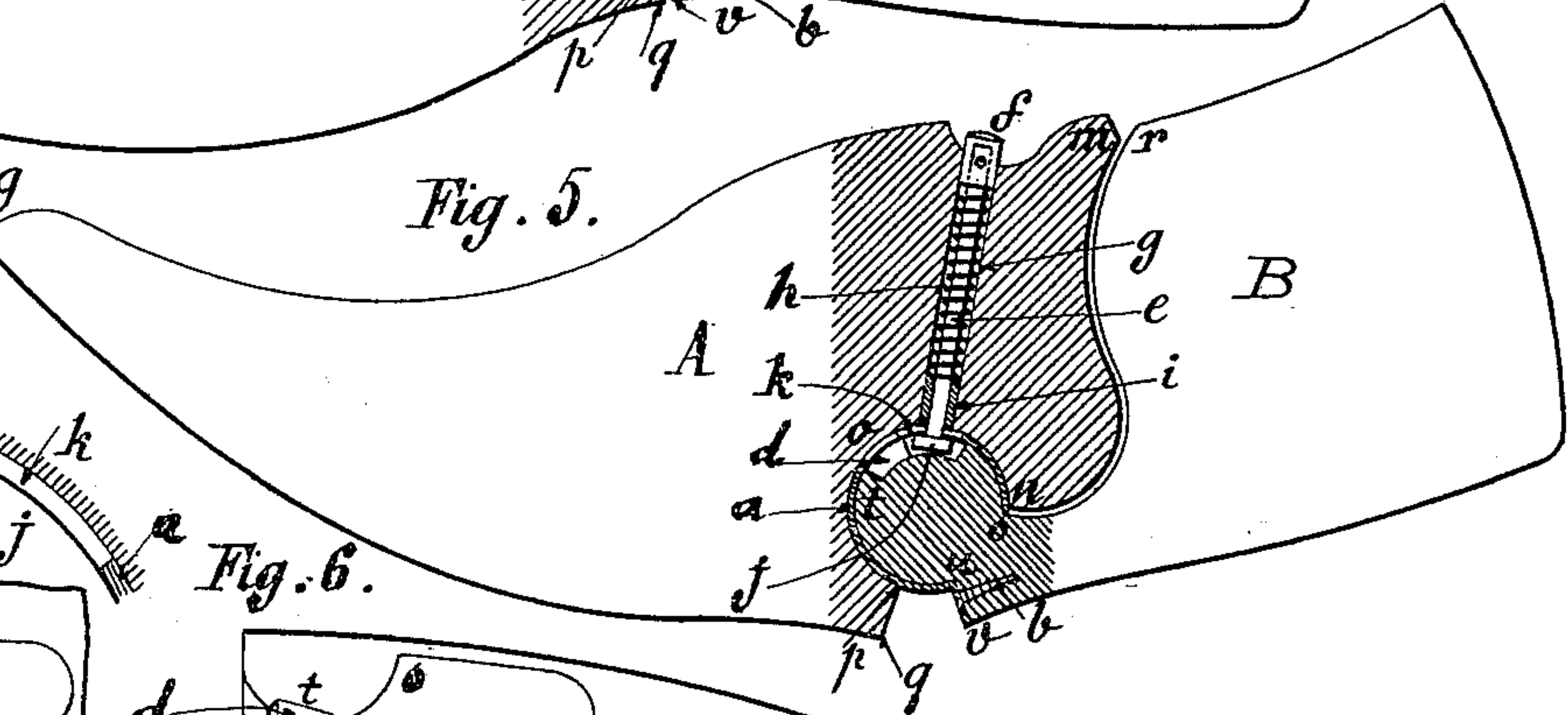


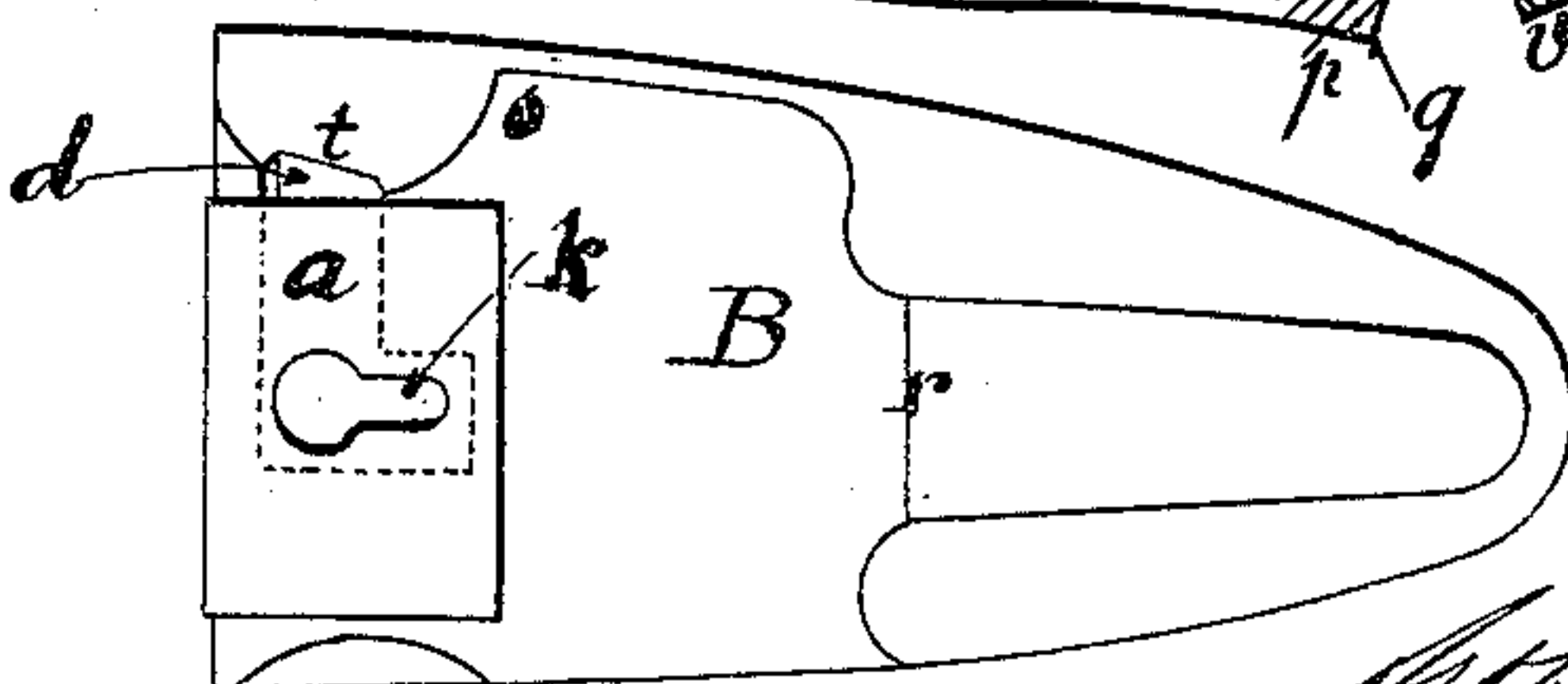
Fig. 5.



WITNESSES:

Fred White  
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Fig. 8.



INVENTOR:

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# UNITED STATES PATENT OFFICE.

JOSEPH JAPIOT, OF PARIS, FRANCE, ASSIGNOR TO GUSTAVE HELD, OF  
SAME PLACE.

## LAST.

SPECIFICATION forming part of Letters Patent No. 639,990, dated December 26, 1899.

Application filed December 22, 1897. Serial No. 663,055. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH JAPIOT, a citizen of the Republic of France, residing in Paris, France, have invented certain new and useful  
5 Improvements in Lasts, (the same being the subject-matter of Letters Patent in France, No. 266,752, dated May 8, 1897,) of which the following is a specification.

The various constructions of jointed and  
10 divided lasts heretofore proposed have the disadvantage either of not possessing the requisite strength or of requiring to be struck by a hammer or the like when the boot or shoe is being put on the last. The striking is liable  
15 to damage the last or its joint. Further, there is a loss of time, due to the use of wedges, keys, or screw-turning tools. Now in the last which forms the subject of the present invention there are not these drawbacks. It  
20 does not comprise any hinge affixed separately thereto, the joint consisting mainly of a recess of circular shape in cross-section formed in the fore part of the last and in which there engages a tenon of corresponding section  
25 formed on the rear part or heel-piece of the last. This joint is somewhat similar to a ball-and-socket joint; but it extends the entire width of the last, so that it is very strong, and the two parts of the last will readily maintain their positions in line with each other.  
30 The improved last may also be provided with an automatic stop for keeping the two parts of the last rigidly together.

Having stated the nature of the invention,  
35 I will proceed to describe more in detail a last constructed in accordance therewith.

Figure 1 is a longitudinal section of a form in position of working. Fig. 2 shows the last closed. Fig. 3 is section by 33 of Fig. 2. Fig.  
40 4 is a view similar to Fig. 1, showing another form of my invention. Fig. 5 is a view thereof similar to Fig. 2. Fig. 6 is a front elevation of the rear piece thereof. Fig. 7 is an enlarged fragmentary vertical section thereof, and Fig. 8 is a fragmentary cross-section thereof.

The last comprises two main parts—namely, a fore part A, having a recess *m n o p q* of circular form *n o p* in cross-section, extending the entire width of the last, and a rear part  
50 or heel-piece B, forming at the front end a

tenon *s t u* of circular form in cross-section, adapted to be inserted laterally into and to work in the circular recess *n o p* of the fore part of the last. The shape of the cooperating surfaces *m n* and *r s* is such that in the closed position of the last the two parts fit close up against each other, the tenon *s t u* turning in the circular recess *n o p* about their common axis.  
60

The diameter of the recess *n o p* is slightly larger than that of the tenon *s t u*, so as to permit of the provision between the two of a casing or lining of metal *a*, which is intended to increase the smoothness of movement between the two parts A and B of the last. This metal casing *a* may be fixed, by means of screws *b*, to the rear part B of the last.  
65

In order that the two parts composing the last shall not shift laterally in relation to each other when they are once connected together, a stop-piece, such as a screw *c*, having a projecting head, is provided opposite a narrow cavity *d*, formed in the underside of the fore part A of the last. (See Figs. 1, 2, and  
70 3.) The head of the screw *c* is adapted to move in the said cavity *d*, and by being imprisoned between the sides of the said cavity when the last is opened out it prevents all lateral shifting of the parts A and B of the last relatively to each other.  
80

In another construction of the jointed last, which is particularly suitable for mounting or wholly finishing a boot or shoe thereon, (see Figs. 4, 5, and 6,) the arrangement of  
85 the two parts of the last is substantially the same as in the construction above described, the fore part having a circular recess *n o p*, in which is adapted to work a corresponding tenon *s t u*, and a metal casing *a* is similarly  
90 interposed between the cooperating parts of the joint; but the stop-screw *c* above referred to is replaced by another stop which has a further function—namely, to maintain the two parts A and B of the last in the opened-out position, Fig. 4, in such a manner as to render it impossible for any unintentional closing movement to take place during the making of the boot or shoe mounted on the last. The said stop consists of a rod *e*, terminating at its upper end in a head *f* and  
100 mounted in a hole *g* in the fore part A of the



last. A small coiled spring *h* is interposed between the under side of the head *f* of the stop-rod and a shoulder *i*, serving as an abutment for the same. The lower part of the stop-rod (see the detail at larger scale in elevation, Fig. 7, and in section, Fig. 8) is provided with a knob *j*, which works in a groove *d*, formed in the circular tenon *s t u v* of the rear part B. The metallic casing or lining *a* is formed with a slot *k*, somewhat similar to a buttonhole, Fig. 8. When the stop-rod is in its outermost position, its knob *j* is engaged in the circular or widest portion of the buttonhole *k* and all relative displacement of the two parts A and B of the last with a tendency to close the same is impossible, because (see Fig. 7) the knob *j* is arrested by the edges of the buttonhole-slot; but if pressure is applied to the head *f* of the stop-rod, so as to compress the spring *h*, the said knob *j* will be moved down below the under side of the metal casing, and then the rear part of the last can be shifted by turning it about its joint, the stop-rod then moving in the narrow portion of the buttonhole *k*. When the last is opened out again, the knob *j* of the stop-rod *e* is caused by the action of the aforesaid spring *h* to automatically enter the circular portion of the buttonhole when it comes opposite the same.

It will be seen that my invention provides a last which collapses sufficiently by turning the parts upwardly to permit its easy insertion in a shoe or its removal therefrom and which expands by straightening the parts out and that any suitable catch may be used for holding the parts in either or both their relative positions.

It will be understood that the invention is not limited to the particular details of construction set forth as constituting its preferred forms, since it can be employed according to such modifications as circumstances or the judgment of those skilled in the art may

dictate without departing from the spirit of the invention.

What I claim is—

1. A last consisting of toe and heel parts united by a hinge constructed as a cylindrical recess in one part and a cylindrical tenon formed on the other, entering laterally into said recess, with a lining of metal introduced between the two parts, said lining turning with one part, and a stop projecting from one part of said hinge and entering a slot in the other part thereof, to prevent lateral displacement of the parts.

2. A last consisting of toe and heel parts hinged together, a spring-catch on one part and a recess in the other engaged by said catch to prevent lateral displacement of the parts while turning on the hinge, and having a shoulder engaged by said catch when the last is extended to hold the parts in position.

3. A last consisting of toe and heel parts united by a hinge constructed as a cylindrical recess in one part and a cylindrical tenon formed on the other, entering laterally into said recess, with a lining of metal introduced between the two parts, said lining fixed to one part and formed with a slot having wide and narrow portions, and a recess beneath said slot, the other part having a socket, and a catch consisting of a spring-pressed rod carried in said socket, having a head movable into the wide portion of said slot to hold the last extended, and the head when displaced therefrom movable in said recess beneath the narrow portion of said slot to permit the folding of the last while preventing lateral displacement of its parts.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOSEPH JAPIOT.

Witnesses:

EDWARD P. MACLEAN,  
AUGUSTE MATHIEU.