

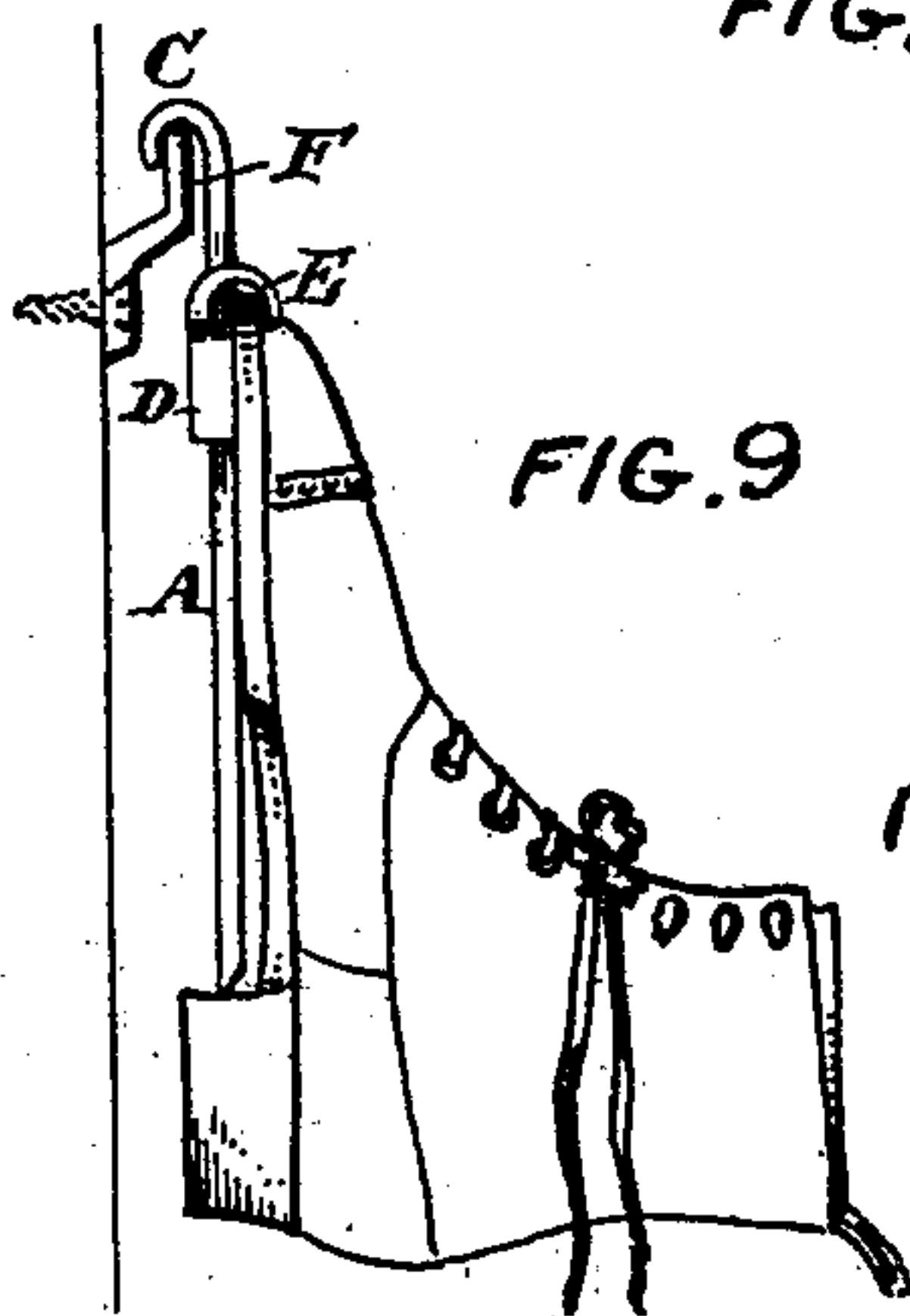
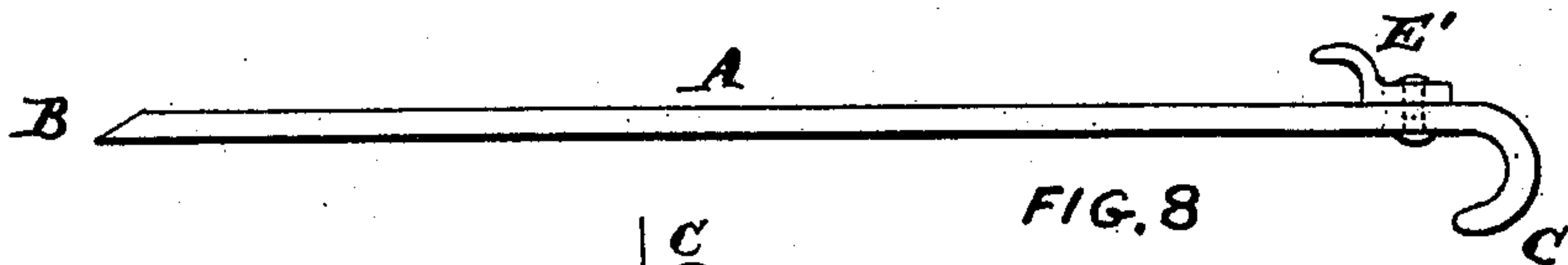
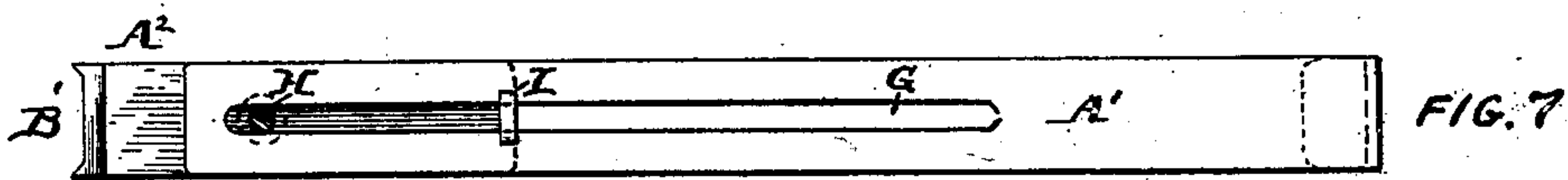
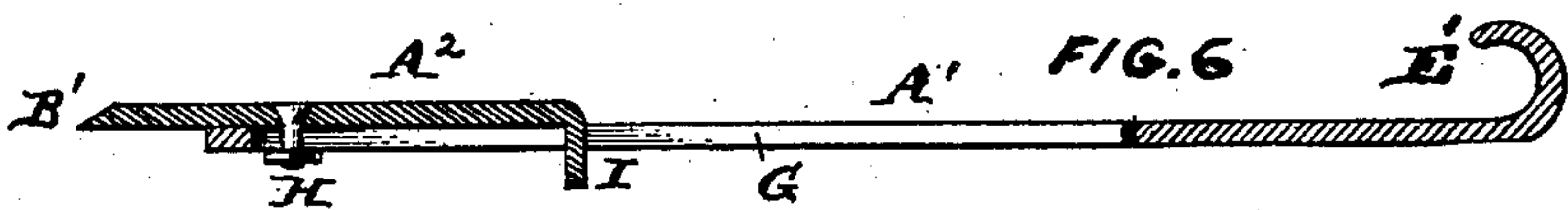
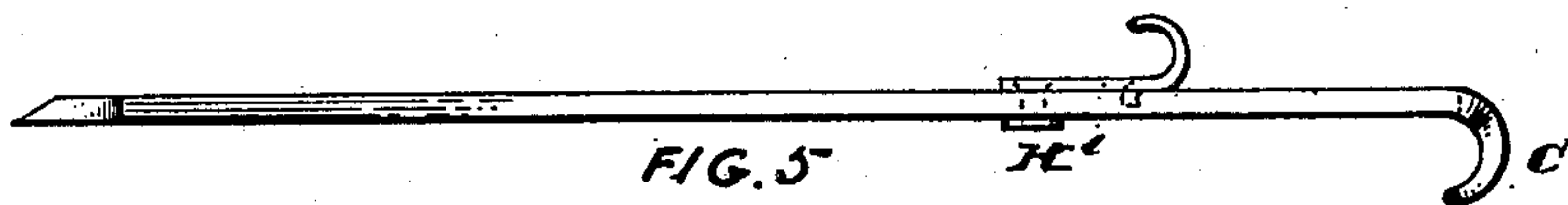
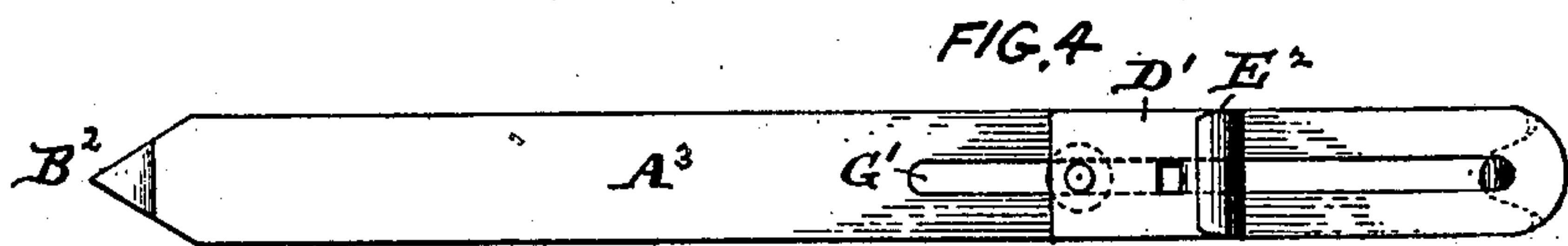
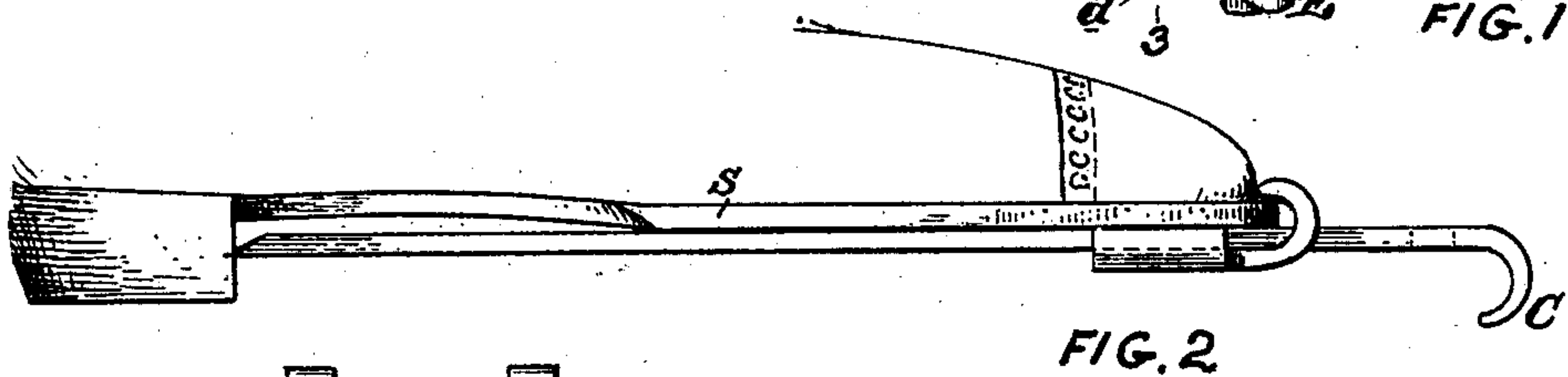
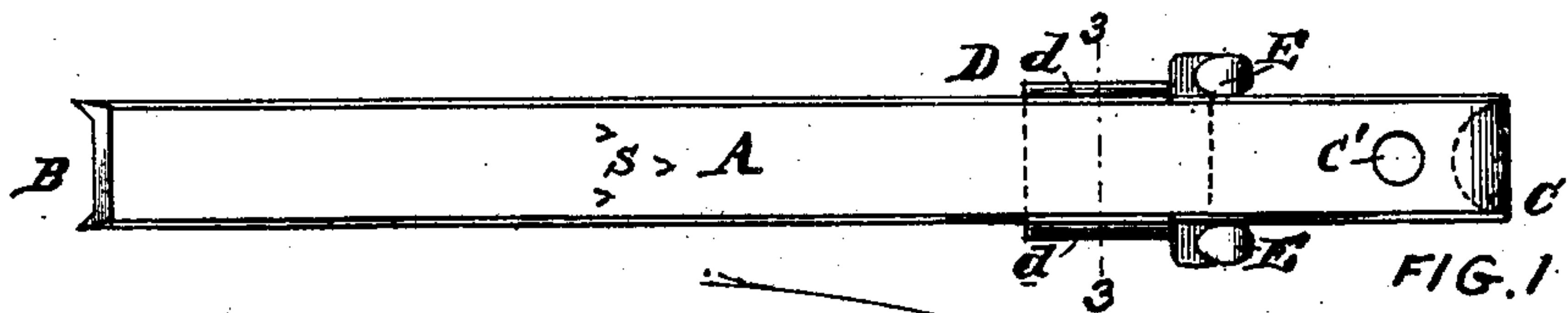
No. 890,711.

PATENTED JUNE 16, 1908.

B. L. RINEHART & J. W. OWEN,

SHOE TREE.

APPLICATION FILED JAN. 19, 1907.



WITNESSES:

O. M. Kelly
M. F. Driscoll

INVENTORS

Bentley L. Rinehart
and James W. Owen

By *J. M. [Signature]*
ATTORNEY.

UNITED STATES PATENT OFFICE.

BENTLEY L. RINEHART, OF CAMDEN, NEW JERSEY, AND JAMES W. OWEN, OF PHILADELPHIA, PENNSYLVANIA.

SHOE-TREE.

No. 890,711.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed January 19, 1907. Serial No. 353,010.

To all whom it may concern:

Be it known that we, BENTLEY L. RINEHART, of the city and county of Camden, State of New Jersey, and JAMES W. OWEN, of the city and county of Philadelphia, State of Pennsylvania, have invented an Improvement in Shoe-Trees, of which the following is a specification.

Our invention has reference to shoe-trees and consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings which form a part thereof.

Heretofore it has been customary to make shoe-trees with parts which fit into the shoe and stretch the same, very much in the manner as in the case of a last, for the purpose of keeping the shoe in a smooth condition and avoiding cracking. The objection to a tree of this character, aside from its cost, is that a tree which is suitable for one shoe will not necessarily fit another, and consequently a large variety of shoe-trees must be provided from which any purchaser may select one suitable for his purpose. In many cases, the shoe-trees are specially formed to suit the shape of the foot of the wearer of the shoes to be stretched. Further objection is found in the fact that a shoe-tree which fits into the shoe interferes with the proper ventilation of the same, and if the shoe is wet or damp, it is more difficult to insure the drying of the same. Furthermore, the cost of shoe-trees which fit into the shoe is considerable, especially when it is borne in mind that a person will employ shoe-trees for various pairs of shoes which he may possess.

The object of our invention is to obviate all of the above existing objections to the trees which are now found on the market.

Our invention consists of a bar, preferably of stamped metal, having at one end a point or prong adapted to be thrust slightly into the forward part of the heel adjacent to the sole, and having a hooked portion, preferably adjustable along the bar, adapted to extend over the rim of the sole of the shoe adjacent to the toe, whereby the forward or toe portion is pulled downward and keeps the upper adjacent to the instep portion in a stretched condition.

Our invention further consists in providing the tree with a hooked end, preferably directed away from the hooked portion which connects with the shoe, whereby the

tree with its attached shoe may be hung upon a suitable support attached to the wall.

Our invention also consists of a shoe tree when made of a flat rigid bar having a point at one end directed away from and in a plane with the bar for penetrating the front of the heel of the shoe and having a clamp for extending over and clamping the sole of the shoe adjacent to the toe thereof.

Our invention also comprehends details of construction which, with the features above specified, will be better understood by reference to the drawings, in which:

Figure 1 is a plan view of our improved and preferred form of shoe-tree; Fig. 2 is a side elevation of the same showing its application to a shoe; Fig. 3 is a cross section of our invention on line 3—3 of Fig. 1; Fig. 4 is a plan view of a modified form of our invention; Fig. 5 is a side view of the modified shoe-tree shown in Fig. 4; Fig. 6 is a longitudinal sectional side view of a still further modification of our invention; Fig. 7 is a plan view of the same; Fig. 8 is a side view of another modification; and Fig. 9 is a side elevation showing the application of our invention in suspending the shoes from a rack on the wall.

A is the bar or main body of the shoe-tree and is provided at one end with one or more prongs B, and at the other end preferably with a hooked portion C. The prongs are preferably two in number, widely separated and of very small size, the intermediate part of the bar at the end between the prongs limiting the possible penetration of the latter into the heel of the shoe.

D is a sliding plate and is fitted to the bar A so as to have longitudinal adjustment thereon, and is provided with one or more (preferably two) hooked portions E which are directed away from the hooked portion C of the bar A.

As shown in Figs. 1, 2 and 3, the bar A has its lateral sides made inclined so as to form with the lateral sides of the plate D a dovetailed connection which holds the parts together and yet allow freedom of movement. Any other mode of providing an adjustable connection between the parts A and D may be employed in lieu of that described as will be evident to anyone skilled in the art of metal working.

When the shoe-tree above described is employed to stretch a shoe, the prongs B are

first thrust into the forward part of the heel close to the sole with the plate resting along the center of the sole; the toe portion is then pressed downward toward the bar A which stretches the instep or upper, and the plate D is then moved toward the toe portion until the hooked portions E extend over the projecting toe portion of the sole as indicated in Fig. 2 and also Fig. 7. The tendency of the shoe to assume the original position holds the parts in permanent connection without any means being required to secure the plate D in its adjusted position upon the bar A. To insure the prevention of slipping of the bar A under the shoe and thus releasing the point B in rough handling of the tree, the bar A may be provided with struck up teeth or points S upon which the sole is pressed as indicated in Fig. 2.

It will be seen that if this shoe with the tree attached be allowed to rest upon the floor, it will, as a matter of fact, be supported upon the heel and upon the hooked portion C, or if it be omitted, upon the plate D as a foot, thereby supporting the sole of the shoe above the floor and allowing full ventilation over, under, and inside of the shoe. In shoe-trees which are inserted into the shoe, inside ventilation is interfered with, and as the shoes rest upon the floor with the weight of the tree added, great difficulty is experienced in drying the soles. This is entirely obviated in the employment of our improved tree. It will further be noticed that as the plate D may slide the full length of the bar A, the tree may be employed for shoes of any size from the smallest to the largest and is quickly and easily attached or detached. The penetration into the heel is exceedingly slight and in no manner injures the heel in the slightest degree.

When it is desired to hang up the shoe when attached to the tree, it is only necessary to hook the part C over a bracket F attached to the wall or door. The tree may be suspended in any other suitable manner if so desired as, for example, by employing a hole C' in the bar A which may be hooked over a nail or other convenient projection should the bracket F not be available.

In referring to Figs. 4 and 5, showing the modification of our invention, the bar A³ is formed with the slot G' near the end having the hook C, and the other end is provided with a point B² for entering the heel of the shoe. Adjustably secured to slide on the bar A³ is a hooked plate D' having the hooked portion E² for clamping the forward or toe portion of the sole. This sliding part D' has means at H' extending through the slot G' for holding the plate D' in position. By adjusting the plate D', the same result is secured as in the case of the plate D in Figs. 1 and 2. This construction, however, is limited as to adjustment to the length of the

slot G' but of course it is evident that this slot G' may be extended almost the entire length of the bar A³ if so desired.

Referring to Figs. 6 and 7, the bar is made extensible by forming it in two parts, A' and A², the end of part A² having the prongs B' for entering the heel. The part A' is slotted as at G and through this slot are provided parts H I on the portion A² for holding it to the part A' of the bar while permitting longitudinal adjustment. At or near the other end of the bar A' is arranged a permanent hook E', which is adapted to hook over the end of the sole at the toe portion of the shoe as above described. In this case the distance between the hooked portion E' and the penetrating point B' is adjustable to suit shoes of various sizes just as is the distance between the point B and the hooked portion in the structure shown in Figs. 1 and 2 are adjustable and for the same object.

In Fig. 8, we have shown our tree in its simplest form, namely, of a bar having no adjustable parts but with the point B at one end and the suspending hook C at the other end and the clamping hook E' near the suspending hook but on opposite sides thereof, but in this case there is no adjustability to the device and consequently trees of this character would be required for every material variation in the length of the shoe.

We do not restrict ourselves to the employment of the suspending hook C as it is quite evident that the same may be dispensed with if so desired. It is also evident that the details of construction of the sheet metal parts constituting the tree, whether in the simplest or in the preferred forms, may be varied by employing in their construction any of the various well known modes of metal working. In the forms which we prefer for commercial use, the parts are made of sheet metal by suitable dies and forming machines so that exceeding simplicity and accuracy in fitting is secured without material expense. Therefore, while we prefer the construction shown, we do not restrict ourselves to the minor details thereof as these may be modified without departing from the spirit of our invention.

Having now described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. A shoe-tree consisting of a flat rigid bar having a point at one end directed away from and in the plane of the body of the bar for penetrating the front of the heel of the shoe and a clamp slidable on the bar for adjustment near its other end for extending over and clamping the sole of the shoe adjacent to the toe thereof.

2. A shoe-tree consisting of a flat bar having a point at one end directed away from and in the plane of the body for penetrating the front of the heel and a hook at the other

end for suspending it, combined with a sliding plate adjustable along the bar between the point and hook and having means for clamping the sole of the shoe at the toe portion.

5 3. A shoe-tree consisting of sheet metal and comprising a bar of uniform width and pointed at one end for attachment to the forward part of the heel of the shoe, combined with a solid sliding plate having sides clamping the edges of the bar and provided with hooked portions integral with the plate for clamping the sole of the shoe adjacent to the toe portion.

10 4. A shoe-tree consisting of a flat bar having a point at one end for penetrating the front of the heel of the shoe and a roughened or toothed part S on the body of the bar to create a friction upon the under part of the

sole of the shoe, combined with a sliding clamp adjustably supported by the side edges of the bar and adapted to extend over and clamp the sole of the shoe down upon the bar and the roughened or toothed parts thereof.

25 5. A shoe-tree consisting of a flat rigid bar having a point at one end directed away from and in a plane with the bar for penetrating the front of the heel of the shoe and having a clamp for extending over and clamping the sole of the shoe adjacent to the toe thereof.

30 In testimony of which invention, we have hereunto set our hands.

BENTLEY L. RINEHART.
JAMES W. OWEN.

Witnesses:

R. M. HUNTER,
R. M. KELLY.