

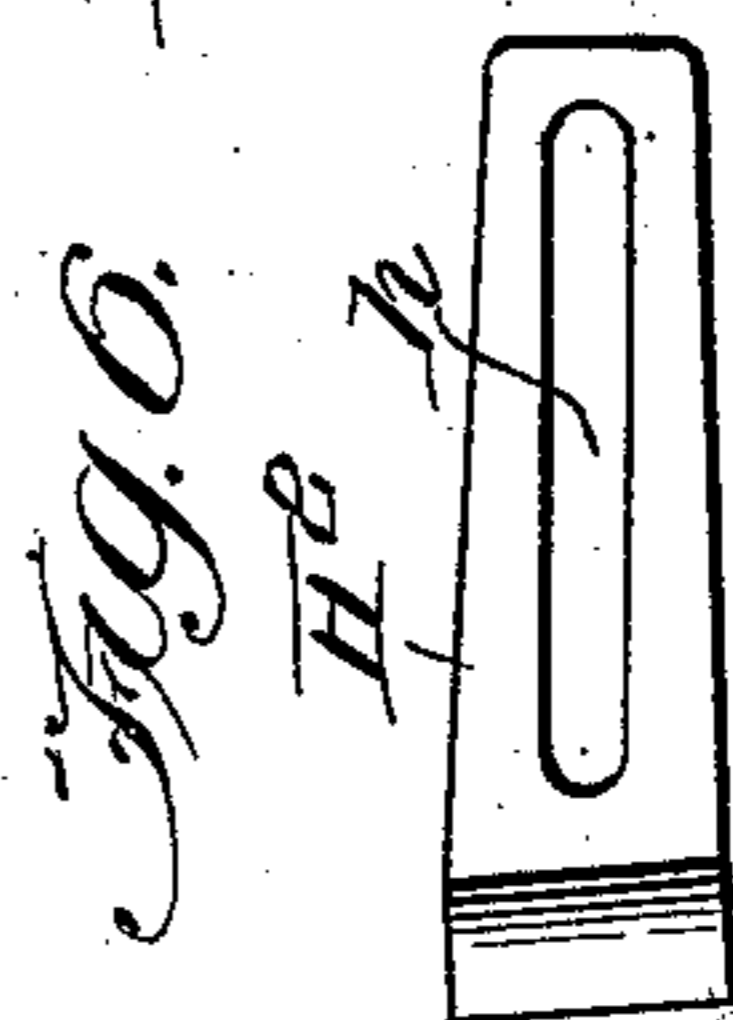
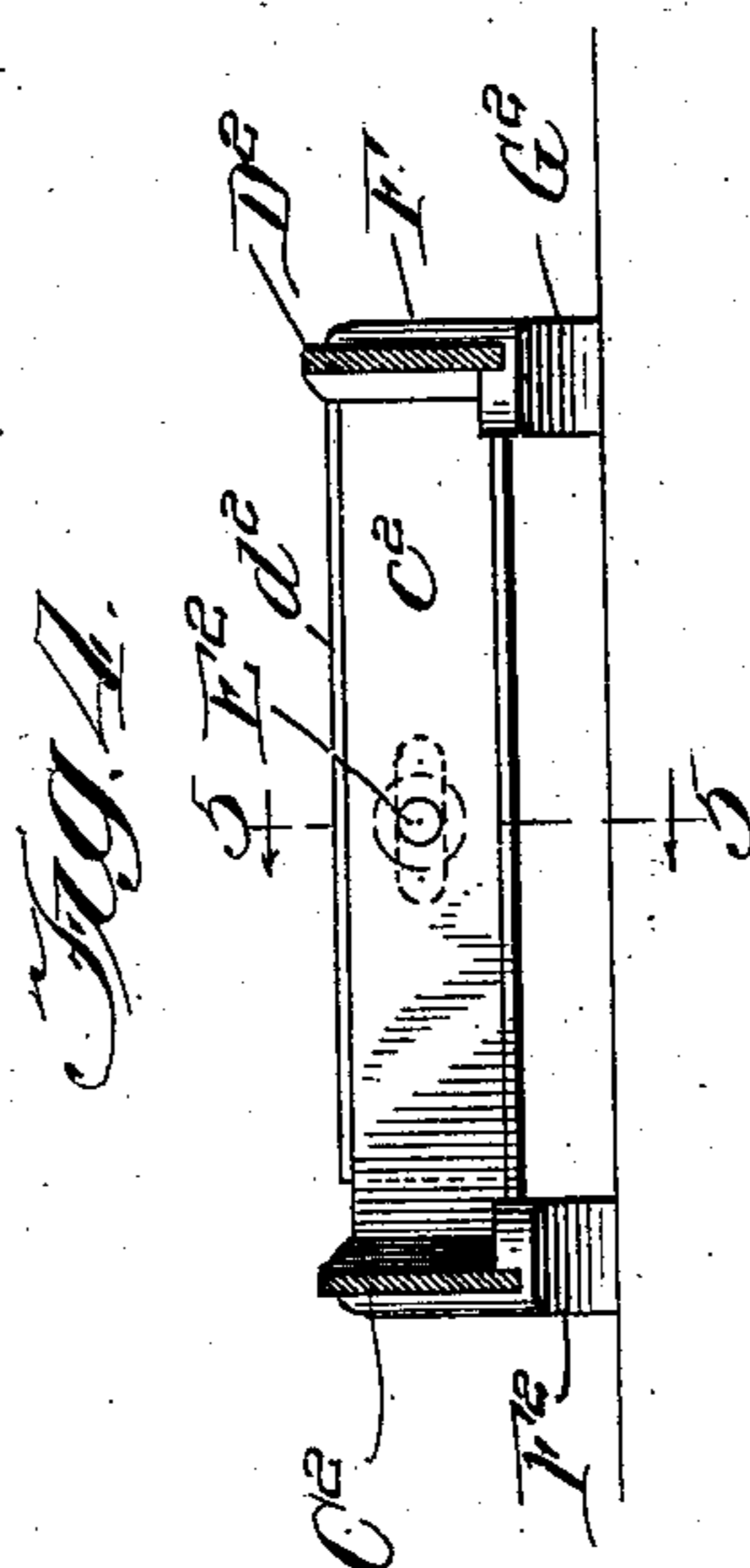
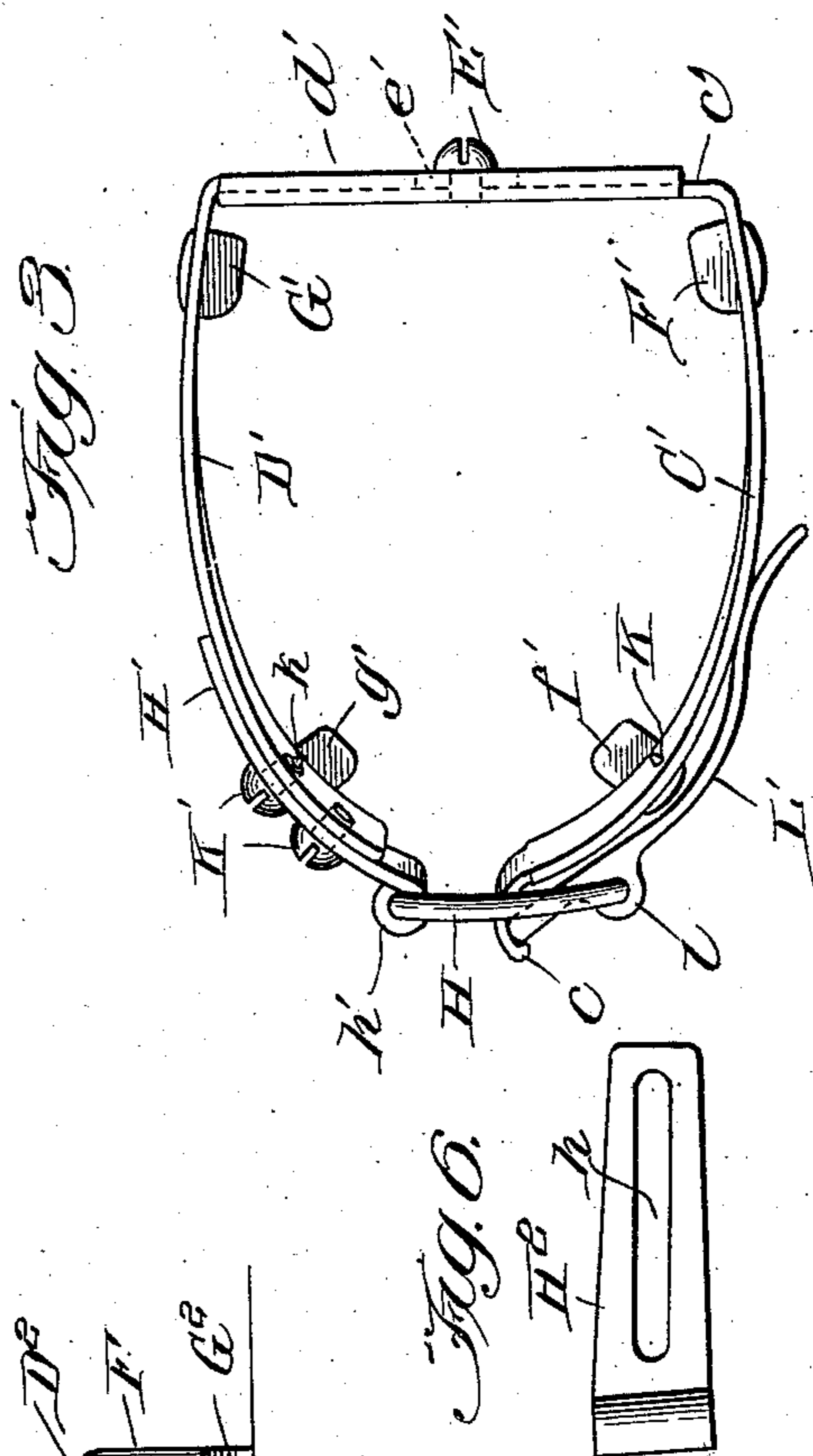
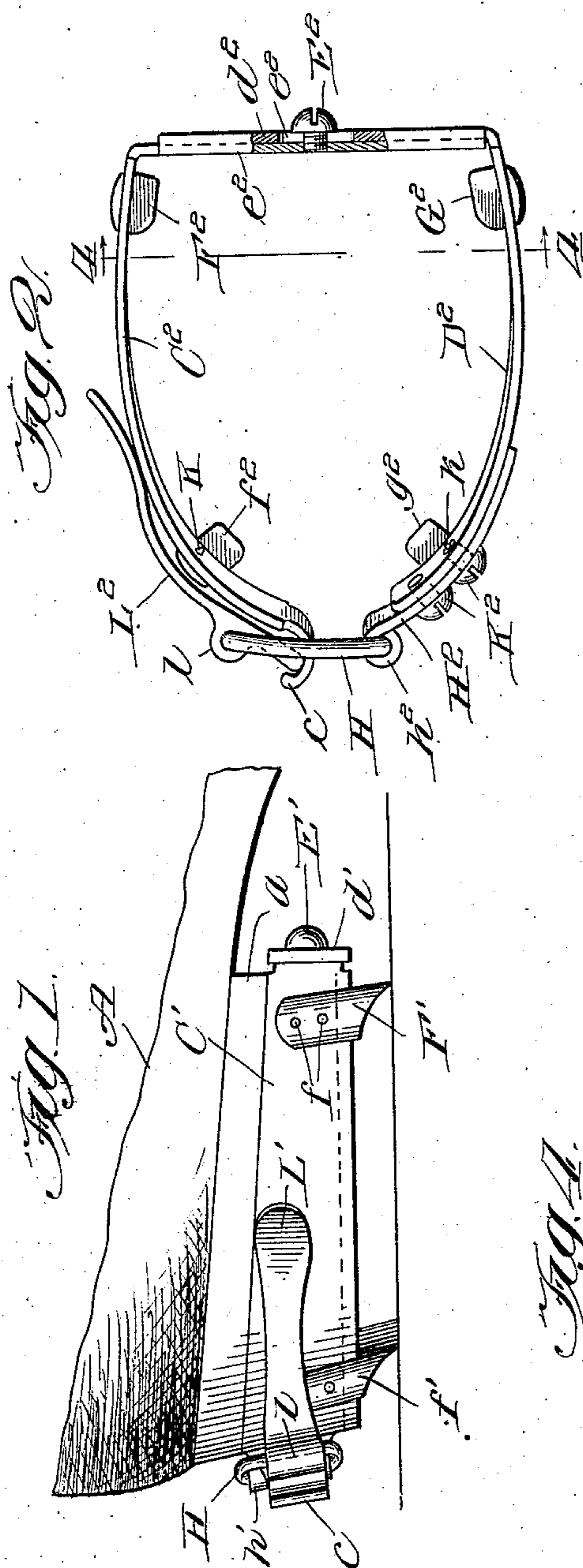
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PATENTED APR. 9, 1907.

H. A. L. HEINICHEN.

HEEL CLIP.

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Witnesses:
O. A. Mullen.
H. S. C. Sitter

Inventor:
Hugo A. L. Heinichen
by Lambert M. Wilkinson
attys

UNITED STATES PATENT OFFICE.

HUGO A. L. HEINICHEN, OF CHICAGO, ILLINOIS.

HEEL-CLIP.

No. 849,901.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HUGO A. L. HEINICHEN, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Heel-Clips; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates in general to devices for preventing pedestrians from falling upon slippery surfaces, and more particularly to clips adapted to be detachably secured to the heels of boots or shoes.

It has heretofore been common to provide shoes with rubber heels or soles or with sharp projections for insuring a firm footing. The pavements in most climates are only in a condition to render necessary such means for preventing slipping at infrequent occasions. It is therefore undesirable to have the anti-slipping device permanently secured to the shoes, not only because they are inconvenient in walking, but also because the projections if sufficiently sharp to prevent slipping cut the floors and carpets when worn indoors.

The primary object of my invention is to provide a device adapted to be detachably secured to boots or shoes for preventing the feet of the wearers from slipping, whereby the device may be readily removed without removing the shoes when the wearer is indoors.

A further object of my invention is to provide a device of the character described which will be simple in construction, inexpensive in manufacture, and efficient in use.

My invention, generally described, comprises a frame adapted to surround the heel of a shoe or boot, projections carried by the frame extending downwardly below the surface of the heel, means for adjusting the frame to various sizes, and means for detachably securing the frame to the heel.

My invention will be more fully described hereinafter with reference to the accompanying drawings, in which the same is illustrated as embodied in a convenient and practical form, and in which—

Figure 1 is a side elevational view showing a heel of a shoe with my improvement secured thereto; Fig. 2, a plan view of the device for the heel of the left shoe; Fig. 3, a

plan view of the device for the heel of the right shoe; Fig. 4, a sectional view on line 4 4, Fig. 2; Fig. 5, a sectional view on line 5 5, Fig. 4; and Fig. 6, a detail side elevational view.

Similar reference characters are used to designate similar parts in the several figures of the drawings.

Reference-letter A indicates the portion of a shoe or boot to which the heel *a* is secured.

Referring to Figs. 1 and 3, reference characters C' and D' indicate the two parts of a metal frame adapted to surround the heel of a right shoe or boot. The frame is preferably made of metal—such, for instance, as machine steel. The portion of the frame C' which is overlapped by a portion of the frame D' is provided with flanges along its upper and lower edges, between which is received the overlapping part *d'* of the portion D'.

The overlapping parts *c'* and *d'* of the portions of the frame are adjustably connected together by any suitable means—such, for instance, as a clamp-screw E', extending through a slot *e'* in the part *d'* into engagement with a screw-threaded opening in the part *c'*.

The lower edges of the portions C' D' of the frame are provided with depending lugs having sharp lower edges. F' and *f'* indicate lugs depending from the portion C', while G' and *g'* indicate lugs depending from the portion D'. Each of the lugs is provided with a groove into which extends the lower edge of the supporting-frame and with an upwardly-extending part F overlying the outer surface of the frame. Any suitable means may be provided for securing the lugs to the frame—such, for instance, as rivets *f*, or the lugs may be secured to the frame by brazing. The lugs are preferably made of a hard material to withstand wear—such, for instance, as tool-steel. The lugs are provided with portions, which extend laterally within the frame, adapted to underlie and support the heel.

A bracket H' is secured to the end of the portion D' of the frame and is provided at its outer end with an eye *h'*, within which is hinged a bail H. Any suitable means may be provided for adjustably securing the bracket H' to the frame—such, for instance, as by providing a slot *h* therein, through which clamp-screws K' extend into engagement with screw-threaded holes in the frame.

Pivotally secured to the bail H at the opposite side thereof from the eye h' is a lever L' , the end of which is adapted to engage the curved end c of the portion C' of the frame.

5 In order to securely clamp the frame to the heel, a point, such as k , is preferably provided upon the inner end of one of the clamp-screws K' , while a similar point K projects from a corresponding place on the portion C' of the frame.

10 In order to secure the clip to the heel of a boot or shoe, the lever L' is swung outwardly, thereby permitting the end c of the portion C' of the frame to move away from the corresponding end of the portion D' . The frame is then placed around the heel with the inwardly-projecting portions of the lugs engaging the under surface thereof. The lever L' is then swung into position shown in Figs. 1 and 3, thereby, through engagement with the curved end c , forcing the two portions of the frame together and tightly clamping the same around the heel.

25 The frame may be adjusted in size to suit various sizes of heels by loosening the screw E' and sliding the overlapping parts d' and c' relatively to each other and then again tightening the screw to clamp the parts of the frame in the adjusted position. The bracket H' may also be adjusted to vary the size of the frame by loosening the clamp-screws K' and sliding the bracket relatively to them, after which the screws are again tightened to clamp the bracket in its adjusted position upon the frame.

30 In order that the clips may be readily secured to the heels of the shoes and to prevent their interference with the movement of the feet in walking, they are preferably made slightly different for the two feet. The clip for the right foot (illustrated in Figs. 1 and 3) is provided with a lever L' on the outside, so that it will not interfere with the other shoe.

40 The clip for the left foot is the reverse of that for the right and is illustrated in detail in Figs. 2, 4, and 5. The lever L^2 is located on the outside of the clip and is adapted to cooperate with the curved end c on the portion C^2 of the frame.

50 The bail H, to which is pivotally secured the lever L^2 , is pivotally supported in the ear h^2 of the bracket H^2 , which is adjustably carried by the portion D^2 of the frame by means of the clamp-screws K^2 .

55 Reference characters c^2 and d^2 indicate the overlapped parts of the two portions of the frame, which are adjustably secured together by the clamp-screw E^2 , extending through the slot e^2 . The lugs F^2 f^2 G^2 g^2 correspond to the lugs above described as provided upon the frame for the right heel.

60 It will be noticed that the end of the lever which engages the curved end c of the frame when the frame is clamped around the heel lies outside of the bail H, so that the lever

will be retained in close contact with the frame and the latter securely locked in position around the heel.

From the foregoing description it will be observed that I have invented an improved device for preventing the feet from slipping which may be readily secured to and detached from the heels of boots or shoes, thereby permitting the device to be secured for use prior to the wearer going out of doors and permitting the ready removal of the device from the heels before the wearer goes indoors.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination with an open frame having one end curved, a bail secured to the other end of said frame, a lever secured to said bail adapted to engage the curved portion on the opposite end of said frame for detachably securing said frame to a boot or shoe, projections depending from said frame, and means for adjusting the size of said frame to fit different sizes of boots or shoes.

2. In a device of the character described, the combination with a frame, of means for securing said frame around the heel of a boot or shoe, projections depending from and secured beneath the under edge of said frame, and lugs extending inwardly from said projections to support the heel.

3. In a device of the character described, the combination with a frame, of means for securing said frame around the heel of a boot or shoe, projections secured to said frame having grooves within which the lower edges of the frame is seated, and lugs formed integrally with said projections to support the heel.

4. In a device of the character described, the combination with a two-part open frame having one end curved and adapted to be expanded and contracted to surround the heel of a boot or shoe, means for adjustably connecting the two parts of said frame, a bail secured to one end of one part of said frame, a lever secured to said bail and adapted to engage the curved portion on the opposite end of the other part of said frame, and projections depending from said frame.

5. In a device of the character described, the combination with an open frame adapted to be expanded and contracted to surround the heel of a boot or shoe, an outwardly-extending flange on one end of said frame, a link pivotally secured to the other end of said frame, a lever pivotally connected to said link and adapted to engage said flange to clamp the frame around the heel, and projections depending from said frame.

6. In a device of the character described, the combination with an open frame adapted to be expanded and contracted to surround the heel of a boot or shoe, a bracket adjust-

ably secured to one end of said frame, an
outwardly-extending flange on the other end
of said frame, a link pivotally connected to
said bracket, a lever pivotally secured to said
5 link and adapted to engage said flange to
secure the frame around the heel, and pro-
jections depending from said frame.

In testimony whereof I sign this specifica-
tion in the presence of two witnesses.

HUGO A. L. HEINICHEN.

Witnesses:

GEO. L. WILKINSON,
C. A. MULLEN.