

907,693.

F. G. HOLBROOK.  
HINGE.  
APPLICATION FILED MAR. 10, 1908.

Patented Dec. 22, 1908.

FIG. 1

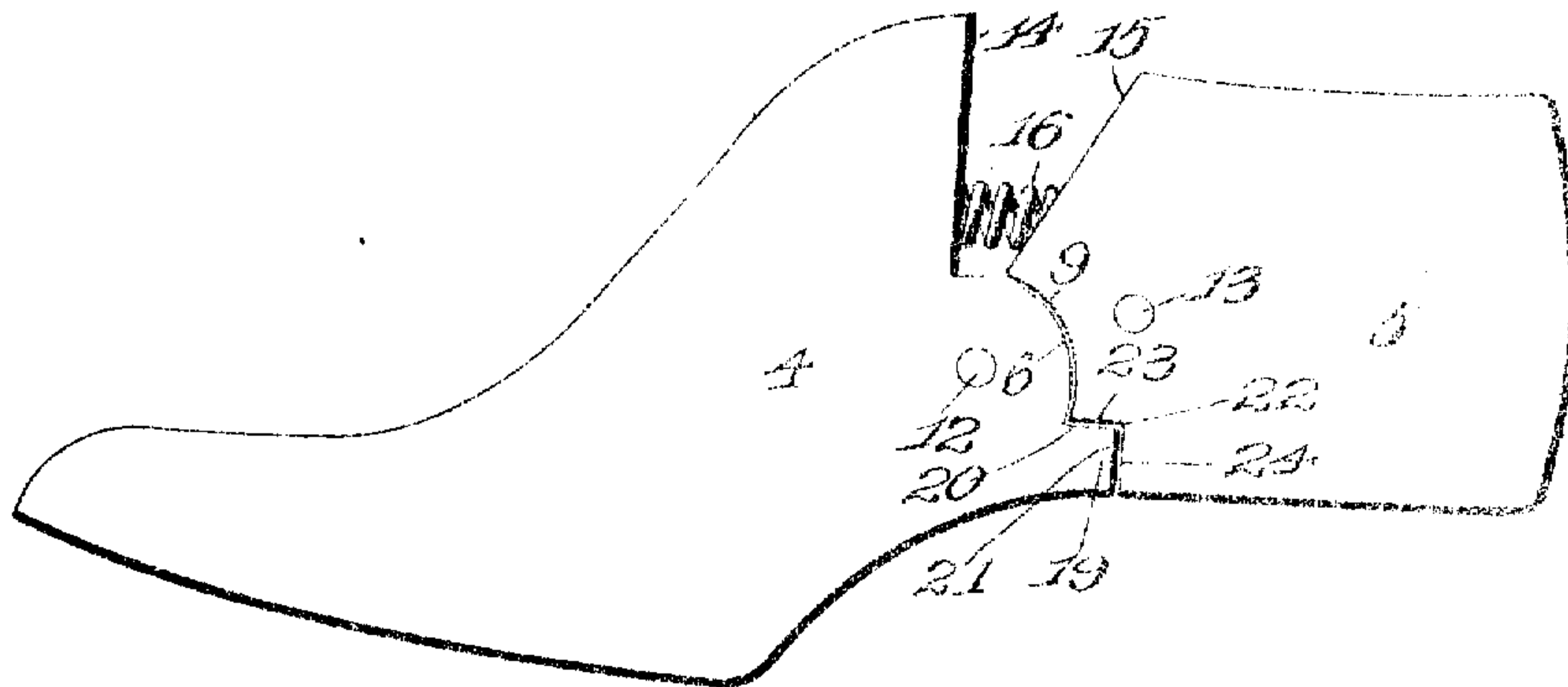


FIG. 2

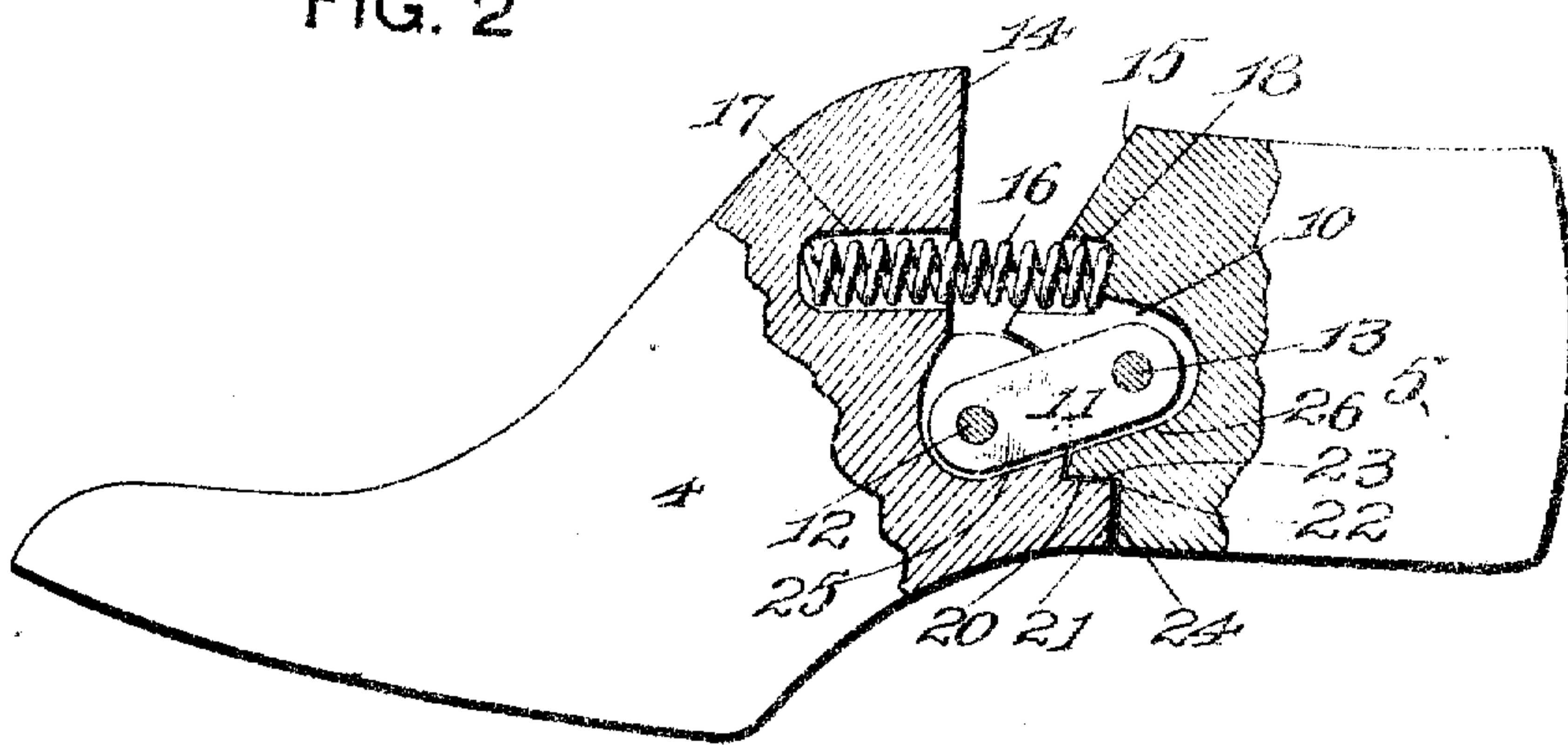
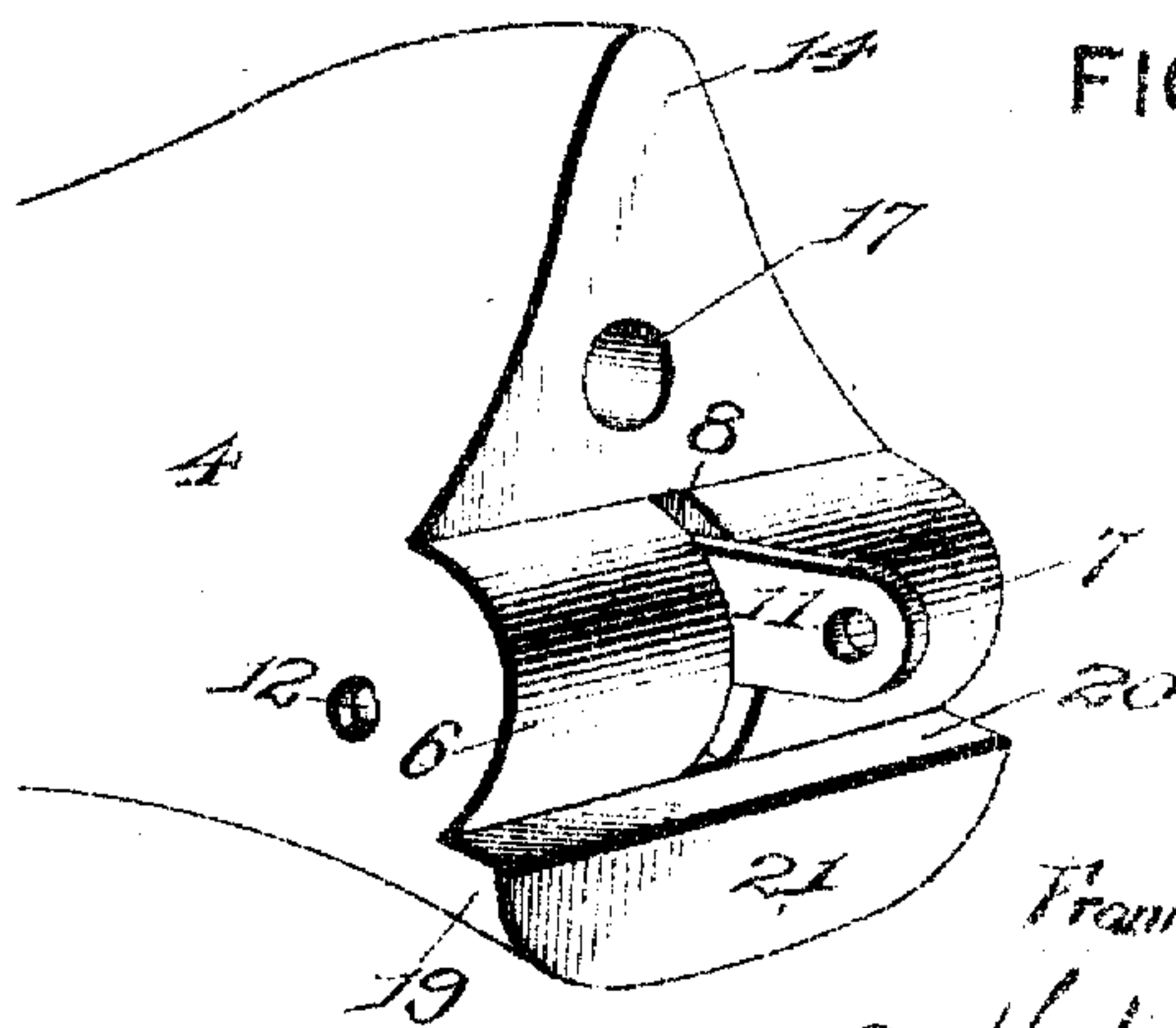


FIG. 3



WITNESSES

*H. C. Stein*  
*L. A. & McIntyre*

INVENTOR

*Frank G. Holbrook*  
*By Hopkins & Eichen, Attys.*



# UNITED STATES PATENT OFFICE.

FRANK G. HOLBROOK, OF ST. LOUIS, MISSOURI.

## HINGE.

No. 907,693.

Specification of Letters Patent.

Patented Dec. 22, 1908.

Application filed March 10, 1908. Serial No. 420,123.

*To all whom it may concern:*

Be it known that I, FRANK G. HOLBROOK, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain  
5 new and useful Improvements in Hinges, of which the following is a specification.

This invention relates to improvements in hinges and has for its object to provide a  
10 hinge for use in pivotally mounting upon each other structures, such as wood-sections, having comparatively little tensile strength.

In the drawings—Figure 1 is a side elevation of a hinge embodying my invention. Fig. 2 is a similar view showing the occluding  
15 portions broken away. Fig. 3 is an enlarged perspective view of the convex section of the hinge of my invention.

I have illustrated in the drawings the application of the hinge of my invention to a  
20 shoe last, although said hinge is obviously adapted for use in any structure composed of analogous material and intended for analogous use; that is to say, where two sections of a structure of wood or like material must  
25 be pivotally connected so as to have a limited pivotal movement in relation to each other, combined with the utmost possible strength of the material employed, to limit such relative movement and to prevent the accidental  
30 distortion of the entire structure resulting from injury to the hinge in use.

As shown in the drawings, my hinge is formed of sections 4 and 5. For convenience, the section 4 will be referred to as the convex  
35 section and the section 5, as the concave section. The section 4 is provided with convex knuckles 6 and 7 separated by the slot 8. The curvilinear surfaces of the knuckles 6 and 7 are adapted to fit closely within the  
40 concave recess 9 in the concave section 5. The section 5 is provided with a slot 10 registering with the slot 8 in the section 4, and the metallic strap member 11 is seated in place in the slots 8 and 10, being pivoted to the section 4 by the pin 12 and pivoted to the section 5 by the pin 13. The upward movement of the sections 4 and 5 is limited by the plane faces 14 and 15 with which the sections 4 and 5 are respectively provided; the sections 4 and 5 being normally held in the position illustrated in Figs. 1 and 2 of the drawings by means of the coil-spring 16, for the accommodation of the ends of which the section 4 is provided with the chamber 17 and  
50 the section 5 is provided with the chamber 18, as illustrated in Fig. 2.

In the class of structures in which my hinge is adapted to be used, particularly in shoe lasts, the pins 12 and 13 are subjected to considerable stress, and said pins being seated in comparatively soft material, such stress is calculated to pull the members 4 and 5 apart, causing the pins 12 and 13 to wear, or be drawn, into the comparatively soft material of the sections 4 and 5; such  
65 wear resulting in the displacement of the hinged connection and the dislocation of the sections 4 and 5 with reference to each other. In order to prevent such displacement I have provided the section 4 with a rectangular  
70 shoulder 19 having a horizontal plane face 20 and a vertical plane face 21, and with these faces the section 5 is contoured to register by being provided with the rectangular groove 22 forming the faces 23 and 24, which  
75 are adapted to register with the faces 20 and 21 respectively. As a further safeguard against such dislocation, the slots 8 and 10 are rectilinear and in alinement at their bottoms as illustrated in section in Fig. 2 by the  
80 numerals 25 and 26, so that when the strap 11 is seated in place, its lower edge fits snugly against the plane surfaces 25 and 26 formed by the bottoms of the slots 8 and 10.

By the described structure I have safeguarded the members 4 and 5 against dislocation by any force less than will mutilate or crush the structure of the sections themselves.

Having fully described my invention, what I claim as new and desire to have secured to me by the grant of Letters Patent, is:

1. In a hinge, the combination of a convex section provided with two knuckles separated by a slot; a concave section provided  
95 with a concave recess adapted to register with said knuckles and slotted to register with the slot in the first-named section; a strap seated in said slots and having rectilinear engagement with the bottoms of said  
100 slots; the convex section being provided with a shoulder beneath the knuckles, and the concave section being grooved beneath its concave recess to register with said shoulder; and a spring whereby said shoulder is  
105 normally kept in engagement with the concave section, substantially as described.

2. In a hinge, the combination of a convex section provided with two knuckles separated by a slot; a concave section provided  
110 with a concave recess adapted to register with said knuckles and slotted to register with the

slot in the first-named section; a strap seated  
in said slots and having rectilinear engage-  
ment with the bottoms of said slots; the con-  
vex section being provided with a shoulder  
5 beneath the knuckles, and the concave section  
being grooved beneath its concave recess to  
register with said shoulder; and a spring  
whereby said shoulder is normally kept in  
engagement with the concave section, said  
10 sections being chambered to receive and hold

the ends of said spring, substantially as de-  
scribed.

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

FRANK G. HOLBROOK.

Witnesses:

JAMES L. HOPKINS.

WALTER C. STEIN