

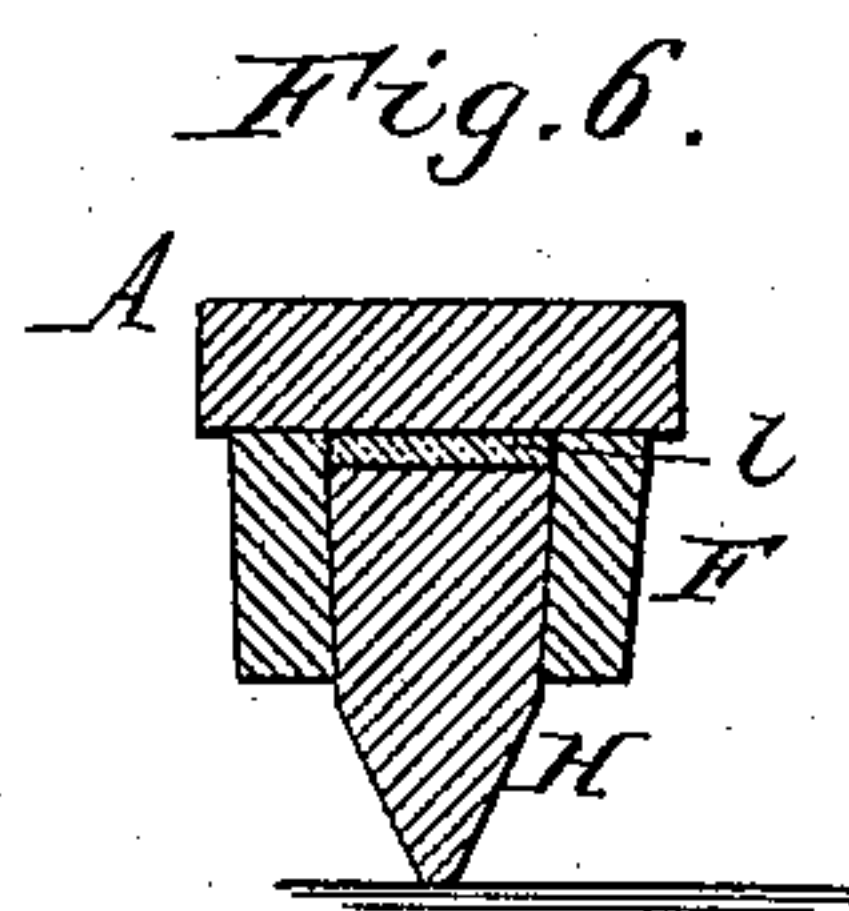
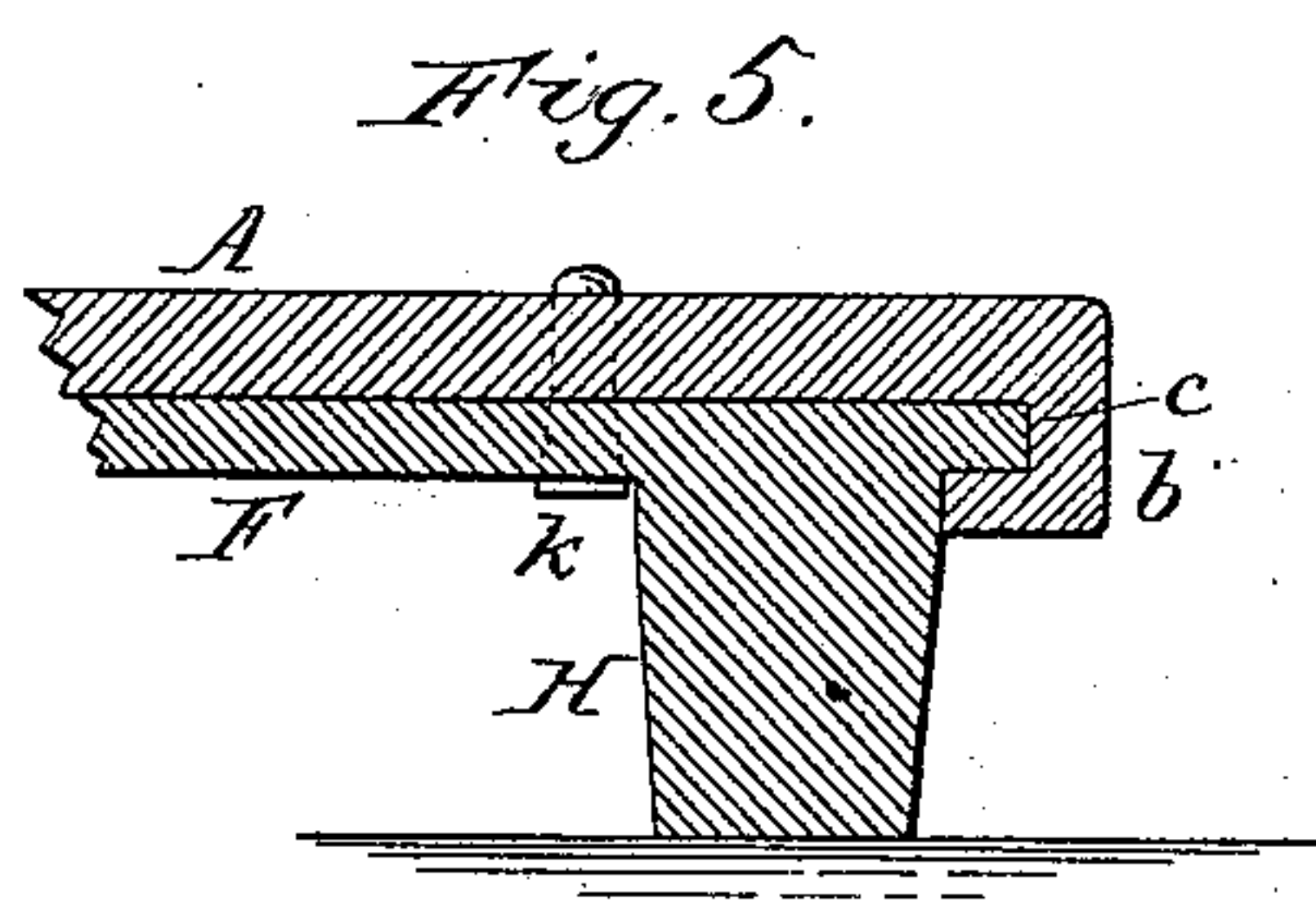
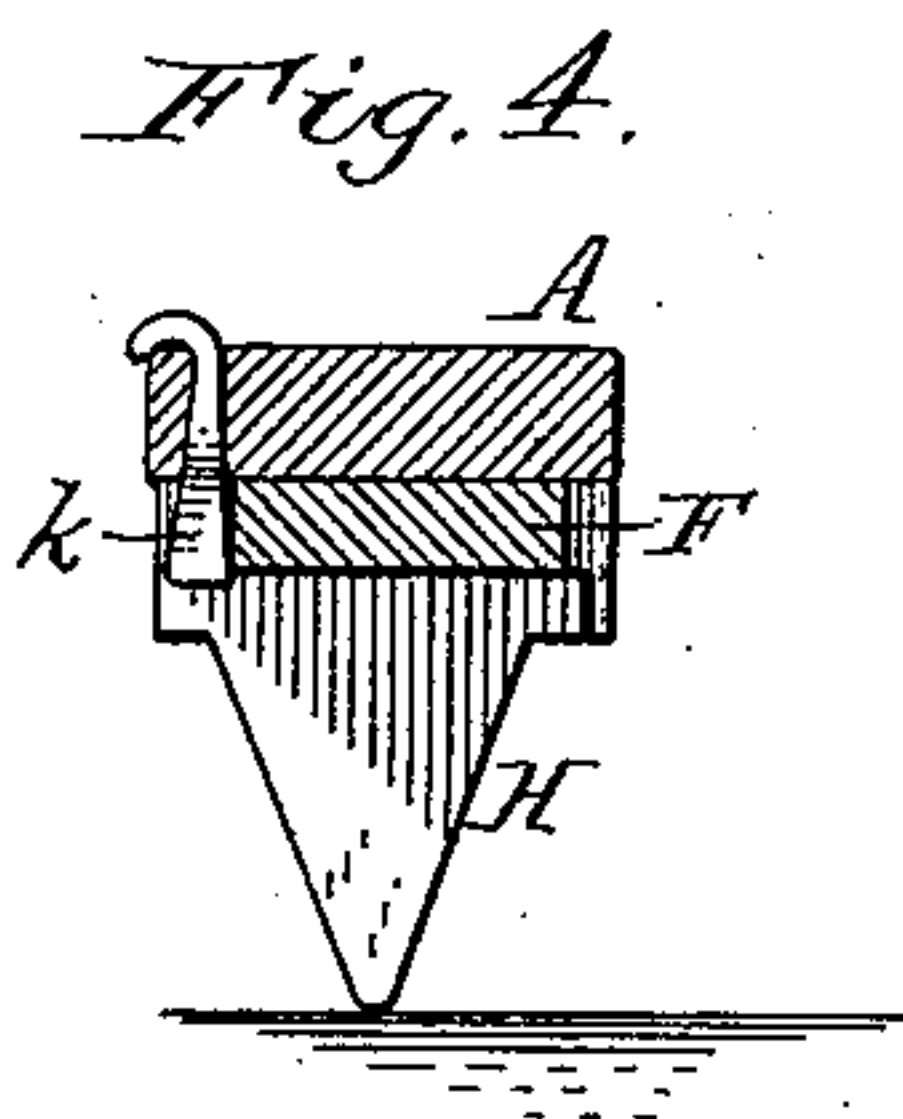
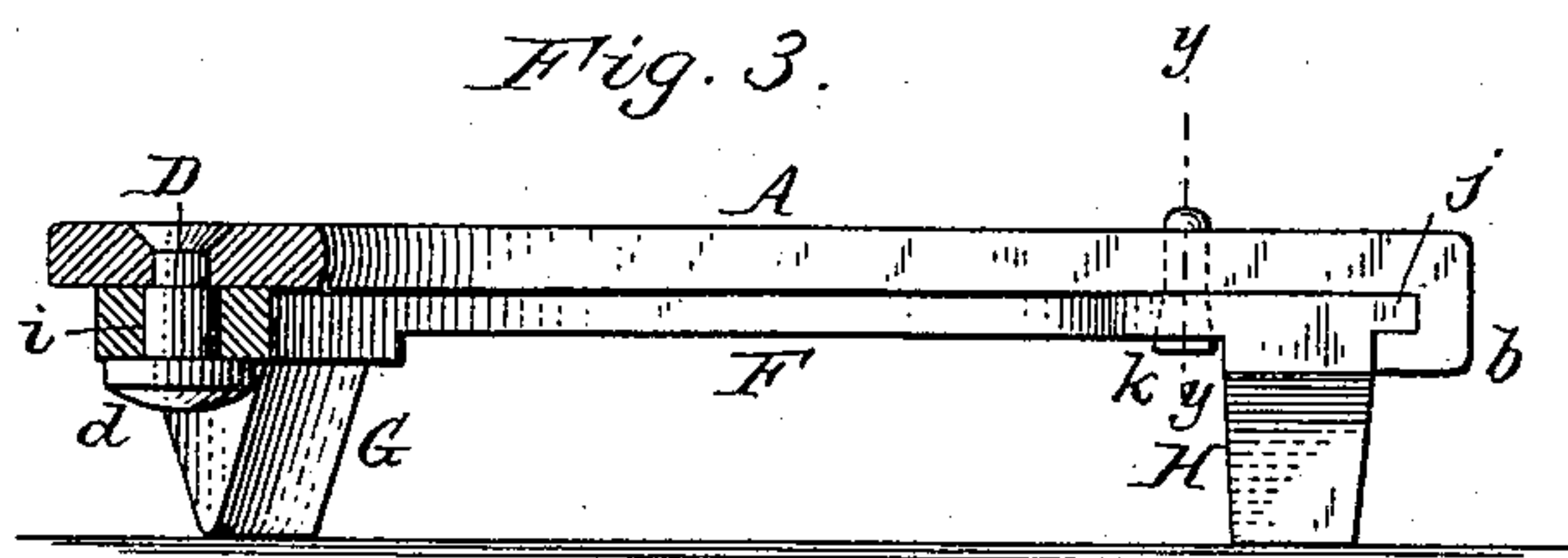
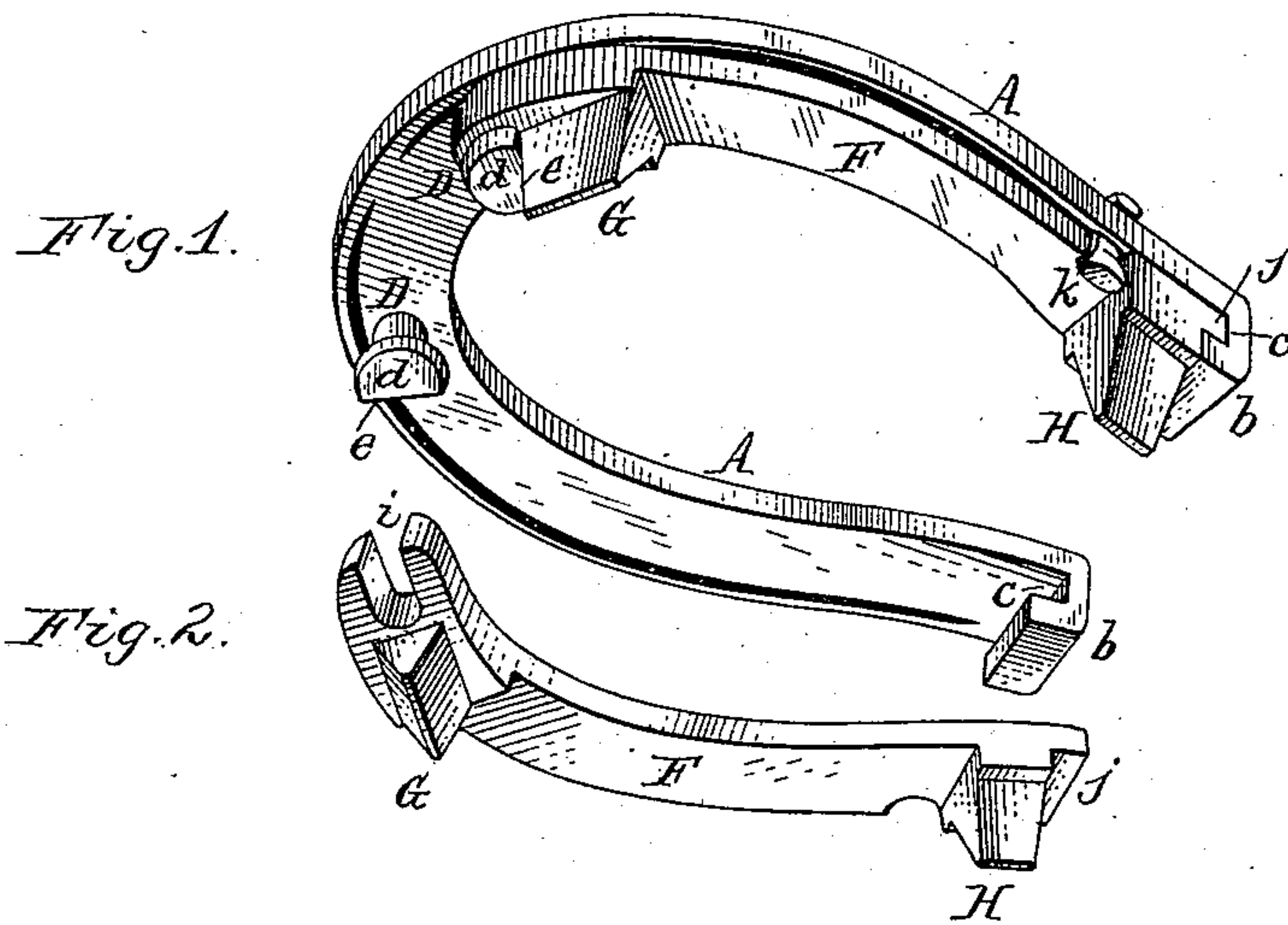
(No Model.)

W. SOMERVILLE, Sr.

HORSESHOE.

No. 337,090.

Patented Mar. 2, 1886.



Witnesses:

Theo. L. Popp
Geo. J. Buckheit Jr

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UNITED STATES PATENT OFFICE.

WILLIAM SOMERVILLE, SR., OF BUFFALO, NEW YORK.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 337,099, dated March 2, 1886.

Application filed November 2, 1885. Serial No. 181,618. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SOMERVILLE, Sr., of the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Horseshoes, of which the following is a specification.

This invention relates to an improvement in that class of horseshoes in which the toe and heel calks are attached to a removable plate which can be attached to the shoe when calks are required for use and be removed therefrom without removing the shoe from the hoof.

The object of my invention is to provide simple and efficient means for removably attaching the calk-plate to the shoe; and my invention consists to that end of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a perspective view of my improved horseshoe with one of the calk-plates detached from the shoe. Fig. 2 is a perspective view of the detached calk-plate. Fig. 3 is a longitudinal section of the shoe. Fig. 4 is a cross-section of the shoe in line *y y*, Fig. 3. Fig. 5 is a longitudinal section through the heel-calk. Fig. 6 is a cross-section showing a modified construction of the calk-plate.

Like letters of reference refer to like parts in the several figures.

A represents a horseshoe of suitable form and provided with the usual nail-holes, so that it can be secured to the hoof of the horse. The rear ends of the shoe A are bent downwardly at right angles to the length of the shoe and then forwardly toward the toe of the shoe, forming at each end of the shoe a claw, *b*, opening forwardly on the under side of the shoe, and having a recess, *c*, between its forwardly-turned bottom portion and the rear portion of the shoe.

D represents studs secured to the under side of the shoe A, near the forward end thereof, and on opposite sides of a central line drawn longitudinally through the shoe. The studs D are provided with laterally-projecting heads *d*, having flat or straight rear sides, *e*.

F F represent the removable calk-plates, and G the toe-calks, and H the heel-calks se-

cured to the same. Each calk plate F is provided with a toe-calk, G, and a heel-calk, H, and the plates are curved or formed of the proper shape to fit snugly against the under side of the shoe between the stud D and the claw *b*. Each plate F is provided at its front end with a notch, *i*, which straddles the neck of the stud D, and at its rear end with a lip, *j*, which enters the recess *c* of the claw *b*.

The calk-plates are secured to the shoe A by inserting their notched front ends under the heads of the studs D and then swinging the calk-plates inwardly or toward the side of the shoe until the lips *j* have entered the recesses *c* of the claws *b*, and the calk-plates lie snugly against the under side of the shoe A. In this position of the calk-plates the rear edges of the heel-calks bear against the front sides of the claws *b*, whereby the further inward movement of the calk-plate is prevented. The calk-plates are secured in this position by nails *k*, driven through the shoe on the outer sides of the calk-plates near their rear ends. Upon removing these nails the calk-plates are readily detached from the shoe by swinging the rear end of the calk-plate outwardly until the lips *j* have cleared the claws *b*, and then withdrawing the notched front ends of the calk-plates from under the heads of the studs D.

The calks may be formed in one piece with the calk-plate, of cast-steel or other suitable metal, as represented in Figs. 1 to 5; but I prefer to make the calks separate from the plate, as represented in Fig. 6. In this case the calk is made tapering and inserted in a downwardly-tapering socket formed in the plate, in which socket it is secured by a backing, *l*, of rubber or other elastic material.

When the calks are worn out, the calk-plates are removed from the shoe and replaced by new ones when the calks are formed on the plate, or the calks only are replaced by new ones when the calks are detachable, which operation is effected very quickly and with very little trouble. If only one of the calks should be worn or broken off, only one calk or calk-plate is required to be replaced, while the other calk-plate is not disturbed.

My improved calk-plates are constructed at

less expense and more easily fitted to the shoe than a calk-plate which covers the entire under side of the shoe.

I claim as my invention—

- 5 1. The combination, with the horseshoe, of two separate removable calk-plates, each provided with a front calk and a heel-calk, the shoe being constructed with fastenings which overlap the under sides of the removable calk-plates at both ends thereof, and nails or stops
10 *k*, whereby the removable calk-plates are held against lateral displacement, substantially as set forth.

2. The combination, with a horseshoe, *A*, provided with headed studs *D* and claws *b*, of 15 two calk-plates, *F*, provided with notches *i* and lips *j*, whereby the calk-plates are attached to the studs *D* and claws *b*, substantially as set forth.

Witness my hand this 23d day of October, 20 1885.

WM. SOMERVILLE, SR.

Witnesses:

JNO. J. BONNER,
CARL F. GEYER.