

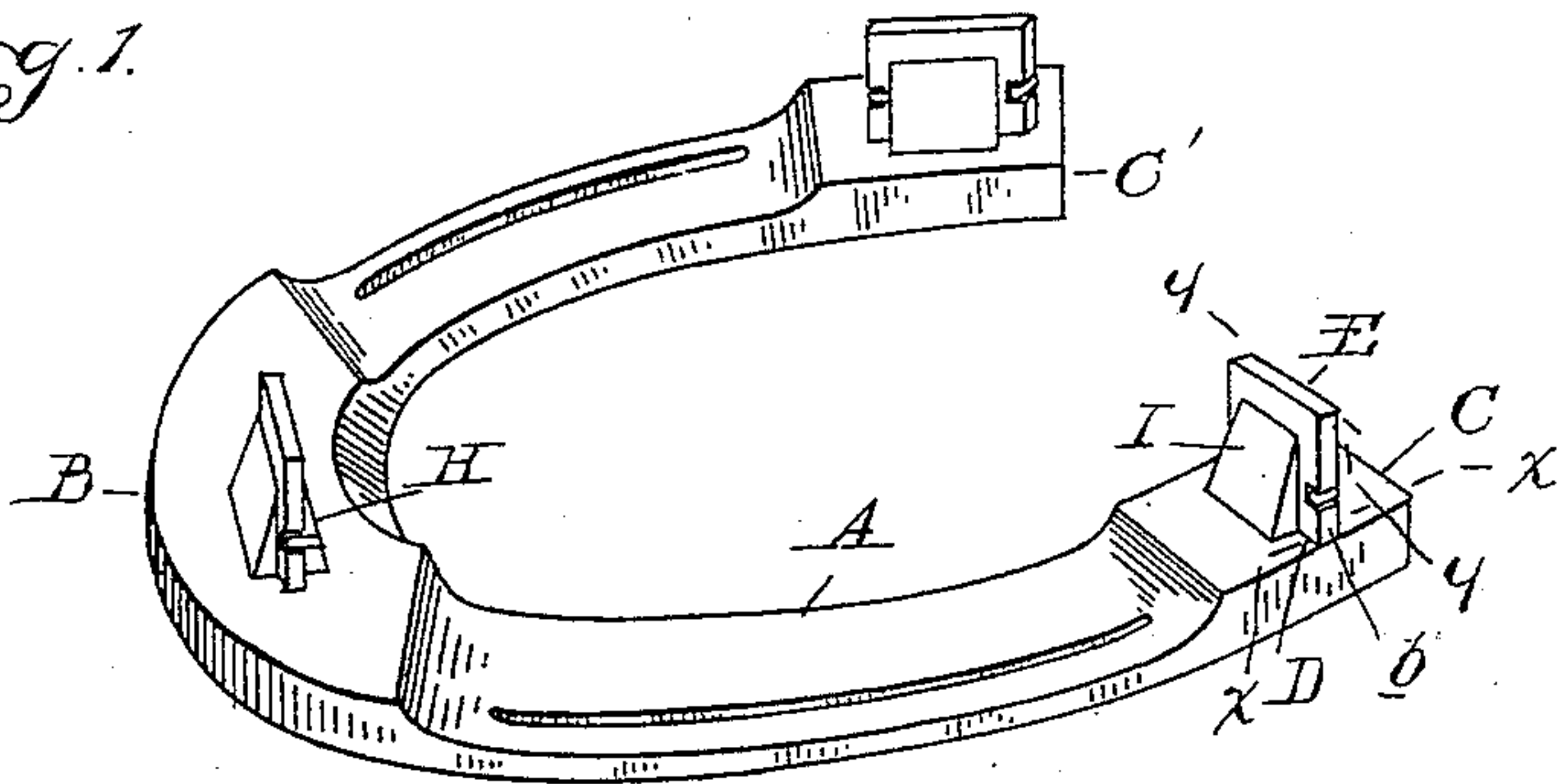
Patented Sept. 12, 1899.

HORSESHOE.

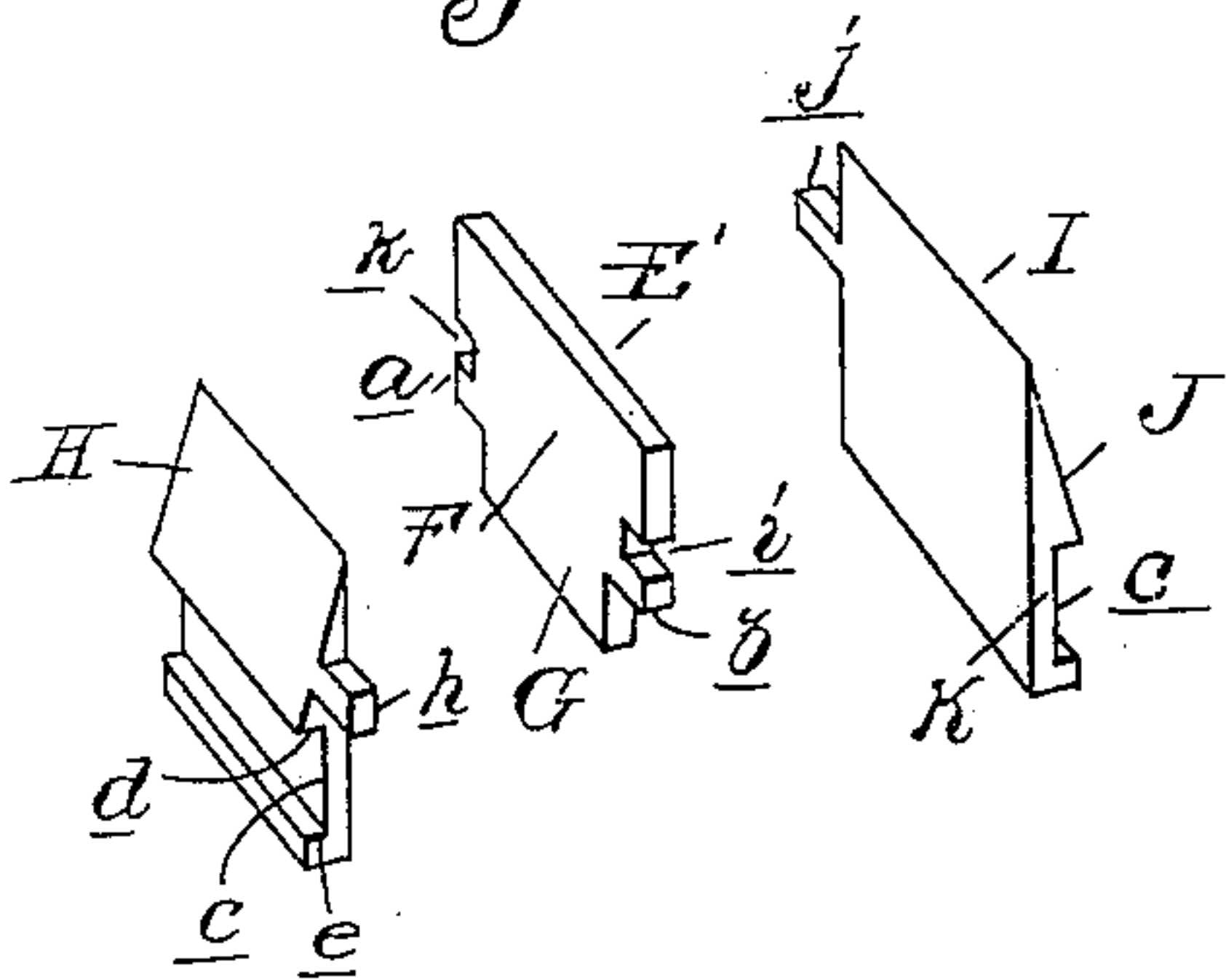
(Application filed May 1, 1899.)

(No Model.)

Fig. 1.



Aug. 2.



Fing. 3.

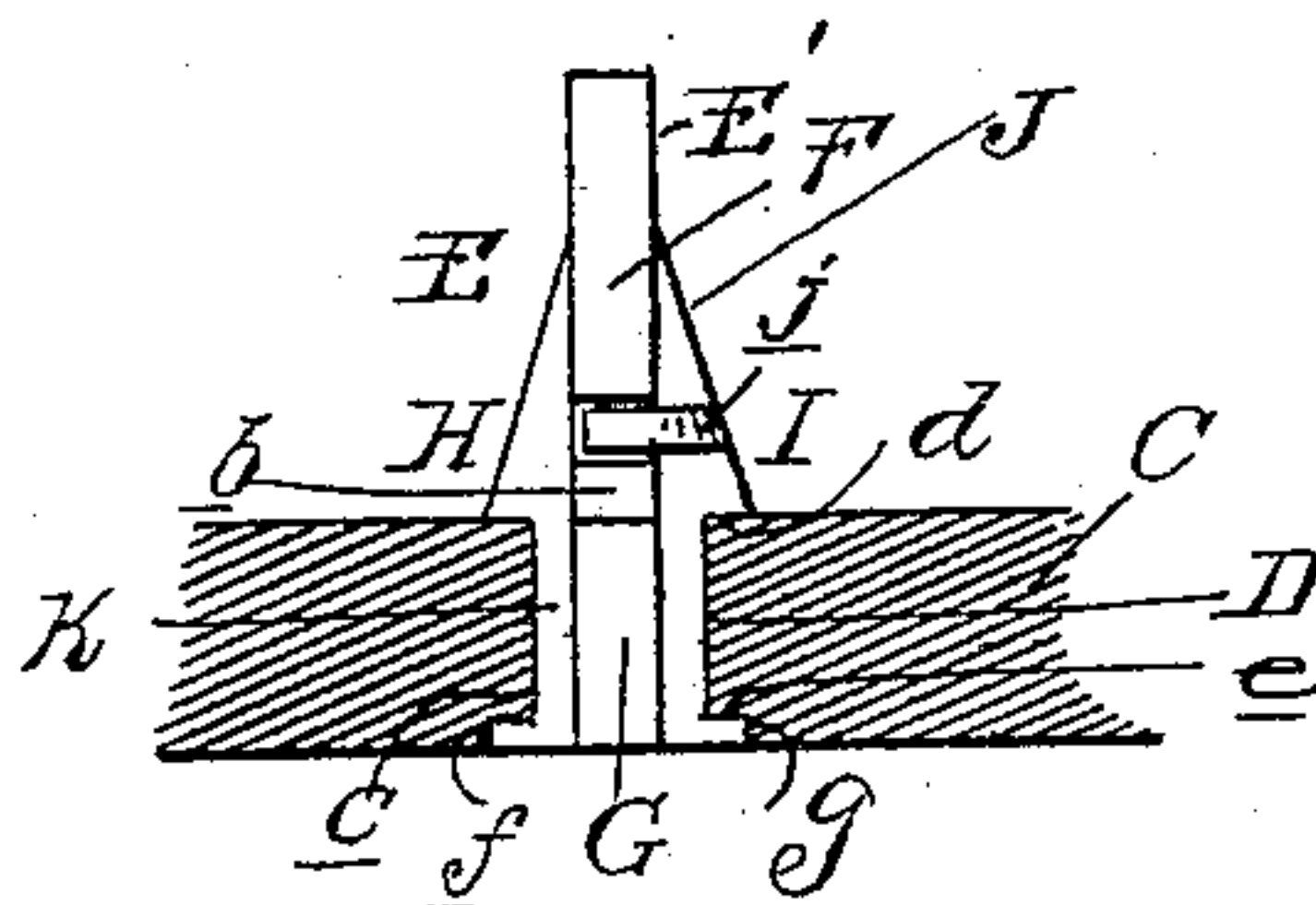


Fig. 5.

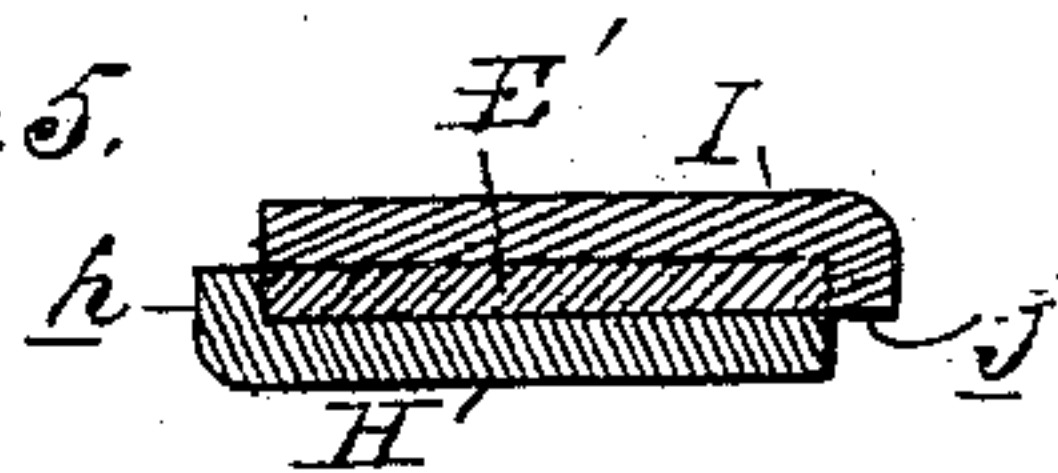
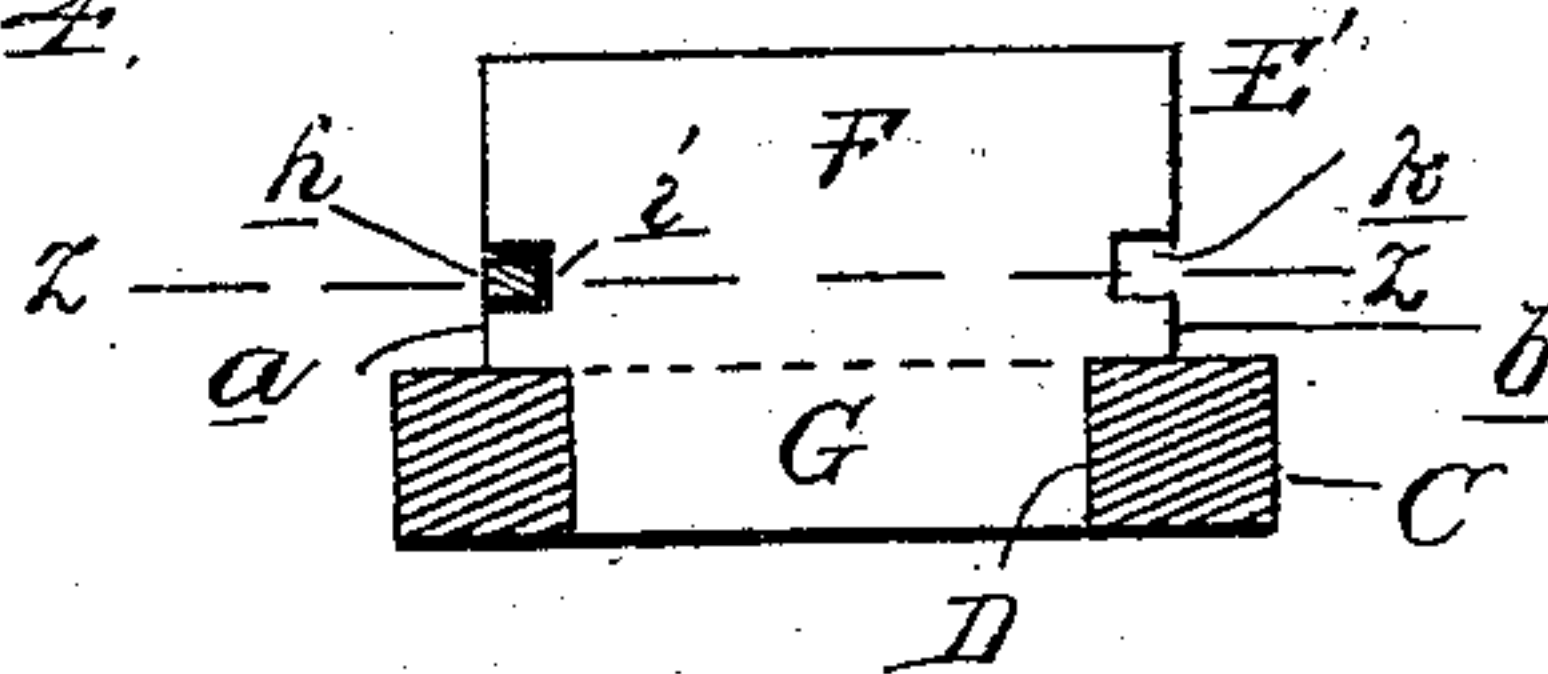
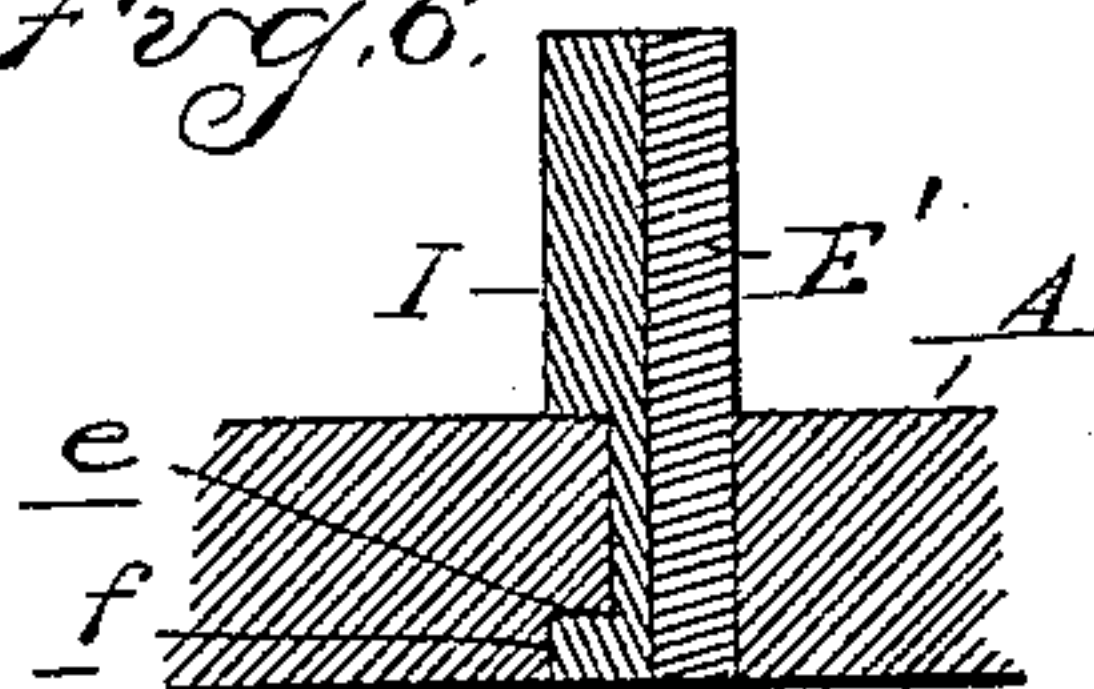


Fig. 4.



Fz. 6.



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UNITED STATES PATENT OFFICE.

BENJAMIN H. COATS AND CHARLES L. SPONENBURGH, OF DETROIT,
MICHIGAN.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 632,960, dated September 12, 1899.

Application filed May 1, 1899. Serial No. 715,218. (No model.)

To all whom it may concern:

Be it known that we, BENJAMIN H. COATS and CHARLES L. SPONENBURGH, citizens of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention has general reference to horseshoes, and relates particularly to a detachable calk therefor and to the novel means employed for securing the calk to the shoe.

The essential object of our invention is to produce a calk that may be readily and quickly attached to or detached from the shoe by the operator without the use of tools, as has heretofore been necessary, and that may be locked into engagement with the shoe in a simple and effective manner.

Another essential object of our invention is to so construct the calk that the attaching or detaching of the latter to the shoe may be effected without the removal of the latter from the foot of the horse.

With these objects in view the invention consists in the novel construction of a sectional calk and in the peculiar arrangement and combination of the various parts of the latter, as will be more fully hereinafter described, and shown in the drawings, in which—

Figure 1 is a perspective view of a horseshoe with our improved calks attached thereto. Fig. 2 is a perspective view of the parts detached. Fig. 3 is a section on line xx , Fig. 1. Fig. 4 is a section on line yy , Fig. 1. Fig. 5 is a section taken on line zz , Fig. 4; and Fig. 6 is a sectional view of a modified type of calk.

The reference-letter A designates a horseshoe provided with a thickened toe portion B and the thickened ends or heels C C'. Openings are formed in the thickened portions of the shoe, within which are arranged our improved calks, a description of one of which will now be given. The opening D, formed in the thickened portion C of the shoe, is preferably rectangular in configuration, and arranged in said opening is the calk E.

In Figs. 1 to 5, inclusive, the calk is shown to be formed in three sections or members, and for convenience in describing the invention these parts will be hereinafter termed the "central" member and the "side" members.

The reference-letter E' designates the central calk member, which comprises in its construction a body portion F and the reduced portion or shank G, the latter being adapted to extend within the opening, freely engaging therein, and shoulders a and b upon the calk, formed at the junction of the shank and body, are adapted to bear against the lower face of the shoe, as plainly shown in the figures referred to.

The reference-letters H and I designate the side members of the calk, which are arranged within the opening upon opposite sides of the central member and are detachably secured to the shoe. Each side member is preferably formed with a lower tapered portion J of less length than the body of the central member and a shank K. Each shank of the side members is recessed at c to form an upper shoulder d and a lower shoulder e , which shoulders are adapted to engage over the opposite faces of the shoe, as plainly shown, forming the detachable connection between the calk and the shoe. In order that a flat even surface will be presented to the foot of the horse, the upper face of the shoe is recessed along the opposite sides of the opening at f and g to receive the shoulders e of the side members.

Various means may be employed for locking the calk members to each other; but the preferable means we employ are as follows: Upon the end of one side member is formed a lug h , which is preferably integral with said side member, and in alinement with said lug is a recess i , formed in one end of the body portion of the central member. Upon the other side member of the calk and upon the opposite end is formed a similar lug j , while in alinement with the latter lug is a recess k , formed in the opposite end of the central member.

In assembling the parts the side members of the calk are first arranged within the open-

ing and moved laterally in opposite directions, so that the shoulders upon said side members are caused to engage upon opposite faces of the shoe, whereby said members are held from movement in either direction within the opening. The central member of the calk is then inserted between the side members and is moved between the same and into the opening until the shoulders upon said central member bear against the lower face of the shoe and the end of the central-member shank is flush with the upper shoe-face. The recesses formed in the ends of the central member are then in alinement with the lugs upon the side members, and the several members are locked to each other by bending the lugs *h* and *j* into the recesses in the manner shown in the drawings. In detaching the calk from the shoe the lugs upon the side members are disengaged from the recesses and the several members withdrawn from the opening, leaving the latter in readiness to receive the new calk.

From the foregoing description of our invention it is obvious that the three calk members described may be of equal length, and this construction is preferable when the calks are used as mud-calks. It will also readily be apparent that the calk need not necessarily be formed in three parts, as it could comprise two members, as shown in the modification in Fig. 6, and still perform the same result. In the figure last referred to the two members are shown to be of equal length, which, as before stated, is sometimes the preferable construction, while the manner of detachably securing the calk to the shoe and the calk members to each other is similar to that already hereinbefore set forth. It will further be observed from the construction that the securing devices for the members are arranged at a point as near the base of the latter as possible, whereby the maximum amount of wear can be had from the calk; also, that the construction of the parts is such that the calk is always supported by the shoe, which prevents any strain from coming upon the lock which holds the calk members to each other, the latter being adapted simply to hold the members from falling without the recess.

What we claim as our invention is—

1. The combination with a horseshoe having a single opening formed therein, and a sectional calk within the opening comprising a calk member and an adjacent member substantially equal in length and in contact, one with the other, the meeting side of each member being a plane surface, a detachable connection between one of the members and the horseshoe, and a lock for tying the members together after their assemblage within the opening has been effected.

2. The combination with a horseshoe having an opening formed therein, and a sectional calk within the opening, comprising a calk

member detachably secured to the shoe, an adjacent member, and a locking device upon the side of one member adapted to engage with the other member after the assemblage of the members has been effected.

3. The combination with a horseshoe having an opening formed therein, and a sectional calk within the opening, comprising a calk member detachably secured to the shoe, an adjacent member, one of said members being recessed, and a lug extending from the side of one member adapted to be bent into engagement with the recessed member to lock said members together after their assemblage has been effected.

4. The combination of a horseshoe, having a single opening formed therein, and a sectional calk within the opening comprising a calk member and an adjacent member substantially equal in length and in contact one with the other, a shoulder formed upon the adjacent member adapted to bear against the lower face of the shoe, a detachable connection between said calk member and the shoe, and a lock for tying the members together after their assemblage within the opening has been effected.

5. The combination of a horseshoe having a single opening formed therein, a sectional calk within the opening comprising a calk member and an adjacent member, substantially equal in length and in contact one with the other, the meeting side of each member being a plane surface, spaced shoulders upon the calk member engaging the opposite faces of the shoe, a shoulder upon the adjacent member bearing against the lower face of said shoe, and a lock for tying the members together after their assemblage within the opening in the shoe has been effected.

6. The combination of a horseshoe having an opening formed therein, a sectional calk within the opening comprising a central member and two side members, one of said members being detachably secured to the shoe, and means for tying the members together after their insertion within the opening, comprising lugs extending one from each side member adapted to be bent into engagement with the central member.

7. The combination with a horseshoe having an opening formed therein, a calk within the opening formed in three parts comprising two side members arranged within the opening and at opposite sides of the latter, each side member being detachably secured to the shoe, a central member arranged between the side members, and a lock for securing the members to each other after their assemblage has been effected.

8. The combination with a horseshoe having an opening formed therein, a calk within the opening formed in three parts comprising two side members arranged within said opening and at opposite sides of the latter, shoulders

upon each side member engaging opposite
faces of the shoe, a central member extending
within the opening between the side members,
shoulders upon said central member bearing
5 against the lower face of the shoe, and a lug
upon each side member adapted to be bent
into engagement with the central member,
substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

BENJAMIN H. COATS.

CHARLES L. SPONENBURGH.

Witnesses:

M. B. O'DOHERTY,

H. C. SMITH.