

No. 635,556.

Patented Oct. 24, 1899.

C. KNOPF.  
STIRRUP.

(Application filed May 19, 1899.)

(No Model.)

3 Sheets—Sheet 1.

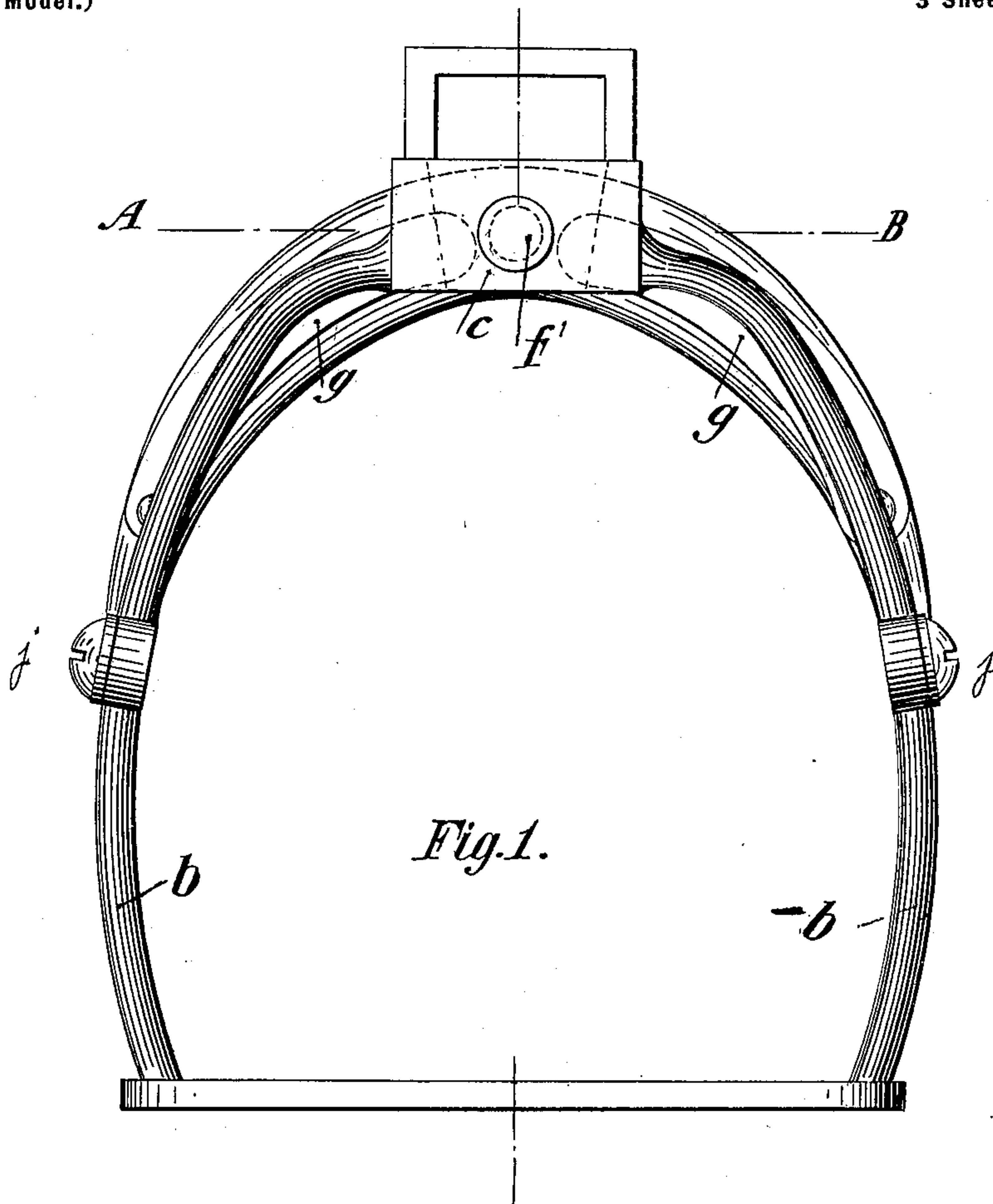


Fig. 1.

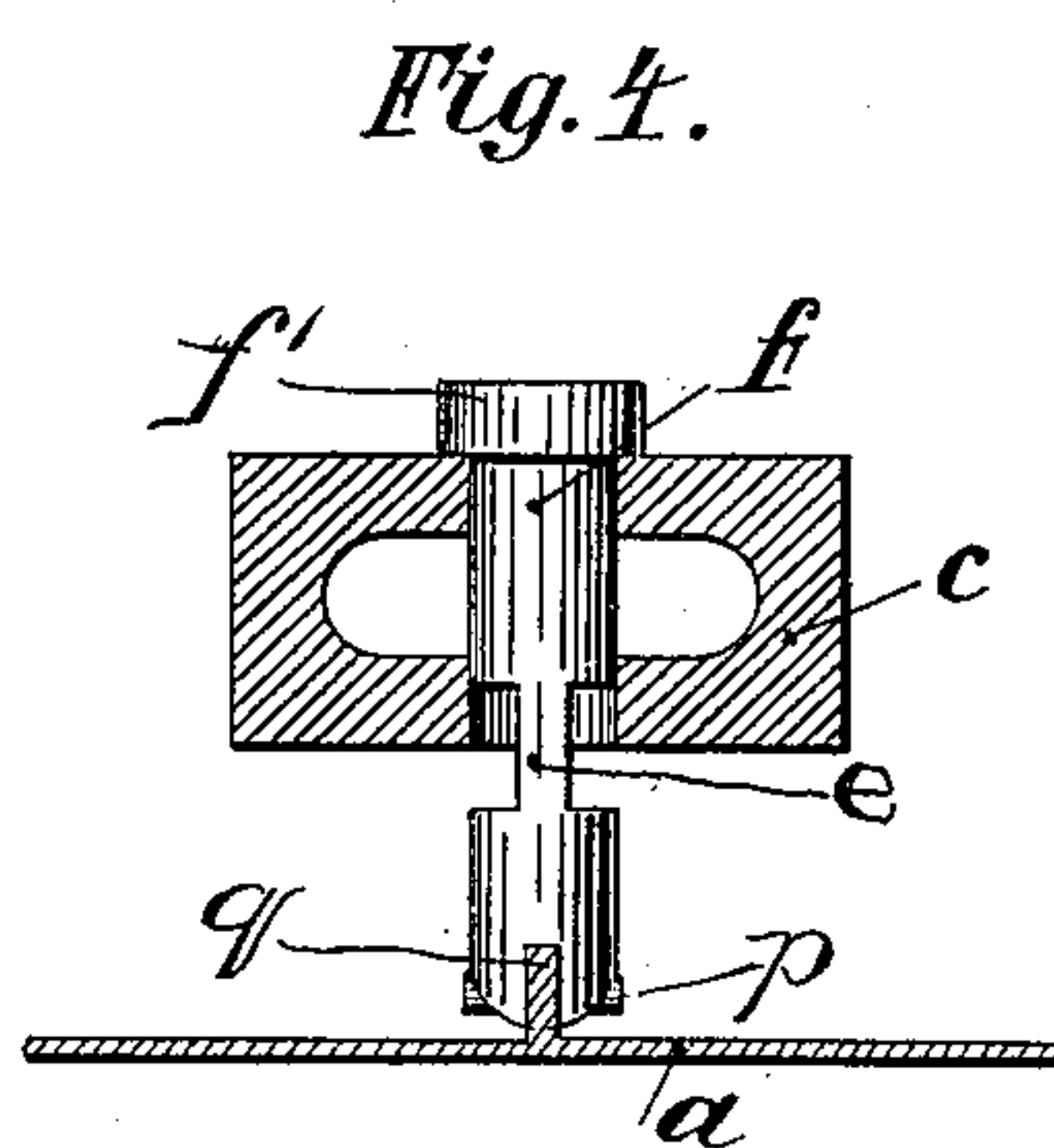


Fig. 4.

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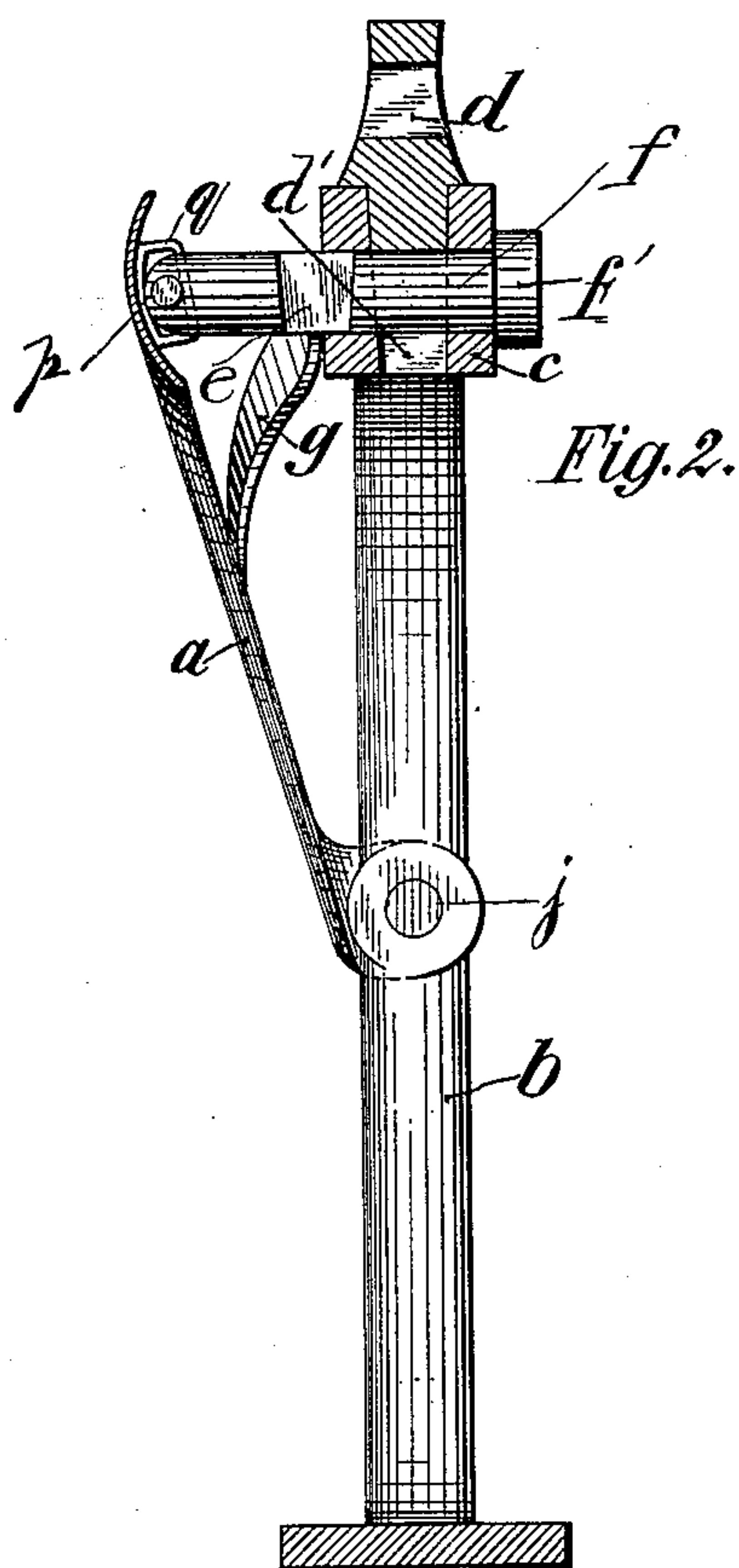
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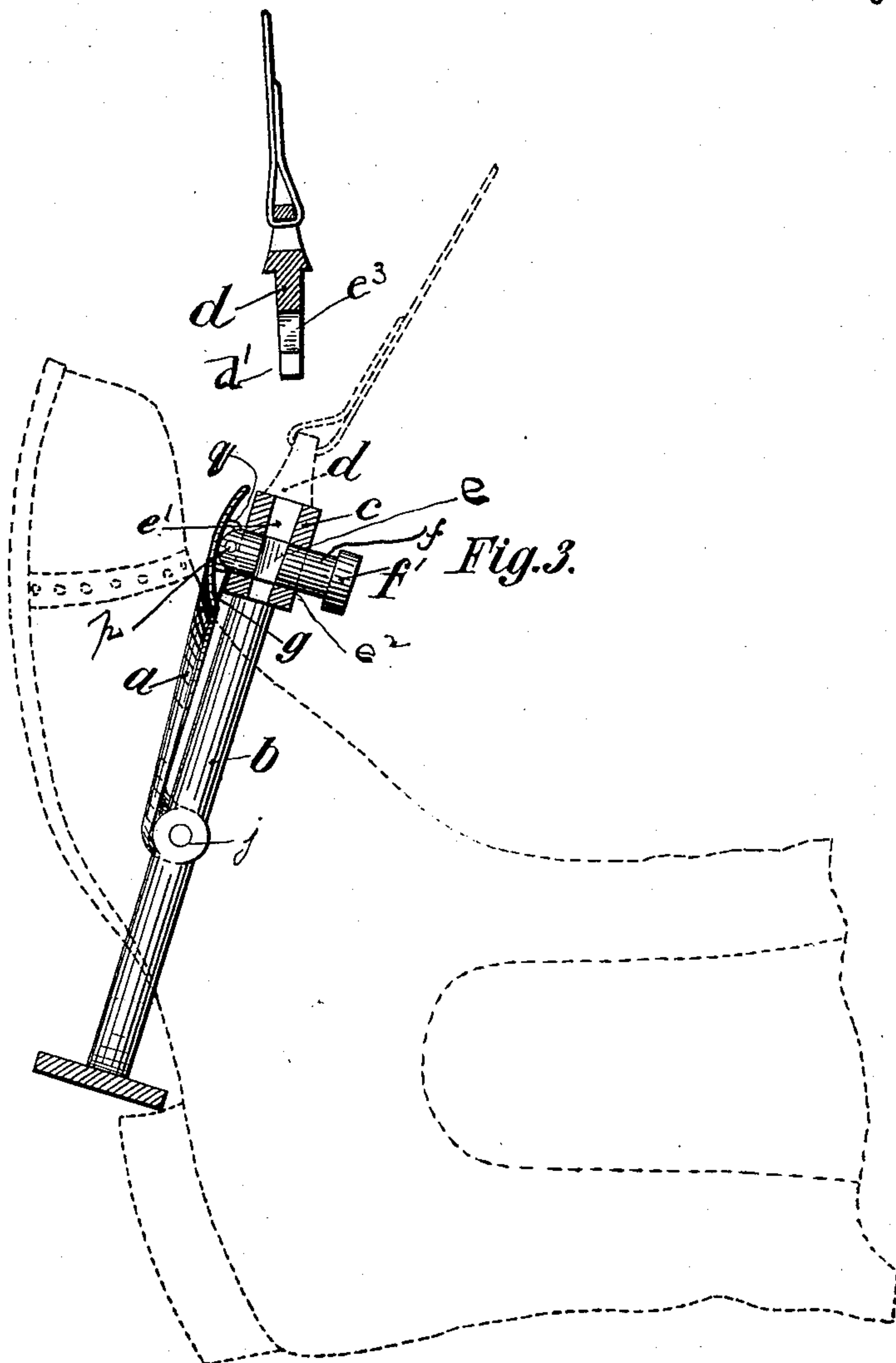
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3 Sheets—Sheet 3.



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# UNITED STATES PATENT OFFICE.

CARL KNOFF, OF AKEN, GERMANY.

## STIRRUP.

SPECIFICATION forming part of Letters Patent No. 635,556, dated October 24, 1899.

Application filed May 19, 1899. Serial No. 717,462. (No model.)

*To all whom it may concern:*

Be it known that I, CARL KNOFF, mechanical engineer, a subject of the Emperor of Germany, residing at Aken-on-Elbe, Burgthor 1, in the Kingdom of Prussia and Empire of Germany, have invented certain new and useful Improvements in Stirrups, of which the following is a full, clear, and exact description.

The invention relates to stirrups for riding-saddles; and it consists in the construction and novel combination of the parts of the stirrup, as will be hereinafter fully described and claimed.

In the drawings hereto annexed and forming part of this specification, Figure 1 is a rear elevation of a stirrup embodying the improvements of my invention. Fig. 2 is a vertical sectional detail view, the upper and lower portions only of the stirrup being shown in section. Fig. 3 is a side elevation, partly in section, showing the connecting-piece *d* in dotted lines when in position within the strengthened middle portion *c* of the stirrup and in full lines in sectional view when disconnected from its seat in the strengthened middle portion *c* of the stirrup. Fig. 4 is a sectional detail view taken on the line A B in Fig. 1.

Referring by letter to the accompanying drawings, *b b* designate the detachable stirrup-body, the sides of which curve outwardly in opposite directions and are connected at their lower ends by the usual rest for the rider's foot. The upper ends of the curved sides *b b* of the stirrup are suitably secured in the end of the strengthening block or piece *c*, which is provided with a downwardly-tapered centrally-located slot *e'*, extending entirely through said block or piece *c*. A transversely-disposed circular opening *e<sup>2</sup>* extends entirely through the strengthening block or piece *c* and intersects the downwardly-tapered slot *e'*. A locking and a releasing pin *f*, provided with a head *f'* at one end and a flat reduced middle portion *e*, is curved at its opposite end in the direction of the height of the stirrup and is slitted or split to receive a loop *g* on the inner face of the transversely-curved half-hoop *a*, said loop *g* being retained in the split end of the pin *f* by a transverse pin *p*,

driven into alined holes provided for its reception. The ends of the half-hoop *a* are connected to the stirrup sides by suitable joints, as at *j j*. Two flat springs *g g*, Fig. 1, under all ordinary circumstances hold the movable flat half-hoop *a* away from the stirrup, so that the cylindrical part of the pin *f* next to the head *f'* occupies the tapered space in the block *c*.

*d* is a wedge-shaped connecting-piece which is attached to the stirrup-leather by a loop fastening. The wedge-shaped connecting-piece *d* is provided with a circular pin-seat *e<sup>3</sup>*, made therethrough a short distance above the lower end thereof, and a slit or opening *d<sup>2</sup>* leads from the circular pin-seat *e<sup>3</sup>* downwardly entirely through the lower portion of the connecting-piece *d*.

When the connecting-piece *d* is in its tapered seat in the strengthening-piece *c* of the stirrup, the half-hoop *a*, pressed outwardly by the spring *g* and the cylindrical portion of the pin *f*, occupies the opening *e<sup>3</sup>* in said connecting-piece *d*. When the rider's foot occupies the position shown in dotted lines in Fig. 3—that is, in the upturned position—showing that he has been displaced from the saddle, and when the fall occurs, the upturned foot of the rider presses the half-hoop *a* back and the flat portion *e* of the pin *f* is forced back and comes opposite the slit or opening *d<sup>2</sup>* in the connecting-piece *d* and permits the flat portion *e* of the pin *f* to pass through the slit or opening *d<sup>2</sup>*, thereby releasing the stirrup from the connecting-piece *d*, attached to the stirrup-leather, and prevents the rider from being dragged along the ground, as he would otherwise necessarily be. Even if the entire foot of the rider should pass through the stirrup the half-hoop would be automatically pressed back and the stirrup would be released from the connecting-piece *d*.

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

In a safety-stirrup, the combination with a stirrup-frame provided with a centrally-disposed strengthening-piece *c* having the vertical tapered slot *e'*, and the circular inter-

secting pin-seat  $e^2$ , of the movable pin  $f, f'$  having flat portion  $e$  intermediate its ends, the slitted end portion, the flat half-hoop  $a$  connected with the stirrup sides by hinge-joints, the loop  $q$  and pin  $p$  connecting said half-hoop with the pin  $f$ , and the connecting-piece  $d$  attached to the stirrup-strap and provided with the circular opening  $e^3$  and the

outlet-slit  $d'$  communicating with said opening  $e^3$ , substantially as specified. 10

In witness whereof I subscribe my signature in presence of two witnesses.

CARL KNOFF.

Witnesses:

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