

H. LADEWIG.
GRIP FOR CABLE LINES.
APPLICATION FILED OCT. 5, 1904.

3 SHEETS—SHEET 1.

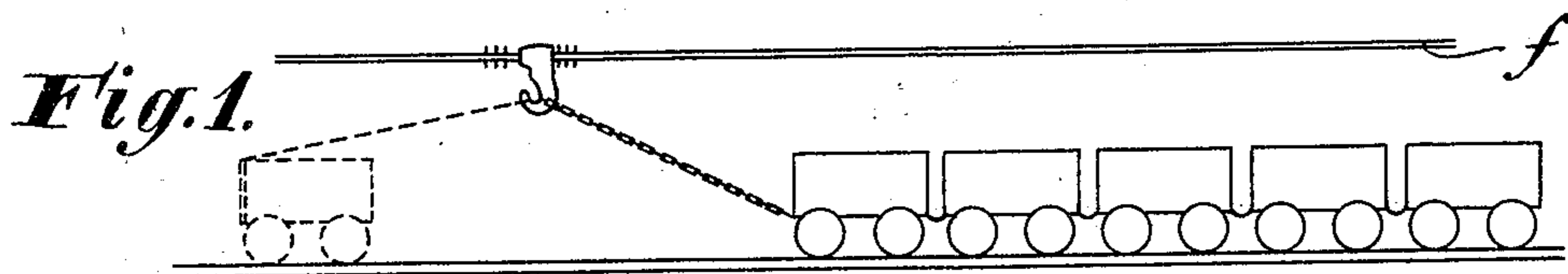


Fig. 4.

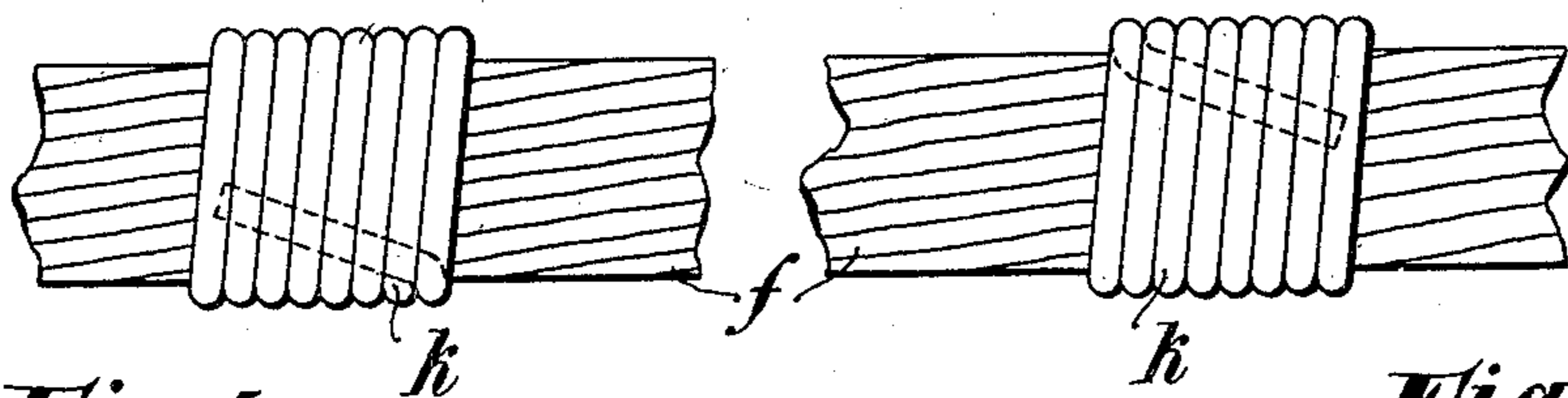


Fig. 5.

Fig. 6.

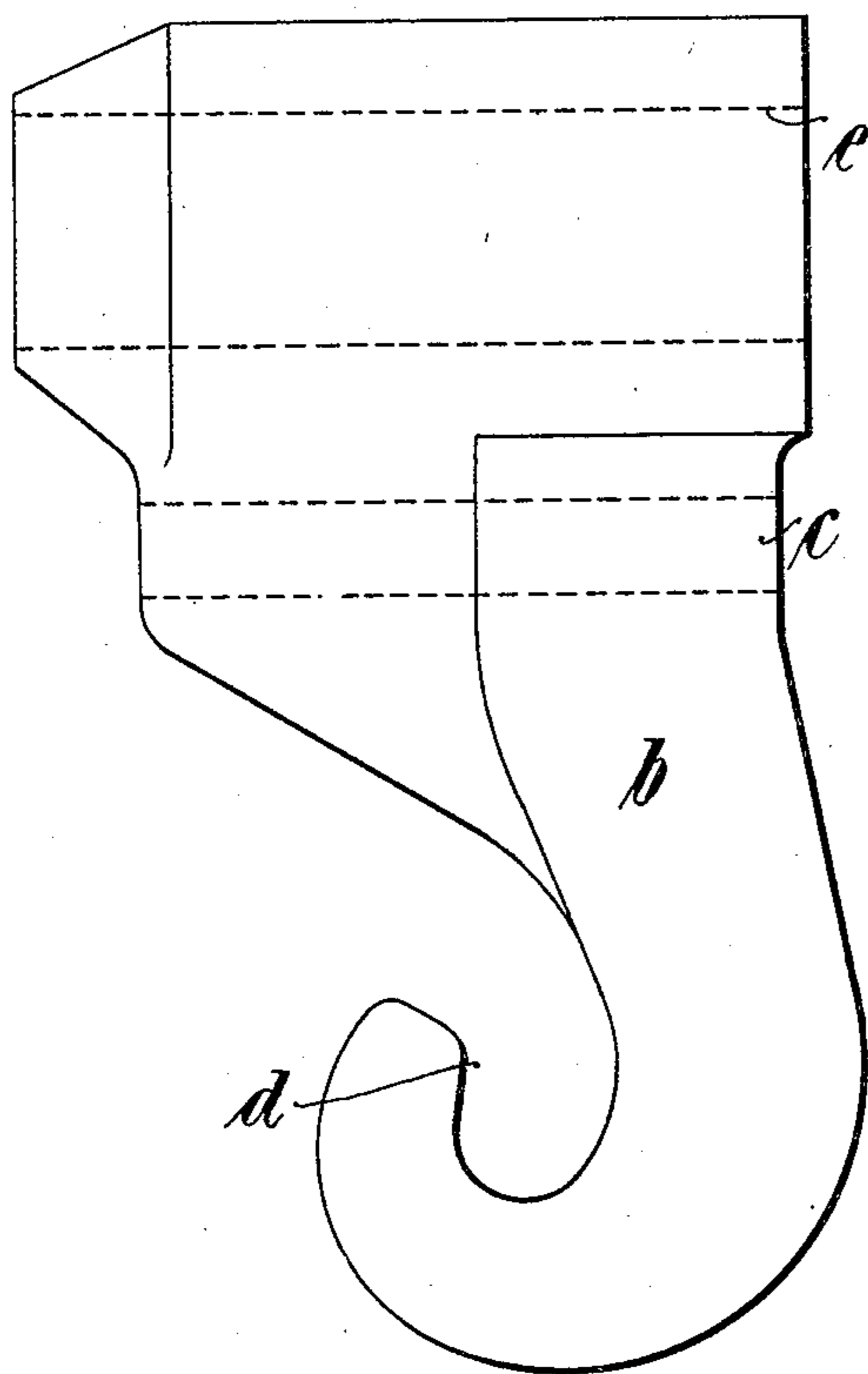


Fig. 2.

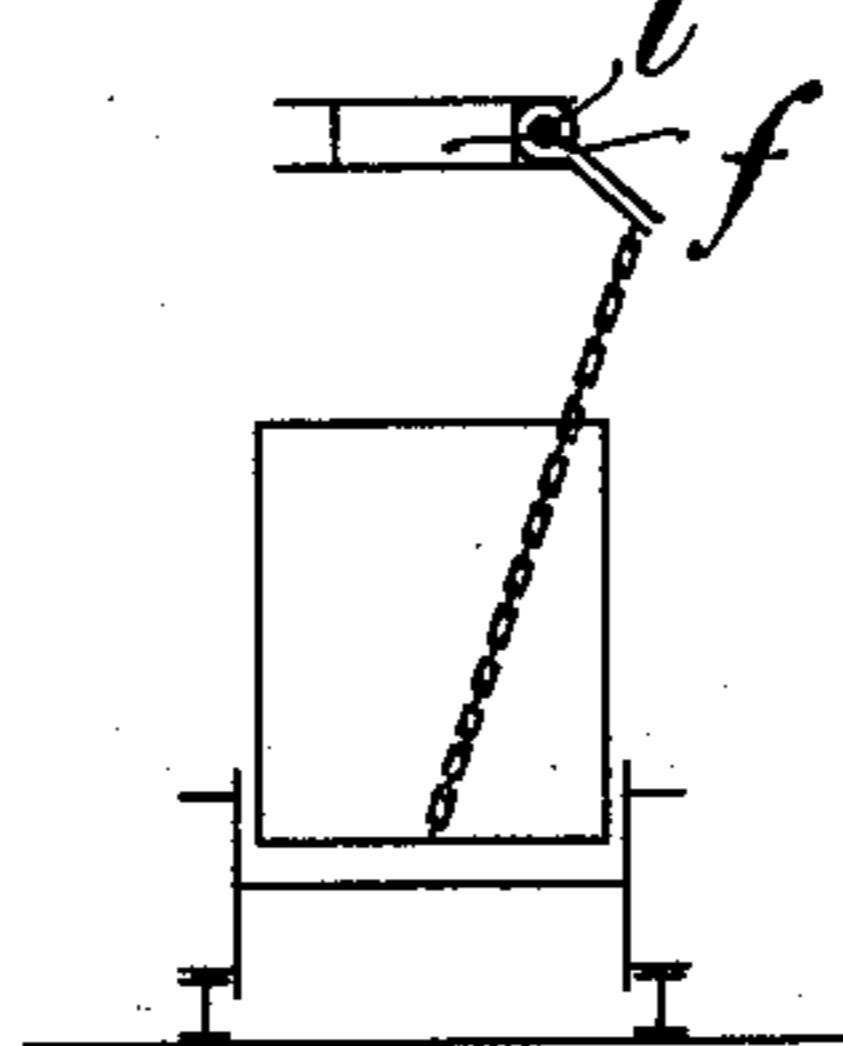


Fig. 3.

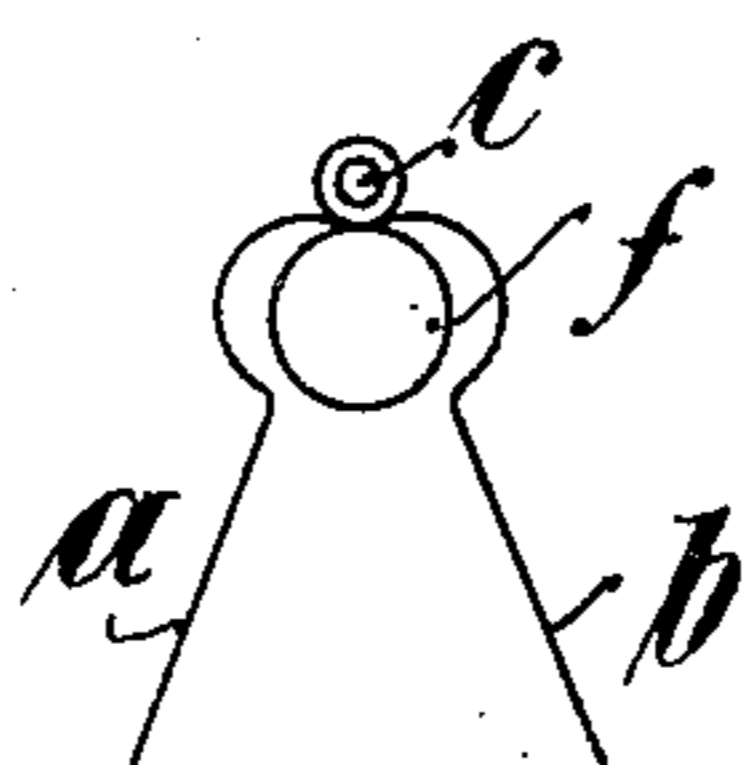
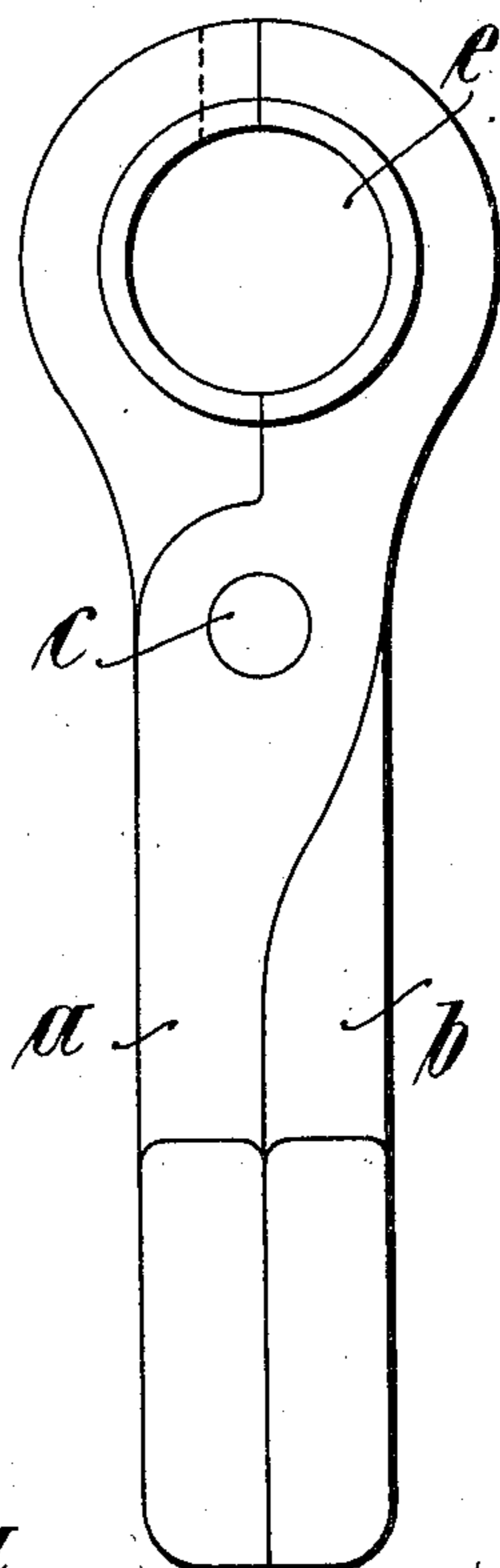
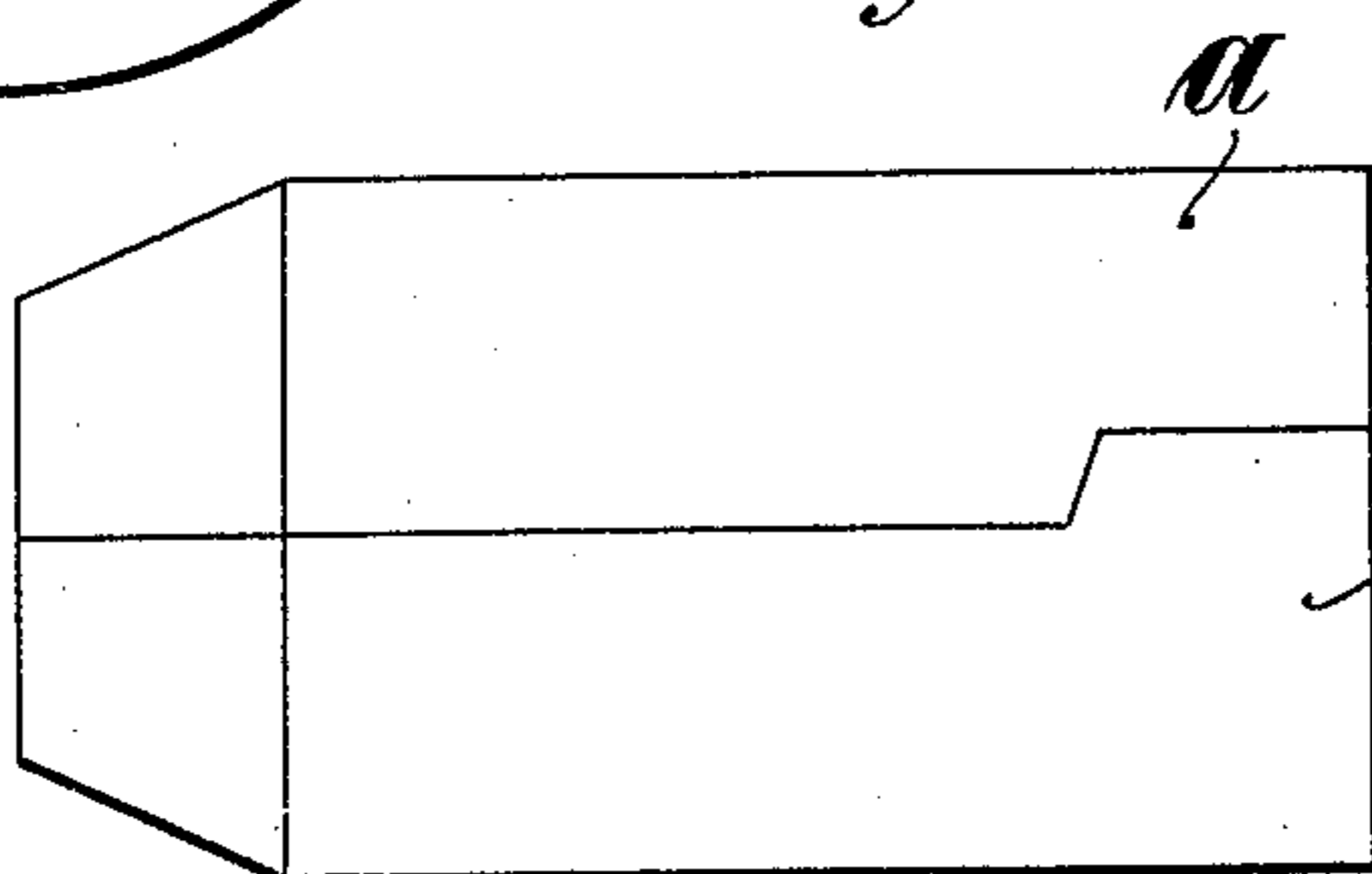


Fig. 7.



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3 SHEETS—SHEET 2.

Fig. 8

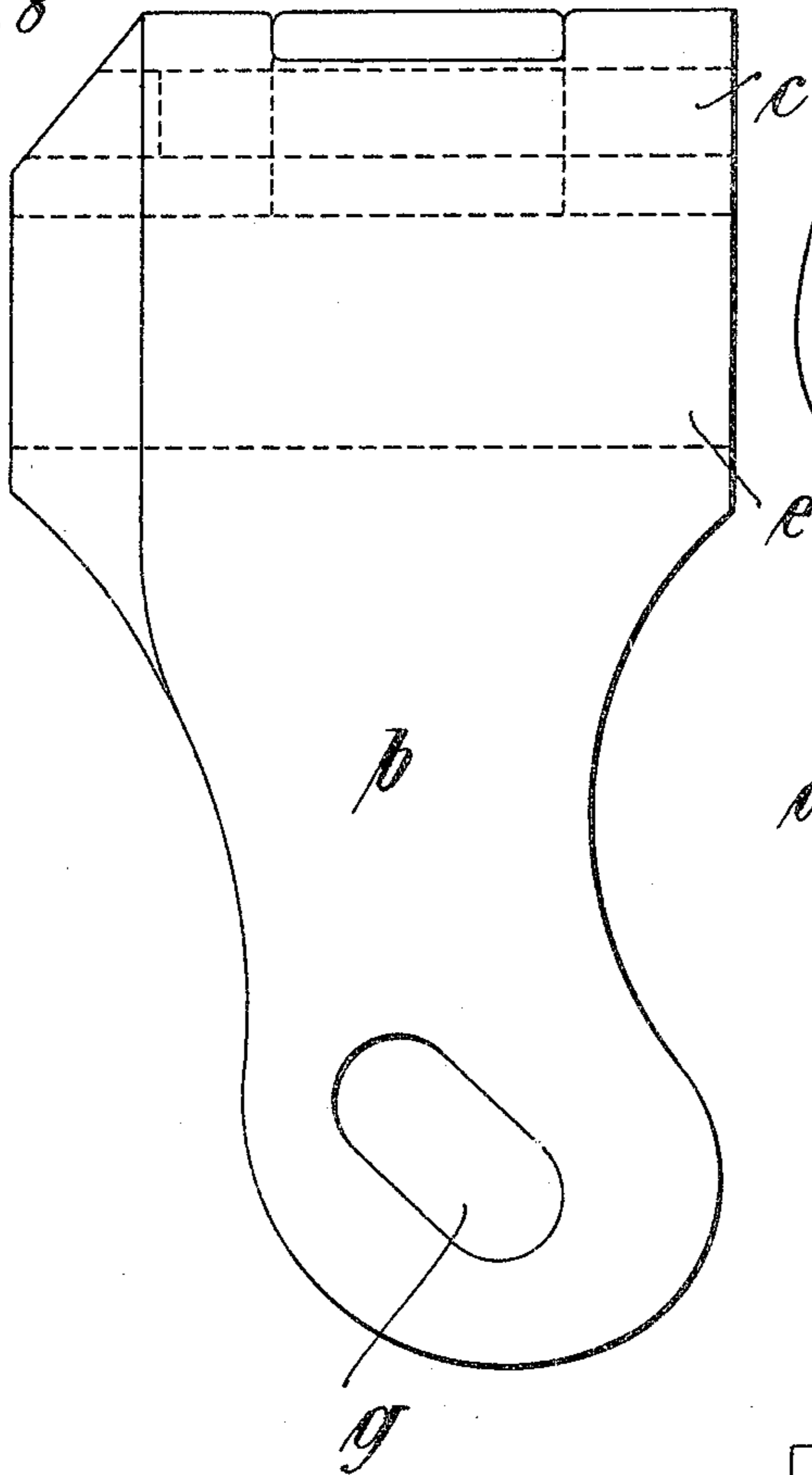


Fig. 9.

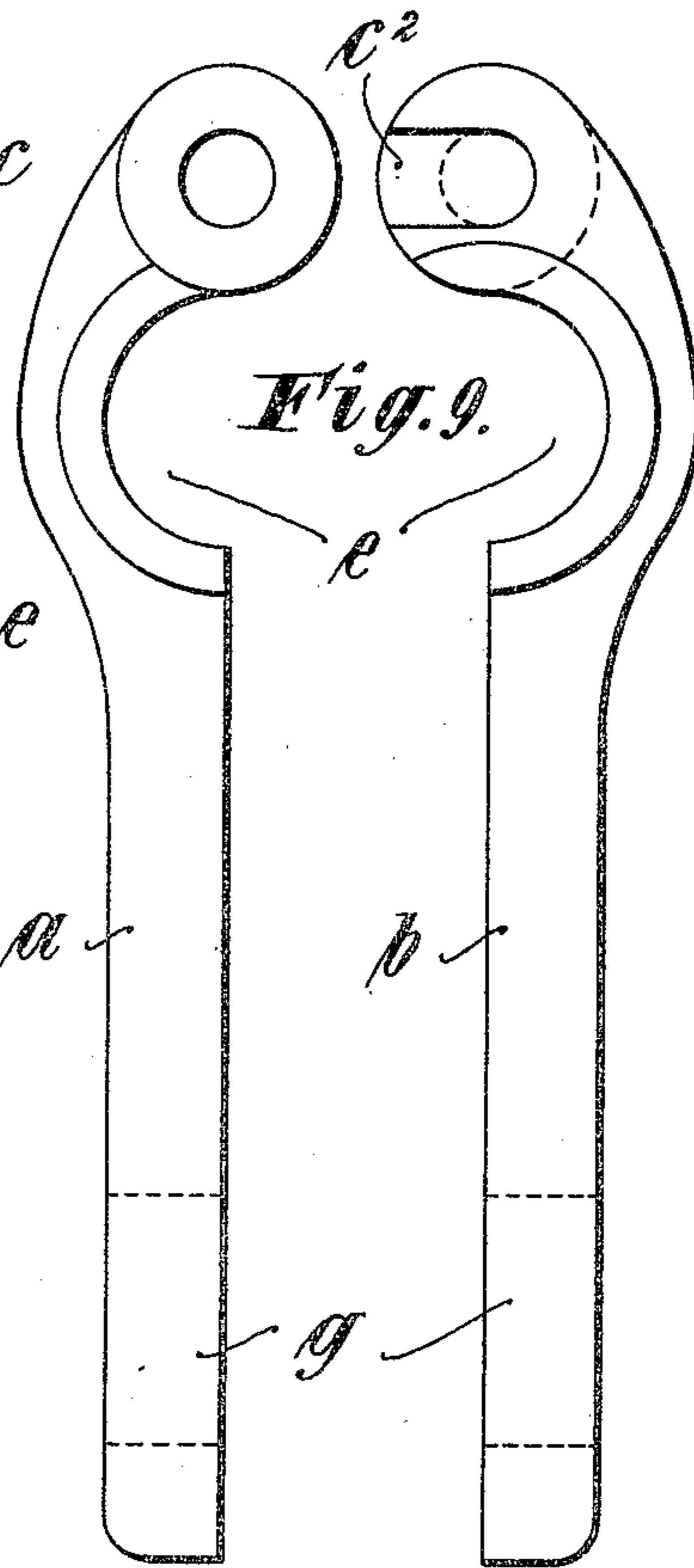
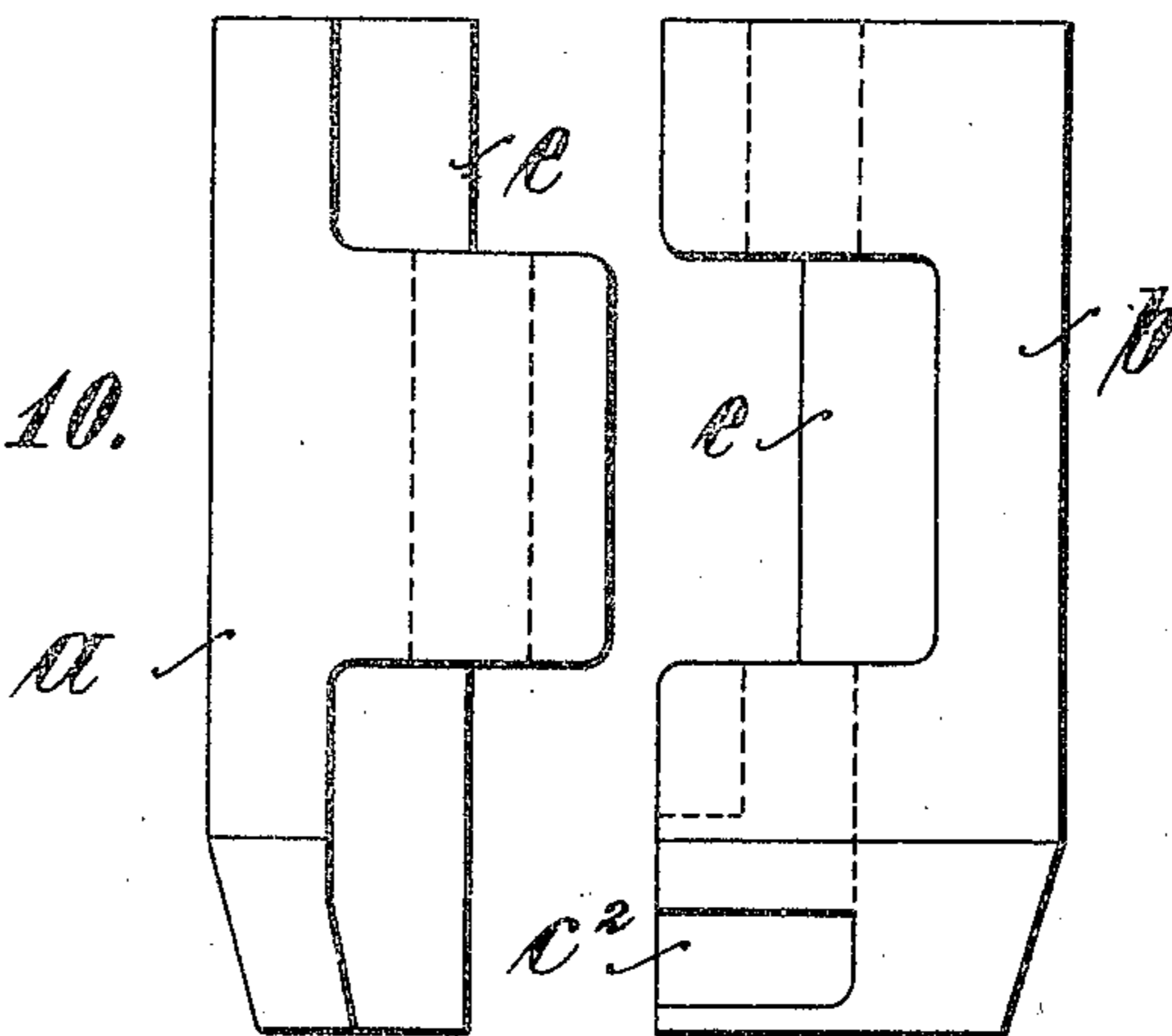


Fig. 10.



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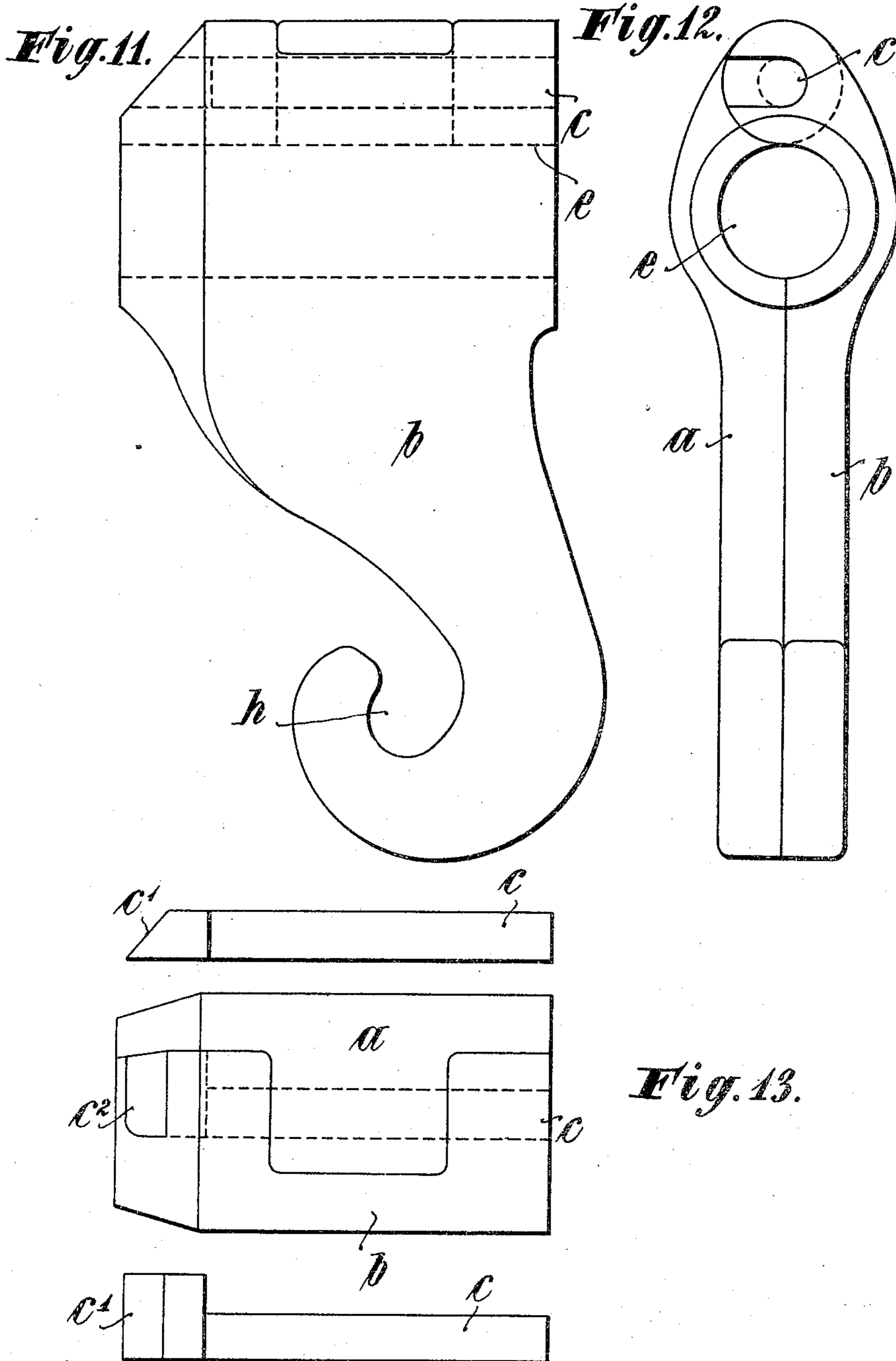
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

HEINRICH LADEWIG, OF DORTMUND, GERMANY.

GRIP FOR CABLE-LINES.

SPECIFICATION forming part of Letters Patent No. 793,384, dated June 27, 1905.

Application filed October 5, 1904. Serial No. 227,208.

To all whom it may concern:

Be it known that I, HEINRICH LADEWIG, engineer, a subject of the King of Prussia, German Emperor, and a resident of 37 Burgwall, Dortmund, in the German Empire, have invented new and useful Improvements in Grips for Cable-Lines, of which the following is a specification.

This invention has for its object a tongs or shears grip for cable-tracks in mines and the like, which is intended to replace the forks or chains hitherto employed for this purpose.

The novel tongs or shears grip presents the advantage that it is easy to manipulate, while at the same time the prejudicial excessive pinching of the conveyer-cable which is effected by fork devices is obviated. By means of the novel device also the torsional effect upon the cable, which is so detrimental when chain devices are used and which frequently introduces insurmountable difficulties into the operation of the line, is rendered negligible. This form of grip also renders it possible to construct economically a cable-track or conveyer-line of any desired gradient or curvature.

In order that my invention may be readily understood and carried into effect, I will describe the same fully with reference to the accompanying drawings, in which—

Figure 1 represents a cable-line in side elevation. Fig. 2 is an end elevation of the same. Fig. 3 shows the tongs-grip open. Fig. 4 represents a portion of the conveyer-cable with windings for retaining the grip. Figs. 5 to 13 show the novel tongs or shears grip in various constructional forms and drawn on a larger scale—that is to say, Figs. 5, 6, and 7 are respectively a side elevation, end elevation, and plan view of a shears form of grip. Figs. 8, 9, and 10 are respectively a side elevation, end elevation, and plan view of a tongs form of grip with upper pivot. In Figs. 9 and 10 the two tongs portions are shown separate one from the other. Figs. 11, 12, and 13 are respectively a side elevation, end elevation, and plan view of a substantially similar grip, but with the difference that the lower extremities of the arms of the tongs are formed as hooks instead of as eyes.

The form of grip represented in Figs 5 to 7 consists of two shears members *a b*, connected by a pivot-bolt *c*, their lower extremities forming a hook *d*, while their upper extremities constitute a cylindrical sleeve *e* for surrounding the conveyer-cable *f*, Fig. 4. The lower extremity of the shears-arm may also be formed as an eye. The form of grip illustrated in Figs. 8 to 13 likewise consists of two parts *a b*; but in this form of the device the pivot-bolt *c* is situated above the cylindrical opening *e*. The pivot *c* is provided with a head *c'*, which fits into a recess *c''* in the part *b*. The two parts *a* and *b* are thus held together and form tongs the arms of which are rotatable around the bolt *c* and which in their closed condition seize the cable *f* by means of their sleeve-shaped cylindrical opening *e*. The lower end of the arms of the tongs may either be shaped so as to form an eye *g*, as shown in Figs. 8 and 9, or so as to form a hook *h*, as represented in Figs. 11, 12. The cable-opening *e* of this grip is arranged upon the cable and the arms of the grip brought together. The grip is maintained in this closed condition by the tractive effort as the traction-ring or a traction-hook situated on the chain is engaged in the hook *h* or the eye of the grip.

The part *e* of the grip which surrounds the cable is made of such a length and its aperture of such a diameter that even when the traction exerted through the chain is very great it is possible for the cable to effect any torsional movement in the sleeve of the grip.

On passing through the fair-leads *i*, carrying the cable, Fig. 2, the closed arms of the grip are automatically pressed laterally by the edge of the fair-leads in such a manner that the cable does not fall out of the disk. Behind the cable-disk the traction-chain causes the grip to resume its vertical position. The grip is held upon the cable *f* by means of small windings *k* of hemp or wire formed upon the cable, or, if preferred, by means of metal sleeves made fast upon the cable.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A grip for cable-lines in the form of tongs or shears, the two arms of which have formed integral therewith traction hooks or eyes so that upon engaging the traction-chain
5 ring or hook in the said hooks or eyes the arms of the tongs or shears grip are maintained closed.

2. A grip for cable-lines consisting of two like parts pivotally connected and each com-

prising a member with integral means to engage the traction-chain and integral eye portions to receive the conveyer-cable.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

HEINRICH LADEWIG.

Witnesses:

OTTO KÖNIG,

J. A. RITTERSHAUS.