

No. 711,655.

Patented Oct. 21, 1902.

A. R. CLARKE.

SNAP HOOK.

(Application filed Mar. 24, 1902.)

(No Model.)

Fig. 1.

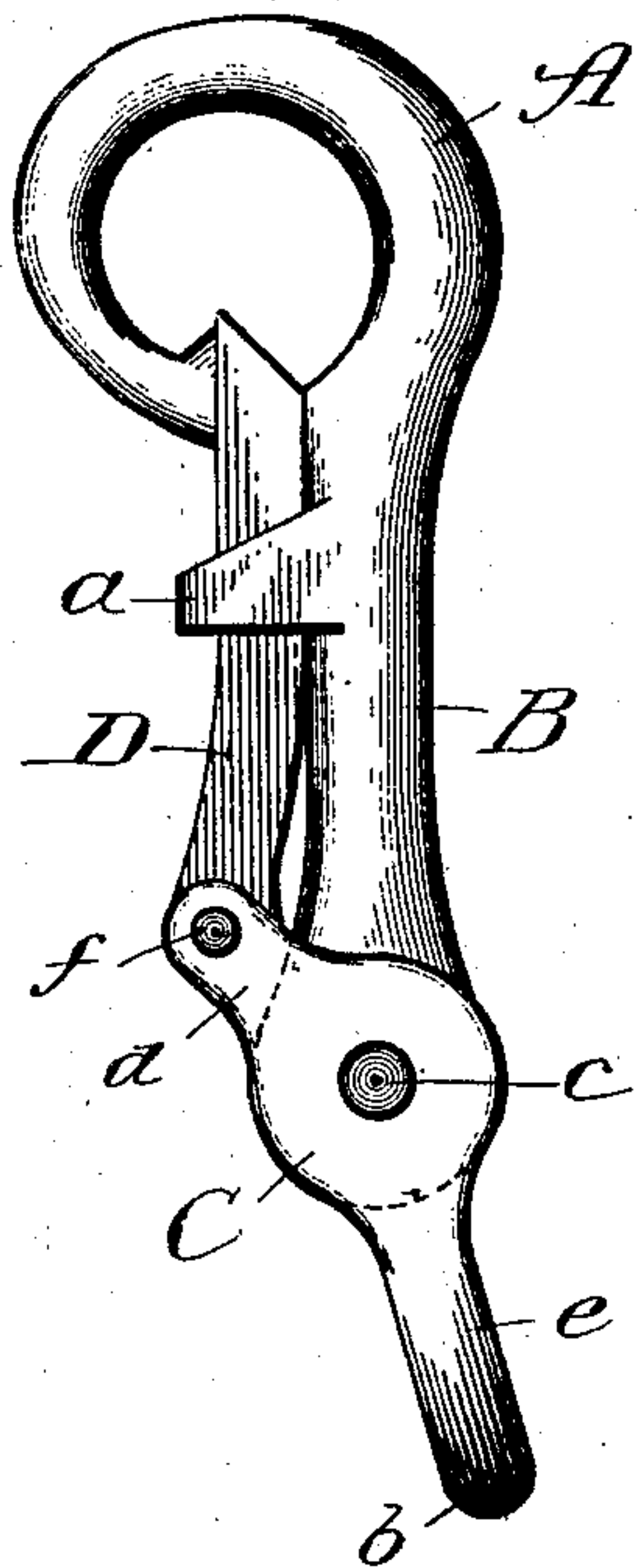


Fig. 2.

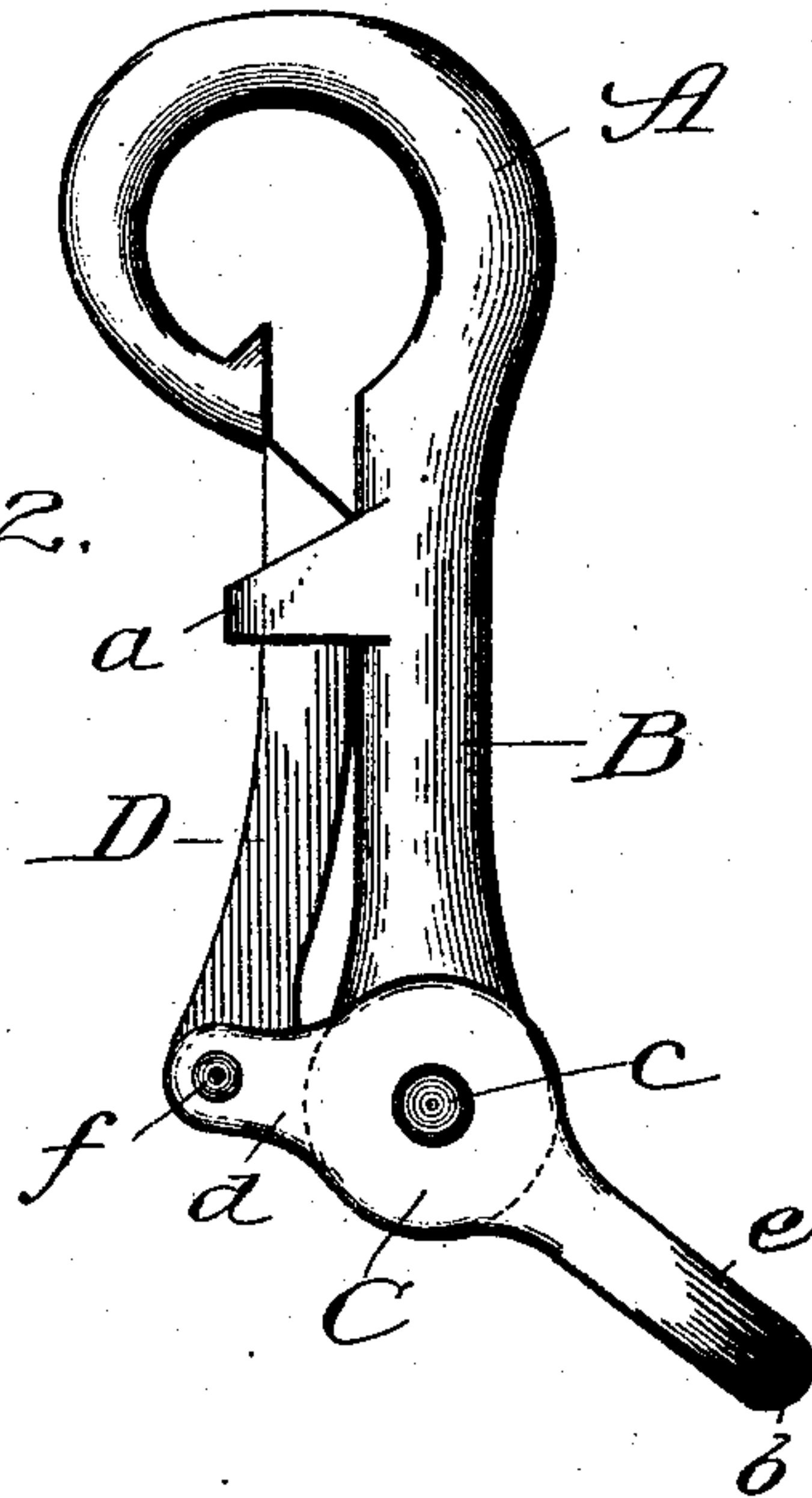


Fig. 3.

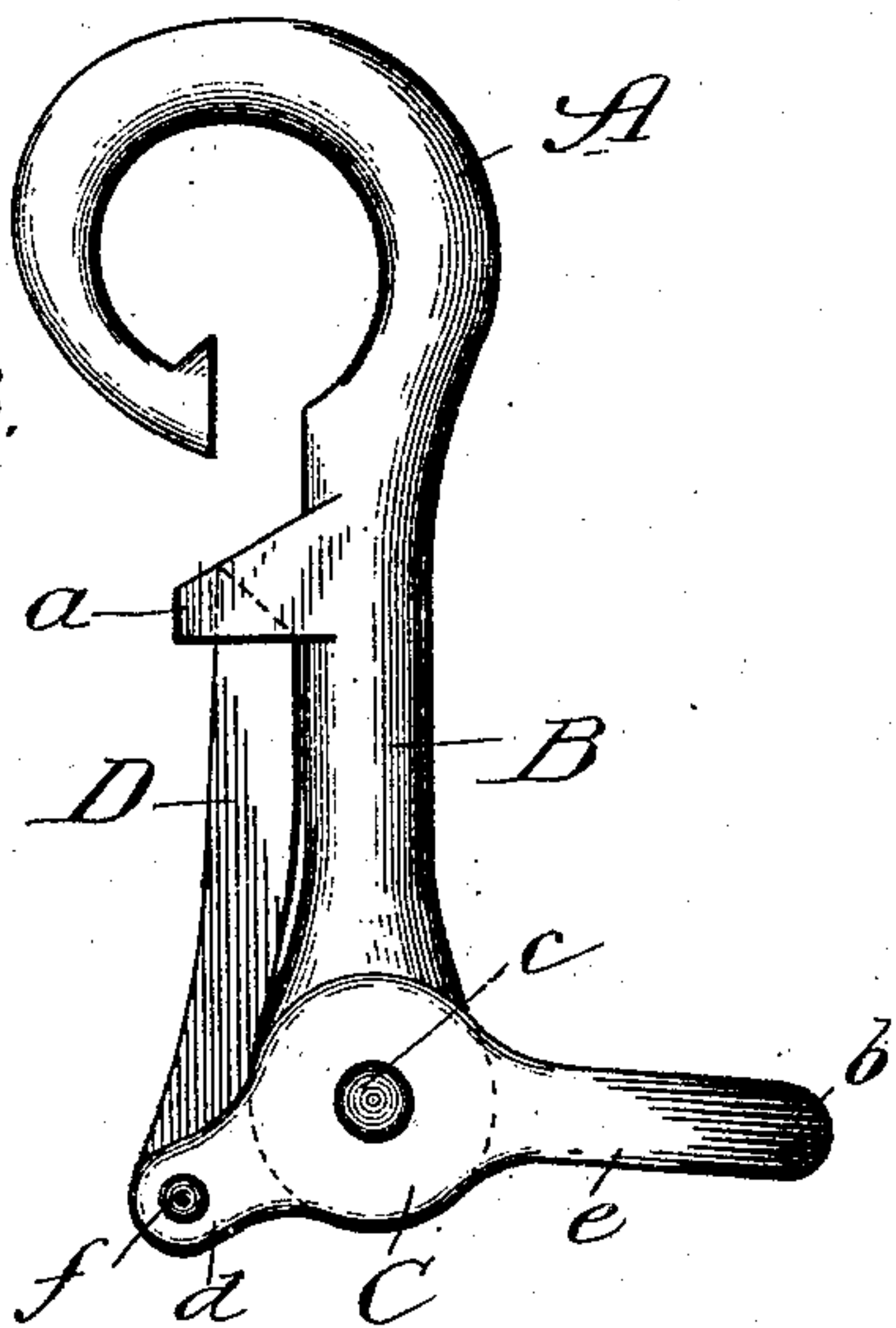
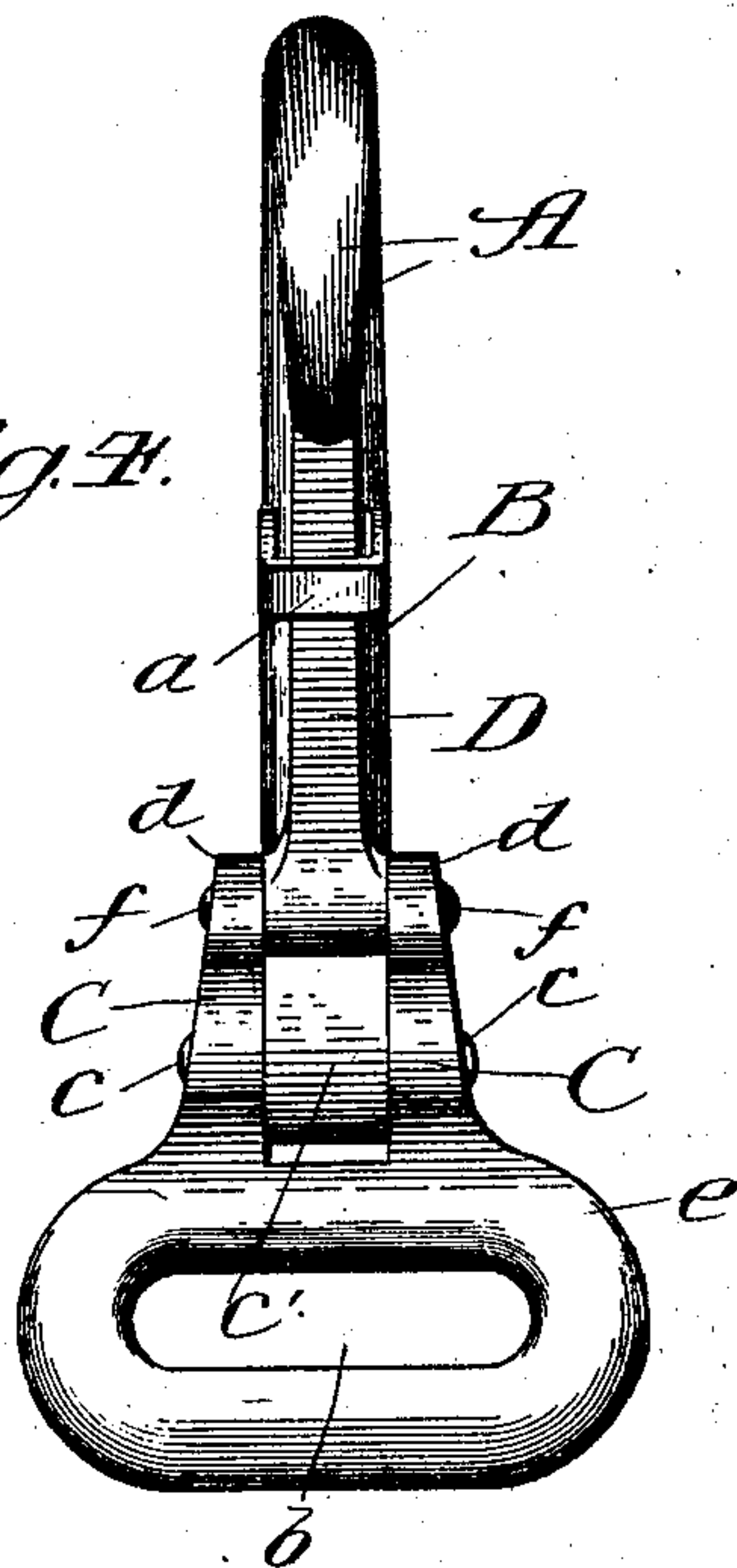


Fig. 4.



Witnesses:
E. J. Gaylord,
Geo. C. Dawson.

Inventor:
Arthur R. Clarke,
By Dyrenforth Dyrenforth & See,
Attys.

UNITED STATES PATENT OFFICE.

ARTHUR R. CLARKE, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
GEORGE JOHNSON, OF CHICAGO, ILLINOIS.

SNAP-HOOK.

SPECIFICATION forming part of Letters Patent No. 711,655, dated October 21, 1902.

Application filed March 24, 1902. Serial No. 99,636. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR R. CLARKE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Snap-Hooks, of which the following is a specification.

My invention relates to an improvement in the class of snap-hooks in which the latch is in the form of a rigid tongue adapted to be brought at its free end by longitudinal movement into engagement or approximate engagement with the extremity of the hook to close or obstruct the entrance to the latter and to be withdrawn from the extremity to open such entrance.

The object of my invention is to provide in the class referred to a novel construction of snap-hook which shall render the device simple and cheap to manufacture and perfectly effective in use; and to these ends my invention consists in the construction hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 shows my improved snap-hook by a view in side elevation with the tongue in its position of closure. Fig. 2 is a similar view of the same, showing the tongue partially withdrawn under the force of gravity. Fig. 3 is a similar view of the same, showing the tongue fully withdrawn to open the entrance into the hook; and Fig. 4 is a front or face view of the snap-hook with the parts in the relative positions represented in Fig. 1.

A is the hook, of usual or any suitable form, on one end of the shank B, which is provided on one side with a guide-loop *a*. The distance between the forward side of the guide-loop and extremity of the hook is preferably the same as the width of the entrance-opening of the hook, which must be sufficient for the ready introduction and withdrawal of the harness-ring or other object to be connected by the hook.

C is a lever having a looped handle end *b* and bifurcated toward its opposite end, where it embraces and is fulcrumed at *c* in the eye *c'* on the enlarged rear end of the shank B. Thus fulcruming the lever renders its forward bifurcated end the shorter arm *d* and the handle end behind the fulcrum the longer or

heavier arm *e*. Between the prongs of the shorter lever-arm *d*, near its extremity, is fulcrumed at *f* at its rear end the rigid tongue D, which extends through the guide-loop. The arrangement of the tongue D is such that at the end of its advance throw it will reach at the extremity of its free end to the inner edge of the end of the hook, as shown in Fig. 1, or about to that position, and that at the end of its retracting throw the free end of the tongue will coincide at its extremity with the forward side of the guide-loop *a* or occupy about that position.

As the lever C is shown to be fulcrumed its longer or heavier handle-arm *e* sufficiently overbalances the combined resistance of the shorter arm *d* and tongue D, attached thereto, to tend to partially withdraw the tongue to the position in which it is represented in Fig. 2. In that position, however, the tongue still maintains closure of the hook at the entrance-opening thereto, and with the snap-hook vertically suspended and the lever then occupying the position shown in Fig. 2 the fulcrum *c* and pivot *f* are in substantially horizontal alinement with each other at or approximately at a right angle to the shank. To withdraw the tongue, therefore, from the last-named position, power must be applied to the handle end *e* of the lever to bring the tongue to the position in which it is represented in Fig. 3 of entire withdrawal to completely remove it from closing or obstructing the hook-entrance. Thus the tongue tends to self-closure of the hook and to maintain its hook-closing position, while it may be easily withdrawn to open the hook and advanced to close it by the operator manipulating it with only one hand, holding the lever at the arm *e* and turning it back and forth.

While the drawings illustrate my improvement in its preferred form as to details of construction and relative arrangement of parts, I do not limit my invention thereto.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a snap-hook, the combination with the hook and its shank provided with a guide-loop, of a lever bifurcated at one end and there embracing the end of the shank upon which it is fulcrumed to form a shorter lever-

arm and a longer lever-arm, and a tongue pivoted at one end in the bifurcated shorter lever-arm and extending through said loop to adapt it, by working the lever, to be moved
5 longitudinally back and forth with relation to the end of the hook, substantially as described.

2. In a snap-hook, the combination with the hook and its shank provided with a guide-
10 loop, of a tongue longitudinally movable in said loop into and out of engagement with the end of the hook, and a lever having a bi-

furcated end pivotally connected with the rear end of the tongue and embracing the end of the shank, upon which it is fulcrumed 15 to form a shorter lever-arm and longer lever-arm overbalancing said shorter arm and tongue, said longer lever-arm being provided with a loop, substantially as described.

ARTHUR R. CLARKE.

In presence of—

ALBERT D. BACCI,
W. B. DAVIES.