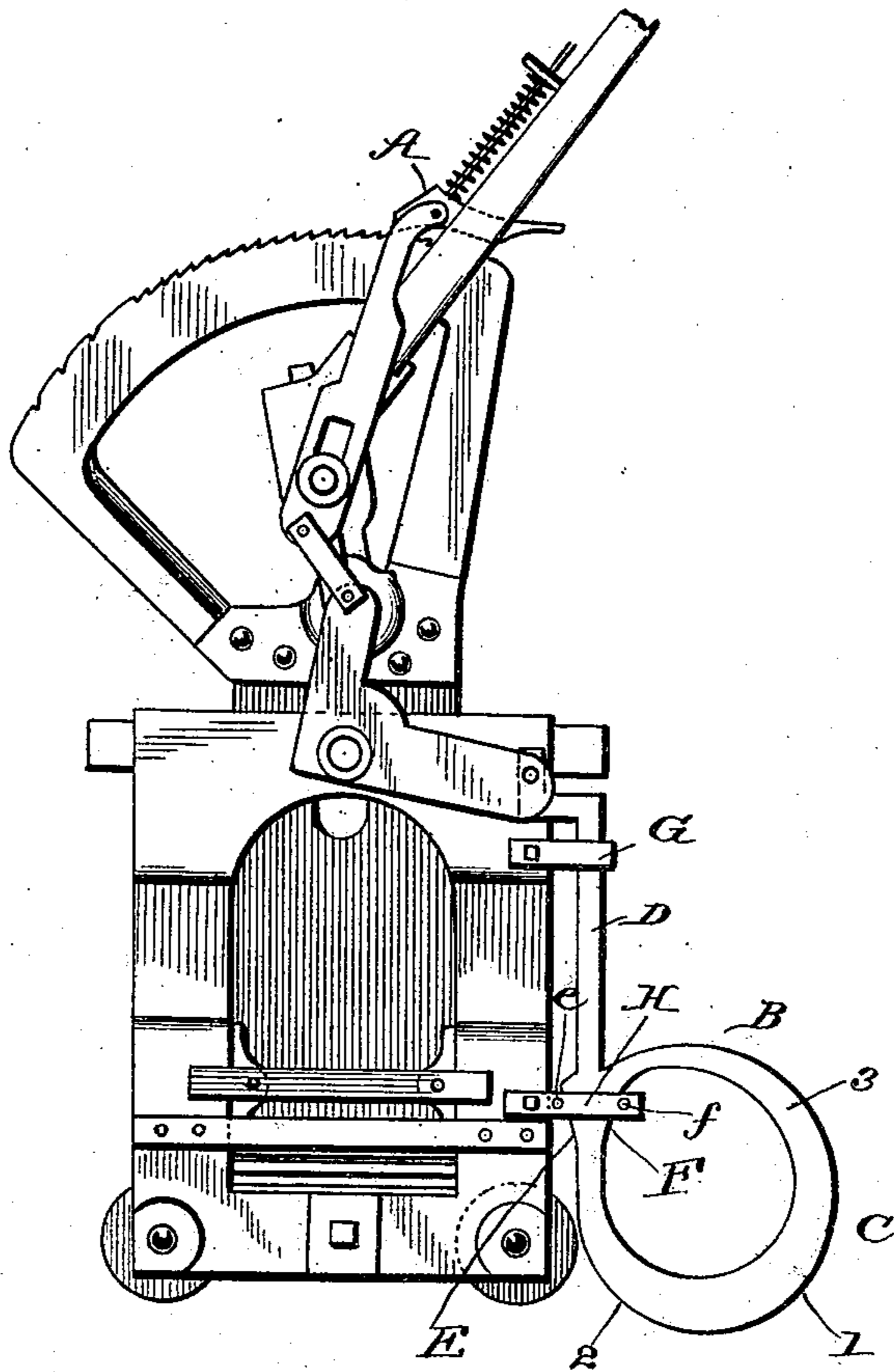


(No Model.)

W. P. COURTNEY.
GRIP OPENER.

No. 501,764..

Patented July 18, 1893.



WITNESSES:
Fred G. Dietrich
P.B. Turpin.

INVENTOR
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UNITED STATES PATENT OFFICE.

WILLIAM P. COURTNEY, OF OAKLAND, CALIFORNIA, ASSIGNOR OF ONE-HALF
TO ALBERT BROWN, OF SAME PLACE.

GRIP-OPENER.

SPECIFICATION forming part of Letters Patent No. 501,764, dated July 18, 1893.

Application filed April 19, 1893. Serial No. 471,040. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. COURTNEY, of Oakland, in the county of Alameda and State of California, have invented a new and useful Improvement in Grip-Openers, of which the following is a specification.

My invention is an improvement in automatic grip openers or releasers in which the grip is released by means of a tripping bar arranged to engage a suitably placed abutment or bearing, and the present invention seeks to provide improvements in the tripping bar and in the guides therefor for the purposes more fully described hereinafter and the invention consists in the novel constructions, combinations and arrangements of parts as will be hereinafter described and pointed out in the claims.

In the drawing the figure is a side elevation of a grip provided with my improvements.

The grip which may be of the ordinary side or bottom grip form has its detent pawl A connected by the intermediate devices with the vertically movable tripping plate or bar B which is movable along the rear edge of the grip, so that the upward movement of the tripping plate or bar will operate to release the detent.

As the special construction of the connecting devices forms no part of the invention claimed herein a detail description thereof seems unnecessary. The safety plate or bar B is formed with a main or body portion C and with the shank D extended upwardly therefrom and is provided with the opposite front and rear inclines E and F which flare upwardly as shown such inclines being preferably arranged in the circle or bow as presently described. The safety bar is held to the grip blade by the keepers or guides G H the former embracing the upper portion of the shank D and the latter the portion formed with the opposite inclines E F and has the rollers *e* and *f* engaging respectively the inclines E and F. By providing these front and rear inclines the upward movement of the tripping plate or bar is eased, whether such bar is lifted on a forward or backward movement of the grip, and in addition to easing its upward movement the said rollers and opposite in-

clines ease and guide the descent of the tripping bar to its normal position. At its lower end the safety or tripping bar engages an abutment suitably placed in the conduit and is lifted in operation as it passes over said abutment.

It sometimes occurs that the grip is moved rearwardly for a greater or less distance and to avoid fouling the abutment by the tripping bar I curve or incline said bar on its rear edge at 1 similarly to its curved or inclined front edge 2 so that whether the tripping bar be moved into engagement with the abutment from either the front or rear thereof it will ride up over said abutment and release the cable and no fouling or injury of any of the parts will result. It is preferred in securing this double curvature of the tripping plate to form its lower end in the ring or loop form as shown as thereby the portion 3 serves to brace and give rigidity and firmness to the portions of the tripper which engage the abutment.

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

1. In a grip a safety bar having at its lower end reversely curved or inclined tripping surfaces 1 and 2 and provided with opposite upwardly flared inclines E and F all substantially as set forth.

2. In a grip a safety bar consisting of the shank and the ring or loop at the lower end thereof provided with the reversely curved tripping surfaces 1 and 2 and the connecting portion 3 substantially as set forth.

3. The combination with the grip having the keepers or guides of the safety bar held in said keepers and formed with a shank and a ring or loop extended rearwardly from the lower end of said shank and formed with reversely curved or inclined tripping surfaces substantially as set forth.

4. The improvement substantially as herein described consisting of the grip having keepers G and H, the safety bar held in said keepers and provided with reversely inclined upwardly flared edges E and F and a ring or loop C having curved surfaces 1 and 2 and a connecting portion 3 and the rollers *e* and *f*

engaging the surfaces E and F substantially as set forth.

5. The combination with the grip having a guide or keeper H of the safety bar held in
5 said keeper and provided below the same with tripping surfaces 1 and 2 and having a connecting portion 3 extended from tripping sur-

face 1 and uniting with the safety bar above the keeper H all substantially as shown and described.

WILLIAM P. COURTNEY.

Witnesses:

SAMUEL HUMPHREYS,
THOMAS MILLER.