

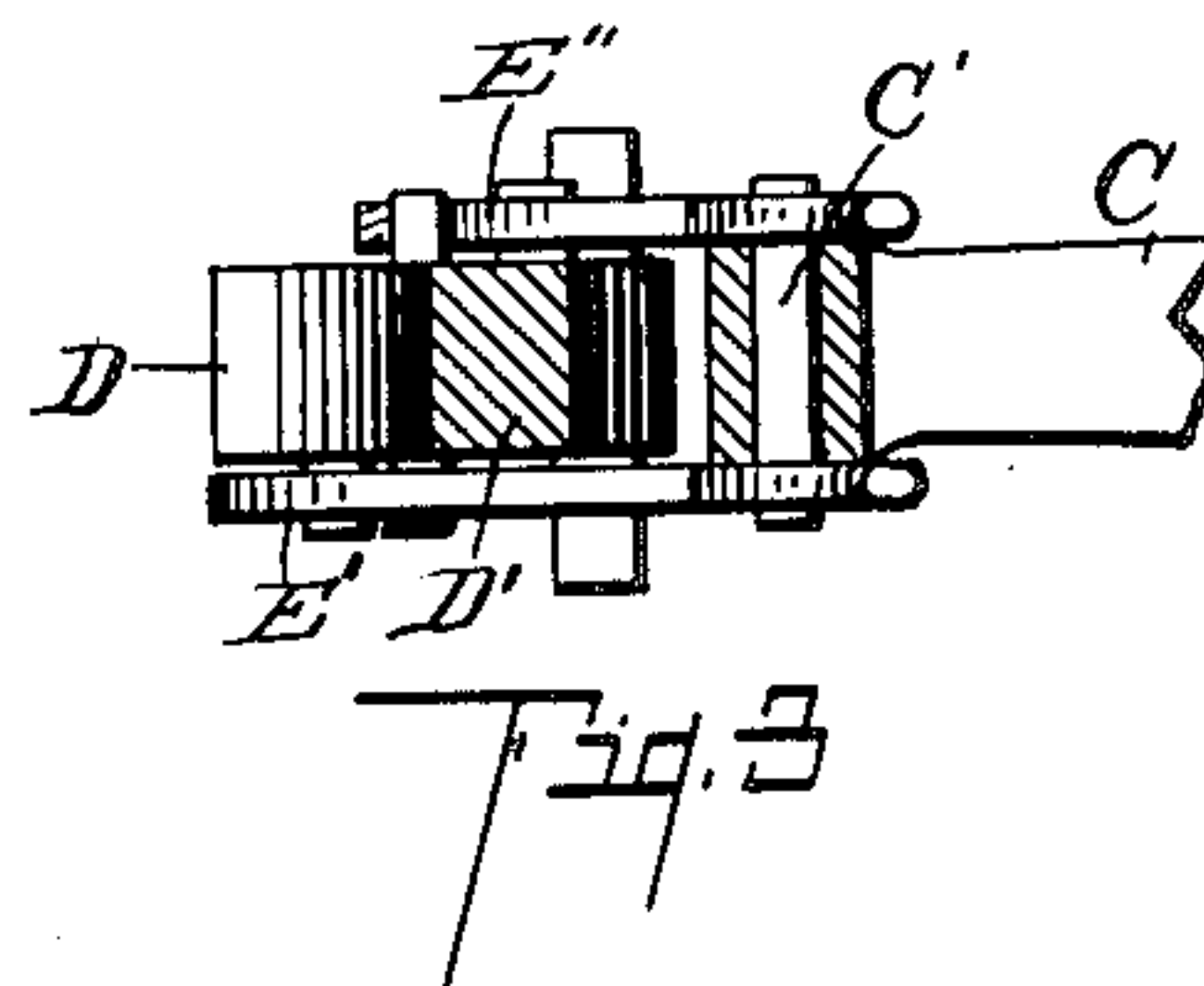
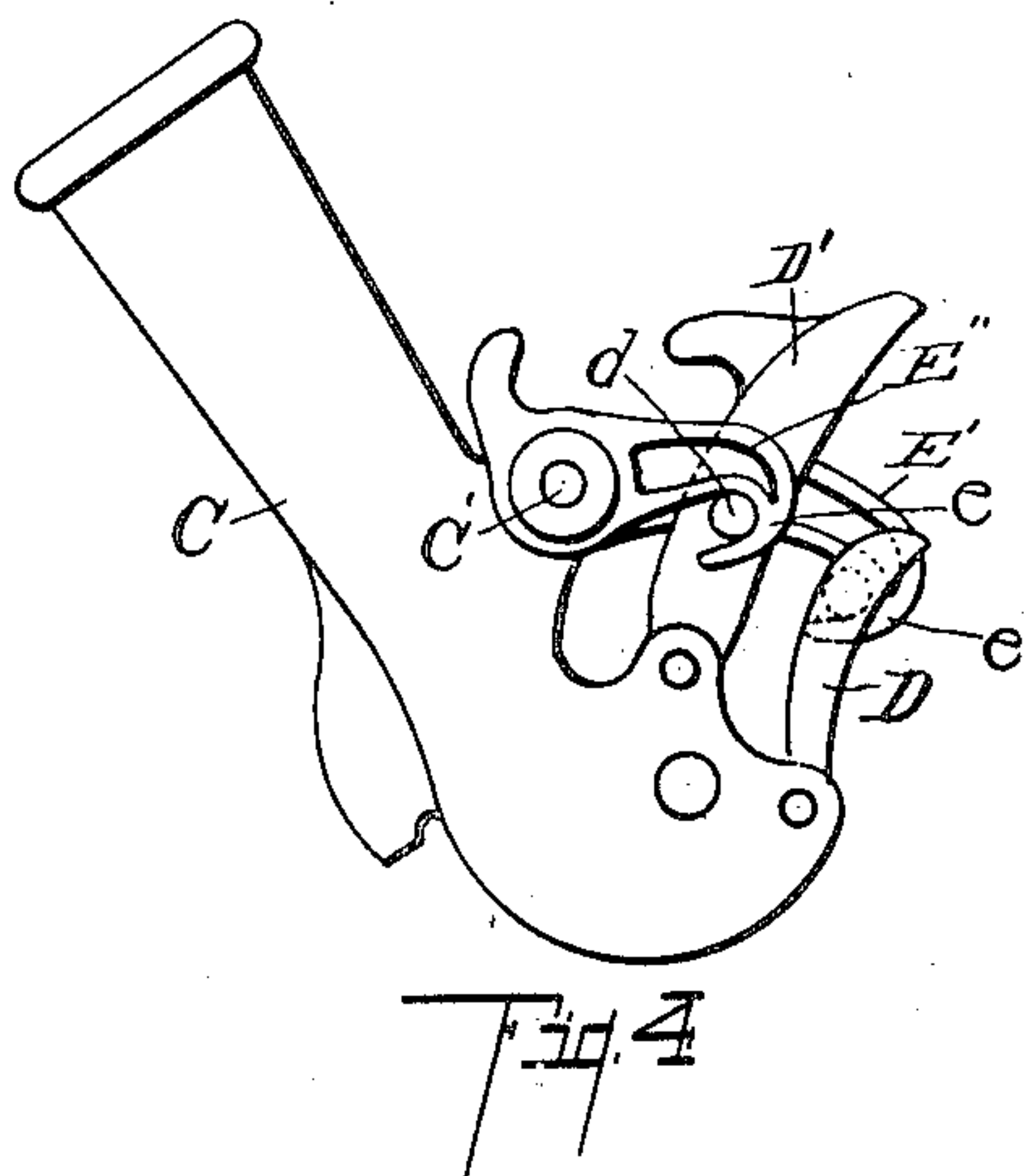
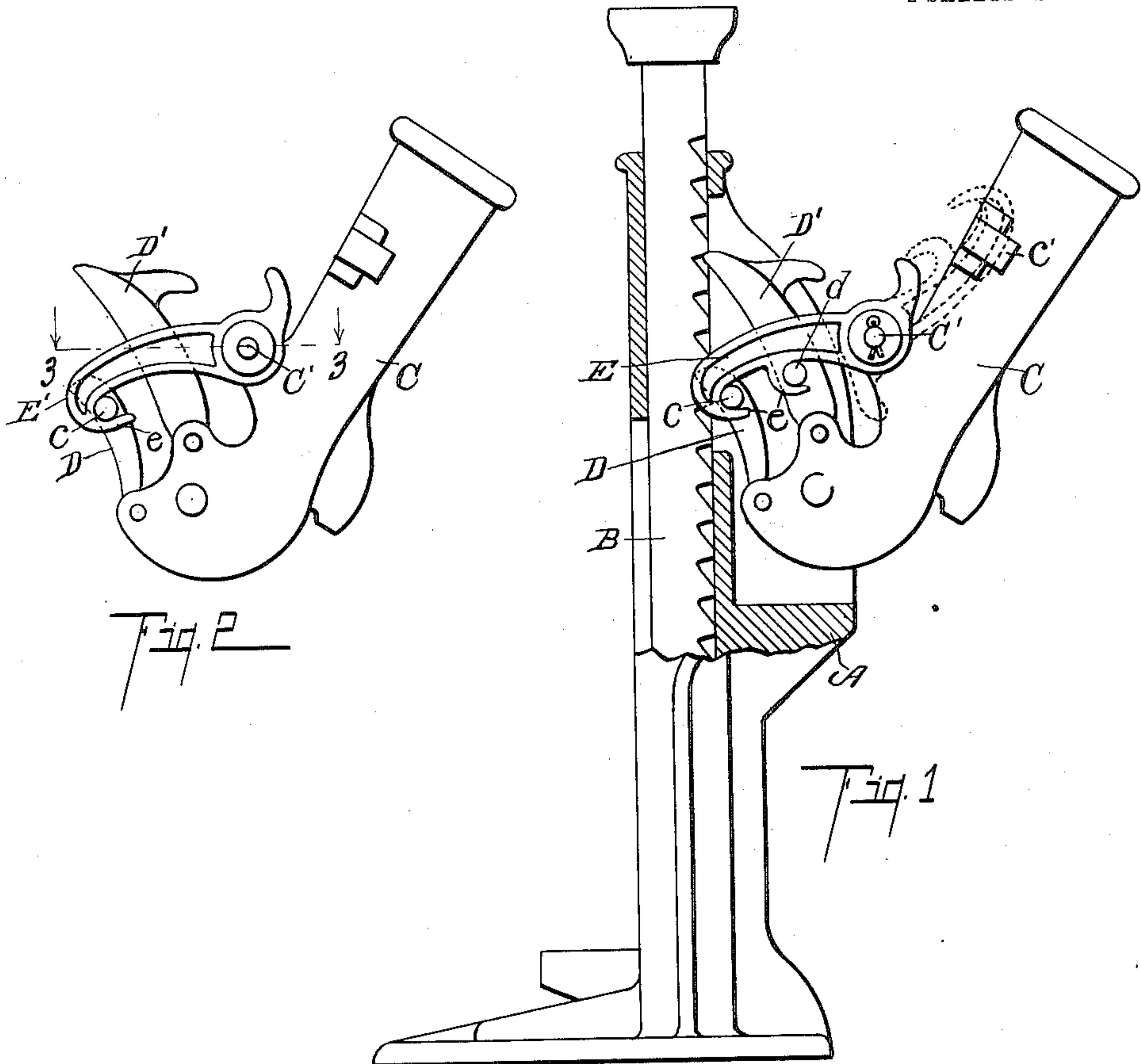
No. 822,350.

PATENTED JUNE 5, 1906.

E. COOK.  
LIFTING JACK.

APPLICATION FILED JULY 26, 1905.

2 SHEETS—SHEET 1.



Witnesses:  
*Edw. A. Bradford*  
*E. M. Jackson*

Inventor,  
*Eugene Cook*  
By *Chappell & Carl*  
Att'ys

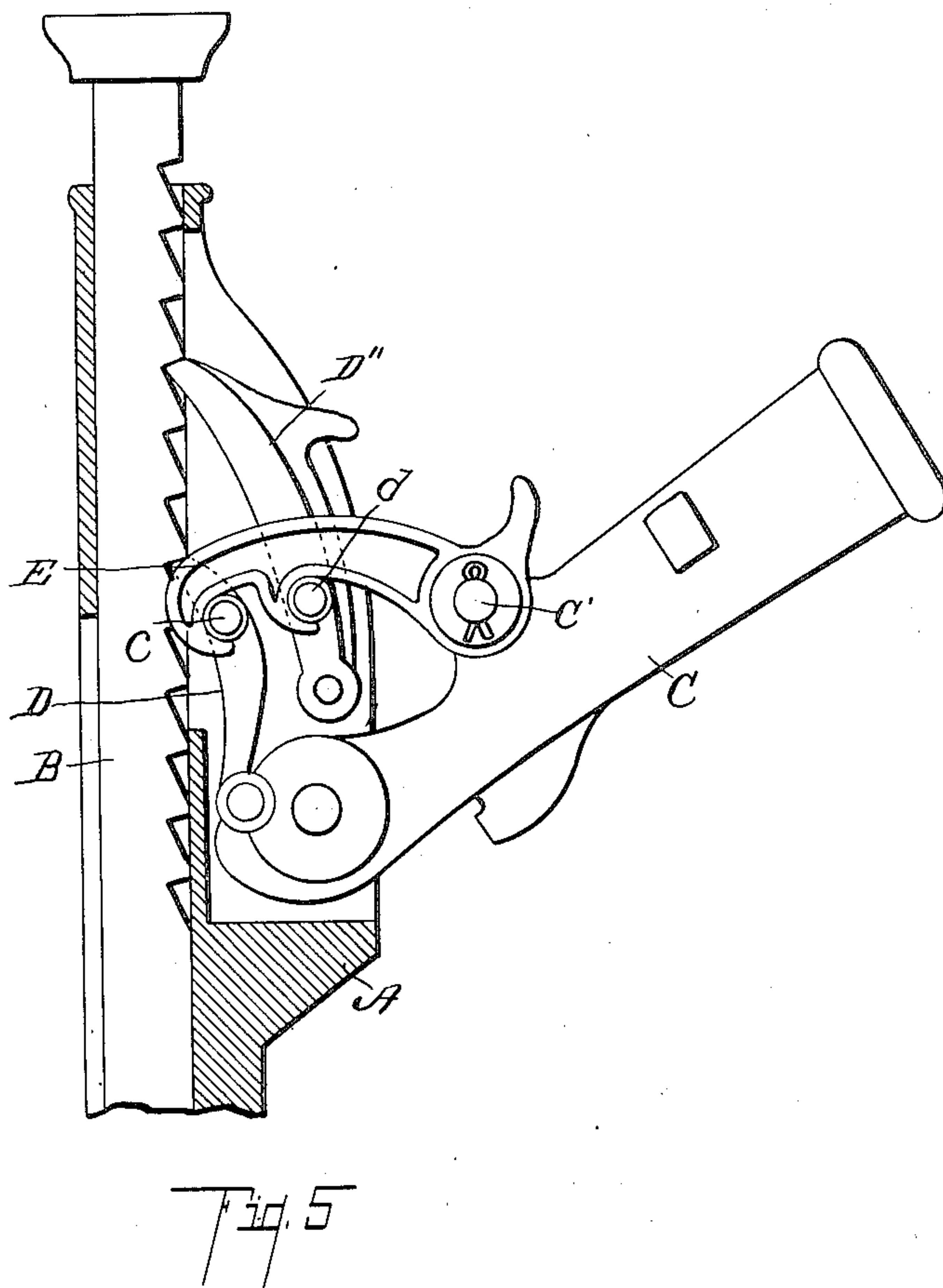
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE.

EUGENE COOK, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO COOK'S  
RAILWAY APPLIANCE CO., OF KALAMAZOO, MICHIGAN.

## LIFTING-JACK.

No. 822,350.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed July 26, 1905. Serial No. 271,372.

*To all whom it may concern:*

Be it known that I, EUGENE COOK, a citizen of the United States, residing at the city of Kalamazoo, county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification.

This invention relates to improvements in lifting-jacks.

The main object of this invention is to provide an improved lifting-jack which may be tripped with comparative ease even while under a heavy load.

Further objects and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation view, partially in section, to show the arrangement of the parts of a structure embodying the features of my invention. Fig. 2 is a side elevation view of a modified structure, only the lever and pawls with the trips therefor being shown. Fig. 3 is a sectional view taken on a line corresponding to line 3 3 of Fig. 2 looking in the direction of the little arrows at the ends of the section-lines. Fig. 4 is a side elevation view of the structure appearing in Fig. 2 in a reverse position. Fig. 5 is a detail side elevation view, partially in section, to show the arrangement of the parts of the structure appearing in Fig. 1 adapted to a single-acting lifting-jack.

In the drawings similar letters of reference refer to similar parts throughout the several views.

Referring to the drawings, A is the frame, and B is the lifting-bar. The lifting-bar is provided with suitable ratchet-teeth on one side. The shank C of the operating-lever is pivoted on the frame A.

The pawls D and D' are pivotally mounted on the lever-shank C, one to each side of its pivot-point. The outer pawl D' is of sufficient length to engage the rack-bar above the inner pawl D. With the pawls thus arranged

the rack-bar is acted upon on both the up and down movements of the lever.

In the structure shown in Fig. 5, which is what is known as a "single-acting" jack, the pawl D' serves as a holding-pawl, only holding the lifting-bar on the downward movement of the lever. The pawl D' is suitably pivoted on the frame at a point above the lever and is of sufficient length to engage the bar above the pawl D, allowing space for the free movement thereof. In this structure the lifting-bar is acted upon only on the downward movement of the lever, the pawl D' engaging the bar to hold it during the upper movement of the lever as stated.

The structure shown in Fig. 5 is a structural modification of the structure shown and described in Letters Patent No. 787,435, issued to me on the 18th day of April, 1905, and this invention is an adaptation of my invention therein shown.

In use it is frequently necessary to disengage the pawls to release the lifting-bar or to trip the "jack," as it is called. This I accomplish by the trip-hooks *e*. In the preferred construction the trip-hooks *e* are arranged to engage the laterally-projecting pins *c* and *d* and the pawls D D', respectively. The hooks *e* are pivoted on the lever-shank C at C'. These pawls preferably have a common or single shank E, as is illustrated in Figs. 1 and 5, although they may have separate shanks, as E' E''. (See Figs. 2, 3, and 4.) It is evident, however, that the trips shown in Figs. 1 and 5 are more simple to manufacture and to operate. The trip-hooks are so arranged as to act upon the outer pawl first, releasing it from the lifting-bar before the inner pawl is acted upon. It will be readily seen that as the lever is forced downwardly with the hooks in their engaging position the load will largely be removed from the outer pawl, so that only a comparative amount of power is required to withdraw it from the bar. The pull on the inner pawl is comparatively direct, so that it may be withdrawn from the bar with comparative ease. When the load is being lifted, the hooks are preferably thrown back against the rest *c'*, as I have indicated by dotted lines in Fig. 1.

The parts of my improved jack are very simple to construct and very durable in use. I have illustrated and described the same in



detail in the form preferred by me on account of its structural simplicity, although I am aware that it is capable of considerable variation in structural details without departing from my invention.

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

1. In a lifting-jack, the combination of a frame; a lifting-bar; an operating-lever pivoted to said frame; a pair of pawls pivoted on said lever at opposite sides of its pivot-point; laterally-projecting pins on said pawls; a pair of trip-hooks having a common shank, pivoted on said lever, adapted to engage said laterally-projecting pins on said pawls, arranged so as to withdraw the outer pawl from engagement with the lifting-bar before the inner pawl is acted upon, for the purpose specified.

2. In a lifting-jack, the combination of a frame; a lifting-bar; an operating-lever pivoted to said frame; a pair of pawls pivoted on said lever at opposite sides of its pivot-point; a pair of trip-hooks having a common shank, pivoted on said lever, arranged so as to withdraw the outer pawl from engagement with the lifting-bar before the inner pawl is acted upon, for the purpose specified.

3. In a lifting-jack, the combination of a frame; a lifting-bar; an operating-lever pivoted to said frame; a pair of pawls pivoted on said lever at opposite sides of its pivot-point; laterally-projecting pins on said pawls; a pair of trip-hooks pivoted on said lever, adapted to engage said laterally-projecting pins on said pawls, arranged so as to with-

draw the outer pawl from engagement with the lifting-bar before the inner pawl is acted upon, for the purpose specified.

4. In a lifting-jack, the combination of a frame; a lifting-bar; an operating-lever pivoted to said frame; a pair of pawls pivoted on said lever at opposite sides of its pivot-point; a pair of trip-hooks, pivoted on said lever, arranged so as to withdraw the outer pawl from engagement with the lifting-bar before the inner pawl is acted upon, for the purpose specified.

5. In a lifting-jack, the combination of a frame; a lifting-bar; an operating-lever pivoted to said frame; a pair of pawls pivoted on said lever at opposite sides of its pivot-point; trips pivoted on said lever, arranged to engage the said pawls successively to withdraw the outer pawl from engagement with the lifting-bar before the inner pawl is acted upon, for the purpose specified.

6. In a lifting-jack, the combination of a frame; a lifting-bar; an operating-lever pivoted to said frame; a pair of pawls, pivoted on said lever at opposite sides of its pivot-point; trips pivoted on said lever, arranged to engage said pawls successively whereby they are drawn successively from engagement with said lifting-bar, for the purpose specified.

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

EUGENE COOK. [L. s.]

Witnesses:

OTIS A. EARL,

ETHEL A. BRADFORD.