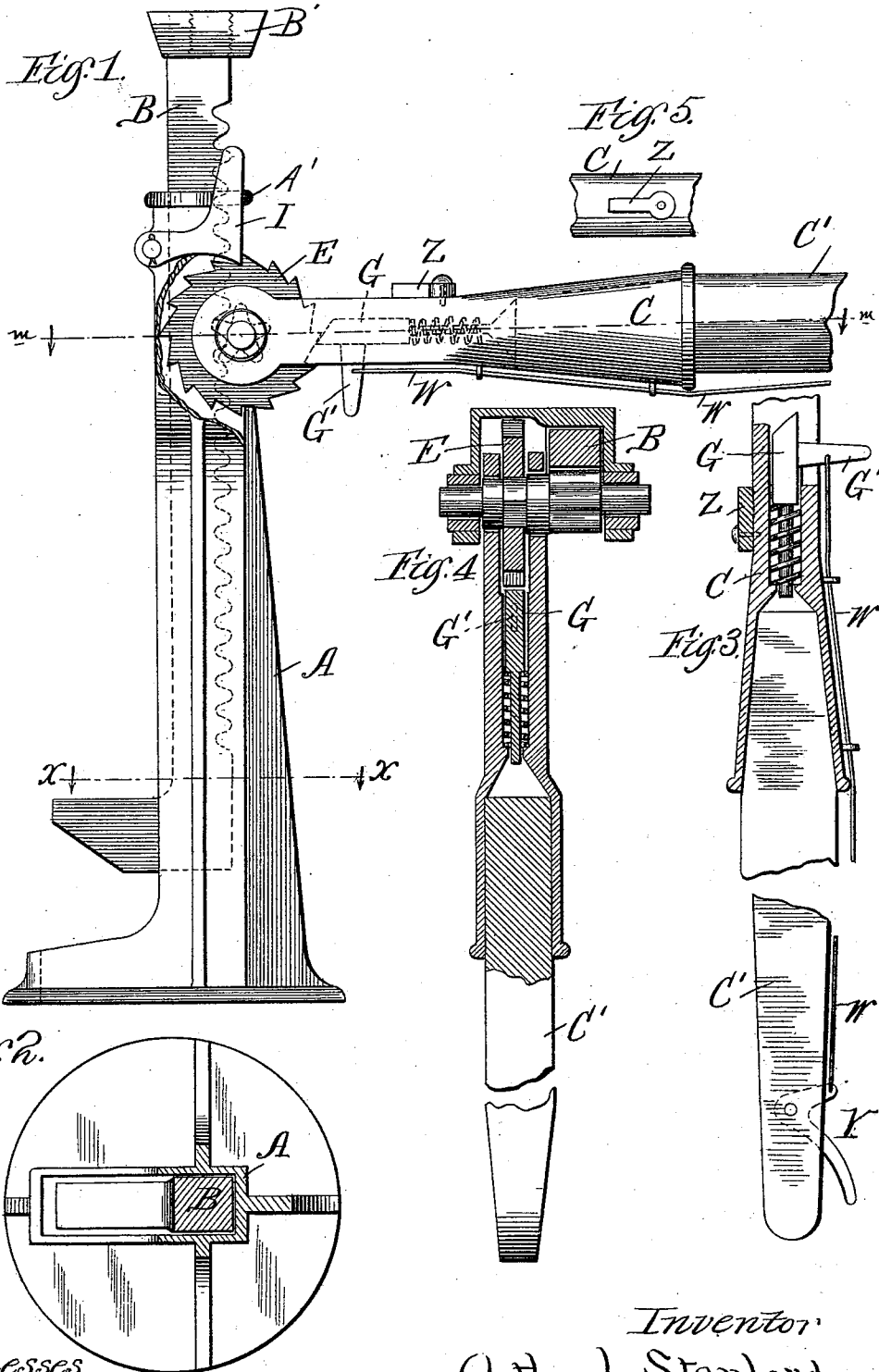


(No Model.)

A. L. STANFORD.
LIFTING JACK.

No. 527,818.

Patented Oct. 23, 1894.



Witnesses
Geo. E. Stanford
Harry White.

Inventor
Arthur L. Stanford.

UNITED STATES PATENT OFFICE.

ARTHUR L. STANFORD, OF EVANSTON, ILLINOIS.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 527,818, dated October 23, 1894.

Application filed May 31, 1894. Serial No. 513,040. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR L. STANFORD, of Evanston, Cook county, Illinois, have invented a new and useful machine, being an
5 Improvement in Lifting-Jacks, of which the following is a specification.

My invention consists in the construction of the various parts, of the arrangement and combination thereof, and will be found to be
10 the lifting jack shown and described in Letters Patent of the United States No. 513,155, issued to me and dated January 23, 1894, with the addition of certain parts and the modification or reconstruction of other parts
15 whereby the machine is well adapted both to lower the load gradually without danger of sudden precipitation of the same; and also to drop the lifting bar with its load instantly when desired, thus better adapting the lifting
20 jack to general use.

The object of my invention is to provide a lifting jack of simple construction well adapted to railroad and other service.

The drawings show the lifting jack of my
25 invention above referred to with the changes which constitute my present invention.

Figure 1 is a side elevation of my lifting jack showing the retaining pawl I so located as to be out of reach of lever socket C but in
30 position to by gravity engage the ratchet wheel and also showing my movable safety precipitating latch Z. Fig. 2 is a right cross section upon the line $x x$ of Fig. 1, showing in outline another form for the base of jack
35 which form is preferable for some uses. Fig. 3 is a vertical section upon the line $m m$ showing my novel form of lifting pawl G G'. Fig. 4 shows the position of G' upon G. Fig. 5 is a detail drawing of my safety latch Z.

40 The object of my present invention is attained by the following described mechanism.

I provide a retaining pawl I of the general form shown in Fig. 1 or of any suitable form and pivot the same to the standard A as appears in Fig. 1 in such manner that the pawl
45 is caused by gravity to engage the ratchet wheel E. Manifestly the pawl I may be operated by the hand of the operator only when the lifting bar B if loaded is supported

through the medium of the pawl G, as other- 50
wise the pressure of the ratchet wheel E upon pawl I would prevent the same being controlled by the hand of the operator. Pivoted upon the lever socket C is my safety latch Z. The relative positions of pawl I, lever socket 55
C, and head piece A' of the standard A are such that in no case can the lever socket C impinge against the pawl I to forcibly disengage the same, as is done by the construction shown in my former device, hereinbe- 60
fore mentioned. Now this eliminates the danger, through inadvertance of the operator, of accidental dropping of the loaded lifting bar. However the loaded lifting bar may be
65 dropped suddenly; and for this purpose I provide a movable safety latch Z which when in the position shown in Fig. 1 may be caused to impinge against the retaining pawl I by fully elevating the lever socket C. The lifting
70 pawl G having first been disengaged the lifting bar is free to drop. The safety position for Z is of course such that it may not strike pawl I.

Lifting pawl G is provided with the extension G' which works in a slot in the lever 75
socket as appears in Fig. 3. Pawl G is controlled through the extension G' both directly through the hand of the operator and indirectly through the hand-piece Y and connecting
80 wire W.

Bar cap B' is located at one side of the center of bar B. It is desirable to offset the bar cap B' in the manner shown in Fig. 1 as the power is applied to the teeth or cogs of rack-
85 bar B and by offsetting bar-cap B' the load is brought nearly or quite into the same vertical line with the power.

The operation of the lifting jack is set forth in my former patent above referred to: except, first, in lowering, the latch Z is placed 90
in the position of safety; second, to precipitate the loaded bar the movable latch Z is intervened to act upon the retaining pawl. Lifting pawl G is controlled in the manner shown. 95

I claim as new and desire to secure by Letters Patent of the United States—

In a lifting jack substantially as described,

safety releasing mechanism comprising in combination with the ratchet wheel, the lifting pawl G, retaining pawl I, and safety release latch Z which is pivoted upon the lever
5 socket C whereby said safety release latch may impinge against the retaining pawl I to release same; or may be swung into the safety

position and permit lever socket C to be fully elevated without releasing the pawl I substantially as and for the purpose set forth.

ARTHUR L. STANFORD.

Witnesses:

F. E. BRIGGS,

GEO. E. STANFORD.