

No. 737,016.

PATENTED AUG. 25, 1903.

E. PRESCOTT.
WAGON JACK.

APPLICATION FILED MAR. 16, 1903.

NO MODEL.

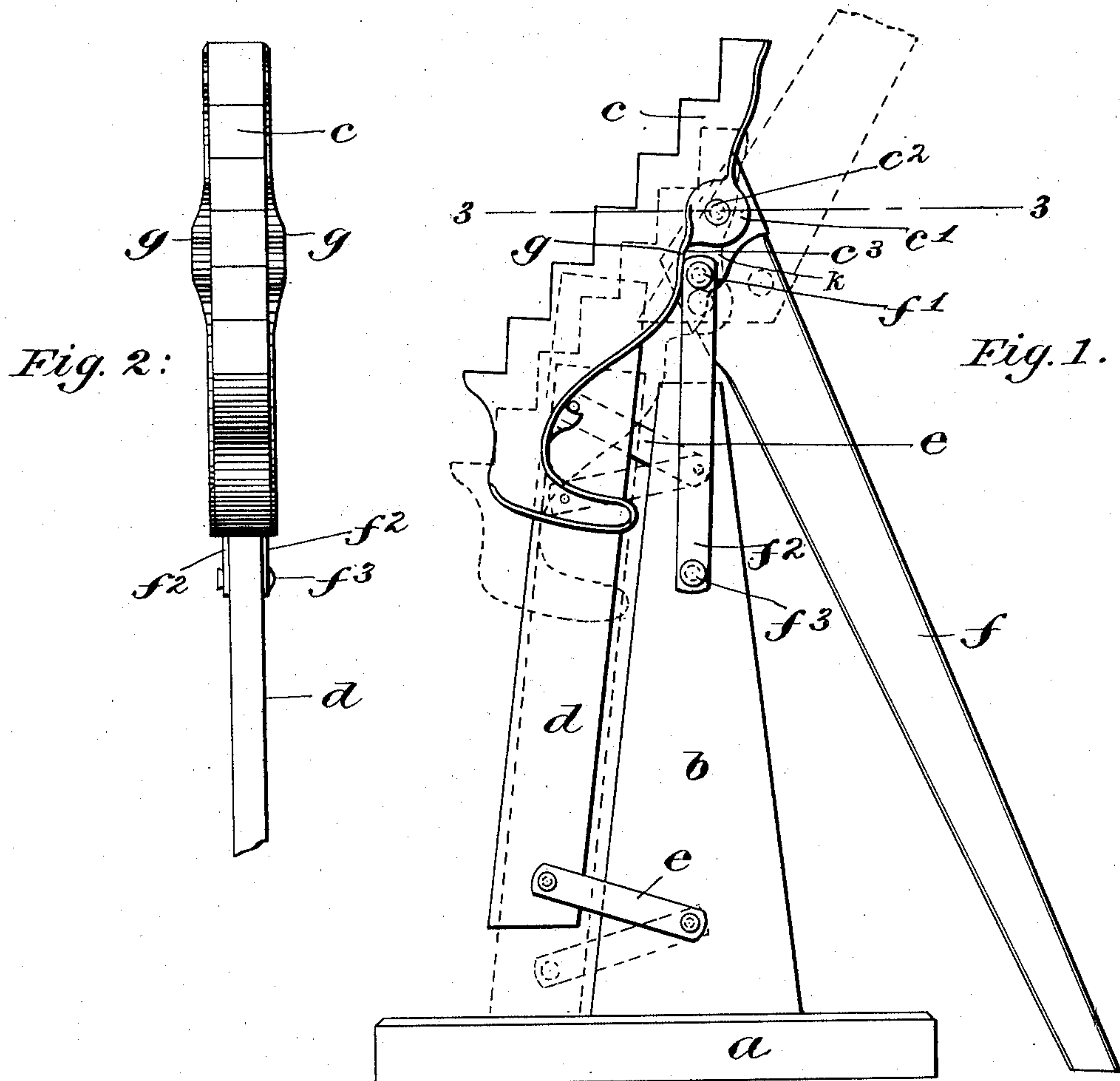
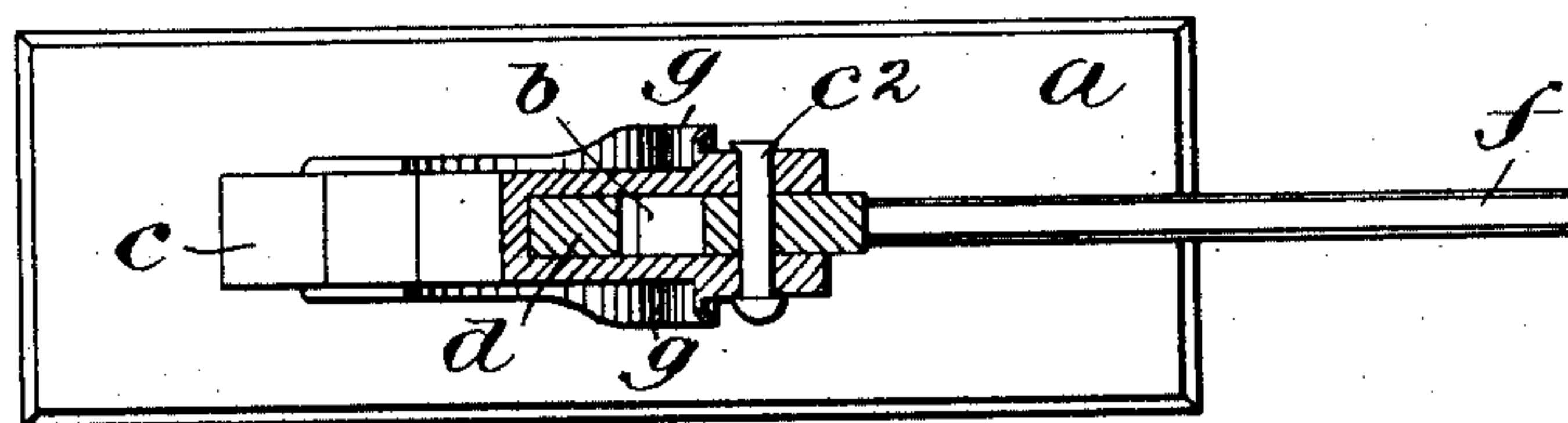


Fig. 3:



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWIN PRESCOTT, OF ARLINGTON, MASSACHUSETTS.

WAGON-JACK.

SPECIFICATION forming part of Letters Patent No. 737,016, dated August 25, 1903.

Application filed March 16, 1903. Serial No. 147,907. (No model.)

To all whom it may concern:

Be it known that I, EDWIN PRESCOTT, a citizen of the United States, residing at Arlington, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Wagon-Jacks, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention aims to provide an improved wagon-jack, the invention being directed more particularly to the end of providing a jack which will withstand the rough usage to which wagon-jacks are subjected more effectually than any jack of its type heretofore made and one which also will preserve substantially the original distribution of bearing points and stresses notwithstanding the wear of the various parts.

My invention will be best understood from a description of one embodiment thereof in connection with the accompanying drawings, wherein—

Figure 1 in side elevation shows a jack illustrating one embodiment of my invention, the full lines showing the parts when sustaining a weight, the dotted lines showing the positions of the parts when the handle is raised to release the jack. Fig. 2 is an edge view of Fig. 1 to show the ear-protection ribs; and Fig. 3 is a cross-section on the dotted lines 3-3, Fig. 1, looking downward.

In the particular embodiment of my invention selected for illustration herein and shown in the drawings, *a* is the base of suitable shape upon which is arranged the stand or post *b*, both of which may be made of wood. The stepped head *c*, preferably of iron, is mounted upon the upper end of a head-supporting bar *d*, which is connected with the post *b* by parallel links *e*, so that the said post and its head may be raised and lowered while preserving the same vertical alinement. For raising and lowering the stepped head with any weight thereon I have provided the handle *f*, which at its inner end enters a socket or recess provided therefor between the rearwardly-extended ears *c'* on the head, said handle being pivotally secured to and between said ears by a bolt *c²*. Said handle at the same end and near the pivot-bolt *c²* has jointed to it by a bolt *f'* a pair of links *f²*, which straddle the

said handle and also the post *b* and are pivotally connected to the latter by a bolt *f³*. When the handle is raised to its dotted position, Fig. 1, the head drops to its lowermost position, in which it rests with the lower end of its carrying-bar *d* upon the base. When the handle is turned downwardly into its full-line position, Fig. 1, the handle-bolt *f'* at the upper ends of the links *f²* serves as a moving fulcrum about which the head, with any object resting thereupon, is raised to its full-line position, Fig. 1. In this swinging movement the handle-bolt *f'* is carried inwardly beneath the head-bolt *c²* and beyond the vertical or dead-center line between said head-bolt and the bottom link-bolt *f³* upon the post until it is arrested by contact of the sides of the links with the stop-surfaces *c³*, provided therefor on the head. In this position the weight resting upon the stepped head is sustained in an almost direct line by the head-bolt *c²*, handle, handle-bolt *f'*, links *f²*, and the link-bolt *f³*, and the greater the weight the more firmly is the handle-bolt *f'* pressed to the left with the sides of its links bearing against the stop-surfaces *c³*.

In jacks of this general type as heretofore made it has been common to rely upon the contact of the handle-lever itself with the top corner of the post *b* to limit the swinging movement of the handle-pivot beyond the vertical or dead-center line between the head-bolt and the lower link-bolt. The objection to this construction has been that the contact of wood to wood soon wears sufficiently to permit the handle-bolt *f'* to pass to a greater extent beyond the vertical dead-center line between the head-bolt and lower link-bolt, thus increasing the buckling tendency of the toggle and rendering the entire construction more susceptible to breakage. By my invention, wherein the movement of the handle-bolt or toggle past the dead-center line referred to is limited by contact of the metal links themselves with the metal head, there is no such appreciable wear as if the contacting members were of wood, and it matters not how much the bearing-surfaces between the handle-bolt *f'* and the upper ends of the links may wear the points of contact between the sides of the link and the head remain constant, so that regardless of wear between the

bearing-surfaces of the various joints the arrangement of lines of pressure or support remain substantially constant throughout the life of the jack. A clearance $\frac{1}{2}$ is provided
 5 between the tops of the links and the portions of the head immediately overlying the same to prevent the ends of the links upon wearing of the bearing-surfaces thereat from coming into contact with the said head, which
 10 would be detrimental, as it would transfer the sustained weight directly to the ends of the links without first passing through the head-bolt c^2 , which is necessary to maintain the toggle-lock.

15 In jacks of this type it is desirable that the upper ends of the links be carried under the portion of the head to which the handle-lever is pivoted, and it is also desirable that the handle-lever itself be engaged between projecting portions or ears upon the said head,
 20 as herein shown. These ears I have found in practice are perhaps more easily broken than any other part of the jack, for when the latter is tipped or thrown upon its side, as
 25 frequently occurs in the ordinary handling thereof, or when a wheel rolls over the jack when lying flat upon the floor these ears, one or both, have been found in practice to be, as a rule, the first to break, the fracture
 30 usually occurring through the bolt-holes. To prevent this so far as possible, my invention contemplates providing the head with lateral protecting ribs or wings, herein indicated at g , which begin some distance below the ears
 35 at the rear edge of the head and gradually increase in extent of width or height to a point preferably immediately adjacent to the lower boundaries of the said ears and then taper off quickly to nothing at or about the
 40 level of the head-bolt c^2 . When a jack so constructed is tipped or thrown upon its side, these protection ribs or wings first strike the floor and receive the impact, thus preventing the bolt-head, nut, or the tips of the ears
 45 themselves or other easily-breakable part from contacting with the floor to the damage thereof. Obviously the protection-wings are well calculated to withstand the shock of a fall, because they are supported by the body
 50 of the head itself and receive the blow in the direction of their greatest depth, down through the solid metal of the body, and not laterally, as would the ears.

My invention provides a jack which with-
 55 out additional cost will withstand much longer and severer usage than any jack of its type heretofore known to me without breakage, without appreciable change in the lifting or locking movements, and without dis-

turbing the arrangement of stresses or forces 60 existing either during lifting or supporting and locking.

My invention is not restricted to the particular embodiment thereof herein shown and described, for the same obviously may be 65 varied within the spirit and scope of the invention gathered from the present disclosure.

I claim—

1. A lifting-jack of the type disclosed, provided with a movable head, a handle con- 70 nected thereto between ears thereon, and one or more protection-flanges adjacent said ears or one of them.

2. A lifting-jack of the type described provided with a movable head having rearwardly- 75 extended ears, a lifting-handle pivoted to and between said ears, and oppositely-extended protection-wings on and adjacent the rear edge of said head and having their highest points adjacent the lower meeting points 80 of the said ears with the said head.

3. A lifting-jack of the type described provided with a head, a lifting-handle, and one or more handle-supporting links, said parts 85 so arranged that the links alone contact laterally with the head when in supporting position.

4. A lifting-jack of the type described provided with a head, a lifting-handle jointed thereto, one or more handle-supporting links 90 jointed to said handle and arranged to form in connection with the latter a self-locking toggle when the head is in supporting position, said head and supporting link or links being constructed and arranged to provide a 95 wear-space between the end or ends of said link or links and the adjacent portion of the said head, whereby to prevent contact of the said link or links at the end or ends thereof with said head upon wear of the said joints 100 or any of them, thereby preserving throughout the life of the jack substantially the original lines of locking support.

5. A lifting-jack of the type described, provided with a head, a lifting-handle, and one 105 or more handle-supporting links forming therewith a lifting and supporting toggle for said head, said links by lateral contact with said head furnishing the sole lateral support for said toggle when in supporting position. 110

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWIN PRESCOTT.

Witnesses:

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 EVERETT S. EMERY.