(No Model.)

T. MAXON.

LIFTING JACK.

No. 298,307. Patented May 6, 1884.

Fig. 1.

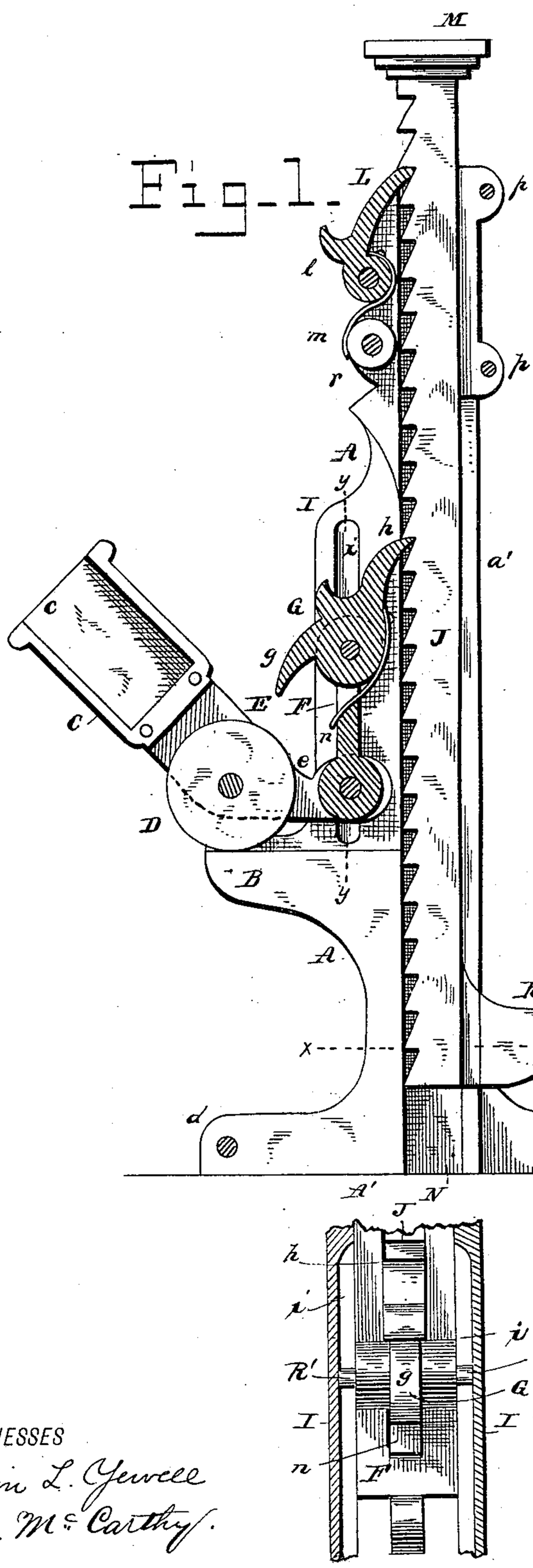

Fig. 2.

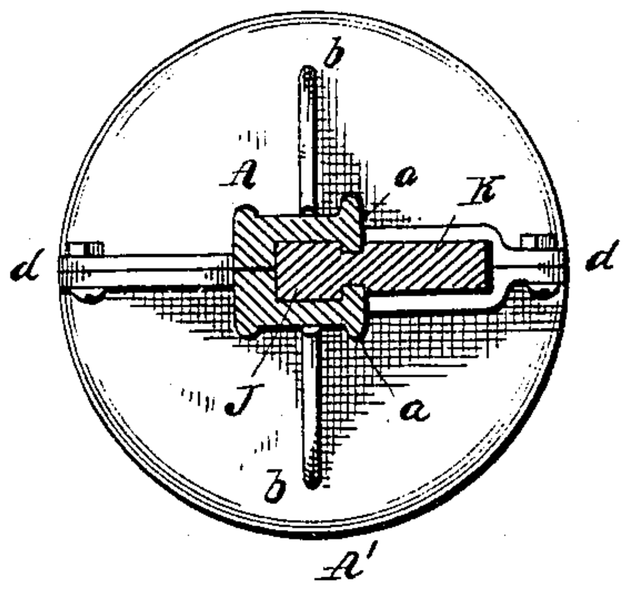

Fig. 3.

WITNESSES

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THOMAS MAXON, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF TO JAMES W. CARPENTER, OF SAME PLACE.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 298,307, dated May 6, 1884.

Application filed November 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MAXON, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to lifting-jacks; and the object I have in view is to provide a strong and durable and at the same time an inexpensive ratchet-jack for use with heavy wagons and carriages, whether loaded or unloaded, or other heavy weights.

The construction and mode of using my invention will be hereinafter fully described.

In the annexed drawings, which make a part of this specification, Figure 1 represents a vertical section, and Fig. 2 a cross-section taken on the line *x x*, Fig. 1. Fig. 3 represents a vertical sectional view on the line *y y* of Fig. 1, showing the pawl in front elevation.

In the figures, A represents the frame of the jack, which is cast in two parts centrally and longitudinally, being bolted together near its top through the ears *p p* and *r*, and at its bottom through the ears or ribs *d d*. The bottom A′ of this frame is circular in form, and is provided with two lateral bracing-ribs, *b b*. When the two parts of the frame are placed together and bolted, an opening, N, will be left throughout its length from bottom to top for the ratchet-lifting bar J to travel in. The ratchet-bar J is provided with teeth on one edge, a suitable square top, M, and a foot-piece, K, out at right angles to it at its lower end. Wings I extend out from the frame. These wings are provided with grooves *i* on their inner faces, and at their lower ends is formed a table, B, the inner edges meeting to form a bearing for the wheel or roller D of the lever. At the rear of the frame is left a vertical opening, *a′*, which extends from the lower ear *p* to its bottom, and the foot-piece K of the bar J plays up and down in said opening. The rear edges of the frame, which form the opening, are T-shaped, as seen at *a a*, and the inner flanges of these edges take into slots in the sides of the foot-piece K, made to receive them, as represented fully in Fig. 2. F represents a connecting-bar, the lower end of which is pivoted between two jaws on the inner end, *e*, of the lever E, its upper end being provided with jaws, between which is pivoted the pawl G.

G represents a pawl, which is provided with a tooth, *h*, for catching into the teeth of the ratchet, a curved projection, *g*, and a spring, *n*. The bar F has flanges R′ on each side, which take into the grooves *i* of the wings I, which act as guides for it.

E represents the lever which operates the ratchet-bar, and which has a head, C, with an opening, *c*, in which the end of a long lever may be inserted. This lever is provided with a wheel or roller, D, and said roller rests and plays upon the table B when the jack is in operation. The short end *e* of the lever connects to and operates the bar F, which carries the pawl G.

L represents a pawl, which is pivoted between two wings upon the frame near its upper end. This pawl is provided with a thumb-piece, *l*, and a spring, *m*, said spring serving to press its upper end in and against the teeth of the ratchet-bar J. The pawl L serves to hold the bar in place after it has been lifted by the pawl G. Weight placed upon the top M can be lifted from the top of the frame until the tooth *h* of the pawl G catches into the lowest tooth of the ratchet-bar; but when weight is placed upon the foot-piece K it can only be lifted until said foot-piece reaches the lower ear *p*.

The operation of this jack is very simple. The construction is entirely of metal. The outer end of the lever is raised, and with its inner end the pawl G descends, the tooth *h* being pressed between the ratchet-teeth of the bar J, as it goes down, by the spring *n*, the bar J being held up in the meantime by the pawl L. When the outer end of the lever is pressed downward, the pawl G ascends, and its tooth *h* carries the bar upward, where it is retained by pawl L. Thus the operation is continued until the weight is lifted as high as is desired. When it is desired to drop the bar quickly, the lever is raised until it strikes the projection *g* of pawl G. This throws out the tooth *h*, but first pressing the tooth of pawl L outward to disengage it from the bar J. Then said bar will drop to the bottom of the frame.

To ease a load down it is only necessary to lift the bar a little with the lower pawl, disengage the upper one, and then raise the lever until the bar moves downward as far as the pawl will allow. Then let the pawl L catch the bar, and hold it until the operation can be completed.

I am aware that it is common to use ratchet-bars and pawls and levers in lifting-jacks; hence I disclaim all of these as new or of my invention; but,

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

1. The frame A, cast in two parts, bolted together as described, and provided with grooved wings I and table B, in combination with lever E and its wheel, connecting-bar F, pawl G, with its tooth *h* and projection *g*, and the pawl L, the several parts being constructed and connected substantially in the manner and for the purpose set forth.

2. The bar F, having flanges upon its edges which take into the guiding-grooves *i* of the wings I, said bar being pivoted to and between the pawl G and the end *e* of the lever C, as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS MAXON.

Witnesses:
WEBSTER W. SHUEY,
S. RUFUS JONES.