(No Model.)

W. K. MOTTRAM.

LIFTING JACK, LEVER, WRENCH, AND OIL HOLDER COMBINED.

No. 312,747. Patented Feb. 24, 1885.

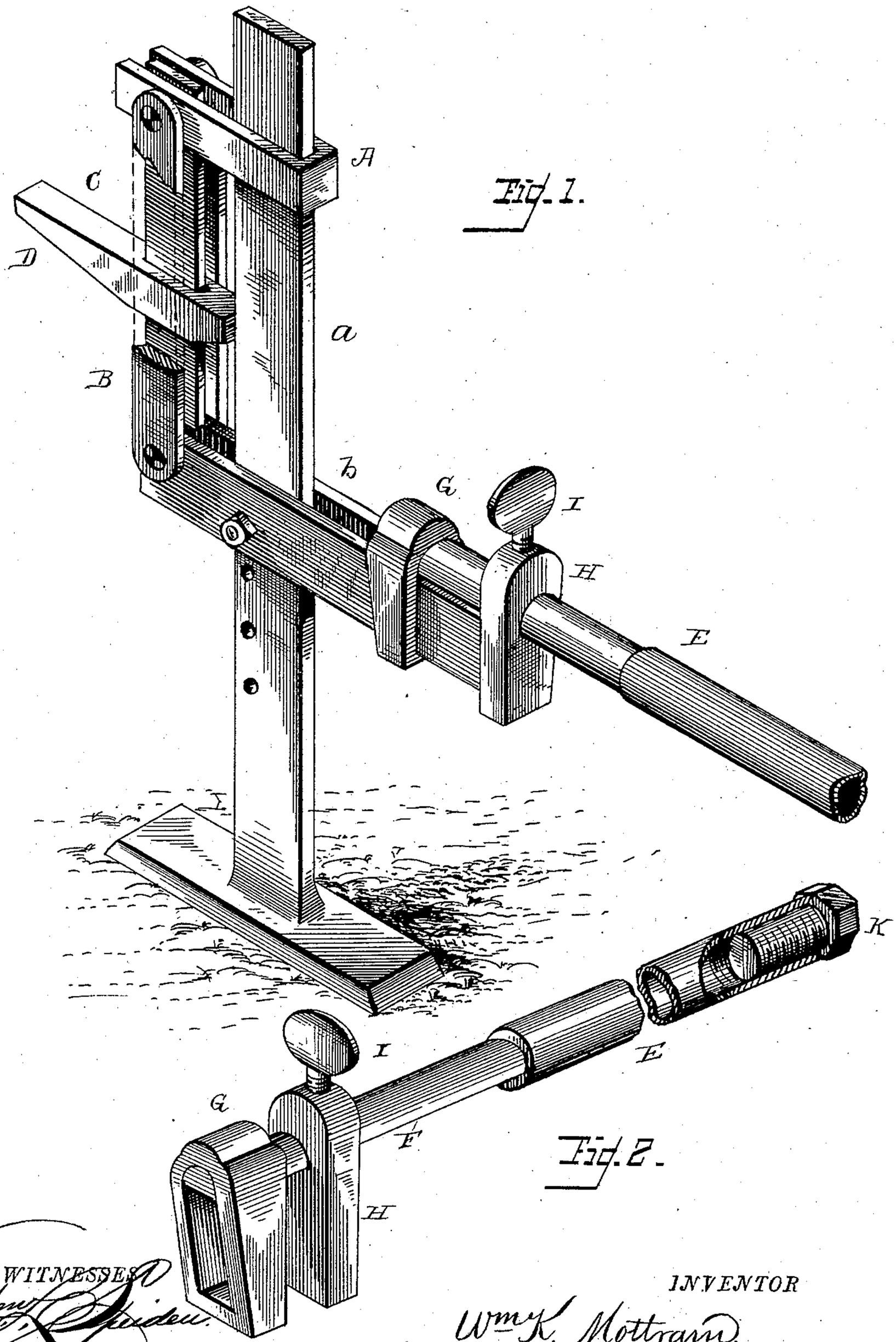

Fig. 1.

Fig. 2.

WITNESSES:

INVENTOR

Wm. K. Mottram.

by Frank Sheehy.

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM K. MOTTRAM, OF OTTAWA, KANSAS.

LIFTING-JACK, LEVER, WRENCH, AND OIL-HOLDER COMBINED.

SPECIFICATION forming part of Letters Patent No. 312,747, dated February 24, 1885.

Application filed November 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM K. MOTTRAM, a citizen of the United States, residing at Ottawa, in the county of Franklin and State of Kansas, have invented certain new and useful Improvements in Lifting-Jack, Lever, Wrench, and Oil-Holder Combined, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a perspective view of my device, with parts broken away to more fully represent the invention; and Fig. 2 is a perspective view of the extension-handle removed from the jack.

This invention has relation to improvements in lifting-jacks; and it consists in the construction, combination, and novel arrangement of devices, as will be hereinafter more fully set forth, and particularly pointed out in the claims appended.

Referring to the accompanying drawings by letter, *a* indicates the standard, which is properly braced, as shown, and is provided with a vertical series of transverse apertures for the reception of the pivot-bolt of the power-lever. The standard, as well as the other parts of the jack, is made of bar-iron, but may be made of other suitable material.

b indicates the power-lever, which may be formed of flat bar or strap iron, and is pivotally connected with the standard in the usual manner, having its forward end projecting beyond the forward vertical edge of the standard and pivotally connected with an upper vertically-moving arm or arms, A, by means of one or more bars, B. These bars are connected with the power-lever and the upper moving arm or arms, A, in such a manner that when the said moving arms are carried to their fullest vertical height by the power-lever they will assume a locked position with relation to the standard, and thereby sustain any weight which may be placed thereon and elevated thereby.

This invention is more particularly adapted for raising vehicles to lubricate their axles or journals, and as the front axles of all vehicles are of less height than the rear axles it is desirable that the lifting parts of the jack should be vertically adjustable without changing the fulcrum-point of the power-lever, in order that time may be saved in the operation; and to accomplish these objects, I have provided means for engaging the rear axle of a vehicle independent from that which engages the front axle. This consists of a vertically-pivoted bar, C, which may be connected with the vertically-moving arms A, by means of the same bolt that connects the said arms A with the power-lever, and a horizontal arm, D, which is vertically slotted, as shown at its inner end, for the reception of the pivoted bar C, and the said horizontal arm may be vertically adjusted thereon as desired. The inner end of this slotted arm D projects a sufficent distance rearwardly of the pivoted arm to engage the forward vertical edge of the standard, so that the former may be held in proper position when engaged by any weight to be elevated. The power-lever is preferably of loop form and composed of flat bar or strap iron, having the free arms of the loop projecting forwardly of the standard, so as to have a vertical curvilinear movement with relation thereto to raise and lower the upper forwardly-projecting arms, A. The power-lever may extend a sufficient distance in rear of the standard for attaining sufficient leverage to manipulate the parts; or a short lever may be used, such as illustrated, and a removable hand-lever, such as shown in Fig. 2, employed. This removable handle is peculiar in construction, being adapted to serve the additional functions of a wrench and lubricant-receptacle.

The handle E may be composed of gas-pipe having one end closed by being flattened out or beaten down, as shown at F, and provided at its outer end with a fixed loop or socket, G, the plane of which is rectangular to the handle, and the interior of this loop is of a shape conformable to the contour of the pivoted power-lever, and is adapted to engage the same, as shown. Upon the flattened portion of this handle is arranged a sliding jaw, H, which is adjusted thereon by means of a set-screw, I, and is designed to co-operate with the fixed jaw or loop in removing the axle-nuts, or used as a wrench for other purposes. This handle is hollow with the exception of the said closed portion, and is designed to serve as a convenient means for holding oil or other lubricant, having its opposite end internally threaded to receive an externally-threaded cap, K.

The advantages of having a hand-lever to serve as a wrench and lubricant-receptacle in a device of this character will be readily appreciated. It will be seen that when the handle or wrench has been placed on the power-lever and depressed so as to raise any weight which may be brought to engage the vertically-moving arms the parts will become locked with relation to the standard. The handle can then be removed and the wrench used to remove the axle-nuts, after which the axles or spindles of a vehicle thus raised may be lubricated by removing the screw-cap at the inner end of the said handle.

While the removable handle or wrench is peculiarly adapted for use in connection with the jack described, yet it will be perceived that the said device may be successfully used as a wrench and lubricant-receptacle for various purposes, the loop at the end of the handle serving as the fixed jaw of the wrench.

Having described this invention, what I claim is—

1. In a lifting-jack, the combination, with the standard, of a vertically-moving horizontal arm connected with a fulcrum or power lever by one or more hinged arms as to become locked with relation to the standard when the said fulcrum-lever has been depressed, substantially as specified.

2. In a lifting-jack, the combination, with the standard, of the vertically-moving arm, and a horizontal vertically-suspended arm adapted to co-operate with the power-lever, so as to assume a locked position with relation to the standard when the said fulcrum-lever is depressed, substantially as specified.

3. The combination, with the standard, of the vertically moving or sliding horizontal arm, the fulcrum-lever pivoted to the standard, and the arm connecting the forward end of the fulcrum-lever with the forward end of the said horizontal arm, whereby the same may be locked with relation to the standard when the said lever has been depressed, substantially as specified.

4. The combination, with the standard, of the upper horizontal vertically-moving arm, the fulcrum-lever, the bars connecting the forward end of the said arms with the forward end of the said lever, and the vertically-suspended bar carrying the horizontal arm, substantially as specified.

5. The combination, with the standard, of the horizontal arm having a sliding engagement therewith, the arm suspended from the forward end of the said moving arm, the horizontal arm vertically adjustable on the suspended arm, and means for operating the same, substantially as specified.

6. The combination, with the standard and horizontal vertically-moving arm, the fulcrum-lever, and means for connecting the said arms with the fulcrum-lever, of the removable extension handle or lever adapted to serve the additional functions of a lubricant-receptacle and wrench, substantially as specified.

7. In a lifting-jack, the combination, with the standard and fulcrum-lever, of the hollow removable handle, having one end provided with the fixed loop-jaw to engage the said fulcrum-lever, and a sliding jaw adjacent thereto, whereby the same is adapted to serve the functions of a hand-lever and wrench, substantially as specified.

8. The hollow extension-handle, having one end closed by a screw-cap and the opposite end closed and provided with a fixed loop-jaw, and adapted to receive a sliding adjustable jaw, whereby the same may serve the functions of an extension for the fulcrum-lever, a wrench, and a lubricant-receptacle, substantially as specified.

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

WILLIAM K. MOTTRAM.

Witnesses:
JAMES ROBB,
A. A. LATHROP.