H. M. WILLIS.
Lifting-Jack.

No. 209,635. Patented Nov. 5, 1878.

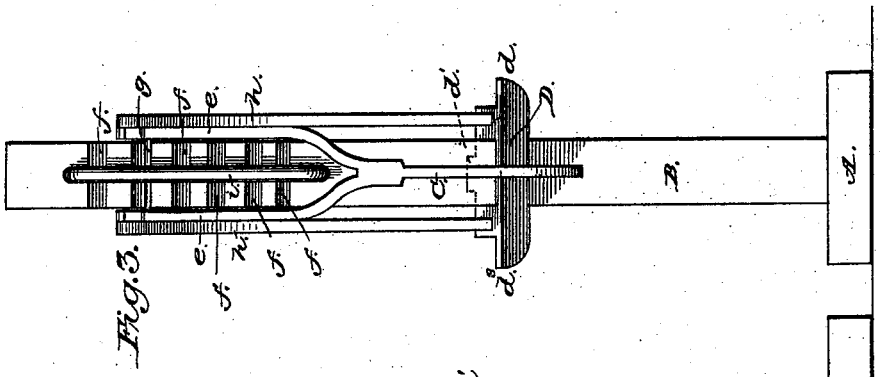

Fig. 3.

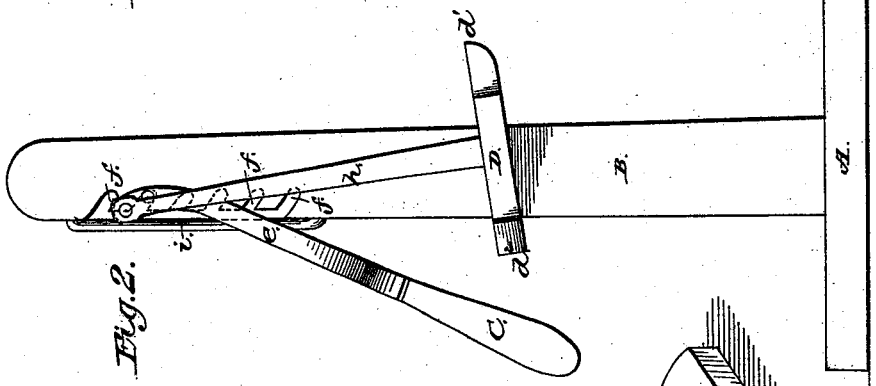

Fig. 2.

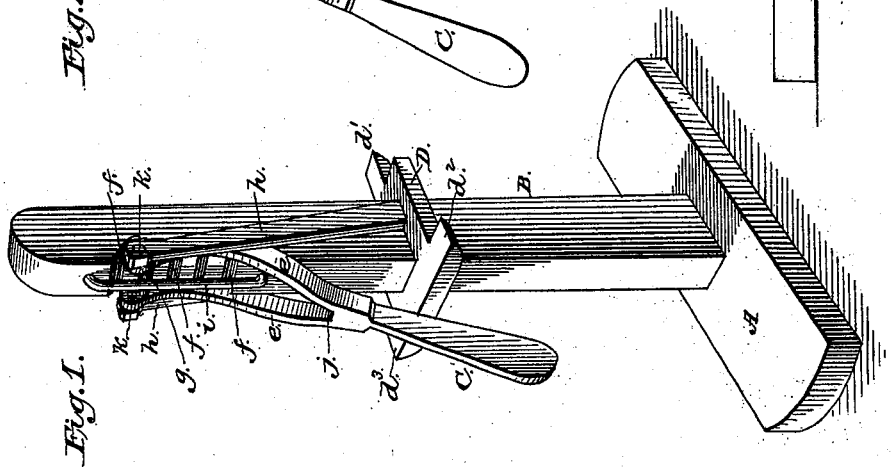

Fig. 1.

WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY M. WILLIS, OF MINEOLA, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO GARRY VANDERBEEK, OF SAME PLACE.

IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. **209,635**, dated November 5, 1878; application filed October 15, 1878.

To all whom it may concern:

Be it known that I, HENRY M. WILLIS, of Mineola, county of Queens, and State of New York, have invented certain new and useful Improvements in Wagon-Jacks; and I do hereby declare the following to be a full, clear, and exact description of my invention, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view, Fig. 2 a side view, and Fig. 3 a rear view, of my wagon-jack.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved jack for raising the axles of wagons, for the oiling of the same or the washing of wheels, which shall be simple in construction, convenient in use, and reliable in operation.

The invention consists in the construction and combination of parts, which will be hereinafter more fully described, and then set forth in the claims.

A is the base, rising vertically from which is the standard B, provided near its upper portion with the series of notches or depressions *f*.

C is the lever, being in its upper part a straight bar, but expanding at about the point *j* into two arms, *e e*, which pass to either side of the standard B, and which at their extreme ends have a slight upward curve.

D is the lifting-plate, compassing the four sides of the standard, having the lugs d^1 d^2 d^3, and joined on opposite sides to the arms *e e* of the lever C by connecting-rods *h* rigidly secured to the plate D.

Pin *k* fastens the connecting-rods with the arms of the lever.

g is the fulcrum-pin joining the arms *e e* and working in any one of the notches or depressions *f*.

i is a rod or guard passing between the arms *e e*, traversing the distance of the notches, and secured at both ends to the standard, designed to keep the fulcrum-pin *g* near the standard when shifting it from notch to notch, thus securing greater ease of operation.

The operation of the jack is as follows: The lever C being thrown upward, as in Fig. 1, the fulcrum-pin *g* is brought into such a notch as shall bring the lifting-plate D, or one of the lugs thereof, just below the wagon-axle to be raised; then by simply exerting a downward pressure on the handle or end of the lever C the axle is elevated, the lever C, connecting-rod *h*, and lifting-plate D being brought into the position shown in Figs. 2 and 3, the fulcrum-pin *g* still remaining in its original notch.

It will be noticed that the arms *e e* of the lever C work between the sides of the standard B and the connecting-rods *h*, and that the lifting-plate D, when the lever C is depressed, is in a slanting position, the side upon which the axle rests being elevated above the opposite side. This position of the lifting-plate gives an additional security to the axle remaining on the plate.

In the drawings I have represented the arms of the lever C as curved; but this construction is not absolutely essential, as a straight double-armed lever can be used to bring the connecting-rods *h* from a vertical to a slanting position and accomplish substantially the same results as the lever C, as shown; but with either lever, the fulcrum being near the lifting-point, a great power can be exerted with a comparatively slight pressure.

In lowering the axle after oiling or washing, it is only necessary to raise the lever, when the lifting-plate will be brought to its first position.

In the construction of my jack, preferably, I make the base and standard of wood and the other parts of iron or steel.

If the wooden rests for the fulcrum-pin are not sufficiently stout to stand the strain put upon them when the lifting-plate supports the axle, they can be strengthened by facing the sides of the standard in the vicinity of the notches or rests with plates of metal.

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

1. In a lifting-jack, the combination of the notched standard B with the lifting-plate D, connecting-rods *h*, and double-armed lever C, arranged substantially as described.

2. In a lifting-jack, the lifting-plate D, having the projecting lugs d^1 d^2 d^3, substantially as described.

HENRY M. WILLIS.

Witnesses:
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