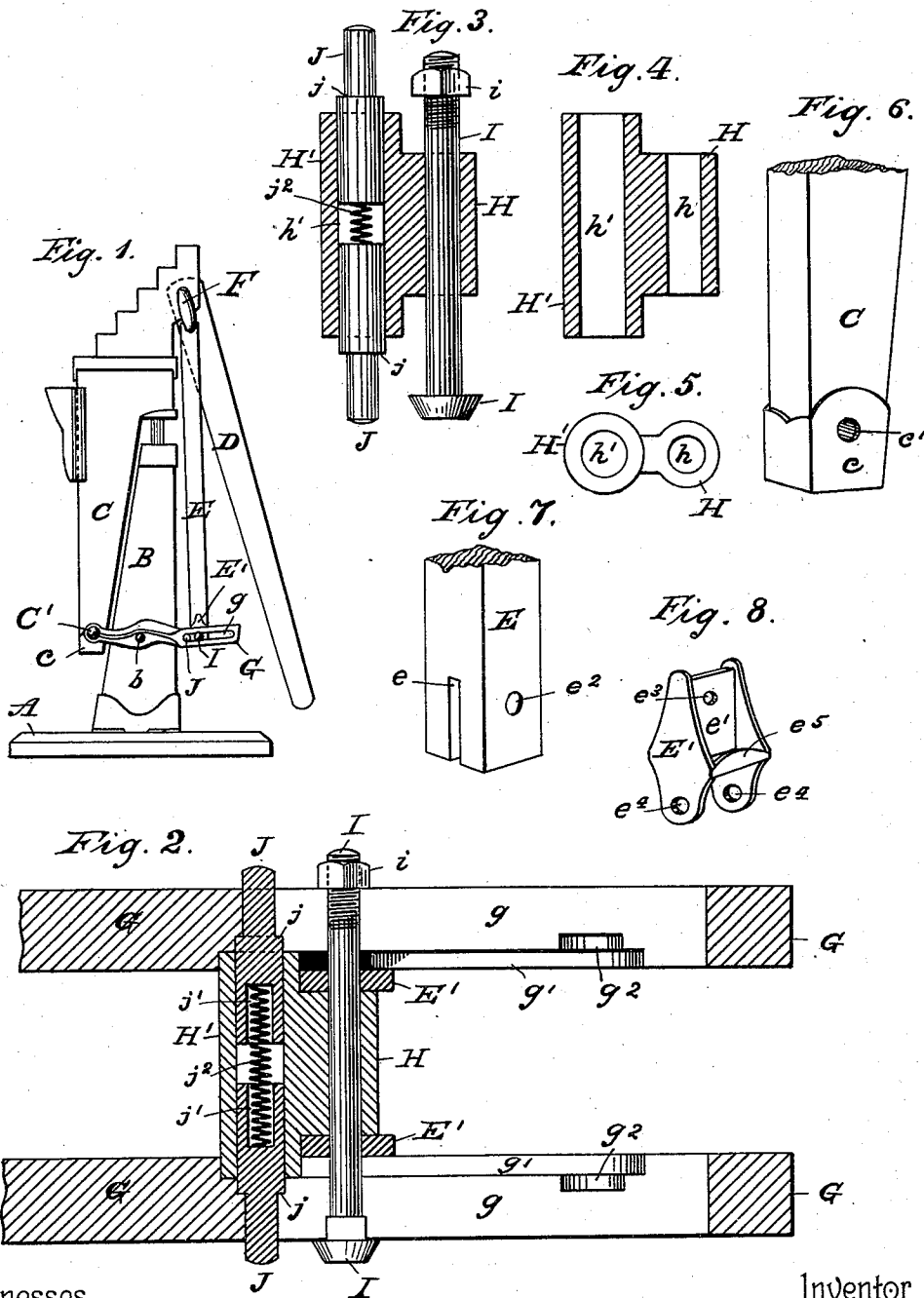


(No Model.)

S. S. JOY.
WAGON JACK.

No. 578,519.

Patented Mar. 9, 1897.



Witnesses

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UNITED STATES PATENT OFFICE.

SAM S. JOY, OF NEW MARKET, NEW HAMPSHIRE.

WAGON-JACK.

SPECIFICATION forming part of Letters Patent No. 578,519, dated March 9, 1897.

Application filed August 18, 1896. Serial No. 603,115. (No model.)

To all whom it may concern:

Be it known that I, SAM S. JOY, a citizen of the United States, residing at New Market, in the county of Rockingham and State of New Hampshire, 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 the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The essential as well as novel feature of this invention is the adjustable leverage, whereby a heavy load may be raised as easily as one of a lesser weight, which will be fully set forth in the following specification and claims, and clearly illustrated in the drawings accompanying and forming a part of the same, of which—

Figure 1 is an elevation of my improved jack. Fig. 2 is a longitudinal sectional elevation showing one end of the levers which connect the step-piece with the lifting mechanism and showing the shifting device, Fig. 3 being a detached sectional view of the shifting device, Figs. 4 and 5 being, respectively, a longitudinal section and an end view of a detail of said shifting device. Fig. 6 is a perspective view showing the lower end of the step-piece with its malleable-iron cap-piece. Fig. 7 is a detail perspective view showing that end of the connecting-rod which attaches to the shifting mechanism of the adjustable lever. Fig. 8 is a perspective view showing the casting by which the connecting-rod is attached to the shifting mechanism of the lever.

Similar reference-letters denote corresponding parts.

A is a base-plate. B is the standard; C, the adjustable step-piece; D, the operating-lever; E, a bar connecting the lever D (to which it is attached by a link F) and the lever G, which connects the lower ends of the step-piece C and the bar E with the standard B. These parts, with the exception of the lever G, may all be similar to those shown and described in a United States patent issued to myself, dated September 18, 1894, and numbered 526,153; but this lever G in the present instance is considerably longer than in the patent above mentioned and is likewise formed in two parts, each section of which is

provided in its longer end with a longitudinal slot *g*, in which the adjustable connection attaching the lower end of the rod E to the lever G is permitted to shift toward or away from the standard B, as will be hereinafter explained.

The lower end of the step-piece C is provided with a metal cap *c*, which prevents splitting; and said cap is perforated on opposite sides, as at *c'*, for the reception of the retaining or pivot pin *C'*, passing through the short end of the lever G, which lever is pivotally attached to the standard at *b*. The opposite end of each section of the lever G is provided with the slot *g*, the adjacent surfaces of each slot being widened or grooved, as at *g'*, for the entire length of said slots, and these are provided with depressions *g²*, one near each end of said slots, as shown in Fig. 2.

The shifting mechanism comprises a casting, which may be made to resemble two connected cylindrical portions H H', the former being shorter than the latter, both being provided with longitudinal openings *h h'*, as shown best in Figs. 4 and 5. The part H of this casting is of proper length to admit the yoke portion between its ends and the two sections of the lever G of the casting E', connected to the lower end of the bar E, and is connected to the lever G by a bolt I, which passes through the elongated openings *g* of the lever, perforations *e¹*, formed for the purpose in the yoke of the casting E, and through the perforation *h* of said part H, said bolt being provided with a threaded nut *i* at one end, as shown.

The part H' is sufficiently long to rest in the grooves *g'* of the lever G, and its perforation *h'* contains studs J, which protrude through the elongated openings *g* of the lever G and are provided with a shoulder *j*, fitting the grooves *g²* of said lever.

The studs J may be provided in their adjacent ends with sockets *j¹* to receive opposite ends of a helical spring *j²* for forcing the said studs outward or normally holding their shoulders *j* in the grooves *g²* of the lever and thus firmly secure and pivotally connect the bar E at either point on the lever G which may be required. To shift from one to another, it is only necessary to depress the studs

J, which frees their shoulders j from the grooves g^2 of the lever G, into which said shoulders will automatically return by the action of the spring j^2 .

- 5 The bar E is slotted at its lower end, as at e , and the casting E' has a centrally-located vertical web e' , which is driven into the slot e of said bar and rigidly fastened therein by a suitable pin or rivet passed through the perforations e^2 of the bar and e^3 of the casting. Flanges e^5 , formed at opposite sides of the casting E', are provided to prevent any tendency in the end of said bar E to split.

15 Having described my improvements, what I claim is—

1. In a wagon-jack of the construction shown, comprising a suitable standard, an adjustable step-piece, and an operating-lever, a lever pivoted at a point between its ends to the standard and pivotally connected at one end to the adjustable step-piece, and a bar attached at one end to the operating-lever and adjustably connected at its opposite end to said pivoted lever, said connection being 20 capable of adjustment toward or away from the pivotal point of said lever, substantially for the purpose set forth.

2. In a wagon-jack, the combination with the adjustable step-piece and operating-lever 30 of a metal cap fitting the lower end of the adjustable step-piece and perforated on oppo-

site sides, a step-adjusting lever composed of two sections and carrying at one end an adjustable connection for the operating-lever, and a bolt or rivet passing through said perforated cap and step-piece and serving the purpose of a pivotal connection for one end of the step-adjusting lever, with the step-piece. 35

3. As a means of varying the leverage of wagon-jacks, a suitable standard, a lever consisting of two parallel members pivotally connected between its ends and at opposite sides of the standard one end of said lever being pivotally attached to an adjustable step-piece 40 and the other end of each member being provided with an elongated opening having grooves on their adjacent sides and depressions near each end, a suitable casting fitting the said groove and provided with spring-actuated studs passing through said elongated openings and having each a shoulder fitting the said depressions, the said adjustable step-piece, an operating-lever, and a bar 45 pivotally attached at one end to said casting and at the other to said operating-lever. 50

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

SAM S. JOY.

Witnesses:

J. B. THURSTON,
JOHN H. ANDREWS.