No. 632,771. Patented Sept. 12, 1899.

C. E. WHEELER.

LIFT FOR PLOW FRAMES, &c.

(Application filed Feb. 27, 1899.)

(No Model.)

Fig. 1.

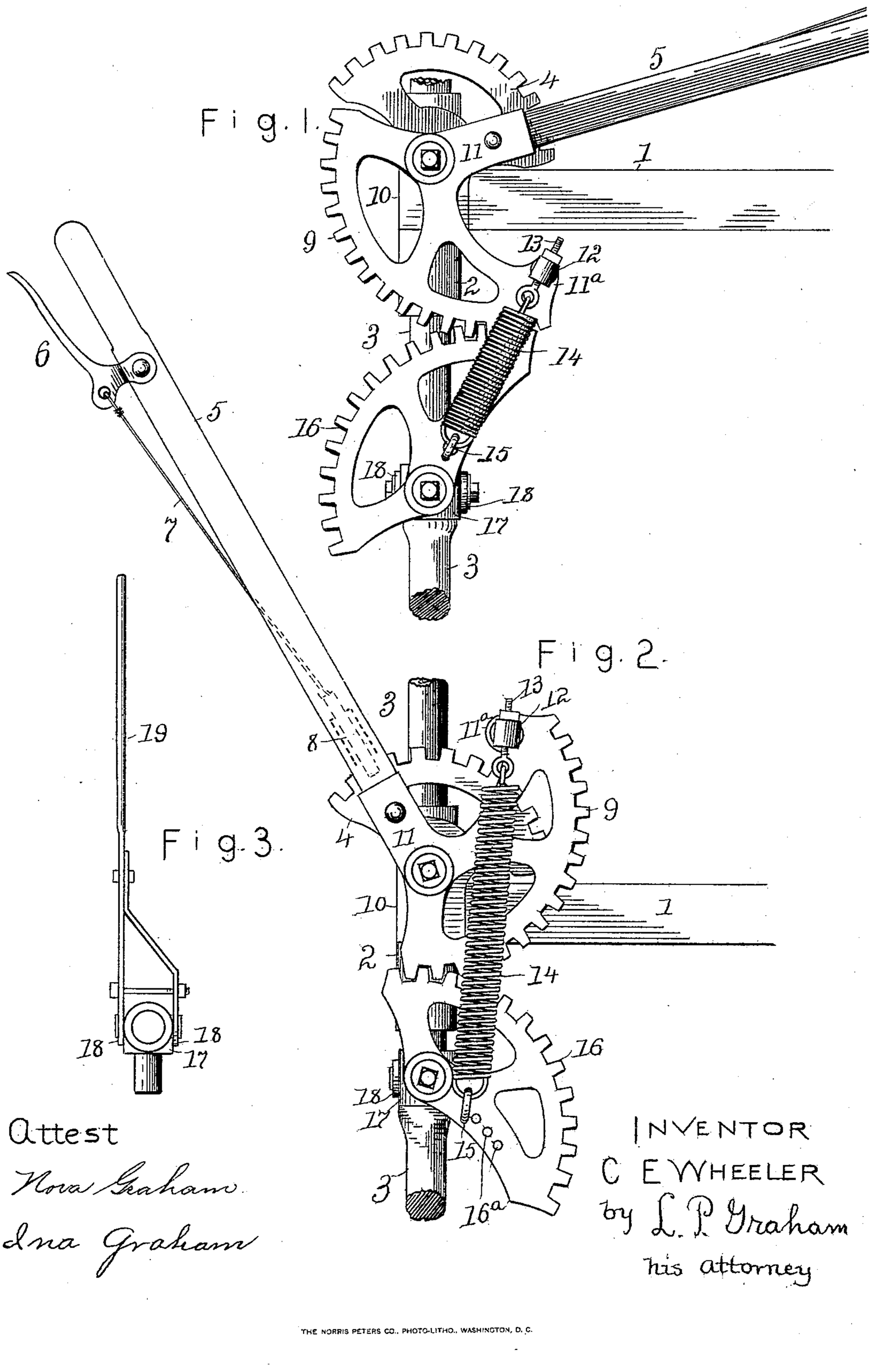

Fig. 2.

Fig. 3.

Attest

Nova Graham.

Ina Graham

INVENTOR

C E WHEELER

by L. P. Graham

his attorney

UNITED STATES PATENT OFFICE.

CHARLES E. WHEELER, OF DECATUR, ILLINOIS.

LIFT FOR PLOW-FRAMES, &c.

SPECIFICATION forming part of Letters Patent No. 632,771, dated September 12, 1899.

Application filed February 27, 1899. Serial No. 707,063. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. WHEELER, of Decatur, in the county of Macon and State of Illinois, have invented a certain new and useful Lift for Plow-Frames and the Like, of which the following is a specification.

This invention is intended to provide a simple and effective lift in which the weight is in part counterbalanced by a spring or springs. It is exemplified in the structure hereinafter described, and it is defined in the appended claims.

In the drawings forming part of this specification, Figure 1 is a side elevation of the lift movement in a raised position. Fig. 2 is a similar representation with the movement in a lowered position. Fig. 3 is a plan of an arm designed to hold the lower part of the lift from turning with the shaft on which it is mounted.

In this particular instance the load to be lifted is the front end of a plow-frame, one of the bars of which is shown at 1. The sleeve for the shaft of the caster-wheel is shown at 2, and a fragment of the shaft is shown at 3. A bracket 10 is fastened to the frame or to the sleeve thereof, and it has a toothed sector 4. A pin projects laterally from the center of the sector, and on such pin is journaled an eccentric segment of a gear-wheel, as 9. A lever 5 is fastened to an arm 11 of the segment 9. It has a bolt 8, adapted to engage the teeth of sector 4, and it also has a grip-lever 6 and a rod 7, connecting the grip-lever with the bolt. A collar 17 is mounted loosely on the lower end of shaft 3, bearing against the lateral bend thereof or against an enlargement formed thereon, and it has a laterally-projecting pin, on which is journaled the eccentric segment of gear-wheel 16. The two eccentric segments are put in mesh, as shown, with the long side of one engaging the long side of the other, and the extended ends are connected together by means of an extension-spring 14. The connection of the spring with the segments may be made in various ways, but it is preferably done by means of a boss 12, journaled in an extension 11^a of the upper segment, a threaded eyebolt 13, extended through the boss and provided with a nut, and an eyebolt 15, set in a hole in the lower segment and projected laterally therefrom. This enables the tension of the spring to be regulated by adjusting the eyebolt 13, and the effect of the spring may be still further varied by providing a set of holes, as 16^a, for eyebolt 15, such holes being at different distances from the pivot of the segment.

The frame or other load is lifted by swinging lever 5 backward and downward, as shown in Fig. 1, thus bringing the extended ends of the segments together and forcing the pivots of the segments apart, and it is lowered by swinging the lever in the contrary direction, as shown in Fig. 2. As the load is lowered it acts to put the spring under tension, and in lifting the spring acts with the force applied to the lever and in ordinary cases may be relied on to accomplish the lift with but little, if any, assistance.

In the shown application of the lift provision must be made to hold the lower segment from turning with the caster-shaft, and this provision consists in an arm 19, having straps 18, that fit over trunnions on the sides of collar 17. The arm is made to engage some convenient part of the plow-frame, and when so engaged it will hold the collar from turning without interference with its up-and-down motion.

In this case but one spring is shown; but it is obvious that a duplicate spring may be connected with the opposite sides of the segments in case it should be desired to greatly increase the spring-pressure.

The lift is applicable to agricultural implements in general as well as to all cases in which a somewhat short lift of a reasonably uniform load is required to be made.

What I claim is—

1. A lift-movement consisting of a slide, a guide for the slide, and a pair of intermeshing eccentric gear-segments pivoted one on the slide and the other on the guide, substantially as set forth.

2. A lift-movement consisting of a slide, a guide for the slide, a pair of intermeshing eccentric gear-segments pivoted one on the slide and the other on the guide, and a lever fastened to one of the segments, substantially as set forth.

3. A lift-movement consisting of a slide, a guide for the slide, a pair of intermeshing eccentric gear-segments pivoted one on the

slide and the other on the guide, a lever fastened to one of the segments and a spring connecting the segments together and resisting separation of the pivots thereof, substantially as set forth.

4. A lift-movement consisting of a slide, a guide for the slide, a pair of intermeshing eccentric gear-segments pivoted one on the slide and the other on the guide, a lever fastened to one of the segments, and an extension-spring connecting the long ends of the segments together, substantially as set forth.

In testimony whereof I sign my name in the presence of two subscribing witnesses.

CHARLES E. WHEELER.

Witnesses:
FRANK M. TENNEY,
J. S. EDMUNDSON.