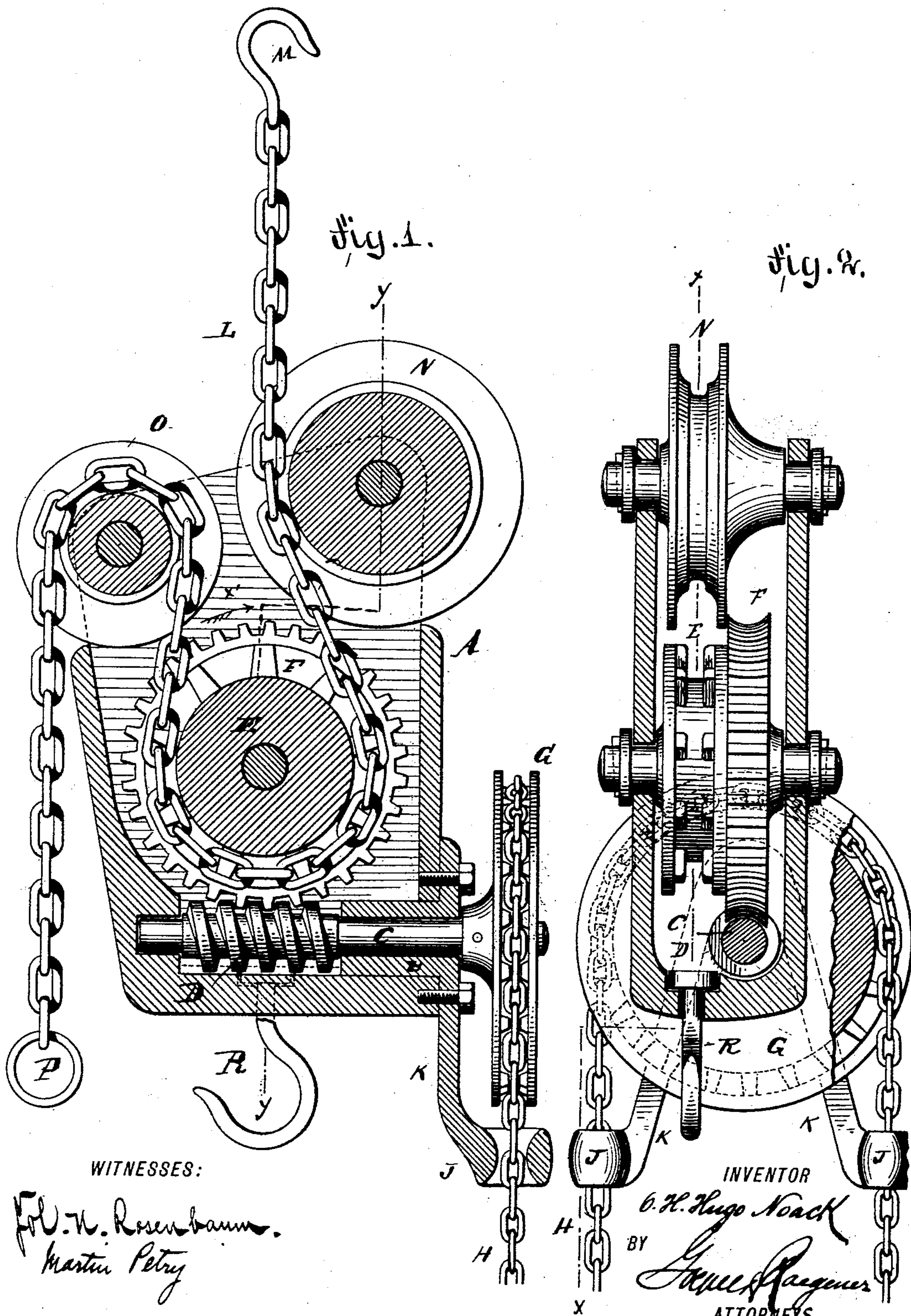


(No Model.)

O. H. H. NOACK.
HOISTING GEAR.

No. 411,165.

Patented Sept. 17, 1889.



UNITED STATES PATENT OFFICE.

O. H. HUGO NOACK, OF STAMFORD, CONNECTICUT.

HOISTING-GEAR.

SPECIFICATION forming part of Letters Patent No. 411,165, dated September 17, 1889.

Application filed June 21, 1889. Serial No. 315,059. (No model.)

To all whom it may concern:

Be it known that I, O. H. HUGO NOACK, of Stamford, in the county of Fairfield and State of Connecticut, a citizen of the United States, have invented certain new and useful Improvements in Hoisting-Gear, of which the following is a specification.

The object of this invention is to provide a new and improved hoisting-gear which is simple in construction, strong and durable, and can be applied or removed very easily and rapidly.

The invention consists in the combination, with a suitable frame or casing, of a shaft mounted in the same and provided with a worm, a worm-wheel engaged with said worm, a sprocket-wheel made integral with said worm-wheel, guide-pulleys in the frame, a hoisting-chain passed over the guide-pulleys, and a sprocket-wheel in the frame or casing, a sprocket-wheel fixed on the outer end of the worm-shaft, and an endless hand-chain passed over said sprocket-wheel on the worm-shaft.

The invention also consists in the construction and combination of parts and details, as will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical longitudinal sectional view of my improved hoisting-gear, on the line $x x$, Fig. 2, parts being broken out. Fig. 2 is a vertical central transverse section of the casing and worm, the wheels being shown in end view.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the main casing or frame of the hoisting-gear, to which is bolted a journal-bearing B at the bottom, in which journal-bearing and the casing a shaft C is mounted. The shaft C is provided within the casing with a worm D, engaging a worm-wheel E mounted within the casing and made integral with a sprocket-wheel F. On the outer end of the shaft C a sprocket-wheel G is rigidly mounted, and over the same the endless hand-chain H passes, which is guided in eyes J, formed on the lower ends of downwardly and outwardly projecting arms K, made integral with the outer ends of the journal-bearing B.

The hoisting-chain L is provided at its upper end with a hook M for fastening it in an eye or a hook on the ceiling or other support, and said chain is passed around the sprocket-wheel F and runs over a guide-pulley N in the upper part of the casing. It also runs over a small guide-pulley O in the upper part of the casing, which guide-pulley serves to keep as great a length as possible of said chain L in engagement with the sprocket-wheel F. On the lower free end of said chain L the large ring P is provided, for the purpose of preventing the hoisting-chain L from being drawn entirely through the casing A, and thus disengaged from the sprocket-wheel F. A hook R is swiveled in the bottom part of the box A, and from the same the load to be lifted is suspended. The chain L is pulled upward until the same can be hooked on the ring or hook on the ceiling or other support without lifting the casing A from the floor. The load to be lifted is then hung on the hook R, or connected with the same in any suitable manner, and the sprocket-wheel G is then turned, by means of the hand-chain H, in such a manner as to rotate the sprocket-wheel F in the direction of the arrow x' . This causes the entire hoisting apparatus to travel upward on the chain L, thereby lifting the load. After the load has been removed from the hoisting device the same is lowered again until it rests on the floor, and the hook N can be disengaged from the support without requiring the lifting or raising of the hoisting device.

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

1. In a hoisting device, the combination, with a casing or frame, of a shaft journaled in the same and provided with a worm, a worm-wheel engaged with said worm, a sprocket-wheel made integral with the worm-wheel, guide-pulleys in said frame, a hoisting-chain passed over the sprocket-wheel in the frame and over the guide-pulleys, a sprocket-wheel fixed on the outer end of the worm-wheel shaft, and an endless hand-chain passed over said sprocket-wheel, substantially as set forth.

2. In a hoisting device, the combination, with a casing or frame, of a shaft journaled

in the same and provided with a worm, a worm-wheel engaged with said worm, a sprocket-wheel made integral with the worm-wheel, guide-pulleys in said casing or frame, 5 a hoisting-chain passed over said guide-pulleys and over the sprocket-wheel, a sprocket-wheel fixed on the outer end of the worm-shaft, an endless chain passed over said sprocket-wheel, and arms having guide-eyes 10 on their ends for the endless hand-chain, substantially as set forth.

3. A hoisting-tackle composed of an exterior casing or frame, a worm in said casing, a sprocket-wheel and chain for turning the 15 said worm, a worm-gear meshing with said

worm, a sprocket-wheel connected to said worm-wheel, a hoisting-chain passing over said sprocket-wheel, and suitable guide-rollers, a hook attached to the casing for supporting the load, the hoisting-tackle being 20 adapted to climb with the load on the chain on operating the worm-gear mechanism by the hand-chain, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence 25 of two subscribing witnesses.

O. H. HUGO NOACK.

Witnesses:

CHALS. MULLER,

FRIEDRICH ZIMMERMANN.