

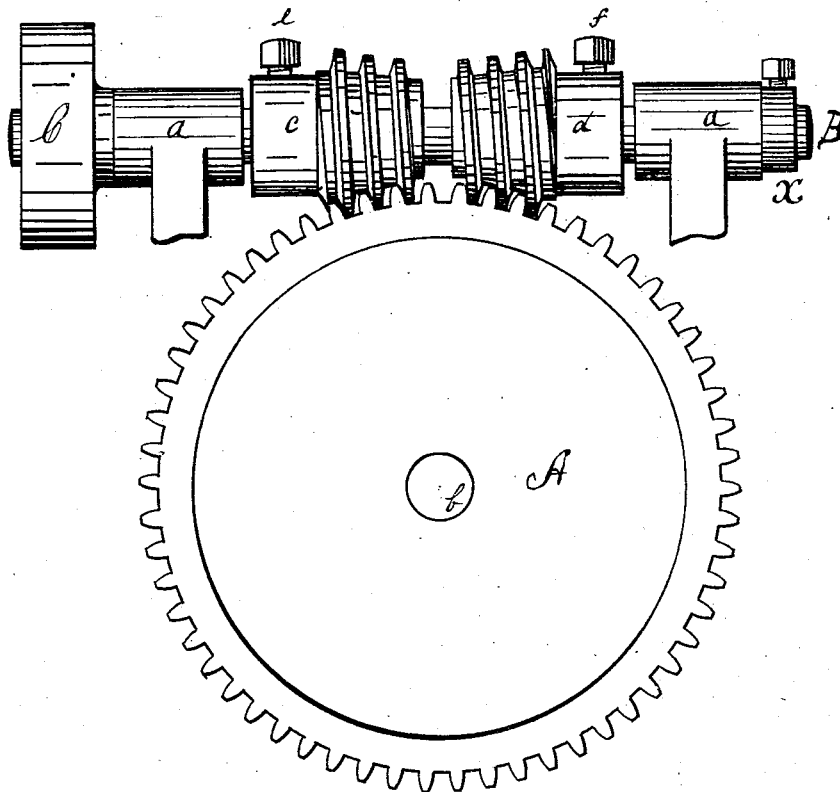
(No Model.)

S. OVERTON & E. WELLS.

WORM GEAR MACHINERY.

No. 260,892.

Patented July 11, 1882.



Witnesses

Isaac J. Franklin

Matthew Murphy

Inventors

Samuel Overton

Edward Wells

# UNITED STATES PATENT OFFICE.

SAMUEL OVERTON AND EDWARD WELLS, OF CHICAGO, ILLINOIS.

## WORM-GEAR MACHINERY.

SPECIFICATION forming part of Letters Patent No. 260,892, dated July 11, 1882.

Application filed August 13, 1881. (No model.)

*To all whom it may concern:*

Be it known that we, SAMUEL OVERTON and EDWARD WELLS, of Chicago, in the county of Cook and State of Illinois, have invented a new and valuable Improvement in Worm-Gear Machinery; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

The sole figure in the drawing represents a front elevation of our device.

The object of our invention is to provide a suitable means of taking up lost motion in worm-wheel gearing, such as is generally used in elevator and hoisting machinery; and it consists in making the worm in two separate castings or pieces, and providing suitable means of adjustment, as hereinafter more fully described.

A in the drawing represents the worm-gear which rotates on axle *b*.

*a a* are bearings which support shaft B, on which the two tapering or conical worms *c* and *d* are fastened with set-screws *e* and *f*.

C represents a pulley, which is intended to be driven by a belt.

In machinery of this kind where it is intended to reverse it is found that after the worm becomes much worn the shock is so great as to not only damage certain parts of the machinery, but in some cases (passenger-elevators, for instance) becomes very disagreeable. To obviate this we make two separate worms, which are located a sufficient distance

from each other to allow of adjustment as the teeth of the wheel and threads of the worms become worn so as to cause lost motion, or what is termed in toothed gearing "backlash." We loosen one of the set-screws and set up the worm by slightly turning or moving it toward the opposite worm until there is no lost motion between the teeth of wheel and the worms. The set-screw may then be tightened, and the machine will run smoothly. It will be seen that the adjustment may be made by setting up either or both of the worms, if it is desirable to do so; and to prevent slipping, the shaft B may be provided with screw-threads and "jam-nuts" to follow behind each of the worms *c* and *d*. The hub of pulley C and the collar X are kept closely in contact with the bearings *a a* to prevent end motion of the shaft B.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

The tapering worms *c* and *d*, made separate and attached to the same driving-shaft, and provided with suitable means of adjustment, in combination with the worm-gear A, substantially as shown, and for the purpose herein described.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

SAMUEL OVERTON.  
EDWARD WELLS.

Witnesses:

ISAAC J. FRANKLIN,  
MATHEW MURPHY.