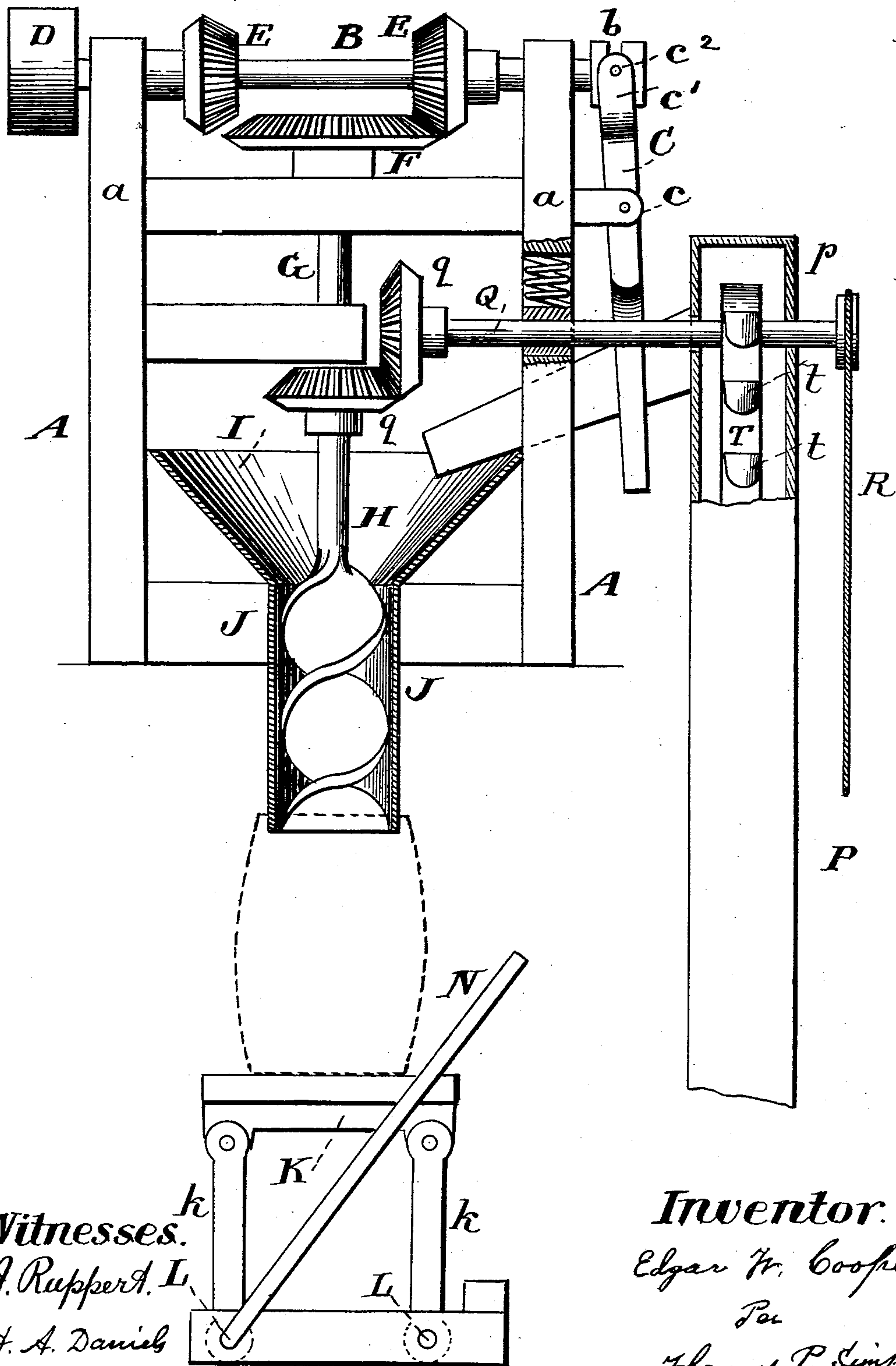


(No Model.)

E. W. COOPER.
SALT PACKER.

No. 563,260.

Patented July 7, 1896.



Witnesses.
A. Ruppert A. L.
H. A. Daniels

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Per
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UNITED STATES PATENT OFFICE.

EDGAR W. COOPER, OF EASTLAKE, MICHIGAN.

SALT-PACKER.

SPECIFICATION forming part of Letters Patent No. 563,260, dated July 7, 1896.

Application filed June 27, 1895. Serial No. 554,202. (No model.)

To all whom it may concern:

Be it known that I, EDGAR W. COOPER, a citizen of the United States, residing at Eastlake, in the county of Manistee and State of Michigan, have invented certain new and useful Improvements in Salt-Packers; and I do 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, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms a part of this specification.

The special object of the invention is to pack salt in barrels; but it may be employed to pack in a cylindrical vessel a great variety of different articles.

The drawing is an elevation adapted to show the relative position of all the parts of my salt-packer.

In the drawing, A represents a frame, in the upper end of which is journaled a shaft B, which is slid longitudinally in its bearings by a lever C. This lever is fulcrumed at *c* and has prongs *c'* with inside studs *c²* to engage the fixed and grooved collar *b* on one end of shaft B, while the other end carries a drive-pulley D.

Between the posts *a a* and on the shaft B are made fast two oppositely-placed bevel-pinions E E, either one of which may be made to engage the horizontal bevel-wheel F by operating the lever C. The wheel F is fast on top of the vertical shaft G and rotates the packer H, which has a concave spiral shank through which the salt passes into the barrel.

I is the hopper arranged at the upper end of the cylinder J, whose lower end enters the upper end of the barrel.

After the barrel becomes filled with loose salt, the rotating packer begins to pack it and continues to do so until no more can be pressed into it.

K is a platform having the legs *k* pivoted thereto, the said legs being fast at the lower end to two parallel shafts L, journaled in a frame. One of these shafts L is provided with a handle-arm N, so that after the barrel is secured on the platform the latter may be raised to bring the upper end of the barrel around the lower end of the cylinder.

The packer H is constructed with a spiral incline on the bottom.

P is an endless conveyer to carry the salt up and pour it into the hopper. At the upper end of the conveyer-box *p* is arranged a cross-shaft Q, which is revolved by a bevel-gear *q q* from the shaft, while the shaft itself is arranged in a bearing, so that it may be moved up or down by a rope R in the hands of some one on the ground. By this means the wheels *q q* may be thrown in or out of gear. The sprocket-wheel on shaft Q is connected by a chain with a sprocket-wheel on a shaft at the lower end of the conveyer-box, while the endless conveyer T has buckets *t* at suitable distances apart.

I am aware that there is no novelty in a rotary spiral packer with hopper and cylinder, or in the particular mechanism for reversing the packer-shaft, or in an elevator to discharge the salt into the hopper; but I am not aware that any one has ever extended the spiral of packer up into the hopper and made it reversible, so as to feed or stop the feed by turning in opposite directions. By reversing the spiral conveyer and packer when the barrel is full the salt which is in the grooves of the spiral is carried back to the hopper, where it remains until the direction of the motion of the spiral is again changed. If this were not done, but the spiral simply stopped, the salt in the grooves of the spiral would be carried out by gravity, scattered about, and wasted. This is the practical advantage of my salt-packer and my improvement in the state of the art. Hence

What I claim as new, and desire to protect by Letters Patent, is—

A salt-packer having the spiral flange of packer extended up into the hopper, adapted to turn in a surrounding cylinder, and provided with means to turn it in opposite directions; whereby the spiral may feed the salt from hopper when turning in one direction, while it stops the feed when turned in an opposite direction, as set forth.

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

EDGAR W. COOPER.

Witnesses:

HENRY CORBY,
H. H. PRESTON.