

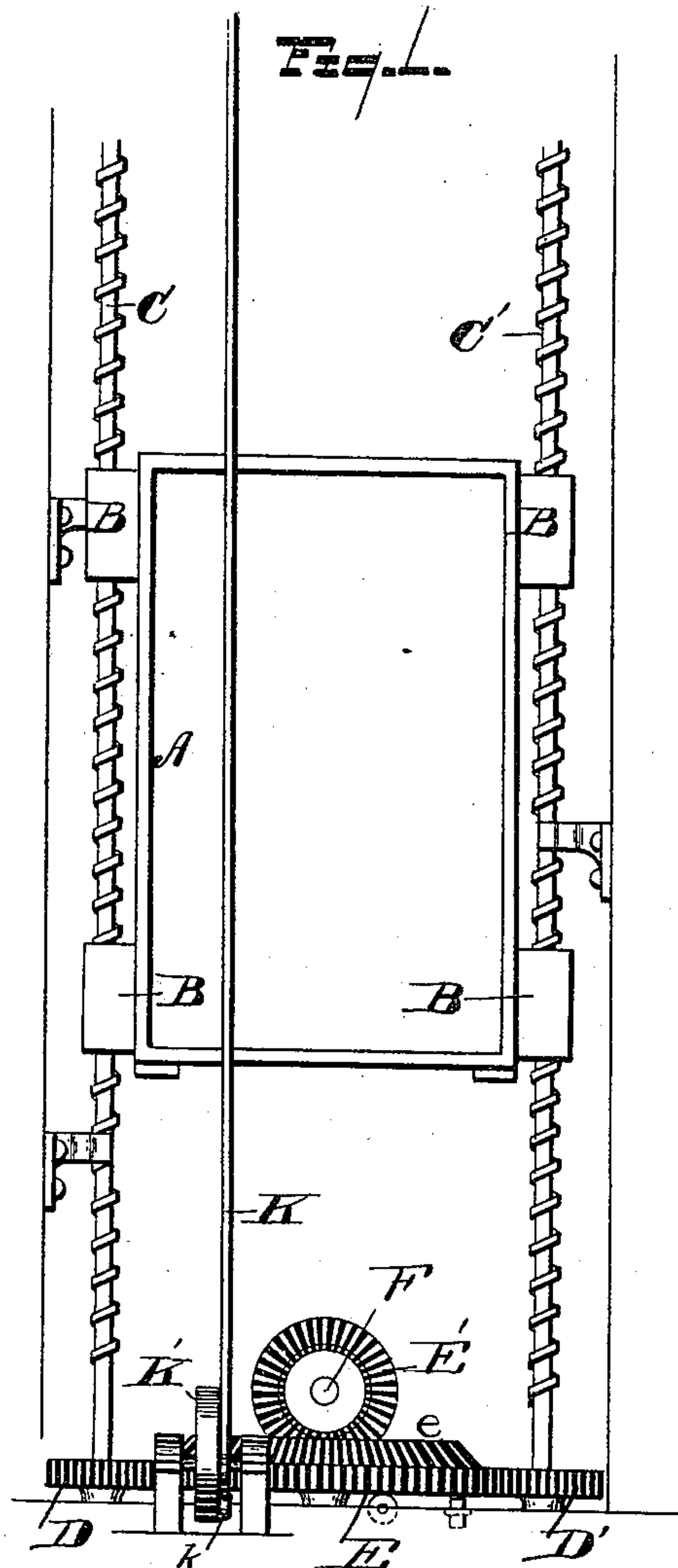
(No Model.)

2 Sheets—Sheet 1.

E. T. YOUNG.
REVERSING MECHANISM FOR ELEVATORS.

No. 428,196.

Patented May 20, 1890.



WITNESSES

Samuel E. Thomas -
L. A. Doeltz

INVENTOR

Edward T. Young
By Wells W. Leggett & Co
Attorneys.

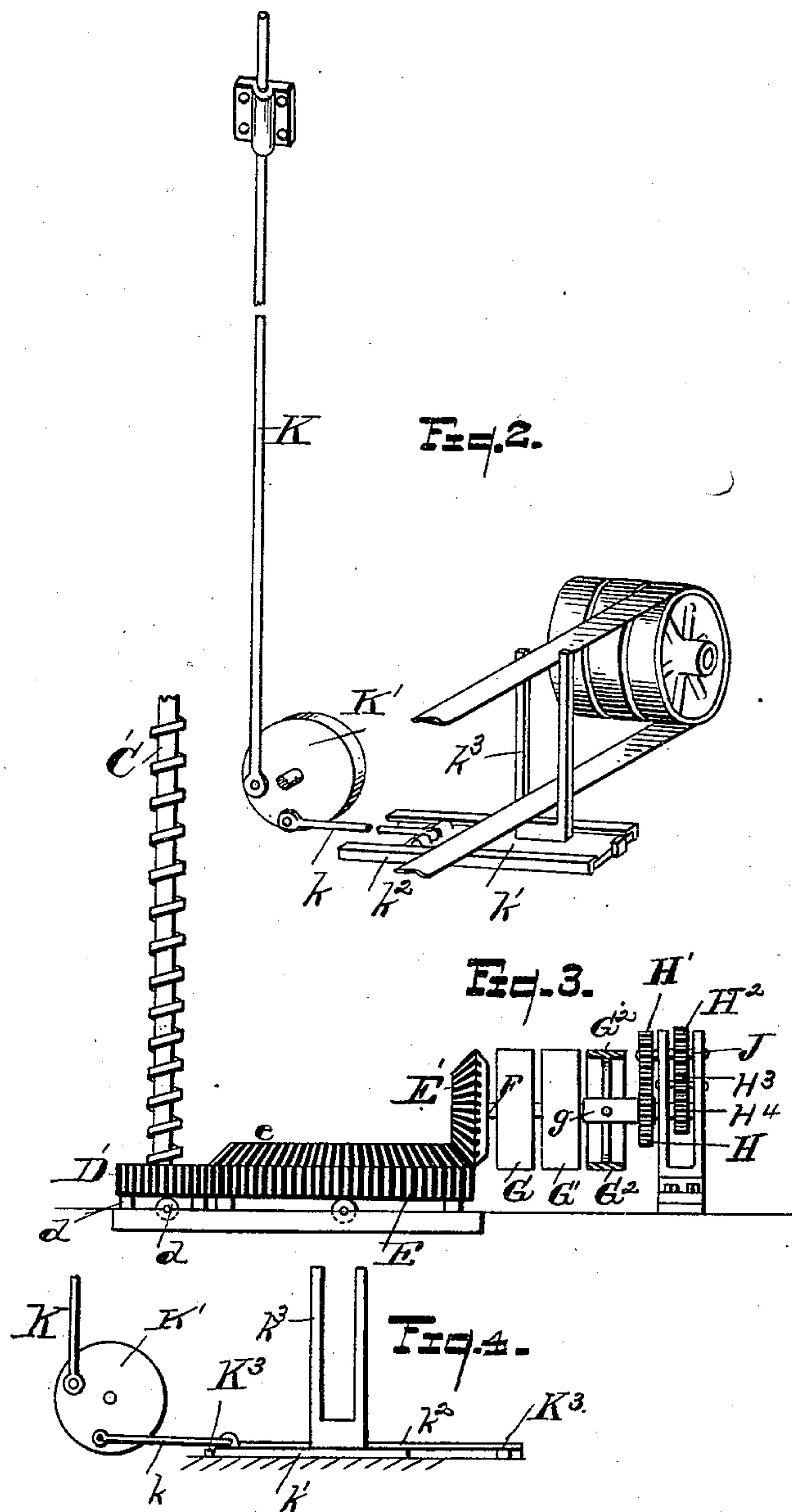
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UNITED STATES PATENT OFFICE.

EDWARD T. YOUNG, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO
WILLIAM SCOTT, OF SAME PLACE.

REVERSING MECHANISM FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 428,196, dated May 20, 1890.

Application filed January 14, 1889. Serial No. 296,317. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. YOUNG, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Reversing Mechanism for Elevators; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a reversing mechanism for elevators; and it consists in the construction and combination of devices hereinafter described and claimed.

In the drawings, Figure 1 is a side view of the elevator-shafts with the car thereon and the operating-connections. Fig. 2 is a perspective view of the belt-shifting device. Fig. 3 shows the driving-gearing for revolving the shafts and the reversing mechanism. Fig. 4 is a side elevation of the belt-shifting device.

In the above drawings, A represents the car of the elevator.

B are what may be termed "sleeves," attached to the sides of the car—two at the top and two at the bottom. On the inner surfaces of these sleeves are journaled small wheels or rollers.

C C' are two vertical shafts, between which the car A is adapted to travel. These shafts are provided with spiral tracks, and the sleeves B embracing the shafts the wheels or rollers will rest on said track, and thus the sleeves will support the car.

D D' are gears rigidly engaged to the base of the shafts and adapted to revolve horizontally, being supported by the rollers *d*. Meshing with these gears D D' is the horizontal gear E. This gear has on its upper surface the beveled pinion *e*, which meshes with the pinion E', the latter being keyed to the shaft F.

G is a belt-pulley rigidly keyed to the shaft F. G' is a loose pulley on said shaft, and G² is another loose pulley on the said shaft. The hub *g* of the pulley G² is provided with

gear H, which meshes with the pinion H'. This pinion H' is keyed to the shaft J, as is also the pinion H². Meshing with the latter is the pinion H³, and with this latter pinion meshes the gear H⁴. This gear H⁴ is keyed to the shaft F.

The operation will now be understood. The pulley G is revolved by belting. This will revolve the shaft F, and this shaft being geared to the vertical shaft C C' the latter will be revolved, and thus carry the car upward. By shifting the belt to the loose pulley G' the car will remain stationary, and by shifting the belt to the pulley G² the shafts will be revolved in the opposite direction and the car lowered.

Fig. 2 represents the belt-shifting device. This is accomplished by extending the rod *k* from the base of the elevator-way up through the car to the top of the way. The lower end of the rod is attached to the bell-crank K', and the rod *k* is also attached thereto. The other end of the rod *k* is attached to the sliding piece *k'*, which works in the guides *k*². Mounted vertically on the piece *k'* are the arms *k*³. These arms are adapted to extend up and embrace the belt.

The operation of the belt-shifting device is obvious. By raising the rod *k* the belt is shifted to the pulley G. By pushing the rod down the belt is shifted to the pulley G².

K³ are stops adapted to limit the play of the piece *k'*.

What I claim is—

A reversing mechanism for elevators, consisting of the gears D D', wheels rigidly attached to the base of the shafts, gear-wheels E E', meshing therewith and adapted to actuate the same, and the pulleys G G² and gearing H H' H² H³ H⁴, all adapted and arranged to rotate the wheel E in different directions at will without reversing the engine, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

EDWARD T. YOUNG.

Witnesses:

W. H. CHAMBERLIN,
L. A. DOELTZ.