

(No Model.)

F. M. CLARK & F. R. LOW.

CONTROL GEAR FOR ELEVATORS.

No. 344,942.

Patented July 6, 1886.

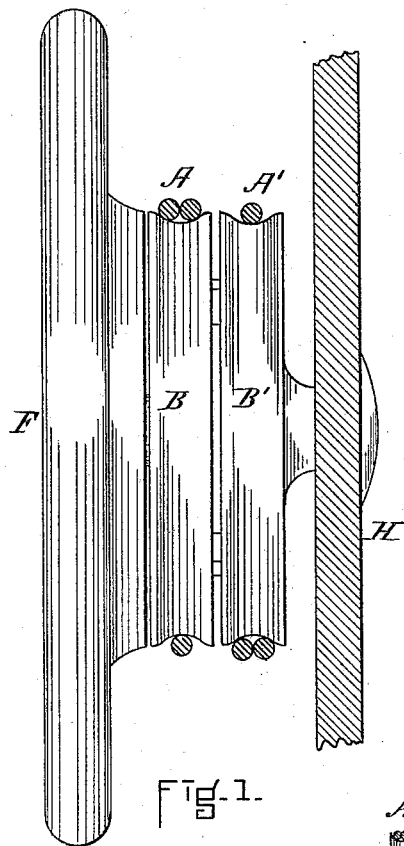


Fig. 1.

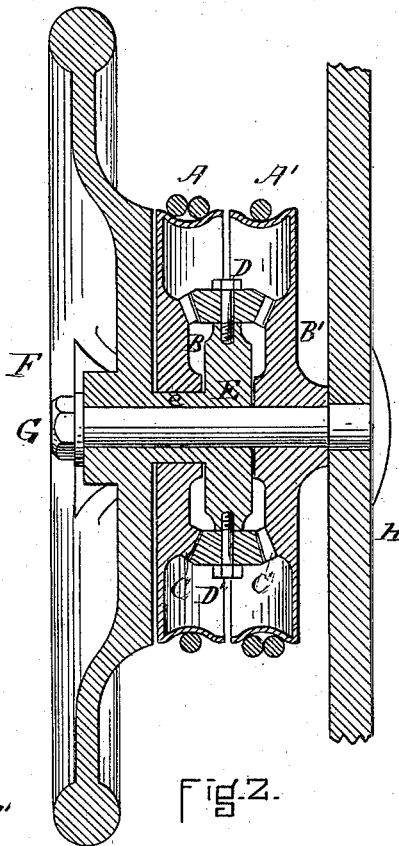


Fig. 2.

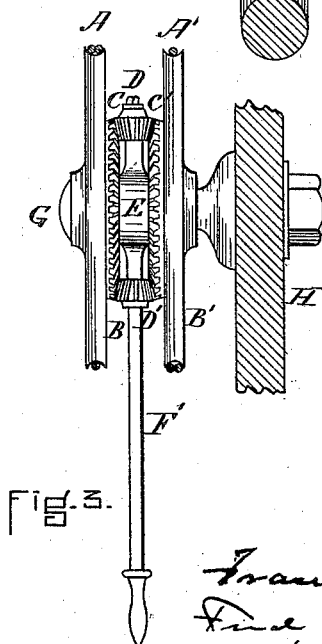


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

FRANK M. CLARK, OF TILTON, NEW HAMPSHIRE, AND FREDERIC R. LOW,
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CONTROL-GEAR FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 344,942, dated July 6, 1886.

Application filed March 6, 1886. Serial No. 194,497. (No model.)

To all whom it may concern:

Be it known that we, FRANK M. CLARK, of Tilton, New Hampshire, and FREDERIC R. Low, of Chelsea, Massachusetts, have invented
5 a Control-Gear for Elevators, of which the following is a specification.

The control-gear for elevators consists, usually, of a rope passing through the car, and which is grasped as the car moves over it by
10 the hand of the operator, or of a hand-wheel around the drum of which the control-rope passes, and which of course revolves as the car moves. In either case the operator grasps an object when his car is in motion which has
15 a differential motion from that of the car, which is inconvenient.

The present invention is designed to furnish the operator with a handle or wheel which will shift the control-rope, and yet shall have
20 stationary relations with the car, except when manipulated by the operator. This is done by a combination of a pair of oppositely-revolving control-rope drums on the same shaft with an intermediate epicyclic gearing controlled by a handle, as will be understood by
25 the following description and accompanying drawings, in which—

Figure 1 is a plan of the apparatus rigged with a hand-wheel or capstan, and Fig. 2 is a
30 horizontal section of the same apparatus, and Fig. 3 is a section of a like apparatus with a lever-handle instead of a capstan-handle.

A A' represent the control-rope, which is wrapped once round each of the two drums
35 B B', and passes over the usual upper and lower pulley of the reversing-gear. On the opposite interior faces of these drums B B' are beveled cog-gears C C', which mesh into beveled pinions D D' on opposite ends of an arm,
40 E. This arm E and the two drums B B' are mounted on the same axis, G, and according as

the arm E is to be adjusted by the capstan F or other centralized handle, or by the lever F', or other circumferential handle, the connection with the handle will be by a sleeve, e, at
45 the center, as in Fig. 2, or at the end of the arm E, as in Fig. 3.

This apparatus is to be fastened to the side or frame of the car and move with it, and of course may be arranged so that the gearing
50 and ropes are outside of the car, and only the handle inside. When the car is in motion, the drums B B' will be revolved in opposite directions by the ropes A A', and the pinions D D' will revolve freely on their arbors, and
55 the handle F or F' will have no motion relative to the car. If it be desired to stop or reverse the motion, a movement of the handle F or F' in a proper direction will do it, because such a movement will check the revolution of one of the drums B or B' and accelerate
60 the revolution of the other.

We wish it understood that in lieu of the gears C C' and D D'—that is, gearing having
65 cogs or teeth—friction-gearing of the same shape may be employed, the only difference being that in lieu of toothed surfaces there would be the ordinary smooth surfaces of friction-gearing. This possesses some advantages over the gear with teeth, in that it is
70 noiseless.

We claim—

The combination of the control-rope A A' of an elevator with two drums, B B', and with
75 an actuating-handle within the car by epicyclic gearing in fixed relation with such handle, substantially as described.

FRANK M. CLARK.
FRED. R. LOW.

Witnesses:

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FRED. B. DOLAN.