S. NASH.

Elevators for Passengers and Freight.

No. 141,513. Patented August 5, 1873.

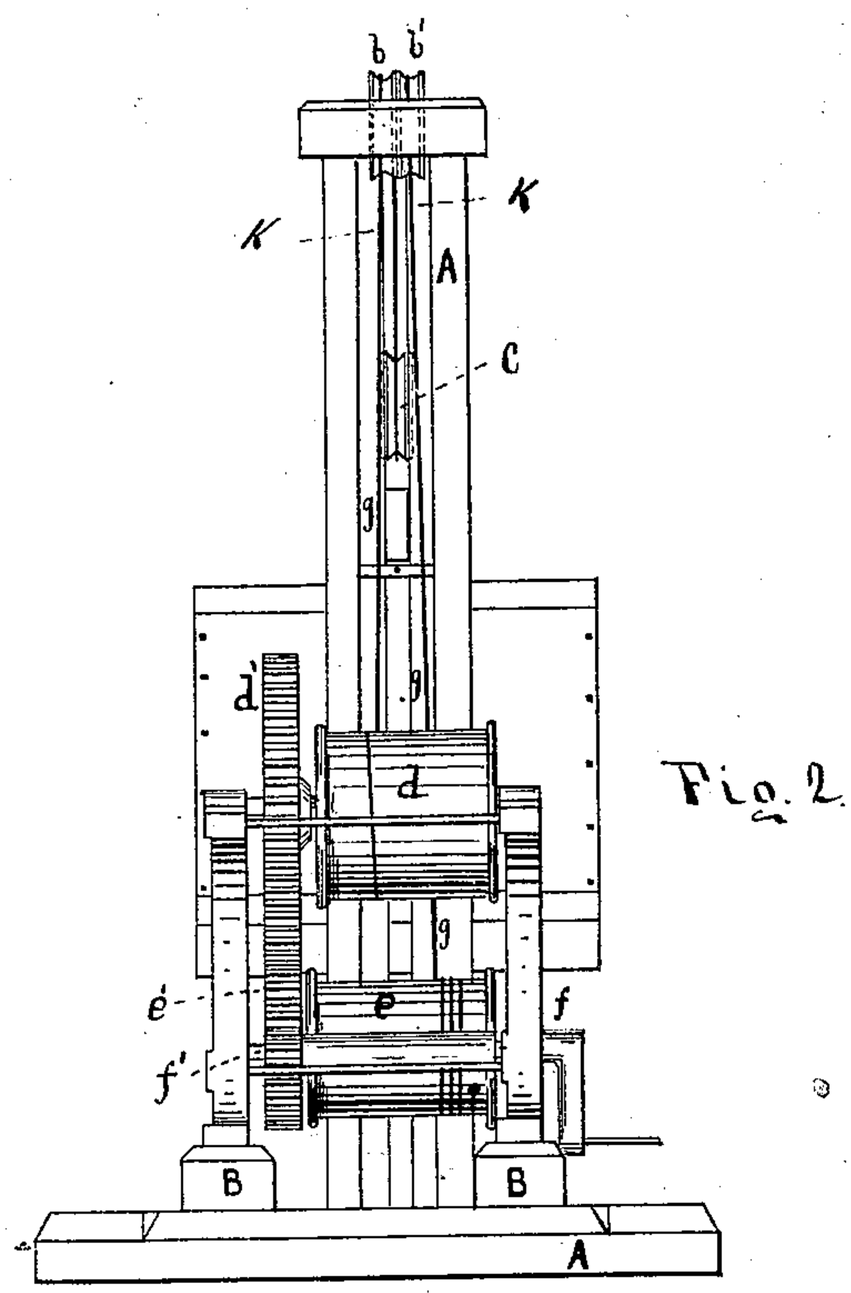

Fig. 2.

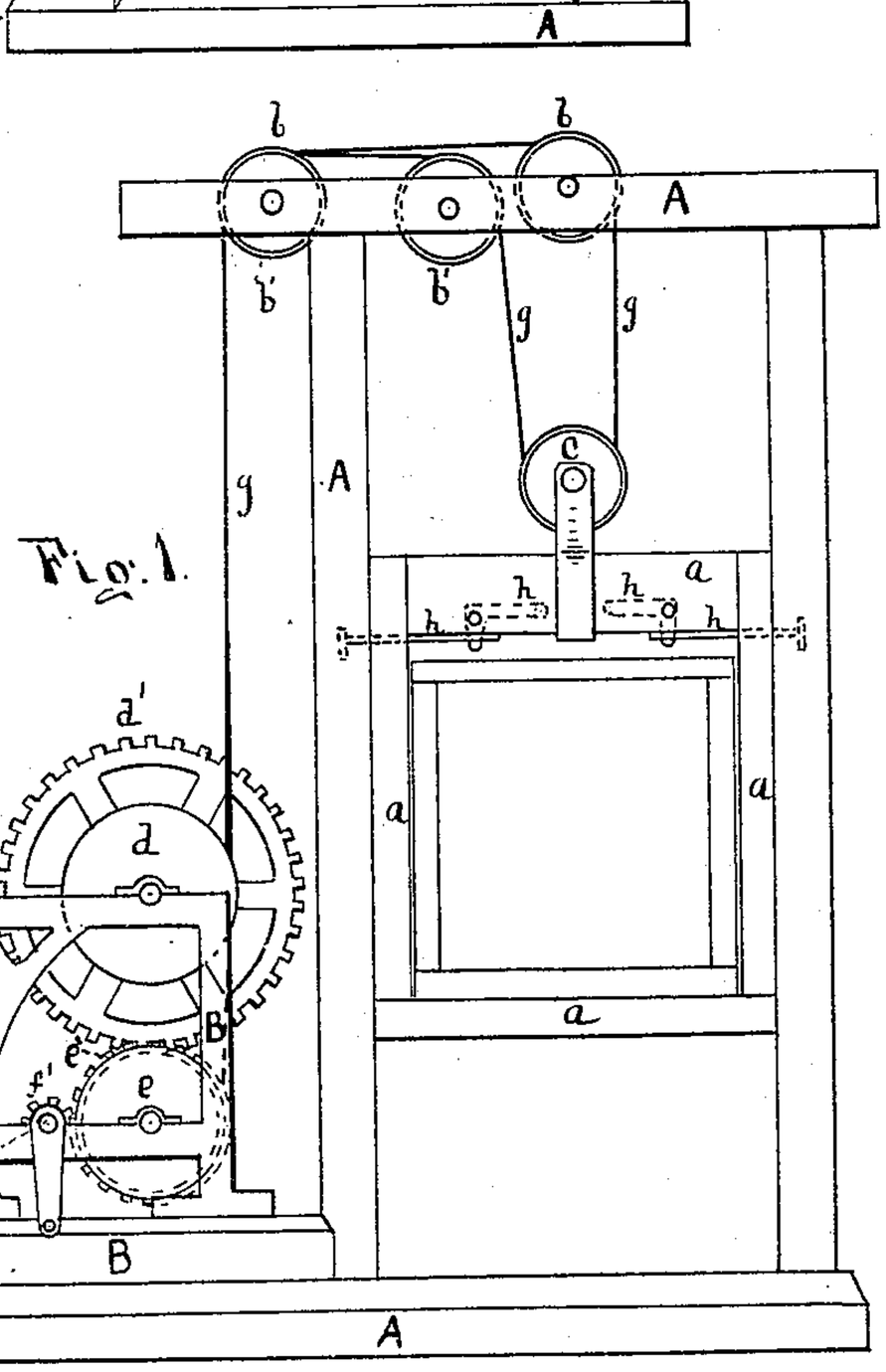

Fig. 1.

WITNESSES

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IMPROVEMENT IN ELEVATORS FOR PASSENGERS AND FREIGHT.

Specification forming part of Letters Patent No. **141,513**, dated August 5, 1873; application filed May 29, 1873.

To all whom it may concern:

Be it known that I, SAMUEL NASH, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented Improvements in Elevators for Passengers and Freight, of which the following is a specification:

The invention relates to elevators for carrying passengers and freight or raising weights upon platforms, &c. It consists of a stationary frame having four upright posts, two standing at each end of the platform and nearly touching each other, and having their upper ends fastened and held by a cap-piece, one end of which extends beyond the frames. The platform and movable frame connected therewith are raised and lowered by means of pulleys, one being attached to the center of the upper brace of the movable frame, raising the platform, and four other pulleys in the cap of the stationary frame, over which pulleys passes a cord or rope, the ends of which are attached to drums placed horizontally one above the other, said drums being outside of the said stationary frame. These drums are provided with gears or wheels having gearing meshing into each other, and are propelled by a horizontal shaft having gearing. Said drums and gear-wheels attached are so proportioned to each other that when the propelling-shaft is moved the drums at the same time let off and take up the cord or rope, so that when the platform is raised or lowered it will become stationary whenever the power ceases to act, and the platform cannot be raised or lowered unless by propelling the shaft.

The object of the invention is so to construct an elevator that by the use of drums and gear-wheels, as before mentioned, the let off and take up will be equal, and the platform, rising or lowering, will become stationary, at will, at any point when the power ceases to act; the platform also, moving between the posts of the stationary frame, cannot get out of place.

Figure 1 is an elevation of the invention. Fig. 2 is a vertical section of the same.

The letter A represents the stationary frame; B, a stationary frame, holding and keeping in place the shaft, drums, gearing, &c.; *a a*, &c., the platform and frame connected therewith; *b b*, *b′ b′*, and *c*, the pulleys; *d*, the upper drum; and *d′*, its gear-wheel; *e*, the lower drum, and *e′* its gear-wheel; *f*, the driving-shaft, and *f′* its gear; *g*, the cord or rope for pulleys; *h h*, &c., levers; *k k*, grooves. The stationary frame A is composed of wood or any suitable material. The two posts, nearly contiguous, on either side, (see Fig. 2,) are grooved on the outer side. The ends of the cross-piece of the frame *a a*, &c., pass between the said contiguous posts; also, guides are attached to the platform running between the said contiguous posts, to steady the same. It will be observed also that I have placed levers *h h*, &c., upon the under side of the upper brace, the ends of which, having cross-pieces, run in the said grooves. The object of this is to attach cords or ropes to said arms, said ropes, &c., not being shown in the drawing, so that in case the rope raising the platform should break the platform would not fall. The stationary frame B (see Fig. 1) is outside of the frame A. The drums *d* and *e* are placed one above the other. They may be of the same size, in which case the gear-wheels *d′* and *e′* must be proportioned so that the let off and take up will be equal, in which case the platform will move slowly but with great power.

In applying power to the shaft *f* it will be observed that the pulleys *b b* move in one direction, and the pulleys *b′ b′* move in the opposite direction, and, in fact, balance each other, and this is the reason why the platform may be made stationary at will, when the power applied at the shaft *f* ceases and no weight on the platform would cause it to move.

The frame B may be made of any suitable material. Its construction is clearly seen in Fig. 1.

This construction of an elevator is simple. The same principle or relation of drums, gear-wheels, &c., may be applied, however the stationary frame A is constructed, in raising heavy bodies.

I claim as my invention and desire to secure by Letters Patent—

1. The drums *d* and *e* provided with gear-

wheels d' and e', and the shaft f having gear f', as arranged and combined with the cord g, the pulleys b b, b' b', and c, substantially as shown and described.

2. The frame A provided with the pulleys b b b' b', and the movable frame a a, &c., having a pulley, c, in combination with the frame B, provided with drums d and e having gear-wheels d' and e', and the shaft f with its gear f', and the cord g, the whole being arranged, combined, and constructed substantially as herein shown and described.

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Witnesses:

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