G. R. Clarke,

Elevator.

No. 78,646. Patented June 9, 1868.

Fig: 3.

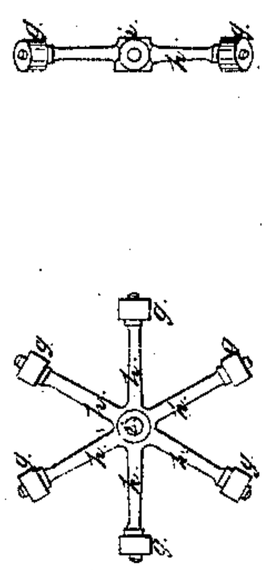


Fig: 4.

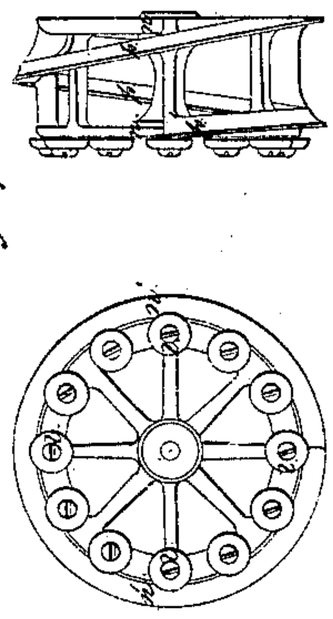


Fig: 5.

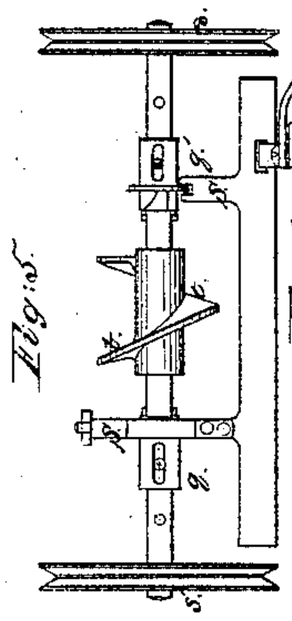


Fig: 6.

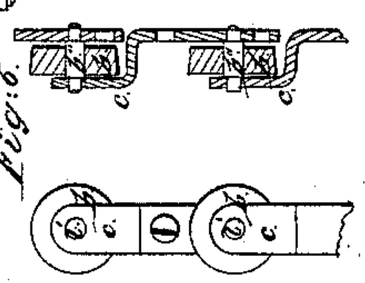


Fig: K.

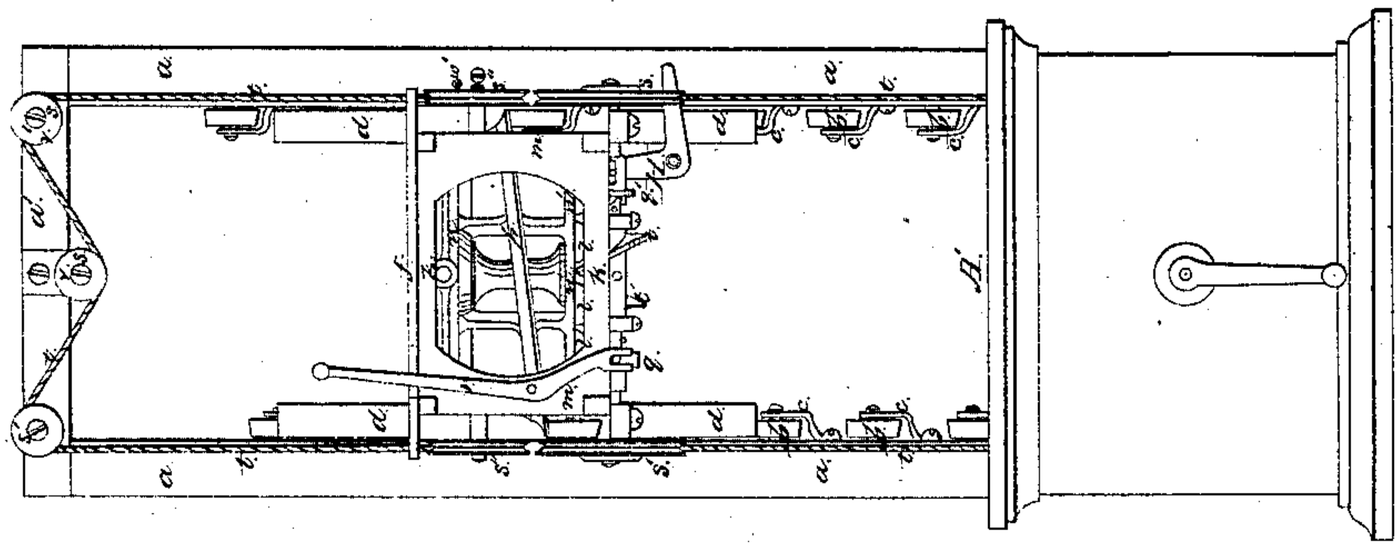
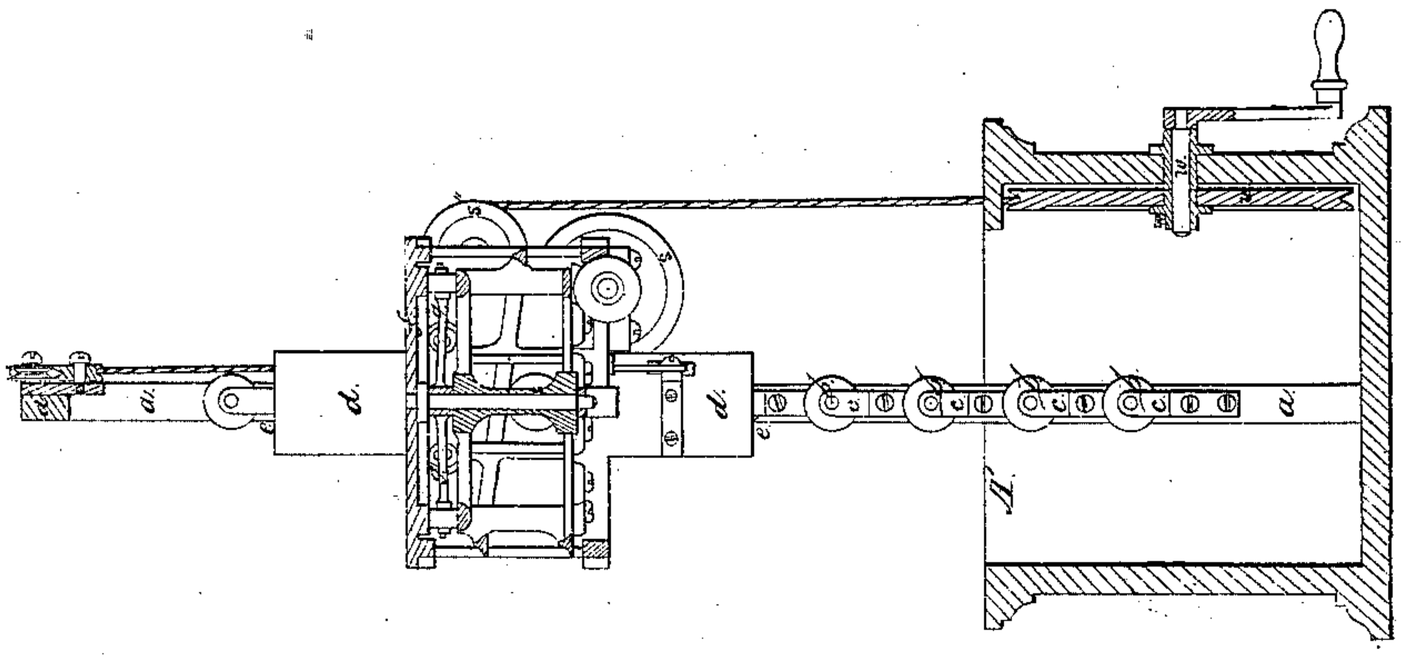


Fig: 1.



Witnesses;
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United States Patent Office.

GEORGE R. CLARKE, OF NEW YORK, N. Y.

Letters Patent No. 78,646, *dated June* 9, 1868.

IMPROVEMENT IN ELEVATORS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE R. CLARKE, of New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Elevators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a vertical section.

Figure 2 is a side elevation.

Figure 3 is a plan of the anti-friction rollers.

Figure 4 is a plan and side view of the revolving table.

Figure 5 is a view of the cam and pulleys.

Figure 6 is a view of the anti-friction rollers, as supported by the segmental brackets *c*.

The nature of my invention consists in affixing over an ordinary hatchway a guide-frame, consisting of two parallel standards, connected by an upright beam, by means of which, when the same is taken in connection with a series of anti-friction rollers, having independent segmental bearings, which are flush with the face of the frame, the table is elevated.

My invention also consists in applying under the platform or table a revolving-table wheel, provided with anti-friction rollers above and below, the lower ones meshing and gearing with a screw-thread lever, whose operations are controlled by an operating-lever and clutch, the entire power being transmitted by means of a crank-shaft, wheel, and endless belt.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

A′ is an ordinary hatchway. *f* is a table, by means of which goods and other articles are raised or elevated. From this ordinary hatchway there rise two upright beams, *a a*, which are connected by a beam, *a′*. On the sides of these standards *a a* are affixed a series of parallel segmental metallic brackets or supports *c*. These brackets are constructed with an angular elbow-bearing or metallic brace.

In the upper end of these bearings are suitable openings, *b′*, corresponding with openings in the uprights *a a*, through which pass bearing-pins *b″*, whereby the anti-friction rollers *b* are retained in position, and upon which they revolve.

Under this platform *f* there is a series of anti-friction rollers, *g*, which are connected by rods to the upper portion of the main shaft *i* of the revolving table, or centre screw-thread wheel *p*. On the under surface of the wheel *p* there is arranged a series of anti-friction wheels, *l*, so adjusted that they will work in or mesh with the threads of the screw-arm *t′*.

v, *v′*, and *v″* are three anti-friction rollers, placed on the connecting-bar of the uprights, and over which passes the endless belt *t*. This endless belt *t* passes over the pulleys *s* and *s′* and the play-pulleys *s″*, and passes down and under the main driving-wheel *u*, power being communicated to the same by means of the crank-shaft *u′*.

In the rear of the screw-thread arm *t′* there is a guide-bar, R. To this guide-bar R are attached two crank-arms, S S, which gear with two clutches, *q* and *q′*, the whole being controlled by the lever *r*, and the whole mechanism being thrown in or out of gear, and the motion reversed, by means of this main lever *r*.

The operation is as follows:

Power is applied to the crank-shaft *u′* and the driving-pulley *u*, from which a belt passes upward, over and around the play-pulley *s″*, and under and around the driving-pulley *s*, communicating motion thereto in a certain direction; thence upward, and over the anti-friction pulleys *v*, *v′*, and *v″*; thence down, under, and around the driving-pulley *s′*, communicating motion in a contrary direction to the pulley *s*; thence over and around the play-pulley *s″*, down to the main driving-wheel, from whence it started.

By moving the lever *r* to the right, the screw-thread arm *t′* clutches with the pulley *s*, and, its threads coming in contact with the series of anti-friction rollers *l*, the platform is raised.

By moving the lever r to the left, the screw-thread arm t' clutches with the pulley s', and the platform is lowered.

By keeping the lever in the centre, the screw-thread arm t' clutches with neither pulley, and the platform remains stationary.

When the platform reaches its highest elevation, the stop-lever H comes in contact with the stop-pin w', when the action of the entire mechanism is checked and thrown out of gear, by means of the clutches q and q', and also, when it reaches its lowest point of descent, the same operation is performed.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent of the United States, is—

1. The combination and arrangement of the hollow and revolving table and worm parallel guides, rollers, and their supporting-brackets, when the whole is operated by means of pulleys and endless belt, substantially as described.

2. The endless belt t, when the same is used in combination with the table or platform p, anti-friction rollers b b, and screw-thread arm t', when the whole is so constructed as to operate substantially as described, and for the purpose specified.

3. The combination of the lever r, the guide-bar R, and the clutches q and q', the stop-lever H, and the stop-pin w', when the same are used and operated in the manner substantially as described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

GEO. R. CLARKE.

Witnesses:

JOHN D. BLOOR,

EDWIN JAMES.