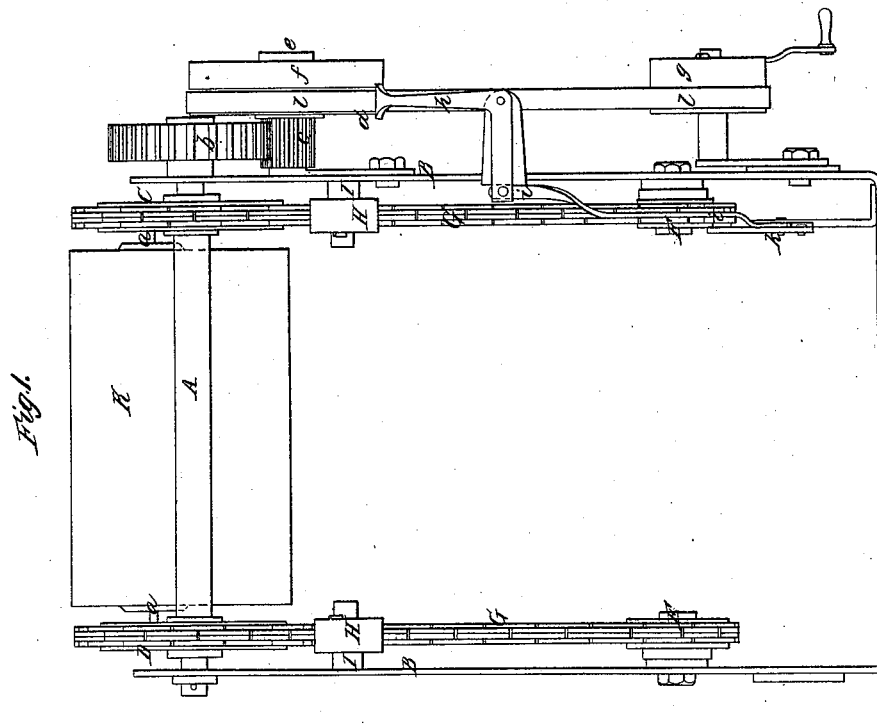
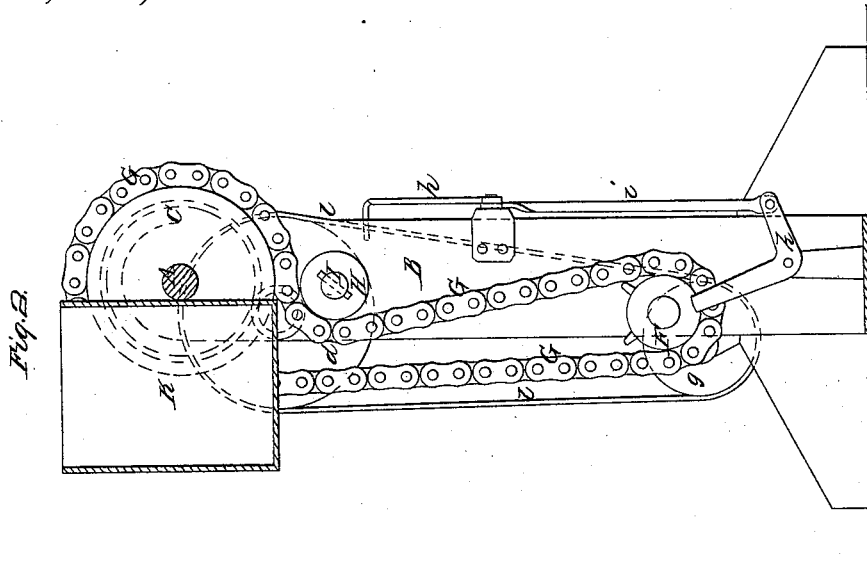


W. Sawyer,
Elevator,

No 50,778,

Patented Oct. 31, 1865.



Witnesses:
J. P. De fr.
C. A. Shackles

Inventor:
Wesley Sawyer
by his Attorney
R. H. Eddy

UNITED STATES PATENT OFFICE.

WESLEY SAWYER, OF LOWELL, ASSIGNOR TO HIMSELF AND FRANCIS A. SAWYER, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN ELEVATORS.

Specification forming part of Letters Patent No. 50,778, dated October 31, 1865.

To all whom it may concern:

Be it known that I, WESLEY SAWYER, of Lowell, in the county of Middlesex and State of Massachusetts, have invented an improved elevator for raising wool or other matter from a lower to a higher level; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a front elevation, and Fig. 2 a transverse and vertical section, of it.

The elevator is intended for use for raising wool or various others matters from one story of a building or factory to another story. It not only raises the material and dumps or discharges it, but arrests the discharging-bucket at or near its lowest position, in order that it may be supplied with some of the material, as occasion may require.

In the drawings, A is a horizontal shaft supported in the upper part of a stand or frame, B, and provided with two toothed wheels, C D, around which and two other smaller toothed wheels, E F, placed near the lower part of the frame and supported on stationary journals, two endless chains, G G, are arranged in manner as represented. Each of the chains passes about the circumference of one of two guide-rollers, H H, arranged immediately underneath the wheels C D, and supported on stationary journals I I, projecting from the frame.

Between the endless chains there is an open pendulous vessel or bucket, K, from whose opposite ends arms or journals *a a* project and enter two opposite links of the two chains, such journals being so applied to the links as to be capable of freely turning therein.

On one end of the shaft A a gear, *b*, is fixed, the said gear being made to engage with a pinion, *c*, attached to the side of a pulley, *d*, which is sustained by a journal, *e*, projecting from the frame B. Another pulley, *f*, is so applied to the said journal as to be capable of being freely revolved thereon. In other words, it is what is usually termed a "loose pulley." An endless belt, *l*, works around the fast pulley *d*, and a driving-drum, *g*, arranged at the lower part of the frame and provided with a crank or other suitable means of putting it in revolution.

A furcated bent lever or shipper, *h*, is applied to the belt and arranged therewith in

manner as shown in Figs. 1 and 2. The lesser or lower arm of such lever is connected with a tripping-lever, *k*, by a rod, *i*, which is jointed to both levers. The lever *k* is so arranged that during the movement of the bucket, while such bucket is at or near its lowest position, the upper arm of the lever should be in the path of movement of one of the journals of the bucket, in order that the lever may be moved on its fulcrum in a manner to so operate the shipper *h* as to force the belt *l* off the fast pulley *d* and on the loose pulley *f*, which having taken place, the chains will cease to revolve the bucket, which will remain stationary until the shipper is again moved in manner to cause the belt to run on the fast pulley.

During the ascent of the bucket and its passage by and between the upper toothed wheels it will be carried against the shaft A and be overturned, so as to dump or discharge its contents. In consequence of the arrangement of the guide-rollers H H of the chains relatively to the upper toothed wheels, the bucket, after having discharged its load, will again tip against the shaft A and gradually be brought into a vertical position.

I do not claim an elevator composed of one or more endless chains and one or more buckets applied thereto, as I am aware that such has long been known and used for raising water, fluids, or materials from one place to another.

What I claim in the improved elevator hereinafore explained is—

1. The combination and arrangement of the belt-shifting mechanism—viz., the two levers *h k* and their connecting-rod *i*—with the bucket K, its elevating-chains G G, their toothed wheels C D E F, and gears *b c*, driving-belt *l*, and pulley *g*, and fast and loose pulleys *d f*, the whole being to operate substantially as specified.

2. The combination and arrangement of the guide-rollers H H with the bucket K, its elevating-chains G G, and their operative toothed wheels C D E F, and shaft A, the whole being substantially as explained.

WESLEY SAWYER.

Witnesses:

E. W. COVERLY,
HENRY SAWYER.