

## Elevators.

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Inventor;  
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# UNITED STATES PATENT OFFICE.

JOHN A. HOLZWARTH, OF FORT WAYNE, INDIANA.

## IMPROVEMENT IN ELEVATORS.

Specification forming part of Letters Patent No. 154,549, dated September 1, 1874; application filed May 20, 1874.

*To all whom it may concern:*

Be it known that I, JOHN A. HOLZWARTH, of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Elevators; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in the construction and arrangement of an elevator for stacking hay, straw, and grain in the straw, and for elevating the same into barns, &c., as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a perspective view of my elevator. Fig. 2 is a longitudinal section of a part of the elevator-apron, and Fig. 3 is a front view of the same.

A represents the bed-frame of my machine, supported upon four wheels, B B, to form a truck, so that the elevator can easily be moved from place to place. On each side of the frame A, near one end, is an upright post or standard, C, suitably braced, and in boxes upon these posts a shaft, *a*, has its bearings. Near each end of this shaft are secured two disks, *b d*, of unequal diameter, the two smaller disks, *d d*, being connected by slats *e e*, the whole forming a reel, E', over which the elevator-apron is passed. One end of the shaft *a* is provided with a crank, D, for operating the reel. The elevator-apron is composed of two belts, *f f*, connected, by means of slats *h h*, at suitable intervals, which slats are provided with points or teeth *i i*, and the ends of each belt are fastened together by means of hooks *x x*.

The larger disks, *b b*, of the reel prevent

the belts from moving laterally on the reel, and keep them in proper place thereon.

The belts *f f* pass around a similar reel, marked E, the central shaft of which has its bearings in the upper ends of two arms, G G, and the lower ends of these arms are pivoted to the sides of the truck-frame A.

By these arms being pivoted as described, the upper end of the elevator may be adjusted at any desired height, and is supported by a brace, H, the upper end of which is forked, and pivoted to the upper ends of the arms G G.

The belts *f f* are shortened or lengthened, according to the inclination of the arms, by means of the hooks *x x*, there being, in a full-sized machine, eyes or loops at intervals near one end of each belt, for the hooks to be fastened in.

In place of the belts *f*, a canvas or other apron may be used in the same manner.

With this machine hay, straw, or grain may be stacked, with very little trouble, to any desired height, and may also be elevated to the barn.

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

1. The truck A B, provided with the posts C C, reel *a b d e*, and hinged arms G G, substantially as and for the purposes herein set forth.

2. The combination of the elevator-apron *f*, reels E' E, hinged or pivoted arms G G, and forked pivoted brace H, the whole arranged upon a truck, A B, substantially as and for the purposes herein set forth.

In witness that I claim the foregoing I have hereunto set my hand this 29th day of January, 1874.

JOHN ADAM HOLZWARTH.

In presence of—

E. P. MAYO,  
G. L. BITTINGS.