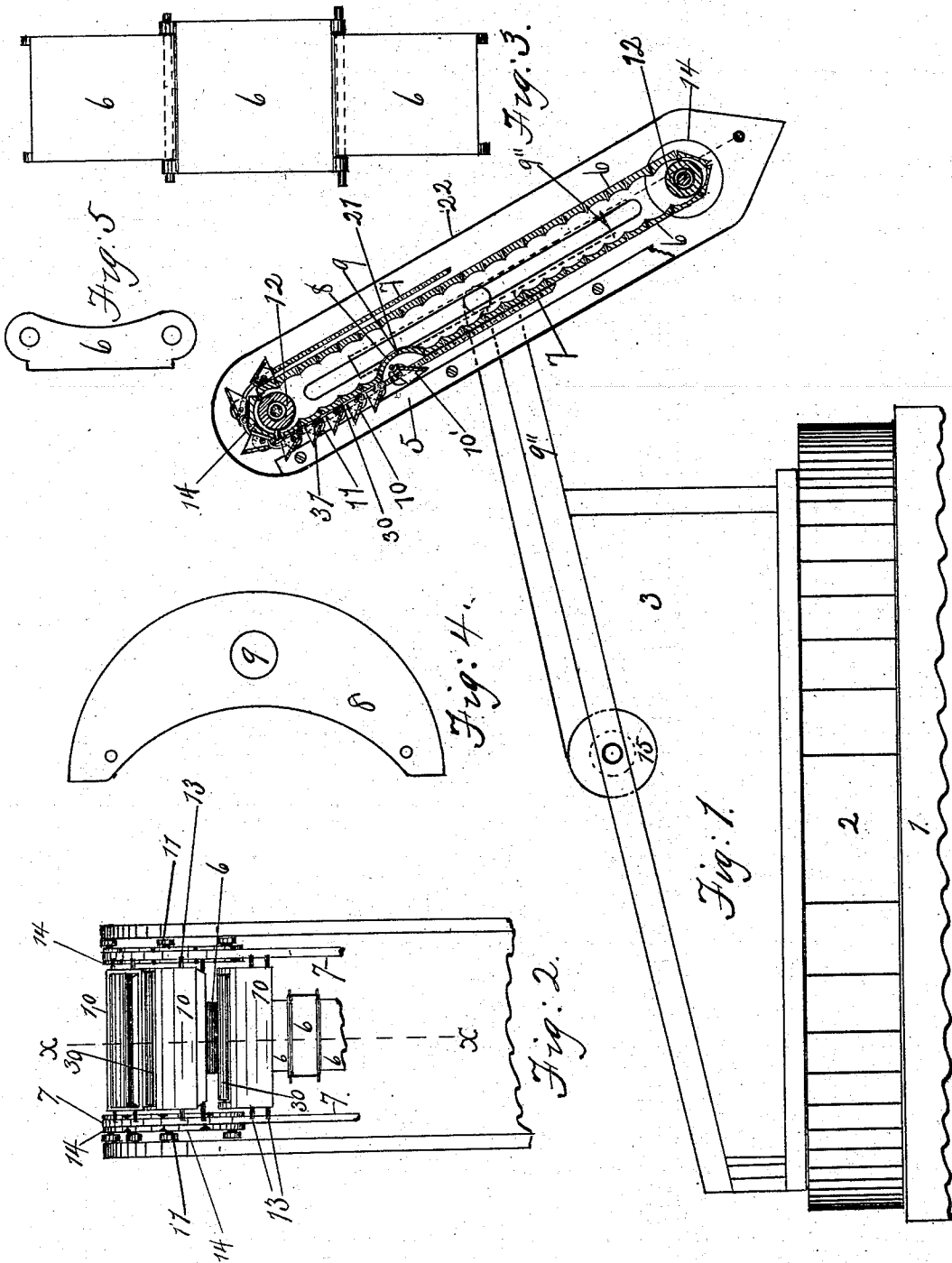


(No Model.)

W. F. AUSTIN.
ELEVATOR.

No. 503,781.

Patented Aug. 22, 1893.



Witnesses.
J. F. Harris.
A. M. Turner.

Inventor.
W. F. Austin
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UNITED STATES PATENT OFFICE.

WILLIAM F. AUSTIN, OF ALBANY, NEW YORK.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 503,781, dated August 22, 1893.

Application filed March 21, 1893. Serial No. 467,024. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. AUSTIN, a citizen of the United States, residing at Albany, Albany county, New York, have invented certain new and useful Improvements in Elevators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

The object of my invention is to provide an improved elevator for grain, coal, &c.

Figure 1 shows a side elevation of a revoluble turret and framework for supporting my elevator, the elevator being shown suspended from the end of the framework and a portion of its mechanism shown in vertical section taken on line X. X. of Fig. 2; Fig. 2 a front elevation of the upper end of my elevator; Fig. 3 a plan view of a portion of the guide way; Fig. 4 a side elevation of one of my segments used in connection with the guide way; Fig. 5 an edge view of one section of my guide way.

The numeral 1 shows a foundation, such as the deck of a boat or flat car, on which to place the portable elevator; 2, a revoluble turret by which the elevator may be swung in a circle the motive power being preferably a steam engine which will also operate the revoluble turret as well as the elevator.

3 shows the sustaining framework of the elevator, which may consist of any material and be in any form desired, said framework having an arm 9" and standard 9" at right angles thereto.

The elevator has a rising and falling motion like all elevators of its class as well as a backward and forward swinging motion. On the vertical portion of the framework 9" will be seen the end of a bolt 21. This bolt passes through the casing 22 and through opening 9 in segment 8, said segment 8 being shown in Figs. 1 and 4 in operative construction. By examining Fig. 1 it will be seen that segment 8 is a part and portion of the guide way 6 and said guide way has a continuous floor except at the point where segment 8 is seen, which segment forms a depression or trap hole in said floor, and segment 8 being made fast to

standard 9" and also to guideway 6, the guideway and the segment never change position however much the elevator as a whole may be raised or lowered, but of course, the bolt or pin 21 may be taken from its position as shown and set in other holes above or below the one it is shown in, which change of position of the bolt would change the location of segment 8, but, when once set at any desired point it will remain there notwithstanding the raising or lowering of the elevator as a whole. The reason why it remains stationary is that the guideway is flexible as shown in Fig. 3 and passes over loose pulleys 12 which do not revolve except by the lowering and raising of the elevator or moving the guideway 6, at which time they revolve and allow guideway 6 to give or render to the upward or downward motion of the elevator, while the guideway 6 does not alter its position with respect to framework 9" and does not change the position of segment 6 with respect thereto. On the same shaft preferably is the driving sprocket wheel 14 and over this sprocket wheel passes an eyebar chain 7 to which the buckets 10 are pivoted by pivot 31 and at the bottom of the buckets 10 will be seen an anti-friction roller 30, which roller rests against and rolls over the smooth floor of guideway 6 when the buckets are in motion. On the ends of pivots 31 is roller 11 which, as the filled buckets rise, rest against and rolls over the cleat 5 and prevents the eyebar chain 7 with its buckets 10 from sagging.

The operation is as follows: Power being applied to driving wheel 15 it is conveyed to the eyebar chain 7 causing the buckets 10 to move with it. As they turn over the lower sprocket wheel 14, they dip up the substance to be elevated precisely as other elevators of this class do. As the buckets ascend, the rollers 11 rest on cleat 5 and keep the chain 7 and buckets 10 from sagging. Each bucket in succession arrives in front of the segment 8 which presents a trap or opening in the floor of guideway 6 and finding no support at this point and the buckets being hung off the center by the pivot 31 the bucket automatically turns over and dumps its load, and as segment 8 may be placed or changed to any point along the line of lift, it is evident that the

dumping point may be altered to suit convenience. As the dumped bucket continues to rise, the roller 30 strikes against the upper end of the separated guide way 6, and this brings the bucket to its normal or filling position again. At 10' in Fig. 1 will be seen a bucket in the act of dumping its load. On the buckets will be seen offsets 13, which limit the tip of the bucket and also the backward throw of the same when it rights itself after leaving segment 8 and when the bucket is righted by the roller 30 striking the upper end of the separated guide way 6 but little friction is generated. When it is desired to change the dumping point, the pin 21 is removed, the guideway 6 and segment 8 rolled to the proper position or desired point, when the pin is inserted in a new opening through the framework and the hole in segment 8 thus fixing the dumping point at any desired point.

The segment 8 may be in any desired form like the three sides of a square if desired and may be fixed to the flexible guideway in any manner desired. I do not confine myself to any particular form of device to produce this break in the floor.

What I claim is—

An elevator having movable conveyers in combination with a flexible adjustable floor, said floor having a trap or opening in it movable with the floor, the movement of the floor changing the point of discharge of the conveyers and having means whereby the floor may be adjusted substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM F. AUSTIN.

Witnesses:

W. M. BROWN,

J. F. HARRIS.