

(No Model.)

C. D. TOWNE.
ELEVATOR FOR HARVESTERS.

No. 423,290.

Patented Mar. 11, 1890.

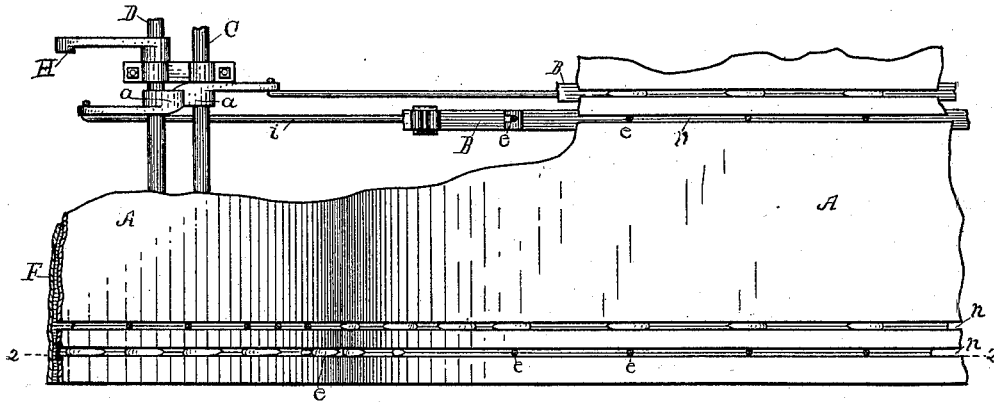


Fig. 1

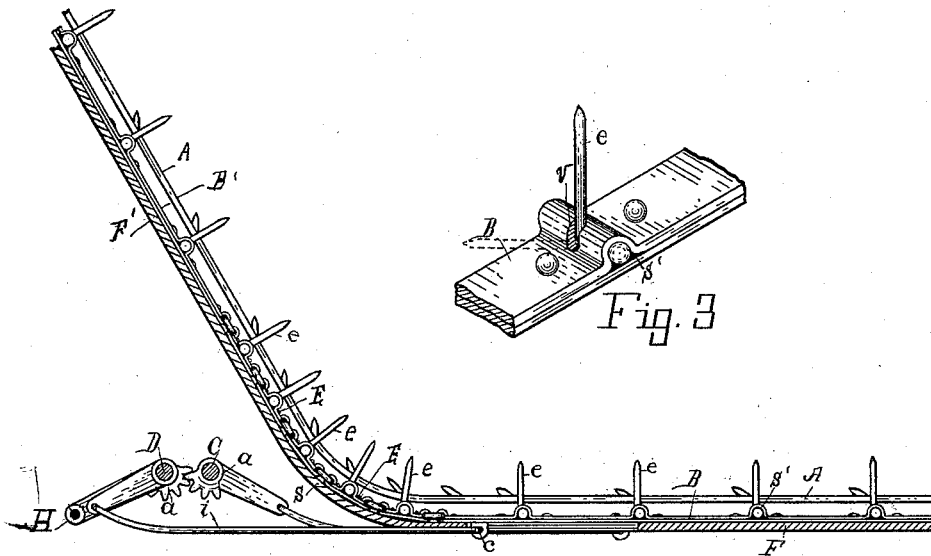


Fig. 2

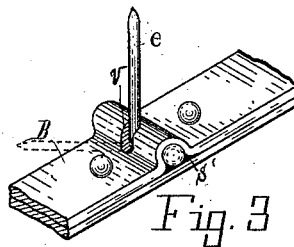


Fig. 3

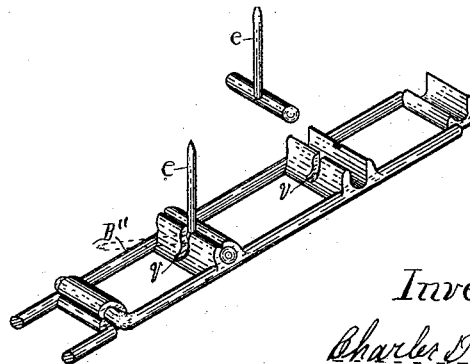


Fig. 4

Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES D. TOWNE, OF GALESBURG, MICHIGAN.

ELEVATOR FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 423,290, dated March 11, 1890.

Application filed October 10, 1889. Serial No. 326,603. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. TOWNE, a citizen of the United States, residing at Galesburg, county of Kalamazoo, State of Michigan, have invented a new and useful Elevator for Harvesters, of which the following is a specification.

This invention relates to that class of grain-elevators in which reciprocating rakes consisting of bars, end to end, and jointedly connected together and bearing pivoted teeth adapted to tilt up and down are employed.

This invention has for its object to construct the reciprocating bars of a series of connected bars or links, each bearing the pivoted teeth adapted to tilt, as above stated.

In the drawings forming a part of this specification, Figure 1 is a plan with parts broken away. Fig. 2 is a sectional elevation on line 2 2 in Fig. 1. Fig. 3 is an enlarged lettered detail in perspective from Figs. 1 and 2, and Fig. 4 is an enlarged detail in perspective, showing changes.

Referring to the lettered parts of the drawings, the grain-platform consists of the horizontal part F and the upwardly-oblique part F', the former being the part which first receives the grain, and the latter the incline part, up which the grain is carried by the reciprocating rakes to the binding mechanism above, said mechanism not here shown.

In Figs. 1 and 2, B is a section of one of the reciprocating rakes on the horizontal part F of the grain-platform, and B' is a section of said rake on the incline portion F' of the grain-platform. These bars B and B', bearing pivoted teeth, are connected together by a series of jointedly-connected links E, which links are supported by and slide upon the surface of a curved portion S of the grain-platform, said curved portion connecting the horizontal part F and the oblique part F' of said grain-platform. Each one of the links E is provided with a tooth e, the same as the teeth of the bars B and B'. The bars B and B' of the rake may be made of jointedly-connected sections, if preferred, each section bearing teeth.

In Fig. 3 is shown a broken portion of the section of the rake, consisting of two straps of metal, the upper one of which is crimped

to form a transverse hole or recess S'. The teeth are made in the form of an inverted T, the lower horizontal bars of which are placed in said holes S'. The slot v is formed through the upper and forward central portion of the crimp, and through this slot the tooth is passed and tilts up and down therein. The grain-platform is provided with a series of these rakes, which reciprocate alternately with each other. When they make their forward movement, the teeth are thrown up, as in Fig. 3, by contact with the grain, and when they make their backward movement the teeth tilt down, as in dotted position in said figure, so as to be drawn beneath the grain, as heretofore.

D C are two shafts, to one of which the power is applied when in use. Each shaft has a series of cranks a, having segmental gears, the gears of the cranks of one shaft meshing with the gears of the cranks of the other shaft.

The horizontal parts of the rakes are connected with the cranks a by rods i, said rods being pivotally connected with the bars B at c at one end and pivotally connected with said cranks at the other end.

Of course it will be understood that the shafts D C and the cranks a oscillate in their movements, and thereby the rakes are alternately reciprocated.

It will be observed in Figs. 1 and 2 that the teeth e project up through slots n in the upper board A of the platform, and thus the bars of the rakes which bear the teeth are nearly covered or hid in the grooves in which they move in the platform.

In Fig. 4 is shown a change in the construction of the rakes, B'' serving to represent either the section B or B' of the rakes in Fig. 2.

The bar B'' is provided with open sockets to receive the base-bar of the teeth e. The forward walls of these sockets have slots v, through which the teeth e are passed, and in which they tilt up and down, the same as in Figs. 1, 2, and 3.

The sections of the rake B'' in Fig. 4 are cast out of malleable metal, the same as are the sockets which are integral therewith. After the teeth are placed in said sockets the

latter are closed sufficiently to retain the teeth therein.

The power above mentioned as being applied to the shafts D C is first applied to the crank-arm H, said mechanism not being here shown, and from thence communicated to the shaft C by the gear-connections of the cranks a, before described.

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

In an elevator for harvesting-machines, the alternately-reciprocating rakes, each consisting of the horizontal bar, the upwardly-in-

clined bar, and the series of jointedly-connected links connecting said horizontal and inclined bars, each of said bars and links being provided with the pivoted teeth, and driving mechanism connected to the horizontal bar of each rake, substantially as set forth.

In testimony of the foregoing I have hereunto subscribed my name in presence of two witnesses.

CHARLES D. TOWNE.

Witnesses:

LEA C. WEST,
B. FREEMAN.