No. 733,824. PATENTED JULY 14, 1903.

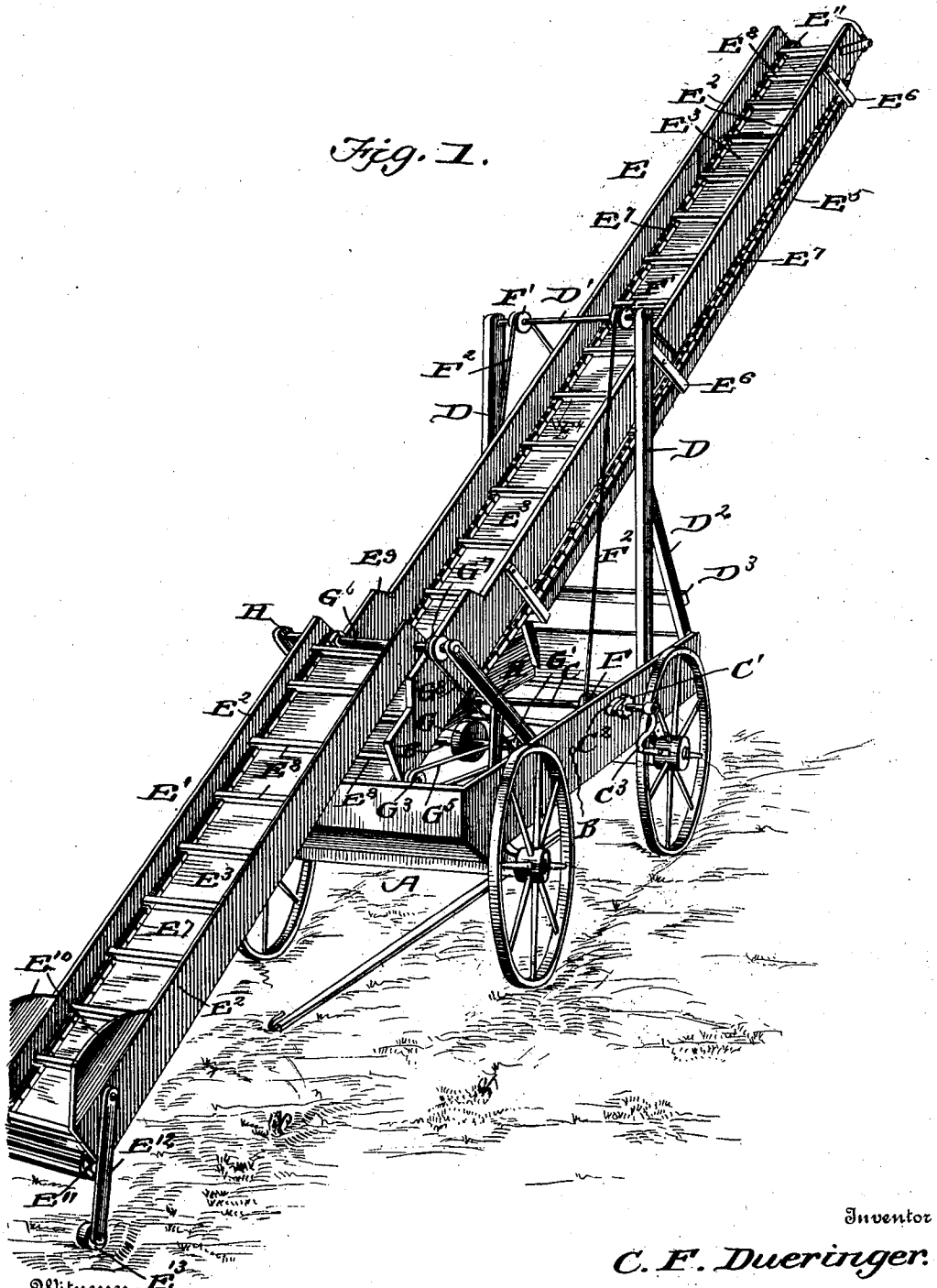
C. F. DUERINGER.

GRAIN ELEVATOR.

APPLICATION FILED NOV. 1, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.




Witnesses

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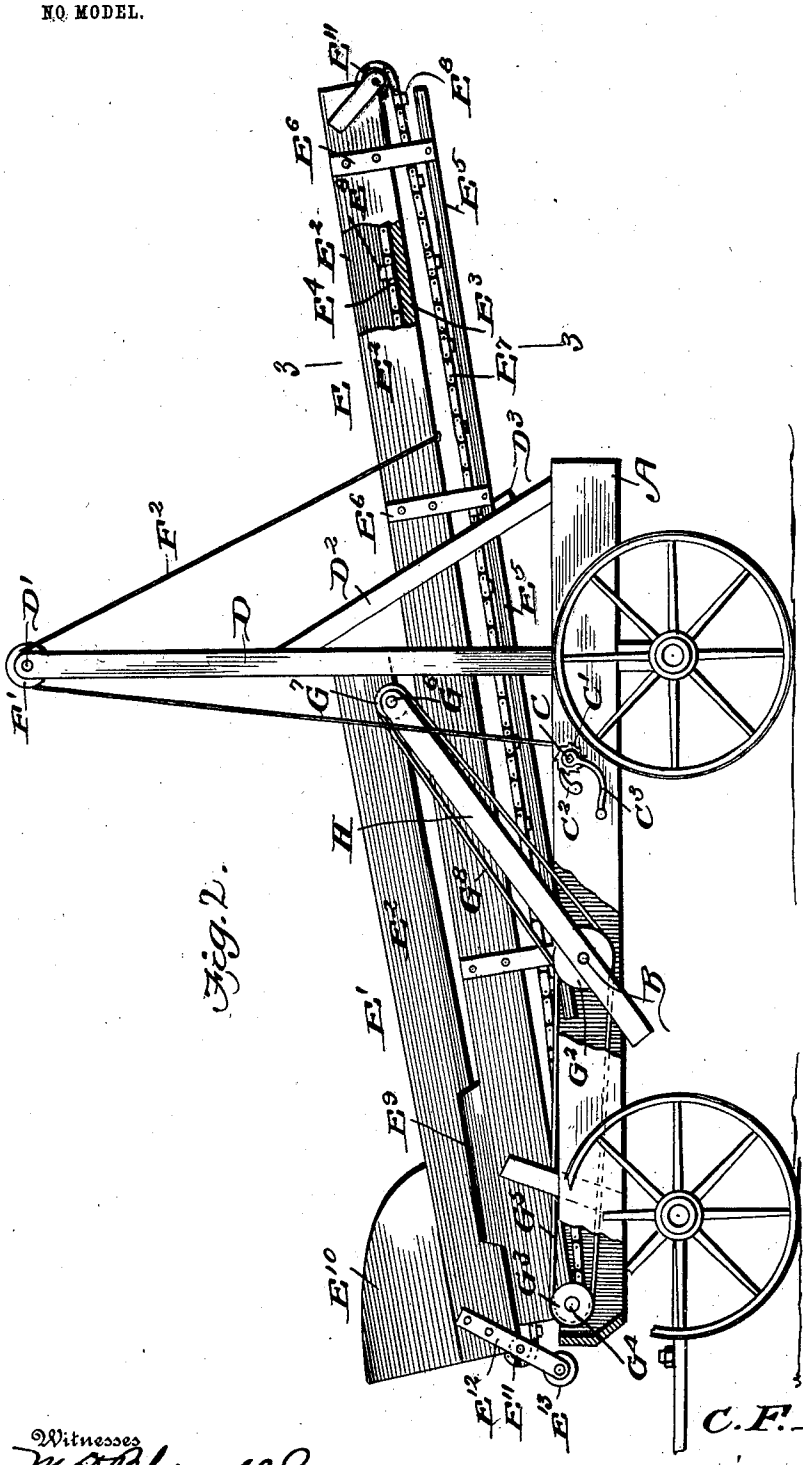


Fig. 2.

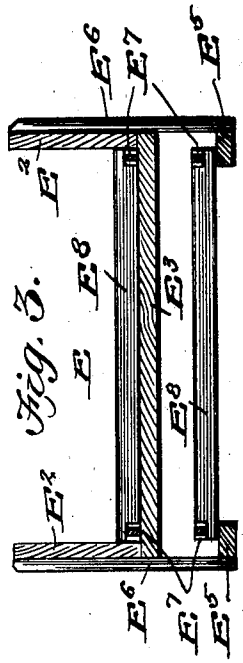


Fig. 3.

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No. 733,824. Patented July 14, 1903.

# UNITED STATES PATENT OFFICE.

CHARLES F. DUERINGER, OF GUTHRIE, ILLINOIS.

## GRAIN-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 733,824, dated July 14, 1903.

Application filed November 1, 1902. Serial No. 129,762. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES F. DUERINGER, a citizen of the United States, residing at Guthrie, county of Ford, and State of Illinois, have invented a new and useful Grain-Elevator, of which the following is a specification.

My invention is an improvement in grain-elevators, the object of the improvement being to produce a portable elevator which can be used for elevating grain into cribs and granaries and also for taking grain from buildings where stored and loading same into wagons; and a further object of my invention is to produce an elevator of this kind which will be simple in construction and which may be operated by a small engine or by horse-power, as may be most convenient.

In the accompanying drawings, Figure 1 is a perspective view of my improvement, showing the elevator in operative position. Fig. 2 is a side elevation showing the device folded for transportation, parts of the wagon being broken away. Fig. 3 is a detail sectional view about on the line 3 3 of Fig. 2.

In carrying out my improvement I employ a wagon-body A, with suitable running-gear, the wagon-body being of ordinary or any preferred construction. A shaft B extends across the wagon-body, while to the rear is a shaft C, one end of which projects through the wagon side and carries adjacent its outer end a ratchet $C'$ and a pawl $C^2$ and at its end a crank-handle $C^3$. Mounted on each side of the wagon-body are the standards D, connected at the top by the cross-rod $D'$ and braced by the pieces $D^2$ $D^3$.

The elevator comprises two sections E and $E'$, the first being the longer and the second being adapted to rest on the first when the parts are folded.

The elevator E consists of the side and bottom pieces $E^2$ $E^3$, the conveyer $E^4$, the strut-beams $E^5$, and the brackets $E^6$. The conveyer comprises the endless link chain $E^7$ and the cleats $E^8$. The short section $E'$ is similar in construction with the exception that the brackets and strut-beam are omitted, and similar parts in the two sections are designated by similar reference characters. Adjacent its forward or lower end the elevator E has the sides increased in height, as at $E^9$, for a purpose to be hereinafter described. The sides of the short elevator are also widened at its lower end, as at $E^{10}$, to prevent grain from spreading and running over when it is thrown on the conveyer. To elevate the section E, drums F are carried on the shaft C and pulleys $F'$ on the rod $D'$, cables $F^2$ passing from the drums over the pulleys and being secured to the sides of the elevator. By rotating the crank $C^3$ the cables are wound on the drums and the elevator raised to the required inclination. Sprockets $E^{11}$ are carried at each end of the elevators, the chains $E^5$ passing over them. To drive the conveyers, a pulley G is rigidly mounted on the shaft B. Smaller pulleys $G'$ $G^2$ are mounted on the shaft adjacent one end. At the lower end of the elevator a pulley $G^3$ is carried by the shaft $G^4$, carrying the sprockets at that end, and a belt $G^5$ passes from the pulley $G'$ to the pulley $G^3$. A shaft $G^6$ at the upper or rear end of section $E'$ carries a pulley $G^7$, while a belt $G^8$ passes from the pulley $G^2$ to the pulley $G^7$. The pulley G may be driven from a small gasolene-engine carried on the wagon, or it may be driven by horse-power, at the option of the user. Bars H are loosely mounted on the ends of the shafts B and $G^6$, thus connecting the elevator $E'$ to the wagon-body and also serving to hold the two shafts always at an equal distance apart and holding the belt $G^8$ always taut. At its lower end brackets $E^{12}$ are secured to the short section and carry rollers $E^{13}$, the brackets and rollers serving to hold the end of section and the conveyer from the ground. The side pieces $E^{10}$ may be flared, if deemed desirable, as shown in Fig. 1.

The operation of the device, together with the mode of folding same, will be obvious from the foregoing. The upper part of the short section rests over the extension $E^9$ when the parts are in operative position, and the grain is thereby prevented from being blown over the sides $E^2$ while falling from one conveyer to the other.

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

1. In a grain-elevator, the combination with a suitable wagon, sectional elevators of different lengths carried by said wagon, said

elevators comprising side and bottom pieces and having separate conveyers adapted to travel in them, the sides of said elevators being increased in height at their forward ends, the rear end of the shorter elevator being adapted to slide between the sides of the longer elevator, the sides of the shorter elevator being outwardly flared at its forward end, and means for driving said conveyers.

2. In a grain-elevator, the combination with a sectional elevator, said sections comprising side and bottom pieces, the side pieces of the longer section being widened adjacent the lower end of the longer section, the rear end of the shorter section being adapted to slide between said widened portions and the sides of the shorter section being widened and outwardly flared at their lower ends, endless conveyers in said elevators, means for raising the sections and portable means for supporting them.

3. In combination with a wagon, a sectional elevator, means for raising the rear end of one section and lowering the forward end of the other section, an endless conveyer in each elevator, shafts at the end of each section, sprocket-wheels on said shafts, sprocket-chains connecting the wheels of each section, a pulley mounted on the shaft at the rear of one section, a pulley on the shaft at the forward end of the other section, a shaft on the wagon, pulleys thereon, a belt running from one of said pulleys to the pulley at the rear of one section, a belt running from the other pulley to the pulley at the forward end of the other section, and bars pivotally secured to the wagon and adapted to hold the last-named belt taut.

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