No. 792,880. PATENTED JUNE 20, 1905.

O. E. CASEY.

PORTABLE GRAIN ELEVATING MEANS.

APPLICATION FILED NOV. 14, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

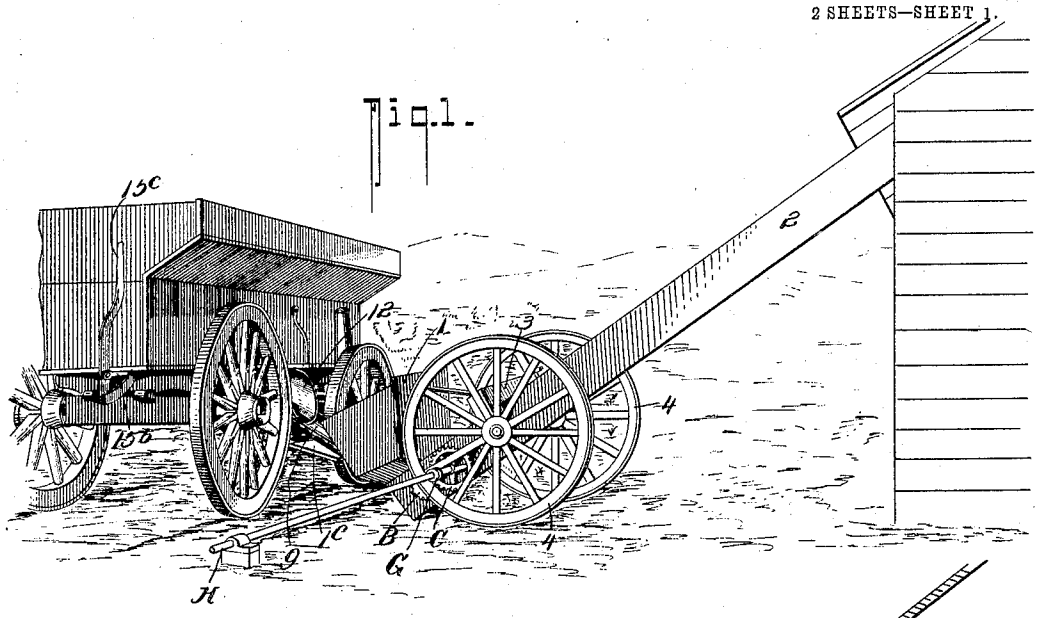
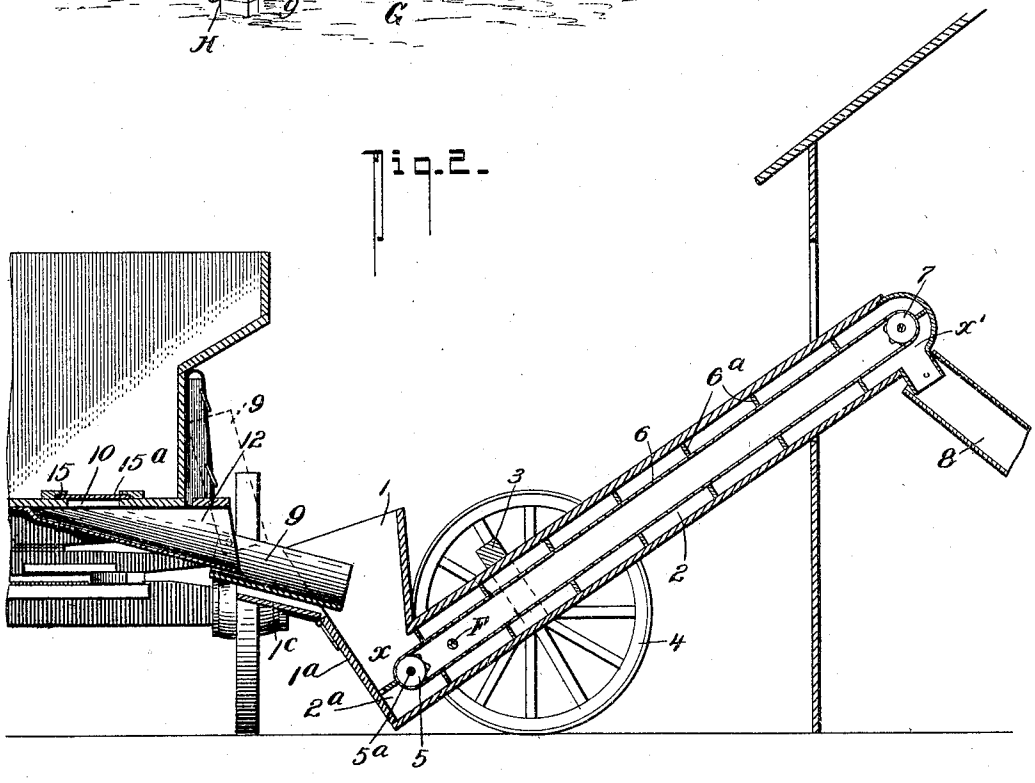


Fig. 2.



WITNESSES:

F. C. Gibson.

John T. Schrott.

INVENTOR

Owen E. Casey.

BY

Fred G. Dieterich & Co

ATTORNEYS

No. 792,880. PATENTED JUNE 20, 1905.

O. E. CASEY.

PORTABLE GRAIN ELEVATING MEANS.

APPLICATION FILED NOV. 14, 1904.

2 SHEETS—SHEET 2.

Fig. 3.

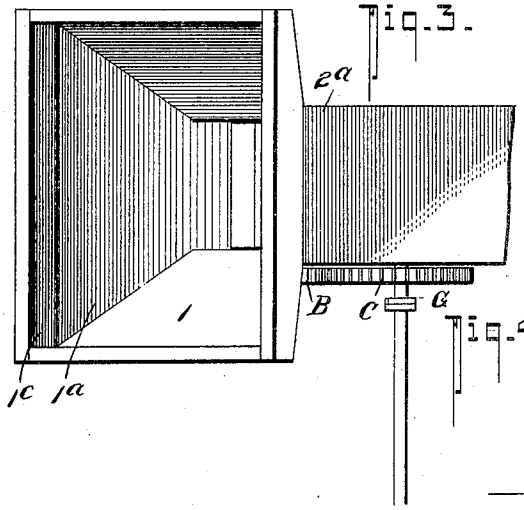
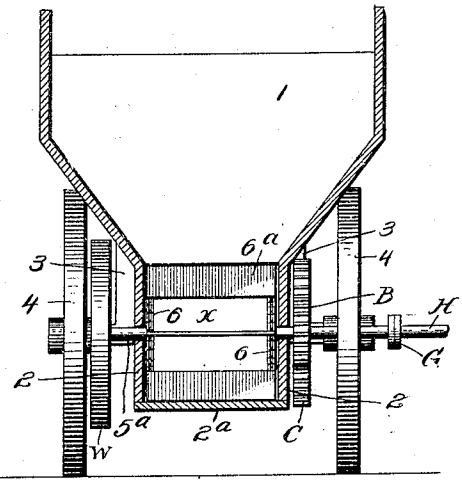


Fig. 4.



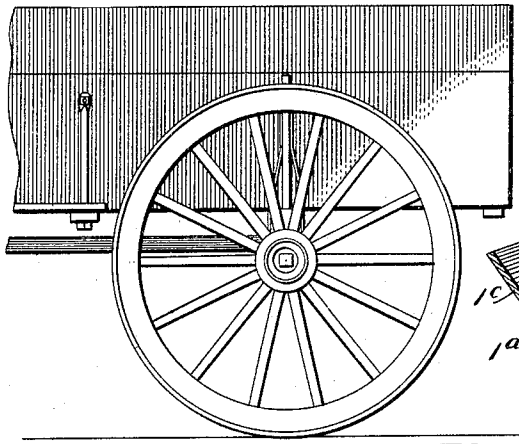


Fig. 5.

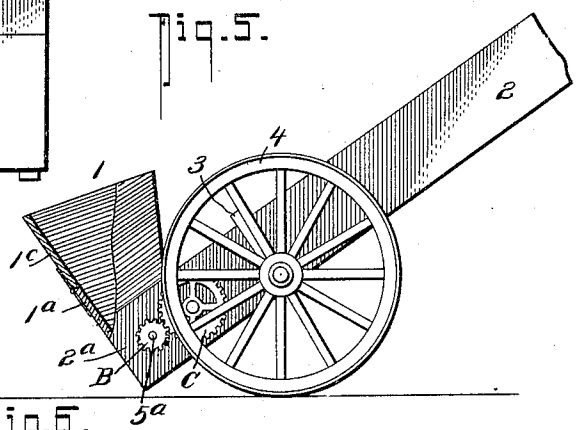
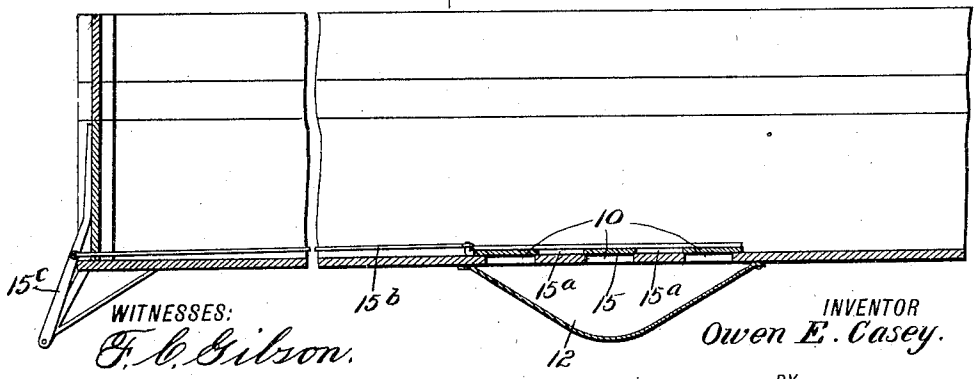


Fig. 6.



WITNESSES:

F. C. Gibson.

John J. Schrott.

INVENTOR

Owen E. Casey.

BY

Fred G. Dieterich & Co

ATTORNEYS

No. 792,880. Patented June 20, 1905.

UNITED STATES PATENT OFFICE.

OWEN E. CASEY, OF LAWRENCE, MINNESOTA.

PORTABLE GRAIN-ELEVATING MEANS.

SPECIFICATION forming part of Letters Patent No. 792,880, dated June 20, 1905.

Application filed November 14, 1904. Serial No. 232,725.

To all whom it may concern:

Be it known that I, OWEN E. CASEY, residing at Lawrence, in the county of Grant and State of Minnesota, (post-office, Nashua, Minnesota,) have invented certain new and useful Improvements in Portable Grain-Elevating Means, of which the following is a specification.

My invention seeks to provide a simple, economically-constructed, and effectively-operating portable elevator especially adapted for receiving grain from a grain-tank, wagon, or other holder in which the grain is held in bulk and adapted to elevate the same to such place or places desired quickly and with but a minimum amount of labor.

My invention comprehends an improved cooperative and combined arrangement of a portable receiving-hopper, elevating mechanism connected therewith, and having special formation of parts whereby it can be easily combined with a grain-tank or held to receive the grain from an ordinary farm-wagon.

In its subordinate features my invention consists of certain details of construction and combination of parts, all of which will be fully described and then pointed out in the appended claims and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my invention, showing the same combined with a grain-tank. Fig. 2 is a longitudinal section thereof. Fig. 3 is a plan view of the hopper end of my elevating mechanism. Fig. 4 is a transverse section thereof. Fig. 5 is a detail view illustrating my portable elevating mechanism as adjusted to receive the grain from an ordinary farm-wagon. Fig. 6 is a detail section through the slide-gate devices that control the exhaust from the grain-tank.

In the practical arrangement of the several parts that constitute my improved construction of grain-elevator the hopper 1 is mounted on the lower end 2^a of a pair of side beams 2, that extend parallelly and form the sides of the elevator-casing and which are fixedly secured to an axle 3 at a point a short distance back of the lower ends that support the hopper. Extending the elevator-casing sides beyond the axle 3, as shown, provides for setting the hopper 1 upon the lower end of the said casing sufficiently forward of the axle 3 so that the receiving-mouth of the casing will be in advance of the supporting-wheels 4, and thereby admit of bringing the said hopper 1 closely under the discharge-chute of the grain-tank, as clearly shown in Fig. 1, or under the tail end of an ordinary farm-wagon, as shown in Fig. 5. To further aid in providing for an easy and positive feed of the grain into the feeding devices, the front 1^a of the hopper is projected from the bottom of the elevating-casing at right angles thereto, (see Fig. 2,) while the outer or rear side of the said hopper projects at an acute angle to the front side, whereby when the hopper is set to receive from the grain-tank or the wagon, as shown in Fig. 2, the said rear side of the hopper will be substantially vertical and serve to positively deflect the material that discharges from the spout 9 to the throat or receiving portion x in the elevating-casing in which the lower sprocket 5 is mounted and over which takes the elevator-chain 6, having a series of flights or transverse drags 6^a, which are arranged to carry the grain up the bottom of the casing to the discharge x' thereof, in which end is mounted the outer sprocket-wheel 7 and with which a deflector-section 8 is pivotally connected in any suitable manner to permit of shifting the said section to such point where it is desired to dump the grain.

The front side of the hopper 1 at its upper edge has a hinged extension 1^c, which is so joined with said hopper front that when turned up, as shown in Fig. 5, it forms the solid upper part of the hopper front, and when turned down it can be readily set to project under the discharge-chute 9, that leads off the grain from the tank outward, which chute when not in use is hinged to fold up against the side of the wagon-body, as shown in dotted lines in Fig. 2.

F designates a shaft which is transversely journaled in the lower end of the side beams 2 2 at a point in the rear of the lower end of the hopper 1 and on one end of which is mounted a large drive-gear C, which meshes with a pinion B upon the axle 5^a, that carries the lower elevator-chain sprocket, and the said axle 5^a may carry a balance-wheel W, as shown

in Fig. 4. Motion is imparted to the shaft F in any desired manner, and for such purpose a drive-shaft H is connected to the shaft F by a knuckle-joint G.

When my portable elevator devices are to be combined with a grain-tank, the bottom of such tank is preferably formed with one or more outlets 10 10, that discharge into a collecting-chute 12, which extends laterally from the bottom of the tank and in such manner that the hinged end of the hopper 1 can be conveniently extended thereunder to properly receive and guide the grain into the hopper 1, as will be clearly understood by reference to Figs. 1 and 2, and to control the outflow from the said tank a slide-gate 15, having apertures 15^a, is provided, which is controlled by a shifting rod 15^b, connected to a hand-lever 15^c, as clearly illustrated in Fig. 6.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the complete operation, construction, and many advantages will be readily understood by those skilled in the art to which it appertains.

Among the points of advantage it should be stated that my portable elevator can be readily sold as an article in itself to be used with an ordinary farm-wagon and when thus used no special arrangement or change of the farm-wagon is required, as the grain can be readily dumped through the tail end of the wagon into the hopper 1. Again, the arrangement of the several parts is such that the whole device can be readily constructed so that it can be carried over the field quickly and set into the position for use.

I am aware that portable elevators have heretofore been provided embodying generally a receiving-hopper and an endless carrier, and I broadly make no claim for such construction. My invention differentiates, so far as I know, from what has heretofore been provided in the art in the peculiar arrangement of the hopper, the means for imparting motion to the elevator-chain, and the construction of the hopper-body and its coöperative connection with the elevator-casing.

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

1. A portable elevator mechanism of the character stated, which comprises a wheel-supporting axle, an elevator-casing on the lower end of which the said axle is fixedly secured, a hopper mounted over the receiving-throat of the casing at a point in advance of the axle, said hopper having its front end projected at right angles to the bottom of the hopper-casing, its rear end being extended vertically with respect to the receiving end or throat of the casing, and means mounted upon the casing for imparting motion to the endless conveyer, substantially as shown and described.

2. A portable grain-conveyer which comprises a wheeled axle, an elevator-casing secured at its lower end to the said axle and projected beyond the axle, an endless conveyer mounted within the said casing including a drive-sprocket mounted in the throat or receiving end of the casing, a hopper connected to said throat or receiving end, said hopper having its front portion projected at right angles to the bottom of the casing and having an adjustable member at its upper end adapted to be swung under the discharge of a grain tank or wagon, all being arranged substantially as shown and for the purposes described.

OWEN E. CASEY.

Witnesses:
P. J. STROMME,
O. T. STROMME.