(No Model.) 2 Sheets—Sheet 1.

F. F. KANNE.

ELEVATOR OR CONVEYER.

No. 599,101. Patented Feb. 15, 1898.

Fig. 2.

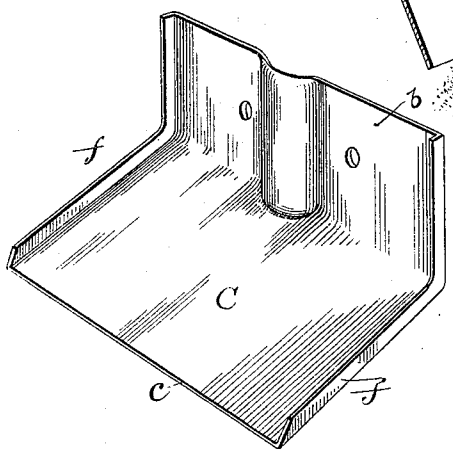


Fig. 4.

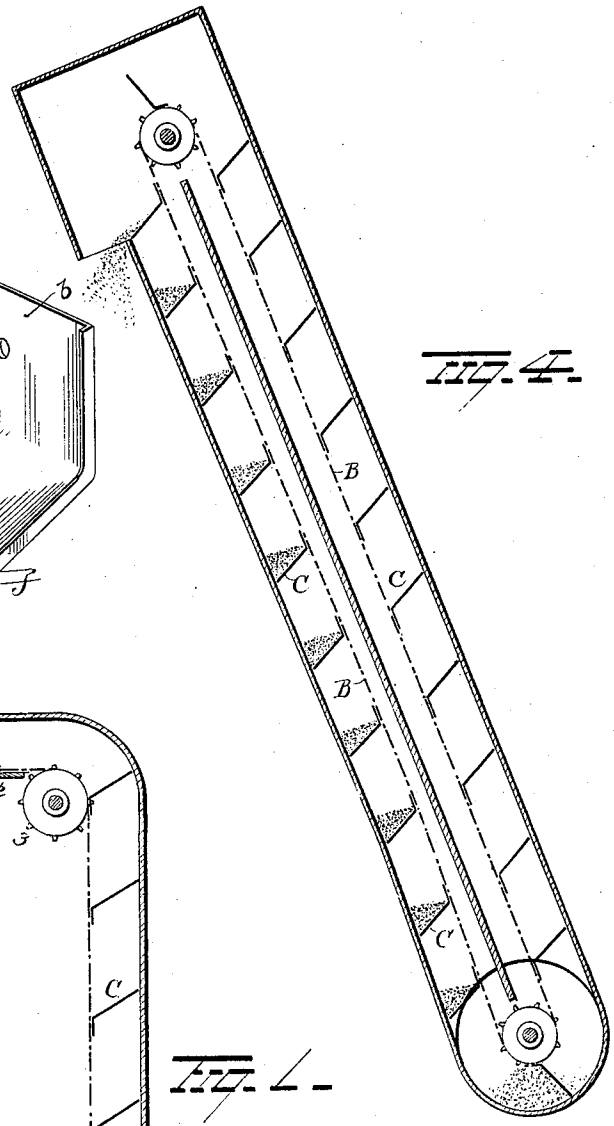
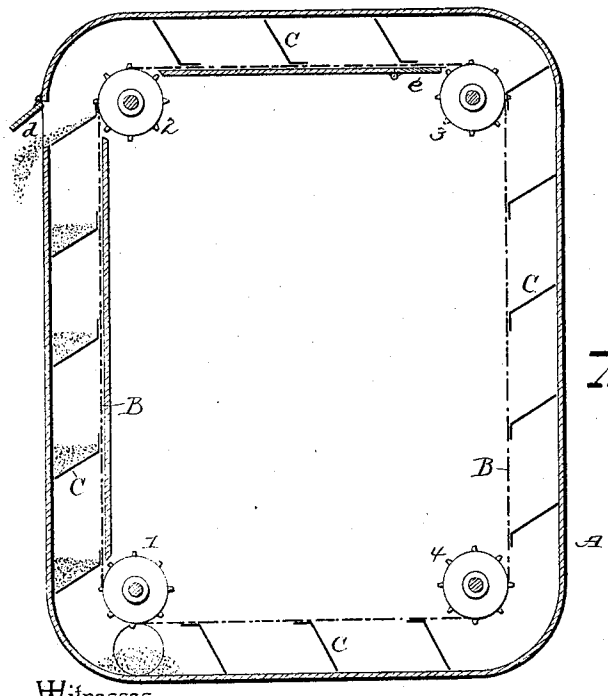


Fig. 1.



Witnesses
E. J. Nottingham
G. F. Downing

Inventor
F. F. Kanne
By H. A. Seymour
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

F. F. KANNE.

ELEVATOR OR CONVEYER.

No. 599,101. Patented Feb. 15, 1898.

Fig. 3.

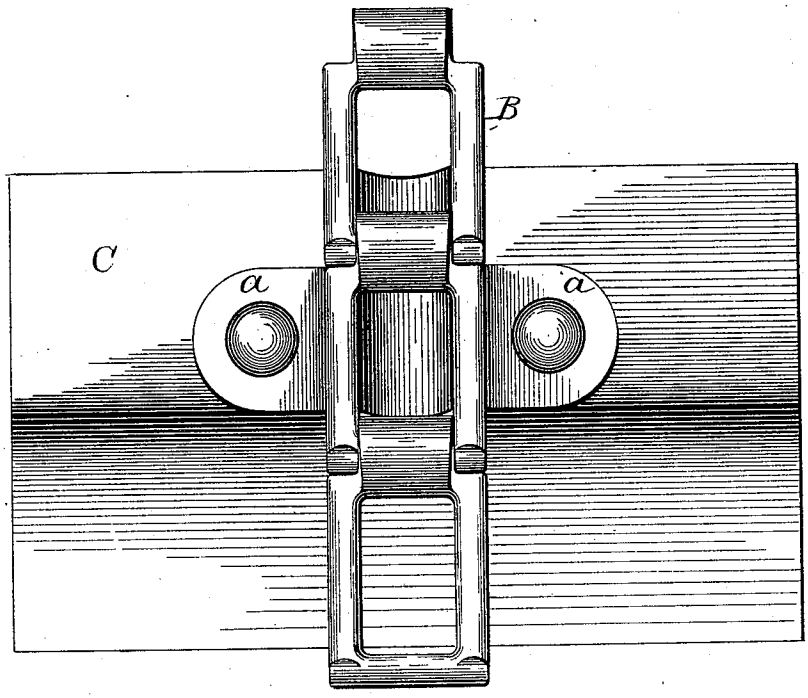
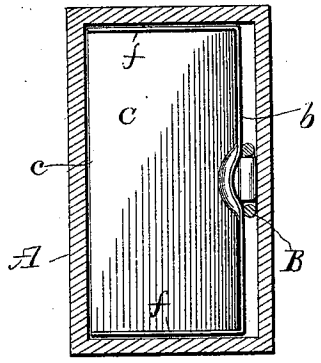


Fig. 5.



Witnesses
E. J. Nottingham
G. F. Downing.

Inventor
F. F. Kanne
By A. G. Seymour
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK FRANK KANNE, OF WATERVILLE, MINNESOTA.

ELEVATOR OR CONVEYER.

SPECIFICATION forming part of Letters Patent No. 599,101, dated February 15, 1898.

Application filed December 28, 1896. Serial No. 617,234. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK FRANK KANNE, a resident of Waterville, in the county of Le Sueur and State of Minnesota, have invented certain new and useful Improvements in Elevators or Conveyers; 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.

My invention relates to an improvement in elevators or conveyers; and it consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view illustrating an embodiment of my invention. Figs. 2 and 3 are detailed views. Fig. 4 represents another embodiment of the invention; and Fig. 5 is a view in section, showing the relative positions of a flight and the casing.

In Fig. 1, A represents a casing, in the corners of which are journaled the sprocket-wheels 1, 2, 3, and 4, on which is mounted an endless sprocket-chain. At suitable distances apart the links are constructed with laterally-projecting ears *a a*, to which the flights C are riveted. Each flight consists of a vertical portion or band *b*, which is perforated for its attachment to the ears on the sprocket-link, and of a forwardly and downwardly projecting portion *c*, while the side edges are provided with upturned flanges *f*, which serve to impart the necessary strength and stiffness to the flight and prevent it from bending while in use. The flights are secured to the links of the sprocket-chain at suitable distances apart, the forward edge of each flight engaging the front wall of the casing, its flanged side edges engaging the side walls of the casing, while the vertical rear wall of each flight constitutes the rear wall of the grain-carrying receptacle. It will thus be observed that the series of flights, in connection with the walls of the elevator-casing, serve to form a series of moving receptacles for elevating and conveying grain from one point to another.

The casing may be provided at the top of its upright portion with a gate *d* and also may have a gate *e* in the horizontal portion of its upper end, so that the grain may be discharged at either point.

From the construction and arrangement of parts above described it will be readily seen that the flights are in a much better position to discharge than if they were disposed at right angles to the chain, the grain falling by its own weight from the inclined working face of the flights, resulting in a complete discharge of the material.

It will also be understood that when my improved elevator is placed in a vertical position the inclined flights will discharge as readily as an elevator disposed in a slanting position with flights set at right angles to the chain. My improved elevator will operate effectually in any position in which it may be set, from a perpendicular to a horizontal position, while a flight set at right angles to the chain will not work in a perpendicular position of an undershot elevator. In overshot elevators my improved flight or cleat will have the same advantages in filling and carrying as where used as an undershot, and will also discharge at a high rate of speed, because it will then throw the grain more upward and outward at the point of return and therefore will not carry back the material to be conveyed.

With my improved flight the work of the elevator in any position in which it may be set is improved. The dip and filling are also improved, the carrying capacity of the elevator is enhanced, and the discharge is rendered perfect whether the elevator be set perpendicular, horizontal, or at an intermediate point.

The exact form of the flights or cleats is not material so long as the working face is disposed at an inclination to the chain or other carrying device.

In Fig. 4 the application of my invention to an undershot elevator is shown.

My improvements are simple in construction and effectual in all respects in the performance of their functions.

Various slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details herein set forth.

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

1. The combination with an elevator-casing and an endless chain arranged to be operated therein, of a series of flights attached to the chain each flight consisting of a vertical portion which fits against the chain and with a forwardly and downwardly inclined portion, the forward and side edges of which fit against the front and side walls of the elevator-casing, substantially as set forth.

2. The combination with an elevator-casing and an endless chain arranged to be operated therein, of a series of flights attached to the chain, each flight consisting of a vertical portion which is attached to the chain, and with a forwardly and downwardly inclined portion the forward and side edges of which engage the front and side walls of the casing, the side edges of the flights being provided with strengthening-flanges, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FREDERICK FRANK KANNE.

Witnesses:

ALBERT J. KANNE,

HARRY G. BLAIR.