(No Model.)

G. A. GILBERT & R. WILCOX.

CONVEYER FOR GRAIN, &c.

No. 349,390. Patented Sept. 21, 1886.

Fig. 1.

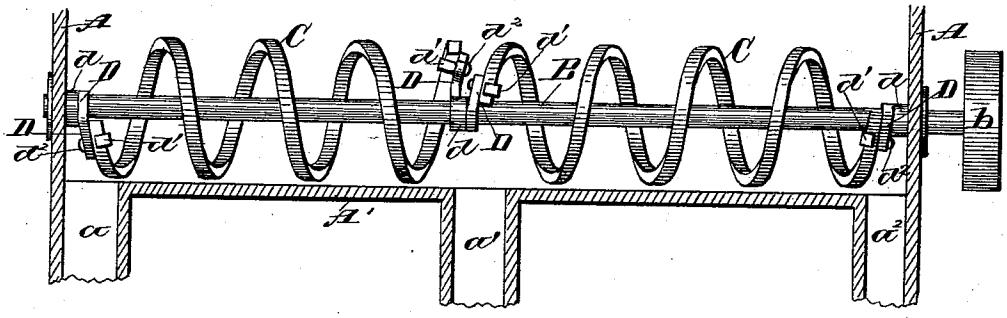


Fig. 2.

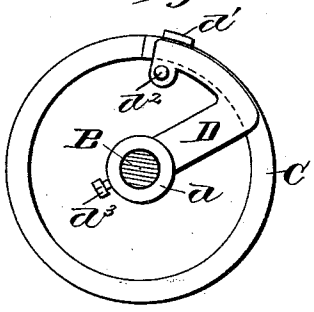
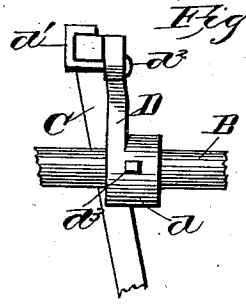


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE A. GILBERT AND RALPH WILCOX, OF MILWAUKEE, WISCONSIN.

CONVEYER FOR GRAIN, &c.

SPECIFICATION forming part of Letters Patent No. 349,390, dated September 21, 1886.

Application filed March 5, 1886. Serial No. 194,097. (No model.)

To all whom it may concern:

Be it known that we, GEORGE A. GILBERT and RALPH WILCOX, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Conveyers for Grain, Middlings, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to devices for conveying grain, middlings, &c.; and it consists in certain peculiarities of construction, as will be fully set forth hereinafter.

In the drawings, Figure 1 is a representation of our device in elevation, and Figs. 2 and 3 are details.

A A′ represent the end and bottom walls of a conveyer-box, and *a a′ a²* represent cut-offs.

B is a shaft extending the whole length of the box, and suitably journaled in its ends, and provided with pulley *b* for connection with power.

C C represent sections of our spiral skeleton flights, which are secured to the revolving shaft B in any suitable manner, so as to be rigid therewith.

In Figs. 2 and 3 we show convenient means for securing the parts B and C together, the same consisting of the arm D, having a hub, *d*, integral therewith at one end, and a hook, *d′*, at the other. This arm extends out straight from its hub for a certain distance, and then is formed with an elbow, from which point the arm continues in the arc of the spiral section C, to which it is secured, preferably by the hook *d′*, one end of which is passed through a perforation in the end of the arm, and riveted or upset, as shown at *d²*. The hub *d* is secured to the shaft B by any suitable means, as by the set-screw *d³*, as shown.

If desired, we may connect the ends of our skeleton flights directly to hubs or sleeves formed on the ends of the said arm D, instead of the hooks named.

In very long conveyers we propose to construct our flights in sections, and when we wish to construct a reverse conveyer, delivering at any particular cut-off, we construct our flights as shown in Fig. 1—that is, with the flights of one section extending in an opposite direction to those of the adjacent section; but it will be understood, of course, that we may construct a continuous conveyer in sections, all of which have right-handed or left-handed flights, as the case may be.

We have shown the wire of our flights as square in cross-section; but we may employ round wire in any given case, if desired. In the case of very long sections, if found advisable, another arm might extend from the shaft and connect with the flights as a support intermediate between the ends of the section.

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

1. In a conveyer for grain, middlings, &c., the combination of a shaft with independent skeleton spiral flights surrounding the same and secured thereto and free from contact with said shaft, except at each end of said spiral, substantially as set forth.

2. In a conveyer for grain, middlings, &c., the combination of a shaft with a series of independent skeleton spiral flights, formed in sections, surrounding the same and secured thereto and free from contact therewith, except at the ends of each spiral section, substantially as set forth.

3. In a conveyer for grain, middlings, &c., the combination of a shaft with a series of independent skeleton spiral flights, formed in sections, surrounding the same and secured thereto and free from contact therewith, except at the ends of each spiral section, the flights of one section extending in an opposite direction to that of the flights in the adjacent section, substantially as set forth.

4. In a conveyer for grain, middlings, &c., the combination of a shaft with independent skeleton spiral flights surrounding the same and arms secured to the shaft and connected to the flights, the latter being free from contact with the shaft at all points between the said arms, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

GEORGE A. GILBERT.
RALPH WILCOX.

Witnesses:
H. G. UNDERWOOD,
MAURICE F. FREAR.