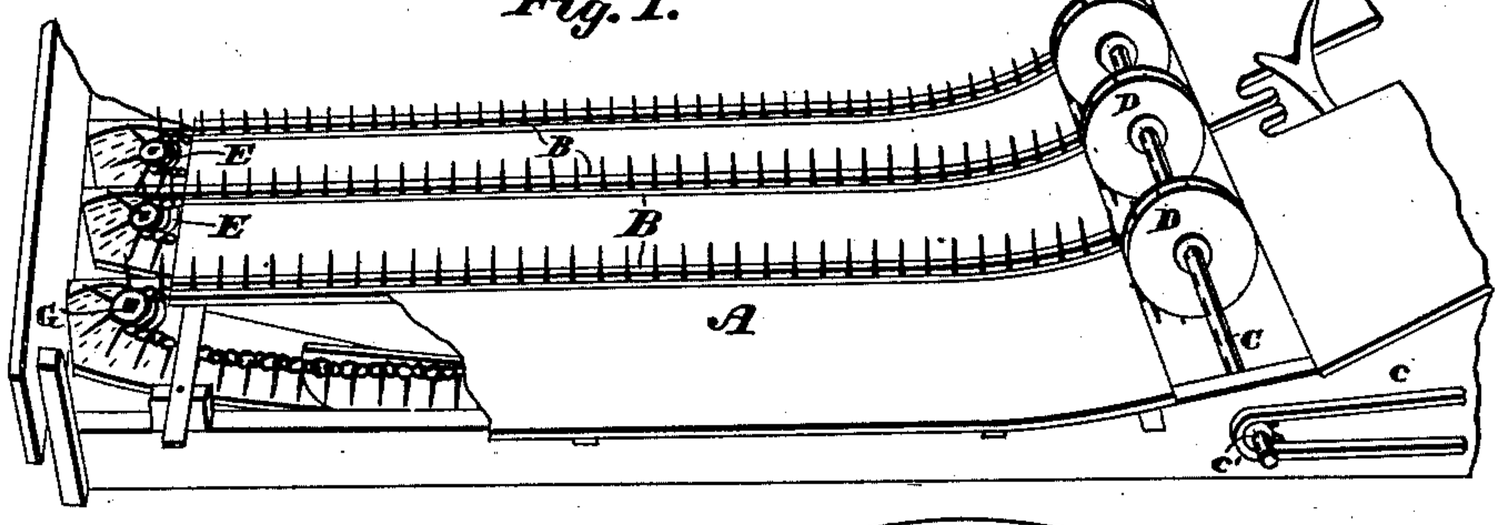
(No Model.)

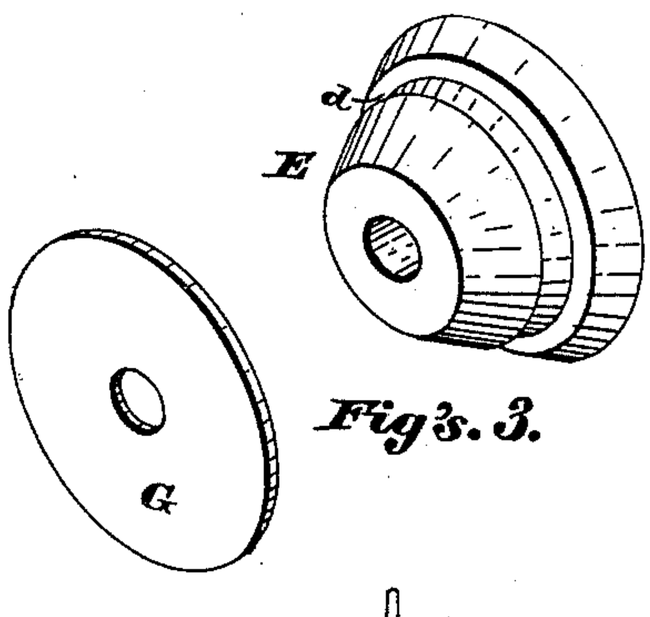
W. P. ESSIG.

CONVEYER FOR GRAIN BINDERS.

No. 359,247. Patented Mar. 15, 1887.

Fig. 1.





Figs. 3.

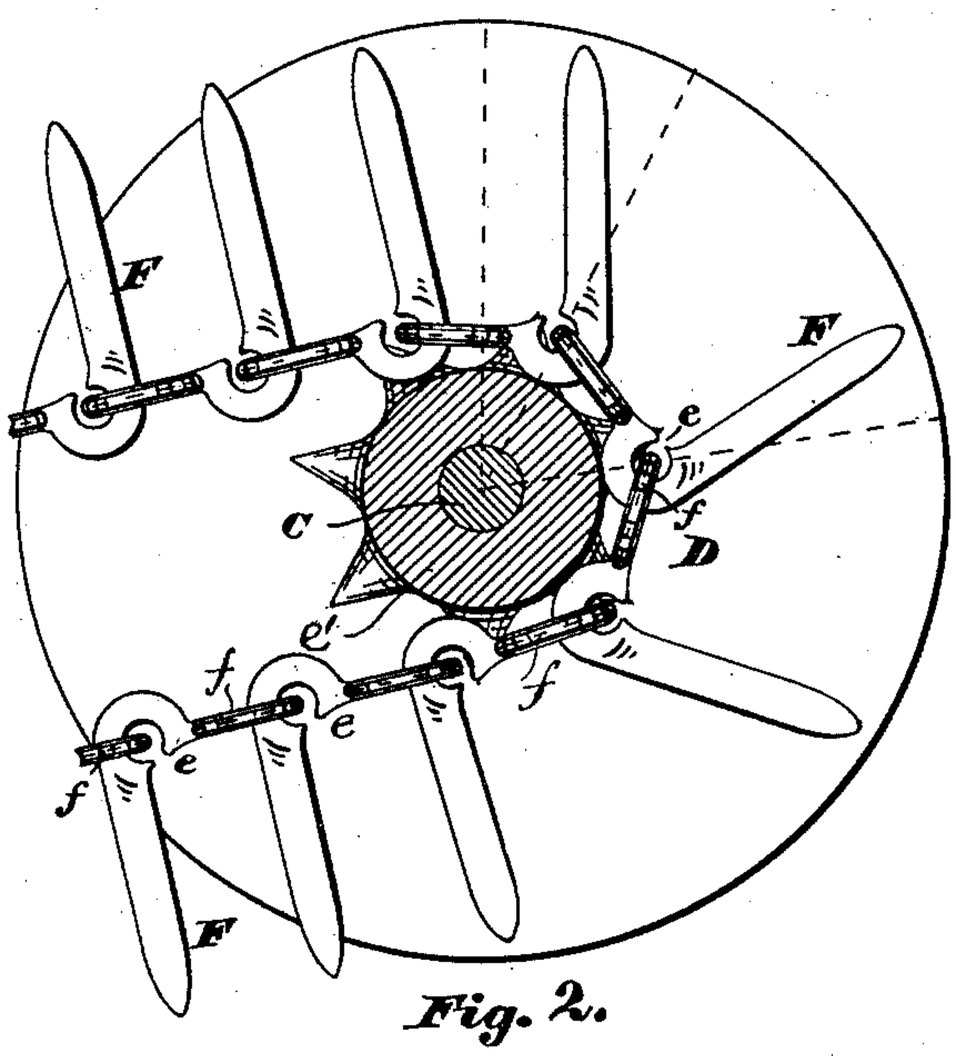


Fig. 2.

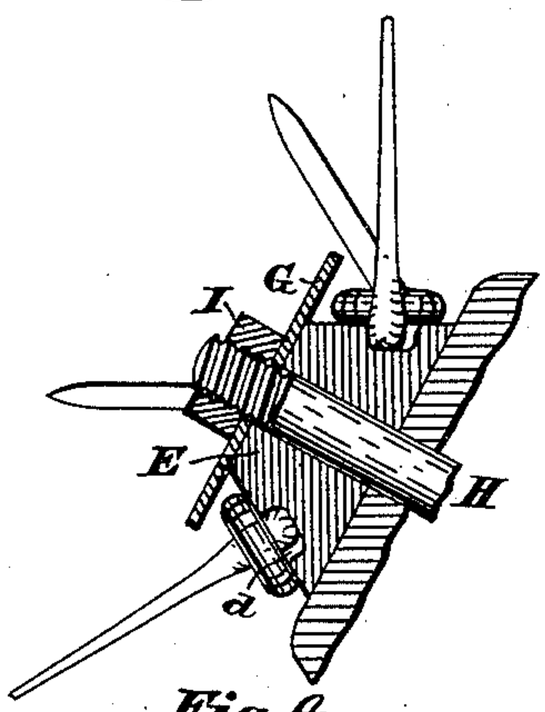


Fig. 4.

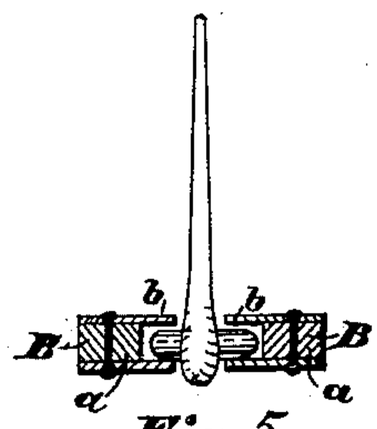


Fig. 5.

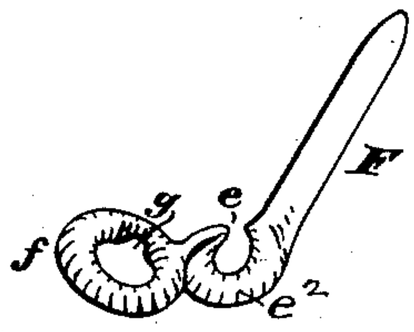


Fig. 6.

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CONVEYER FOR GRAIN-BINDERS.

SPECIFICATION forming part of Letters Patent No. 359,247, dated March 15, 1887.

Application filed July 29, 1886. Serial No. 209,416. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. ESSIG, a citizen of the United States, residing at McDonaldsville, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Conveyers for Grain-Binders; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to letters and figures of reference marked thereon, in which—

Figure 1 is a perspective view of the grain platform or table, showing the conveying devices properly attached thereto. Fig. 2 is a sectional view of a flanged sprocket-wheel. Fig. 3 are detached views of a curved wheel and its retaining plate or disk. Fig. 4 is a sectional view of a conical wheel, showing the conveyer-chain located around said wheel. Fig. 5 is a transverse section of the guide for conveyer-chain, showing chain located therein. Fig. 6 is a detached view of one of the chain fingers and link.

The present invention has relation to conveyers for grain-binders; and its nature consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the grain platform or table, which may be constructed in the ordinary manner.

To the top or upper side of the frame of the grain platform or table are securely attached the guides B, said guides being substantially of the form shown in Figs. 1 and 5, and, as shown, said guides consist of two parallel bars, *a a*, each of said bars being provided with the plates or strips *b*, which are for the purpose hereinafter described. At the binder end of the grain platform or table A is located the shaft C. This shaft C is provided with the flanged sprocket-wheels D, which communicate motion to the conveyer-chains, rotary motion being conveyed or communicated to the shaft C, by means of the belt *c* and the wheel *c'*.

To the frame of the grain platform or table may be attached the conical wheels E, which are located substantially as shown in Fig. 1. These conical wheels E are provided with the groove *d*, which receives the conveyer-chain, as shown in the drawings.

The axles or posts H of the conical wheels E are placed at an angle to the grain-platform for the purpose of having one side of said conical wheels always horizontal. The angle of inclination may be about sixty degrees; but I do not desire to be limited to any given number of degrees of inclination, as a greater or less number may answer the purpose designed. By placing the conical wheels E at an angle to the grain-platform inclining backward, the chain as it approaches the top or upper portion of said wheels is made to assume a position which will cause the fingers F to occupy nearly a perpendicular position. This is affected by means of the part c^2 of the finger running in the groove *d* of the wheel, and when said chain enters the guide said guide will cause the finger F to assume a perpendicular position. The groove in the conical wheel is for the purpose of receiving the heel of the finger F, thereby assisting in holding the chain proper. The fingers F are free after the chain has passed over the flange sprocket-wheel, and will fall to a horizontal position by their own weight.

The guides B are located so that their ends will be in line with the groove *d* and the flanged sprocket-wheels D, thereby permitting the conveyer-chain to pass over and around said wheels D and E.

The fingers F may be substantially of the form shown in the drawings, and, as shown, are provided with the hook *e*, which is for the purpose of receiving the eye *f*, as shown in the drawings. With each of the fingers F is formed integral therewith the eye or ring *f*, which is substantially of the form shown, and is for the purpose of engaging the hooks *e* of the adjacent finger. The rings or eyes *f* are provided with the recesses *g*, which are located as shown in Fig. 6, and are for the purpose of disengaging the rings *f* from the hooks *e*. It will be seen that as the fingers F enter between the flanges of the sprocket-wheels D the grain located upon the conveyer-chain proper will be lifted or removed from the fingers F and conveyed to the binder-platform by means of the flanged sprocket-wheels D. It will also be seen

that the peripheries of the flanges on the sprocket-wheels D will travel much faster than the fingers F, thereby causing the grain to be readily removed from said fingers F. Each finger of the conveyer-chain proper is arranged in front or forward of its connection to the following or next finger, thereby causing the fingers to assume an inclined position away from a line perpendicular to the shaft C, thereby permitting the grain to be easily removed from the inclined fingers F.

The inclinations of the fingers F are illustrated by the dotted lines, Fig. 2. In case it is desired to adjust the conveyer-chains to an elevated binder, the guides B are formed so as to carry the conveyer-chains up to the binder platform or table, and the shaft, together with the flanged sprocket-wheels D, located substantially the same as when designed and calculated for a low-down binder.

In the drawings three conveyer-chains and their guides are shown; but a greater number may be used, if desired, with a corresponding number of wheels D and E.

The deck or covering of the grain-platform is shown with a portion broken away, so as to better show the location and arrangement of the conveyer-chains and the conical wheels E. The conical wheels E are each provided with the plate or disk G, which is for the purpose of preventing the conveyer-chains from becoming disengaged from said conical wheels E. The conical wheels E are placed on the posts or pins H, and are securely held in proper position by means of the nuts I.

It will be seen that by placing the strips *b* in the position shown in Fig. 5 the conveyer-chain will be carried between the strip *b*, thereby holding the fingers F in a perpendicular position when moving the grain.

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

1. The combination, with the conveyer-chain provided with the fingers F, of the conical wheels E, the guides B, and the flanged sprocket-wheels D, substantially as and for the purpose specified.

2. The combination, with the conical wheels E, placed or set at an angle to the grain platform or table A, and provided with the groove *d*, of the conveyer-chains provided with the fingers F, the guides B, and the flanged sprocket-wheels D, substantially as set forth.

3. The combination, with the shaft C, provided with the flanged sprocket-wheels D, of the conveyer-chain provided with the fingers F, the conical wheels E, provided with the grooves *d*, and the retaining plate or disk G, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM P. ESSIG.

Witnesses:
A. W. WEBER,
I. R. ESSIG.