D. W. Bryant,

2 Sheets, Sheet 1.

Grain Conveyer.

No 46,876. Patented Mar. 21, 1865.

Fig: 1.

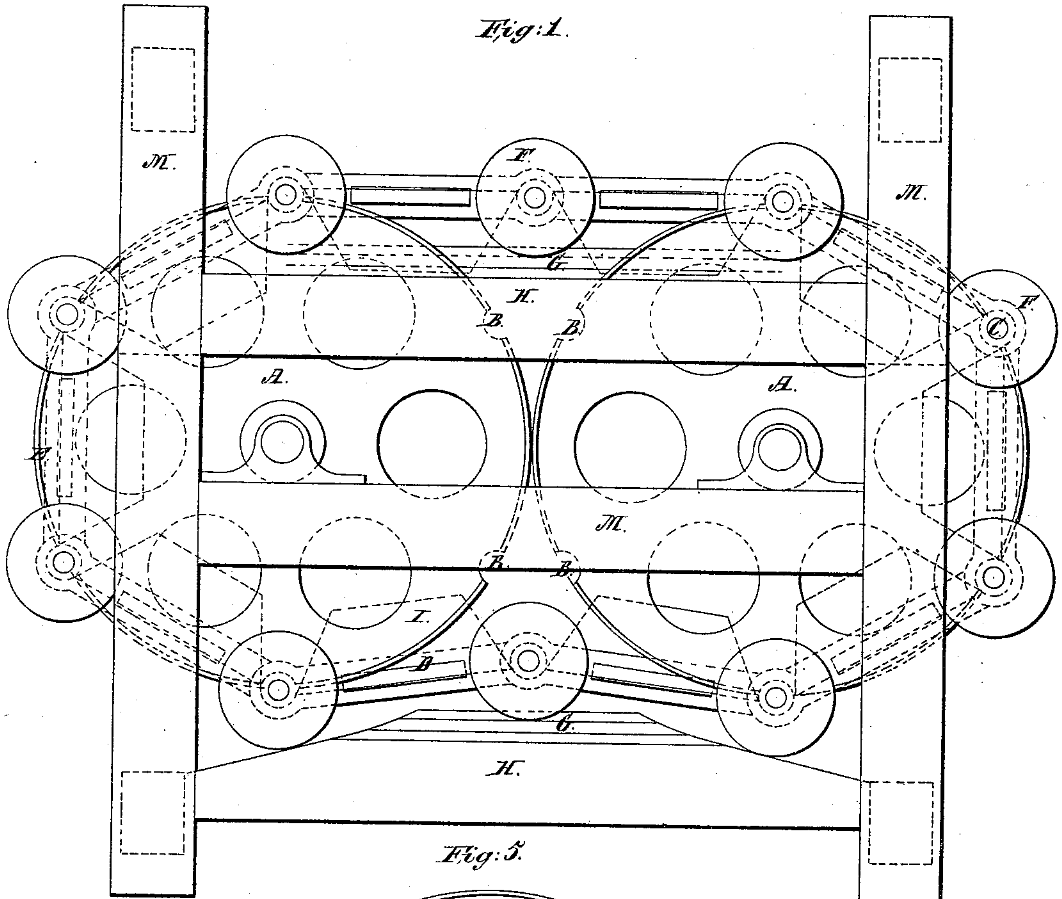


Fig: 5.

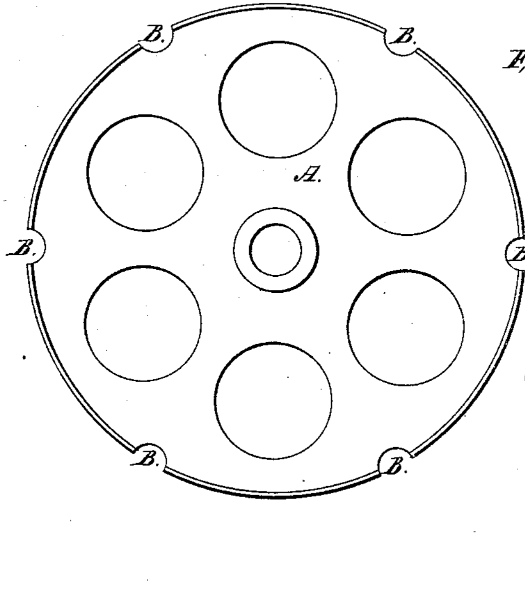
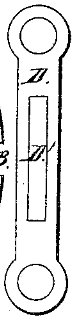


Fig: 4.



Witnesses:

John H. Irwin
W. E. Marrs

Inventor:

D W Bryant

2 Sheets, Sheet 2.

D. W. Bryant,

Grain Conveyer.

№ 46,876. Patented Mar. 21, 1865.

Fig: 2.

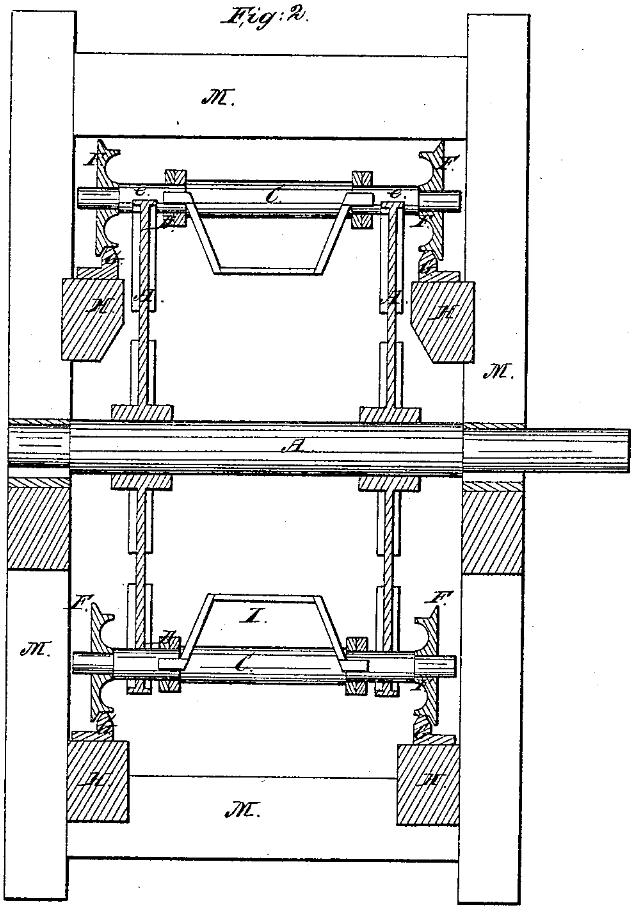
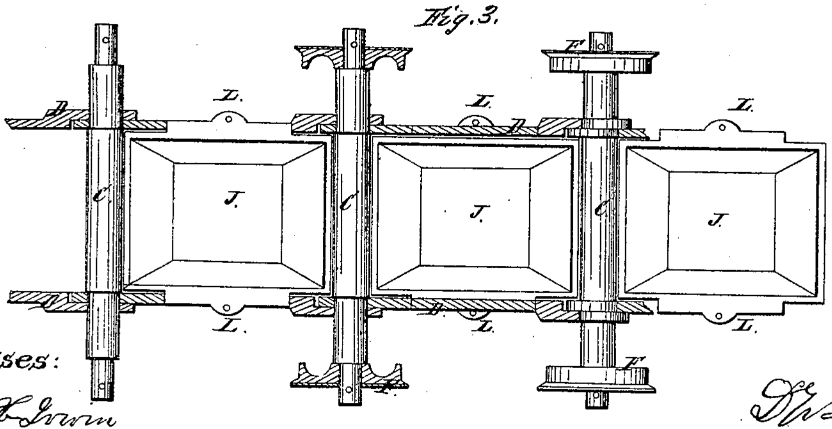


Fig. 3.



Witnesses:

John W. Irwin
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Inventor:

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AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

DANIEL W. BRYANT, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN GRAIN-CONVEYERS.

Specification forming part of Letters Patent No. **46,876**, dated March 21, 1865.

To all whom it may concern:

Be it known that I, DANIEL W. BRYANT, of Chicago, in the county of Cook, and State of Illinois, have invented and discovered a new and useful Improvement in Conveyers for conveying grain or other commodities from one point to another; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and the letters and figures marked thereon, which form part of this specification.

The nature of my said invention consists in the employment of a series of metallic buckets mounted upon endless chains passing around two suitable wheels or pulleys, one pair of said wheels being placed at the point whence the grain is to be conveyed and the other pair of said wheels at the point whither the grain is to be carried, the intermediate parts of said chains being suitably supported, as hereinafter described, whereby, by imparting motion to the said pulleys and loading said buckets with the grain at one end of the conveyer, the same is rapidly and safely transported to the point desired and discharged, while the empty buckets return to be reloaded, as hereinafter mentioned.

To enable those skilled in the art to understand the construction and operation of my invention, I will proceed to describe the same with particularity, reference being made in so doing to the aforesaid drawings, in which—

Figure 1 represents a side elevation of my invention; Fig. 2, a transverse vertical section of the same; Fig. 3, a plan or top view thereof, showing the buckets and endless chain; and Fig. 4, a side view of one of the links of the endless chains, and Fig. 5 a side view of one of the wheels, A.

In said drawings the same letters of reference in the different figures denote corresponding parts of my invention.

M H represent the frame upon which the operative parts of my invention are supported, as shown, and A A, as shown in Fig. 1, represent the pulleys supporting and carrying the endless chains, arranged one at each end of the machine, as aforesaid, said endless chains being shown by the red lines D in said Fig. 1, and A A in Fig. 2 represent the pair of said pulleys arranged upon the shaft A′ and fixed rigidly thereto, so that the revolution of said shaft A′ will revolve said pulleys. I represents the aforesaid metallic buckets suspended between the two endless chains D D by projecting the lugs upon the sides of said buckets through corresponding slots (marked D′) through the links composing said endless chains, and fastening them by means of pins or keys in that part of said lugs (marked L) projecting outside of said links, as shown clearly in Fig. 3, there being a single link extending from one end of each bucket to the other. The said links are connected one with another by means of the shafts C, which pass through suitable holes in the ends of said links, as shown in Fig. 4, said links being constructed with an offset at one end, so that while lapping upon each other to receive the connecting-shafts C the interior line of said chains fit closely against the said buckets, as shown in Fig. 3. These shafts thus lie between every two consecutive buckets in the series, which fit closely to said shafts, so as to prevent any grain from passing between said buckets and being wasted. Upon the ends of said shafts, C are arranged the large friction-wheels F, which rest upon the tracks G, as seen in Figs. 1 and 2.

By this arrangement the endless chains and buckets are kept up in a line, however great the distance between the two ends of the machine where the pulleys A A support the said chains. Upon the periphery of said pulleys A A are cut the semicircular grooves marked B, which are made and arranged at such a distance apart as to receive the said shafts C therein, as shown, whereby the revolution of the said pulleys impart motion to the said conveyers.

By the above machine the grain, being admitted or loaded in the buckets at one end, can be readily and rapidly carried to the desired point, while the buckets discharging the grain in their descent at the opposite end go back beneath to repeat the operation.

Having now described the construction and operation of my invention, I will proceed to specify what I claim and desire to secure by Letters Patent:

1. The combination of the metallic buckets I, the endless chains D D, and pulleys A A, arranged and operating substantially as and for the purposes herein set forth and shown.

2. The combination and arrangement of the metallic buckets I, the shafts C, the endless chains D D, the friction-wheels F, and tracks G, operating as and for the purposes specified and shown.

D. W. BRYANT.

Witnesses:
W. E. MARRS,
L. L. COBURN.