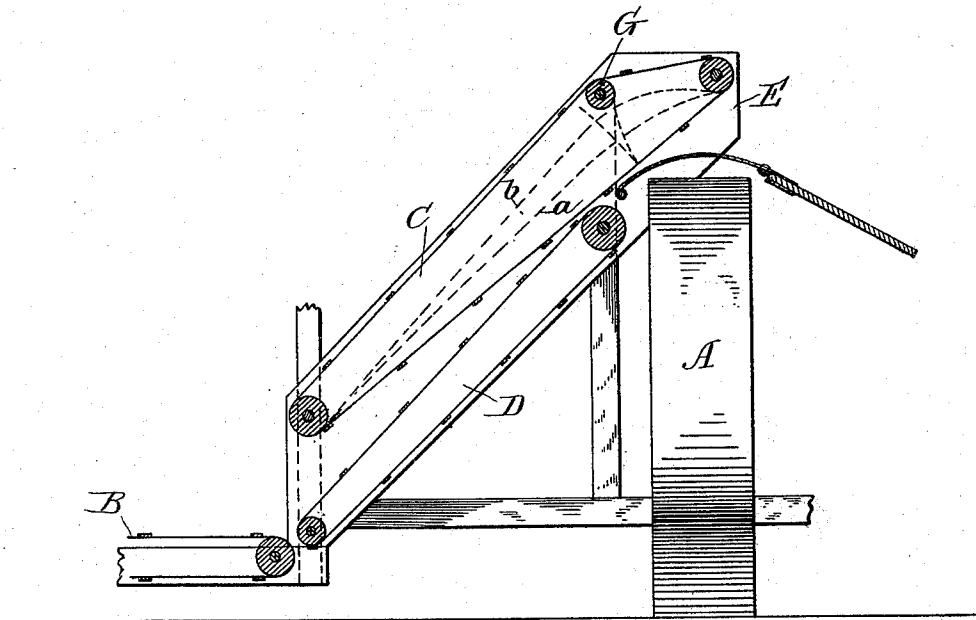


(No Model.)

M. KANE.
HARVESTER ELEVATOR.

No. 535,249.

Patented Mar. 5, 1895.



Witnesses:

J. L. Gentry

Inventor:

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UNITED STATES PATENT OFFICE.

MAURICE KANE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WARDER,
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HARVESTER-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 535,249, dated March 5, 1895.

Application filed January 17, 1893. Serial No. 459,003. (No model.)

To all whom it may concern:

Be it known that I, MAURICE KANE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented new and useful Improvements in Harvester-Elevators, of which the following is a specification.

This invention relates to improvements in harvester elevators, and its object is to arrange
10 the upper apron or belt of the elevator so as to maintain its lower side in practically a straight line, while the vertical height of such apron above the drive wheel is as low as possible.

15 The invention consists in substantially the arrangement and construction hereinafter pointed out, and particularly set forth in the claims.

The drawing represents a vertical longitudinal section of a harvester elevator embodying my invention.

The drive wheel A is of the usual construction and need not be particularly described.

25 The platform conveyor is designated by the letter B, but only the portion of the same next the discharge side of the machine is illustrated, and this, also, is of common and well known construction.

30 The harvester elevator comprises two aprons or belts, an upper apron C and a lower apron D; the rollers for both being suitably journaled in the frame E.

35 The lower apron D extends from adjacent to the discharge end of the platform conveyor to near the upper inner side of the drive wheel. The upper apron C begins at such point above the lower end of the lower apron as will afford a sufficient space for the requisite quantity of grain to pass between the aprons, and
40 then extends to such a point above the drive wheel as will afford an approximately similar space between the outer end of the lower ply of such upper apron and the bridge or deck. A third or guide roller G is provided for the upper
45 ply of the upper apron and is located in the instance shown directly above the upper roller of the lower apron. The under ply of the upper apron is designed to normally extend in an approximately straight line which gradually approaches the upper line of the lower
50 apron and without actually touching extend-

ing beyond the upper and outer end of such lower apron to the point above the drive wheel or bridge before indicated which bridge is designated by the letter H and extends beyond
55 the lower apron over the drive or master wheel as shown. This arrangement of the parts as above described admits the greatest possible displacement of the under ply of the apron in the passage of the grain with the best gripping and feeding action. This will be understood by reference to the dotted lines in the drawing and a comparison of the construction here indicated with that shown in my former
60 Patents No. 487,223, dated November 29, 1892, and No. 456,722, dated January 5, 1892. The lower dotted line is designated by the letter *a* and the upper one by the letter *b* and these are designed to show two positions of the lower
65 ply of the upper apron. If there was no third roller then the lower ply could not be lifted beyond a straight line which would join the upper peripheries of the two rollers of the apron. If there was a third roller, but the
70 lower ply of the apron was carried normally by a ledge out of a straight line, then if the grain was thin and the mass presented at one time to such aprons correspondingly small, the grain might lodge and be difficult to feed
75 forward, by the aprons, but by carrying the lower ply in a straight line from the lower to the upper roller of the upper apron, and providing a third roller to lift the upper ply a sufficient distance, a proper feeding or gripping action for the light grain can be had,
80 and at the same time sufficient room provided for the greatest necessary displacement. In other words, such an apron as is last mentioned is adapted to both light and heavy grain; to light because it gives a good gripping action, and to heavy because it allows
85 sufficient displacement. At the same time by the combination of a straight lower ply and a third roller the outer end of the apron may be brought sufficiently low to form a proper sized delivery throat and thus insure
90 the proper feeding of the grain over the bridge or deck.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A harvester elevator comprising a lower

apron and an upper apron, the lower ply of which latter extends in a straight line, and the upper ply of which is deflected upward by means of a guide or roller; substantially as 5 and for the purpose set forth.

2. A harvester elevator comprising a lower apron and an upper apron, the lower ply of which latter extends in a straight line and the upper ply of which is provided with a guide or 10 roller arranged over the upper outer supporting roller of the lower apron substantially as and for the purpose set forth.

3. A harvester elevator comprising an upper and a lower apron the lower ply of the former 15 being on a straight line such line passing close to the discharge end of the lower apron and the upper ply of the upper apron being deflected upward over a third or idle roller; substantially as and for the purpose set forth.

20 4. A harvester elevator consisting of an upper and lower apron, the discharge side of the latter being located grainward of the master wheel, a stationary deck or bridge extending upward and across the top of the master wheel

thence downward to the binder deck, in com- 25 bination with an upper apron the lower or receiving end of which is located some distance from the upper ply of the lower apron and having its lower ply extending in a straight line and close to the stationary deck, the up- 30 per ply of said apron being deflected upward by means of the idle roller; substantially as and for the purpose set forth.

5. In a harvester elevator, in combination with the grain supporting element of the ele- 35 vator, an endless apron carrier overhanging such element, having its lower ply extending normally in a direct line oblique to the surface of said grain supporting element, and close thereto at the highest point of the latter, 40 said carrier being provided with a guide roller for its upper ply, located above a direct line between the extreme rollers; substantially as and for the purpose set forth.

MAURICE KANE.

In presence of—

G. A. LOWRY,

J. L. GERRY.