

M. E. HUNTER.
HARVESTING MACHINE.

No. 536,351.

Patented Mar. 26, 1895.

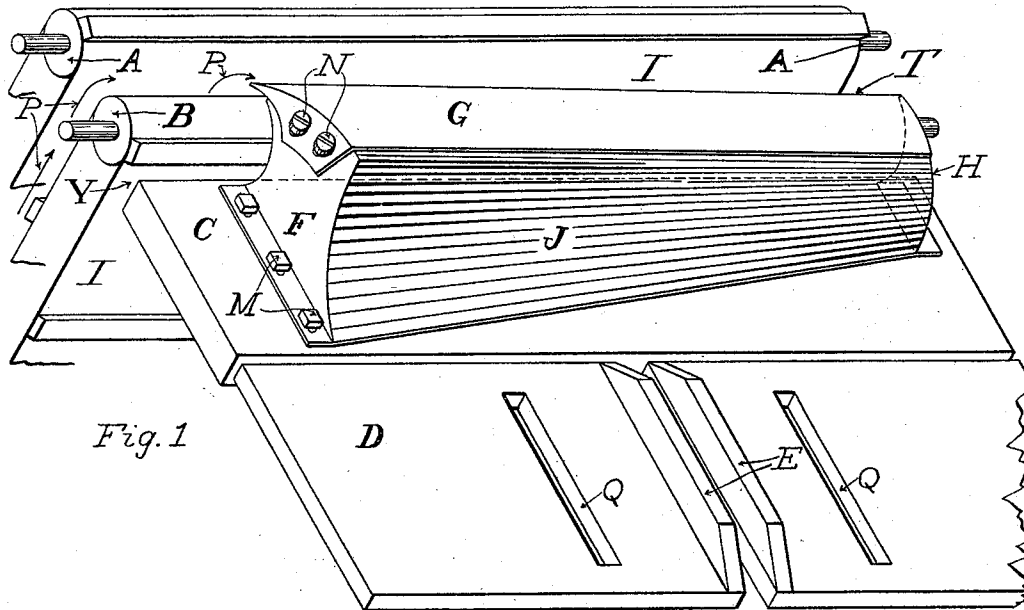


Fig. 1

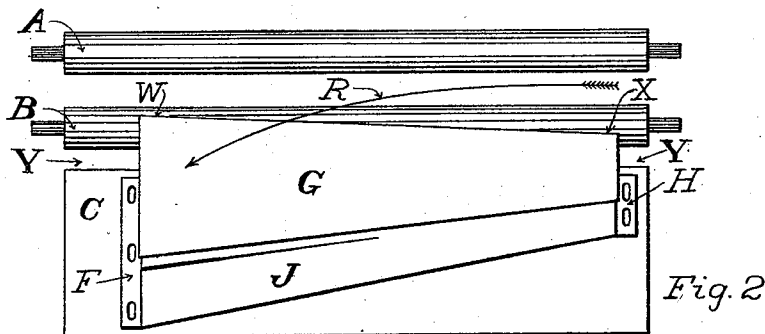


Fig. 2

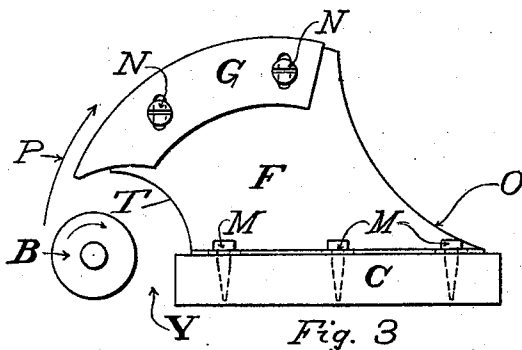


Fig. 3

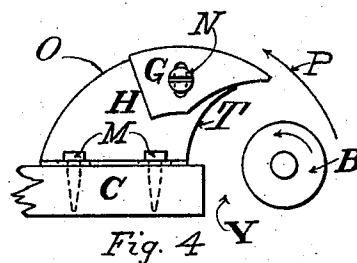


Fig. 4

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Fig. 5.

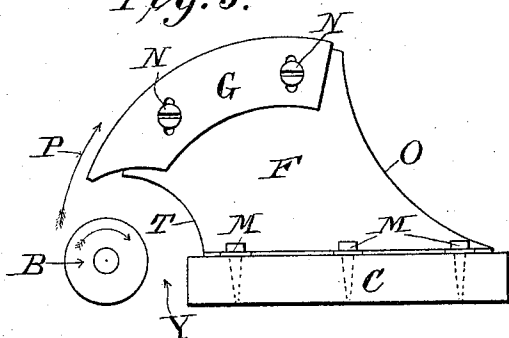


Fig. 6.

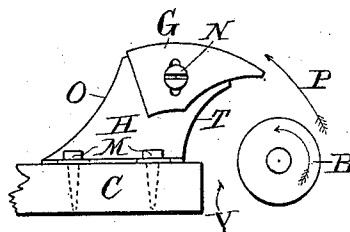


Fig. 7.

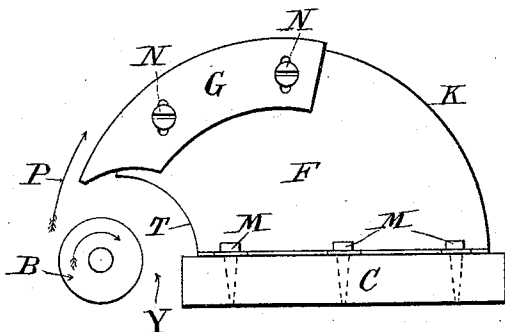


Fig. 8.

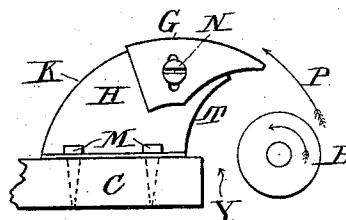


Fig. 9.

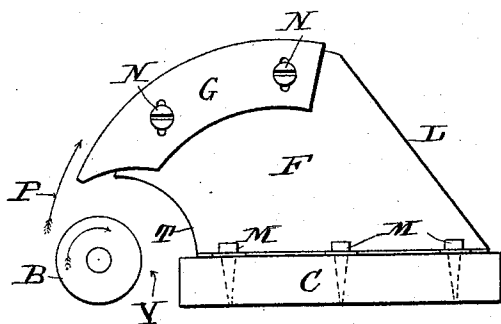
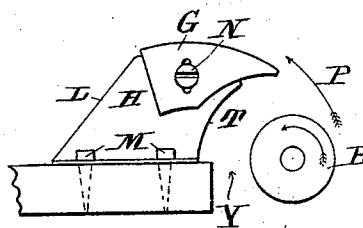


Fig. 10.



Witnesses:

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UNITED STATES PATENT OFFICE.

MARCUS E. HUNTER, OF WILLIAMSTOWN, MASSACHUSETTS.

HARVESTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 536,351, dated March 26, 1895.

Application filed June 11, 1894. Serial No. 514,167. (No model.)

To all whom it may concern:

Be it known that I, MARCUS E. HUNTER, a citizen of the United States, residing at Williamstown, in the county of Berkshire and State of Massachusetts, have invented new and useful Improvements in Harvesting-Machines, of which the following is a specification.

This invention relates to harvesters and binders, the object being to provide improved mechanism in said machines, whereby the "crop" shall be prevented from clogging between or just after escaping from the elevator rolls or aprons thereon; to insure the straightening thereof; and to prevent its backing up under the deflector on its way to the binding apparatus, and to better control its movements from said rolls, rearwardly.

In the drawings forming part of this specification, Figure 1 is a perspective view of certain parts of a grain binder, or harvesting machine, comprising the elevating rollers, the aprons thereon, and the usual inclined board adjoining said rollers, having my improvements applied thereto. Fig. 2 is a plan view of the principal parts shown in Fig. 1. Figs. 3 to 10 inclusive are end views of certain of the above mentioned devices, and are fully described below.

In the drawings, A and B indicate the ordinary elevating rollers, and I, I, the aprons thereon, of a harvesting machine, which serve to move the "crop" or grain upward and deliver it onto the inclined board, C, of said machine, and D is the inclined apron of such machine, adjoining the outer edge of said board, and on which the binding of sheaves of grain is finally effected. As ordinarily practiced, the "crop" is carried upward by said aprons, I, through the space, P, between the latter and is tumbled in considerable disorder upon the board, C, passing under the usual hood (not shown in the drawings) fixed above said board. Said manner of manipulating the "crop," the purpose of which is to cause it to move over the inclined board, C, downwardly onto the apron, D, where it may be bound, causes it, by a certain accumulation thereof at the upper end of the opening between the aprons, I, I, and the adjoining edge

of the board, C, to fall into said opening, and into the space, *y*, thereby deranging the continuity of the movement of the "crop" on the board, C, and apron D, and hindering, materially, the binding operation. Said clogging also tends to derange the grain stalks and prevent their presentation in relatively parallel positions to the binding devices, and causes the "crop" to "back up," so to speak, under the deflector, or against the front side of the table T. The above mentioned inconveniences are obviated by the use of the within described improvements, and the binding of the grain is very materially facilitated.

My said improvements consist in placing an elevated table, T, constructed as below described, upon said inclined board, or otherwise supported on the machine in like position, and so arranged that it receives the upwardly moving "crop" upon smooth, and preferably curved surfaces thereon, which serve to facilitate the proper movement of the grain and obviate said disturbance thereof which occurs as aforesaid, when it moves over a flat surface such as the board, C, presents. The said table, T, may be constructed of any suitable material, and it consists of a top, G, preferably of sheet, or other metal, having a surface curving upwardly and backwardly from the roller, B, over which one edge thereof extends, said table-top being supported by suitable end pieces F and H, as shown. Said end pieces are secured to the board, C, or other fixed part of the machine by bolts, M, or by other suitable means. Said top, G, is preferably so secured to said end pieces F and H, that it may be adjusted toward or from relative to said roll, B, in order to best adapt it to the requirements of the grain operated upon. One convenient manner of providing for said adjustable feature of the table-top is that shown in Figs. 3 and 4, viz.,—by elongating the holes through which the screws, N, pass which secure the turned down end of said top to said end pieces F and H. Said table, T, is made, preferably, with one end wider than the other, as shown, in order to secure a more uniform movement of the "crop" thereover, the latter being fed between the said aprons, and rollers, A, B, so that the

grain-bearing ends thereof will be brought onto said wider end of the table which their greater bulk and weight requires for proper support, while the lighter butt ends pass over the narrower end of the table, where they encounter a surface resistance proportionate to their bulk. This provision of varying superficial surface over which the grain moves on its way to the binding devices secures a uniform sidewise motion of the "crop," and keeps it in better form for binding.

The arrow, R, Fig. 2, indicates, approximately, the form which the moving "crop" assumes when it first reaches said table, but it becomes straightened while passing over it and is dropped directly upon the "packers" at Q, Fig. 1, where the usual binding action is immediate.

E indicates the usual bundle-sizers.

As shown in Fig. 2, the edge, W, X, of the table, T, adjoining the roller, B, is diagonal to the axis of the latter. Thus the end, W, of said edge is brought forward over said roller to better support the top end of the "crop" and the butt, or bulkier end thereof easily passes over the end, X, of said edge. Figs. 3 and 4 illustrate the opposite ends of table, T, and the relation thereto of the roll, B, when taken in connection with the said diagonal line of the edge of the top, G, relative to the axis of said roll.

The side, J, of the table, T, is of gradually reduced width from the end, F, thereof to the opposite end H, and said side has a warped surface, that is, it is concave at the end F, and convex at the end H. This is the preferred form for general use, or for the average weight of "crop" for the reason that said form serves to aid in bringing the latter onto the binding apron, D, in good position for binding it.

If more room is desired between the edge of apron, C, and the roller, B, or varying movements of crop seem desirable, the varying surface-forms for the side, J, over which the crop moves after leaving the table top, G shown in Figs. 3 to 10, inclusive, may be employed, said side in said figures being indicated in Figs. 3, 4, 5 and 6, by O; in Figs. 7

and 8, by K; and in Figs. 9 and 10, respectively, by L.

What I claim as my invention is—

1. In a harvesting machine, the combination with the crop-elevating devices thereof, of a table fixed at the side of said devices and extending thereabove, on which the crop is deposited by said devices, the top of said table having a convex form in cross section, and having one edge extending over one of the rolls of said elevating devices, substantially as set forth.

2. In a harvesting machine, the combination with the crop-elevating devices thereof, of a table fixed at the side of said devices and extending thereabove, on which the crop is deposited by said devices, the top of said table having a convex form in cross section, and having one edge thereof extending over the adjoining roll of said elevating devices, and extending diagonally to the axis of said roll, substantially as set forth.

3. In a harvesting machine, the combination with the crop-elevating devices thereof, of a table of tapering form from end to end fixed on the side of said devices and extending thereabove, on which the crop is deposited by said devices, the top of said table having one edge thereof extending over the adjoining roll of said elevating devices, and a rear side having one end concave and the opposite end convex, thereby producing a warped surface, substantially as set forth.

4. In a harvesting machine, the combination with the crop-elevating devices thereof, of a table of tapering form from end to end fixed on the side of said devices and extending thereabove, on which the crop is deposited by said devices, the top of said table being adjustably secured thereon and having a convex form in cross section, and having one edge thereof extending over the adjoining roll of said elevating devices, substantially as set forth.

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Witnesses:

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