

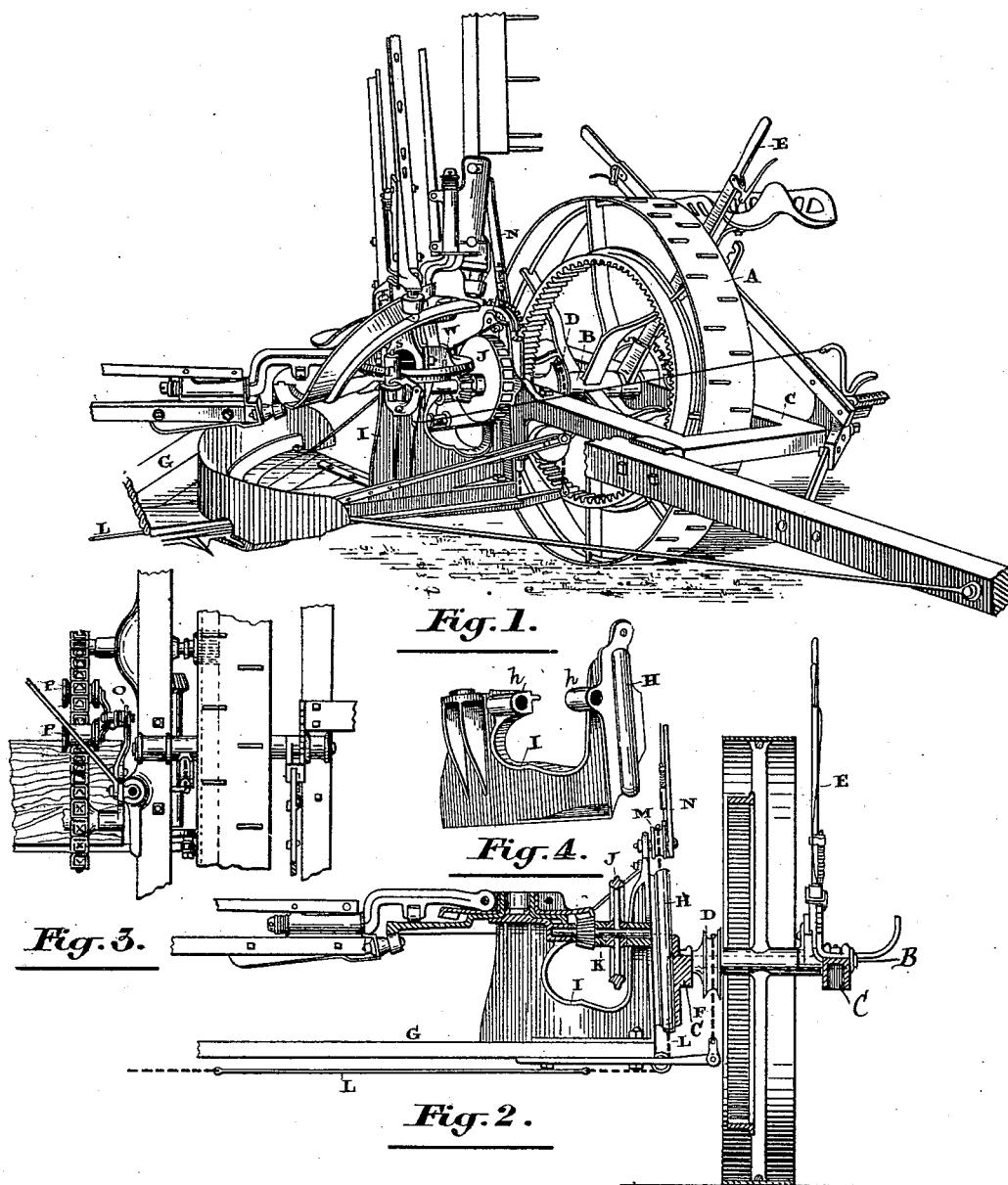
(No Model.)

2 Sheets—Sheet 1.

J. C. McLACHLAN.
HARVESTING MACHINE.

No. 262,604.

Patented Aug. 15, 1882.



Witnesses.

Lewis Toulson

C. W. Baldwin

Inventor.

J. C. McLachlan
by Ridout, Reid & Co

1882

(No Model.)

J. C. McLACHLAN.

2 Sheets—Sheet 2.

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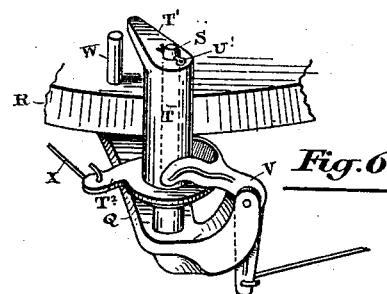


Fig. 5.

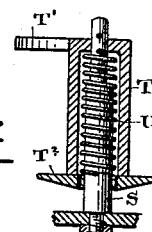


Fig. 6.

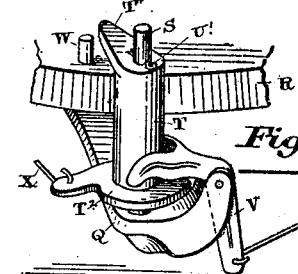


Fig. 7.

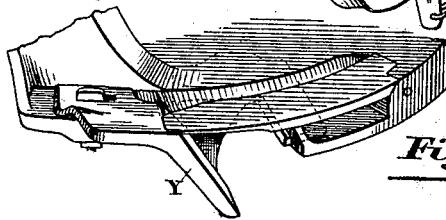


Fig. 8.

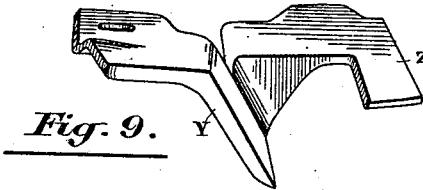


Fig. 9.

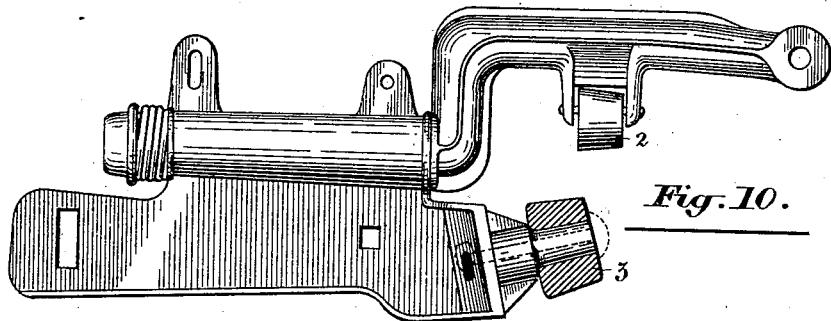


Fig. 10.

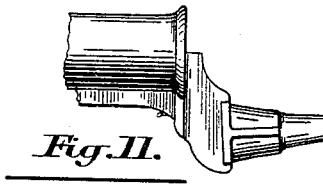


Fig. 11.

Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN C. McLACHLAN, OF PATTERSON, ONTARIO, CANADA, ASSIGNOR TO
PETER PATTERSON, OF SAME PLACE.

HARVESTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 262,604, dated August 15, 1882.

Application filed November 8, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN CAMPBELL McLACHLAN, of the village of Patterson, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Harvesting-Machines, of which the following is a specification.

My invention relates to certain improvements in that class of harvesting-machines in which the grain-table and cutter-bar work independently of the main frame; and it has for its object to simplify the construction of the machine.

Figure 1 is a perspective view of that portion of the machine upon which my improvements are made. Fig. 2 is a cross-section of a portion of the machine, showing the main driving-wheel and rake-jack. Fig. 3 is a detailed plan, showing device for tightening the sprocket-chain. Fig. 4 is a detail of the casting forming the rake-jack and cross-head for connecting the grain-table to the main frame of the machine. Figs. 5, 6, and 7 are details, showing construction of my improved adjustable trip. Figs. 8 and 9 are details, showing my improved throat. Fig. 10 is a detail of the rake arm and rake-head. Fig. 11 is a detail of the inwardly-projecting end of the rake-head.

The main driving-wheel A revolves freely upon its axle B. This axle is supported at both ends in suitable bearings in the rectangular frame C, situated on each side of the main driving-wheel A.

D is a sheave, keyed or otherwise fastened to the inside end of the axle B.

E is a hand-lever, similarly fastened to the axle B on its outer end. A chain, F, connects the sheave D to the bottom of the grain-table G. A suitable notched quadrant is provided for the hand-lever E, in order to hold it in any desired position. It will be seen that by moving this handle the inner side of the grain-table will be raised or lowered as desired.

A cross-head, H, is formed on the inner side of the casting I. This cross-head fits into a vertical groove made in the frame C, in the position indicated, its form being clearly shown in Fig. 3. This connection permits the free vertical movement of the grain-table, which is bolted, as shown, to the casting I. This cast-

ing, it will be noticed, forms a rake jack to support the entire rake mechanism, besides constituting the cross-head, as before mentioned.

By having a casting made in the manner shown in the drawings the rake mechanism may be placed much closer to the main driving-wheel than when these parts are made separately. Consequently much more room is gained on the grain-table for the grain, insuring a more satisfactory delivery of the grain from off the table.

The sprocket-wheel J and bevel-pinion for driving the rake-wheel are carried on the same spindle, K. In order to prevent any twisting strain being exerted upon the spindle, I cast or rigidly fasten together the pinion and sprocket-wheel, the strain being thereby directly transmitted from the sprocket-wheel to the pinion.

It will be noticed by the drawings that the cross-head H has a vertical hole passing through it. This hole is to permit the passage of the chain or rod L, which leads from the grain-wheel on the grain-wheel side of the machine, along the bottom of the table over suitable rollers, and up through this passage-way, its upper end being fastened to the sheave M, operated by the hand-lever N.

As the position of the grain-wheel is well understood, and as I do not claim anything peculiar in the manner of connecting the chain L to it, I have not shown nor is it necessary to indicate it in the drawings. It will be sufficient to say that by pivoting the hand-lever N and connecting it to an adjusting-chain, L, the grain-wheel side of the table can be adjusted by the driver without moving from his seat, and, moreover, the grain side will be adjusted without affecting the inner side of the table.

On reference to Fig. 3 it will be noticed that an arm, O, is fastened to the cross-head H, its other end having pivoted to it the belt-tightening rollers P, the connection between the arm and rollers being provided with a spiral spring arranged to exert strain upon the rollers P. It will be seen by connecting these tightening-rollers to the cross-head that, notwithstanding any vertical movement of the table, the sprocket-chain will always be kept taut.

On reference to Figs. 5, 6, and 7 my improvements in the tripping device will be understood. An arm, Q, is fastened to the casting I and extends beyond the outer rim of the 5 rake-wheel R. Extending vertically from the arm Q and fastened thereto I provide a spindle, S, over which the sleeve-casing T fits, as indicated. The upper end of this sleeve is provided with an arm, T', extending over the upper 10 surface of the rake-wheel R. The spiral spring U fits over and is fastened to the spindle S within the sleeve or casing T in such a manner as to support it. By compressing this spring the arm T' can be brought closer to the 15 surface of the rake-wheel R and held in any desired relative position by means of a pin, U', passing through the end of the spindle S. A bell-crank, V, is pivoted upon a suitable projection formed in the end of the arm Q, and is 20 formed with a bifurcated end extending on each side of the sleeve or casing T, so arranged that its end will come against the flange T² formed on the bottom of the sleeve T. This bell-crank V is connected in the ordinary manner 25 to a foot or hand lever situated near the driver, who, by moving it in the usual way, can cause the arm T' to come closer to the upper surface of the rake-wheel R, so that it will come in contact with the pins W, arranged in 30 its surface for the purpose of tripping the rakes, which is done by means of a trip connected to the sleeve or casing T by the rod X, in the ordinary manner. The pins W, which may be cast or otherwise formed on the upper surface 35 of the rake-wheel, are made of different lengths, so that if desired the arm T' may be set to come in contact with one while passing over the others. For this purpose it will be noticed that two or more pin-holes are made in the end 40 of the spindle S, so that the arm T' can be adjusted to come in contact with the pins W, or to miss them if it is not desired to make the machine trip automatically.

In Figs. 8 and 9 my plan of making the 45 justable throat is indicated. This throat is intended to be situated in the rake-track on the grain-delivery side of the table, and is so placed for the purpose of imparting a rear tilt to the rakes as they deliver the grain.

50 It will be seen on reference to the figures

that I cast in one piece an inclined guide, Y, and the horizontal piece Z. This is done for the purpose of permitting the tread formed between these two parts to be adjusted without widening or otherwise increasing the size of 55 the throat.

On reference to Fig. 10 it will be noticed that the friction-roller No. 2 is supported in jaws cast on the bottom of the rake-arm, while the friction-roller 3 is secured to the rake-head 60 by a bolt passing through an elongated hole or slot made through the internally-projecting end of the rake-head. This slot or elongated hole permits the adjustment of the friction-roller 3 in order to provide for any wear caused 65 by the rocking of the roller off the track.

What I claim as my invention is—

1. In a harvesting-machine, the casting I, bolted solidly to the grain-table, and provided with a cross-head, H, adapted to connect to 70 and move vertically in the main frame, and with bearings for carrying the spindle of the driving-pinion, substantially as described.

2. In a harvesting-machine, the casting I, provided with the cross-head H, bearings h h, 75 and forming a rake-jack to support the entire rake mechanism, substantially as described.

3. In a harvesting-machine, a casting bolted rigidly to the grain-table and constructed to form the sliding cross-head connecting the 80 table and main frame, in combination with a lifting-lever pivoted on said casting and a chain connected to the lever and passing through the cross-head, substantially as and for the purpose specified.

4. In a harvesting-machine having a rolling rake-head, a friction-roller secured to the rake-head by a bolt passing through an elongated hole or slot made through the internally-projecting end of the rake-head.

5. In a harvesting-machine, the combination, with a rake-wheel, R, provided with pins or projections W, of the sleeve T, arm T', flange T², spindle S, spring U, and the lever V, substantially as and for the purpose specified.

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Witnesses:

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H. H. WARREN.