M. K. CHURCH.

Reel-Rakes for Harvesters.

No. 133,966. Patented Dec. 17, 1872.

Fig: 1.

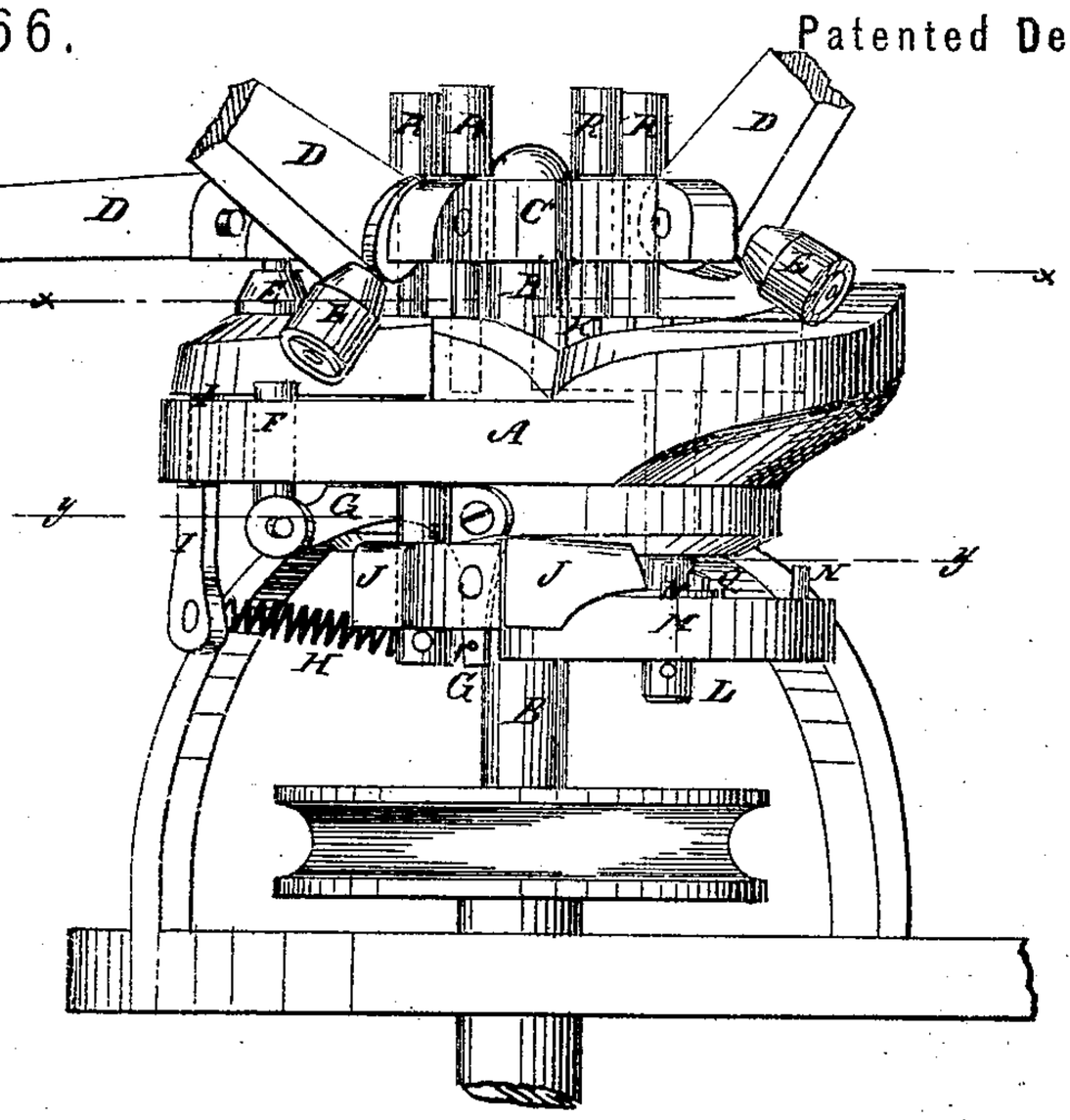


Fig: 2.

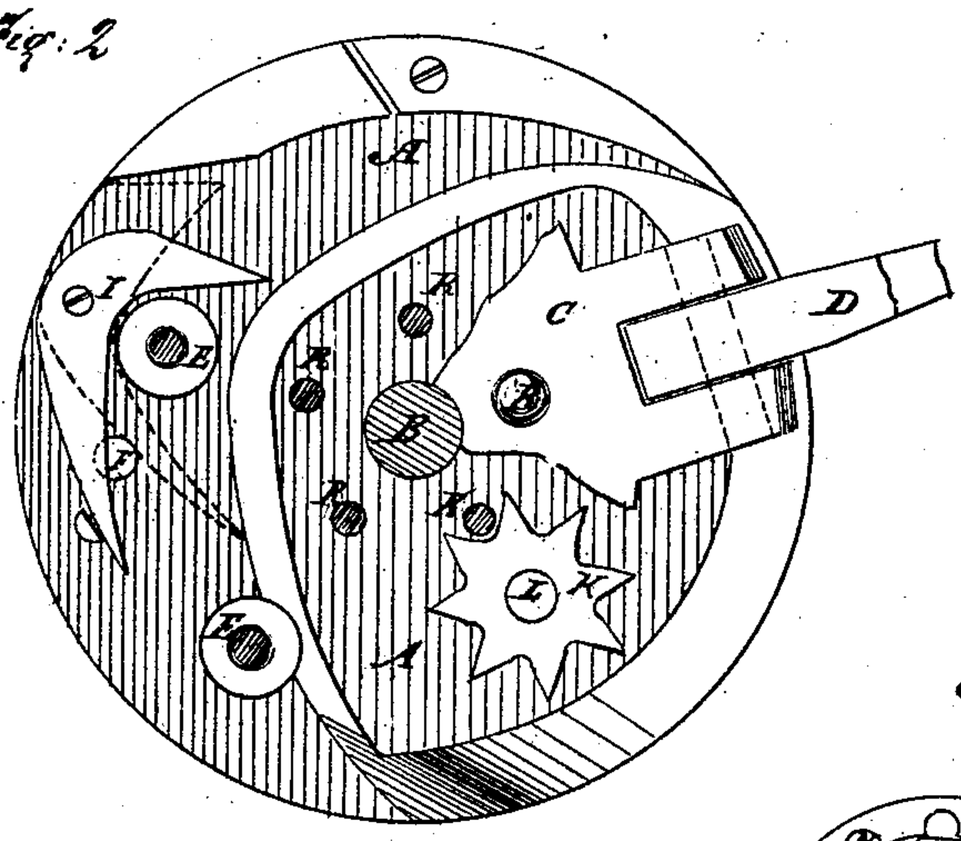


Fig: 4.

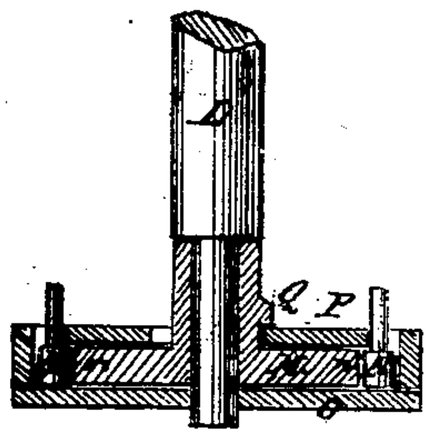
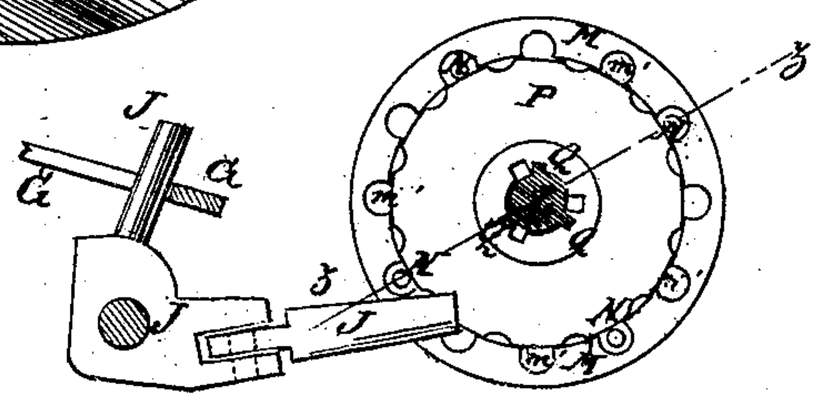


Fig: 3.



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UNITED STATES PATENT OFFICE.

MUNSON K. CHURCH, OF STAMFORD, CANADA.

IMPROVEMENT IN REEL-RAKES FOR HARVESTERS.

Specification forming part of Letters Patent No. **133,966**, dated December 17, 1872.

To all whom it may concern:

Be it known that I, MUNSON K. CHURCH, of Stamford, in the county of Welland, Province of Ontario, and Dominion of Canada, have invented a new and useful Improvement in Automatic Trip for Harvester-Rakes, of which the following is a specification:

Figure 1 represents my improved device as applied to the raking mechanism of a harvester. Fig. 2 is a top view of the same, partly in horizontal section, through the line *x x*, Fig. 1. Fig. 3 is a detail horizontal section of the same taken through the line *y y*, Fig. 1. Fig. 4 is a detail section taken through the line *z z*, Fig. 3.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an automatic trip for opening the gate or operating the lever that controls the rake of a harvester, and which shall be so constructed that it can be set to open the gate each time, at every second, third, fourth, fifth, or sixth time a rake passes the table; and it consists in the combination of a toothed or notched wheel, a shaft, a perforated wheel, shouldered pins, and notched guard-plate with each other, as hereinafter more fully described.

A represents the plate upon which is formed the way that guides the reel-arms. B represents the shaft that drives the reels, and to which motion is given by a band or gearing from the driving mechanism of the harvester. C is the reel-plate which is attached to the upper end of the shaft B, and to which are pivoted the reel-arms D. Each of the reel-arms D is provided with a pin or roller, E, which moves along the way of the plate A, and by entering the branch-way, when the gate is open, lowers the reel-arm to sweep across the platform of the harvester and act as a rake. F is a pin that passes up through the plate A so that its upper end may project to hold the gate locked. To the lower end of the pin F is pivoted the end of a bent lever, G, which is pivoted at its angle to some suitable stationary support. To the other end of the bent lever G is attached one end of a spring, H, the other end of which spring is secured to the outer end of an arm rigidly attached to the lower end of the pivot I, which pivot passes up through the plate A, and to the upper end of which the gate of the guide-way of said plate is attached. The tension of the spring H thus holds the pin F up to lock the said gate, and at the same time opens the gate when the said pin is withdrawn. J is a bent lever pivoted at its angle to some suitable stationary support, and one end or arm of which rests against an arm of the bent lever G, so that the locking-pin F may be withdrawn to open the gate by operating the said lever J. K represents a toothed or notched wheel, attached to the upper end of the shaft L, which revolves in bearings in the plate A, or some other suitable support. To the lower end of the shaft L is attached a wheel, M, in the upper side of which are formed as many holes *m'* to receive pins N as there are teeth or notches in the wheel K. The holes *m'* are arranged in a circle, and may pass partly or wholly through the wheel M. In the latter case a plate, O, should be attached to the lower side of the wheel M to prevent the pins N from dropping through. The upper side of the wheel M is recessed to receive the guard-plate P, said recess extending about one-sixteenth of an inch over the holes *m'*, as shown in Figs. 3 and 4. In the edge of the guard-plate P are formed notches corresponding in position with the holes *m'*, and of sufficient size to allow the pins N to be inserted in the holes *m'*, when the said plate P has been turned to bring its notches opposite the holes *m'*. Upon the pins N are formed shoulders a sixteenth of an inch wide, and in such positions as to be flush with the bottom of the recess in the wheel M, so that by turning the plate P slightly it may lock the pins N in place. The hub of the wheel M or the shaft L has lugs Q formed upon it which pass through notches in the inner edge of the guard-plate P, and which, when the said plate has been turned to lock the pins N, lock the said plate P in place. The plate P may be kept from being jarred out of place by a set-screw. The wheel K is turned by pins R attached to the reel-plate C, or to some other plate attached to the shaft B, or by cogs attached to said shaft B. By using a pin, R, for each rake, the wheel K will be moved one tooth or notch as each rake passes the table, so that by placing a pin, N, in each hole *m'* of the wheel M in each second hole, or in each third, fourth, or

sixth hole, the lever J will be operated as each rake, or as each second, third, fourth, or sixth rake passes the table.

In case the machine has five rakes, and it is desired to have every fifth rake operate, one pin, R, is used to drive the wheel K, and a pin, N, is inserted in each of the holes *m'*.

By this arrangement the wheel K will be moved one tooth or notch as each fifth rake passes the table, and each fifth rake will be made to operate. The lever J is jointed, as shown in Figs. 1 and 3, so that it may be thrown back, when desired, from contact with the wheel M, and the rakes controlled by hand.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the toothed or notched wheel K, shaft L, perforated wheel M *m'*, shouldered pins N, and notched guard-plate P with each other, substantially as herein shown and described, and adapted to be used in connection with the mechanism of a harvester-rake, as and for the purpose set forth.

MUNSON KNAPP CHURCH.

Witnesses:

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