C. P. Wing,
Harvester Cutter.

No. 42248. Patented April 5 1864.

Fig. I.

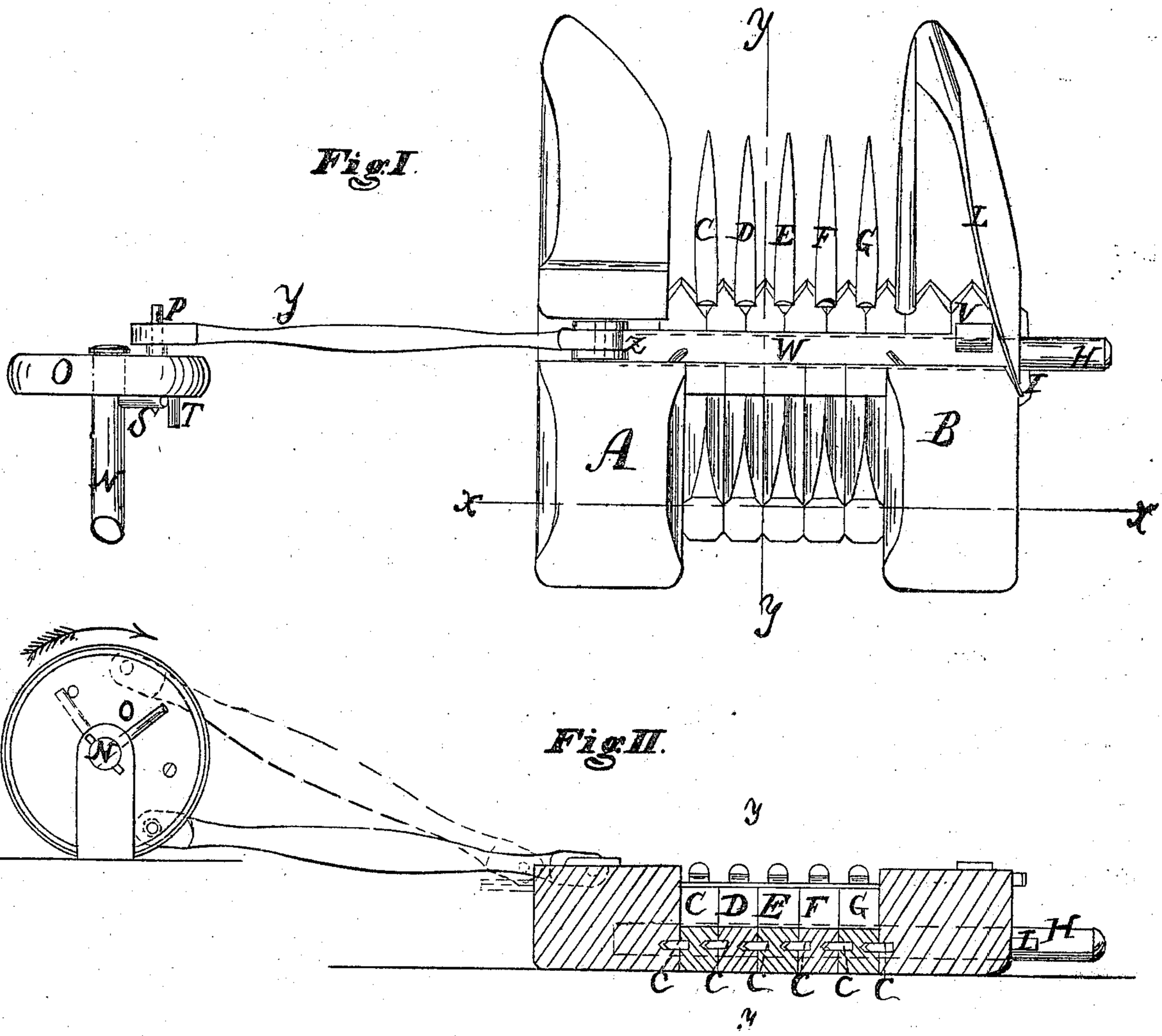


Fig. II.

Fig. III.

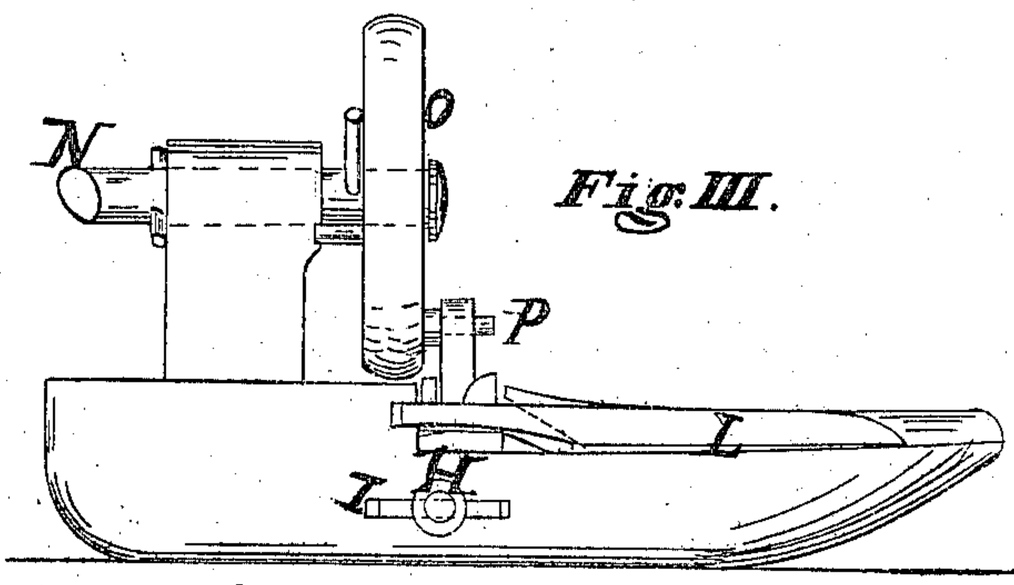
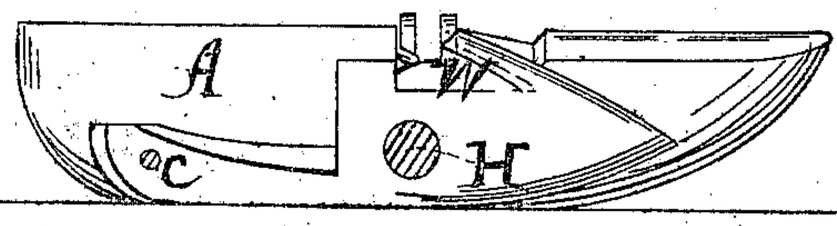


Fig. IV.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES P. WING, OF FAYETTEVILLE, NEW YORK.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **42,248**, dated April 5, 1864.

To all whom it may concern:

Be it known that I, CHARLES P. WING, of Fayetteville, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Harvesters; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan or top view of my invention. Fig. 2 is a vertical transverse section of the same in the line *x x*. Fig. 3 is a side elevation thereof. Fig. 4 is a section in the line *y y*.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to produce a harvesting-machine which will operate in a more perfect and expeditious manner, and at the same time may be constructed at less cost than machines of this class as heretofore constructed.

My invention consists, first, in a peculiar arrangement of devices for imparting motion to the cutter-bar; second, in a device for preventing injury to the grain, all as will be hereinafter fully explained.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

In the accompanying drawings, A B may represent the shoes, and C D E F G the fingers or guards, which latter are mounted upon a rod, H, which is inserted and securely fastened into the shoe A at one end, passes through the fingers or guards and through the shoe B, and is adapted to retain all securely together by means of a key, I, or other suitable locking device. Near their rear ends these fingers or guards are each formed with a pin, *c*, which pins project from the sides of said fingers and enter corresponding apertures in the sides of the adjacent fingers, so as to prevent any vertical movement or displacement of the several fingers, the pins of the end fingers, C and G, taking into corresponding apertures in the shoes A B, and thus securing the entire series.

From the above description it will be seen that the fingers or guards, constructed and arranged as shown, and secured together in the manner described, constitute a substantial and durable finger-beam.

N represents a shaft, to which motion may be imparted by a gear-connection with the carrying-wheels of the machine, said shaft being journaled in any suitable bearing. Upon one end of this shaft is loosely secured a crank-wheel, O, which is caused to revolve by means of a pin, S, on the shaft N, which comes in contact with a projection, T, on the wheel O. The crank-wheel O is adapted to revolve independently of the shaft N for the purpose to be explained.

Y represents a pitman connected to the wheel O by a crank-pin, P, and jointed at Z in customary manner to the cutter-bar W.

L represents a spring secured to the forward end of the shoe B, and adapted to yield in an outward direction to the pressure of the cutter-bar W. This spring L incloses the end of the cutter-bar and prevents the same, when advanced beyond the outer edge of the shoe B, from coming in contact with and consequently tearing or injuring the standing grain.

Operation: By my improved devices for imparting motion to the cutter-bar the same receives a much longer stroke than that given the cutter-bar of harvesting-machines as hitherto constructed. This difference in the extent of the stroke given the cutter-bar by my improved method as compared with that received by the cutter-bar of other harvesting-machines may be illustrated as follows: The cutter-bar W occupying a position in which the knife V is at the center of the finger C, it will be supposed that the cutter is advanced from this point to its utmost extremity in the direction of the shoe B. This stroke carries the said knife V to the center of the finger G, each knife working through four cutting-spaces, whereas by the mechanism commonly employed to reciprocate the cutter-bar the knife V would only be moved to the center of the finger E. This arrangement adapts the cutter-bar to be moved with the requisite rapidity without the employment of multiplying gears, and also adapts the cutter-bar to be operated by less power.

The wheel O, being loosely journaled upon the shaft N, is adapted by its momentum to revolve with increased velocity at certain stages in the reciprocation of the cutter at which the same would otherwise move tardily or slowly, and thereby maintain a uniform regular motion.

The manner described of forming the finger-board—that is to say, so that the fingers themselves will constitute the beam and guards for the cutter-bar—provides means for the substitution of fingers for any that may have become deranged or broken. This may be done by merely withdrawing the key I, which allows the shoe B to be removed. Any or all of the fingers may then be slid off the rod H and replaced with great facility.

The shoes A B, and more especially the latter, need not be of greater width than those commonly in use, the spring L preventing injury to the grain by the knives on the end of the cutter in the manner already explained.

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

1. The pin or projection S in the shaft N, in combination with the pin or projection T in the wheel O, for the purpose specified.

2. The spring-guard L for the purpose of protecting the standing grain or other material outside of the shoe B from the knife V and those following, as described and specified.

CHARLES P. WING.

Witnesses:
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