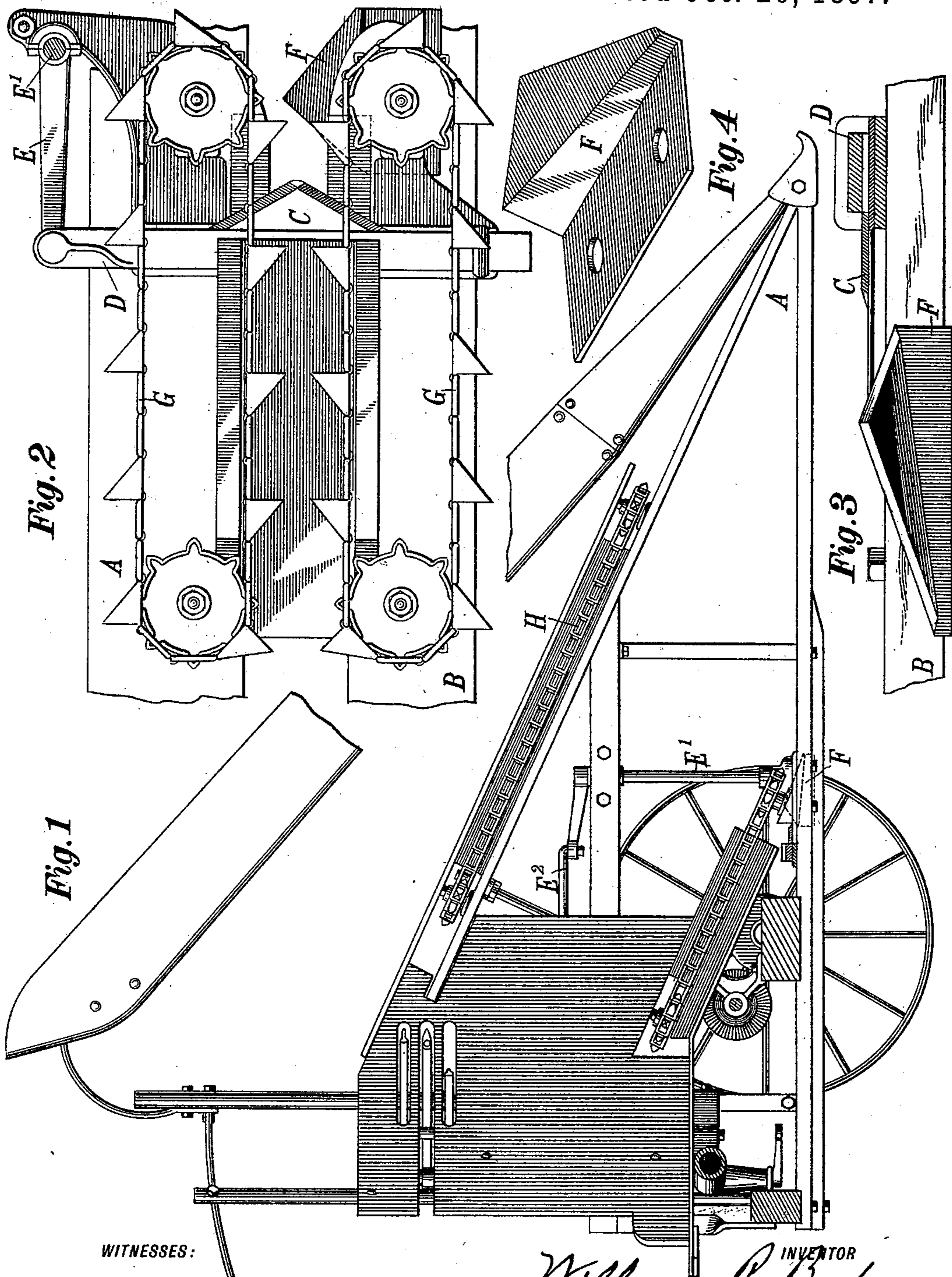


(No Model.)

W. R. BAKER.
CUTTING MECHANISM FOR CORN HARVESTERS.

No. 592,720.

Patented Oct. 26, 1897.



WITNESSES:

E. E. Clinton.
Oscar Laderach

INVENTOR
William R. Baker
BY John M. Culver.
ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM R. BAKER, OF CHICAGO, ILLINOIS.

CUTTING MECHANISM FOR CORN-HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 592,720, dated October 26, 1897.

Application filed February 23, 1895. Serial No. 539,708. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. BAKER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Cutting Mechanisms for Corn-Harvesters, of which the following is a specification.

My improvement consists in a stationary knife or knives located in the passage-way between gathering-prongs of a corn-harvesting machine, which knife is intended to sever the standing corn as the machine is drawn against it, while behind this knife is a reciprocating knife positioned to cut any stalks that may pass the stationary knife, as well as grass, weeds, and trash that pass the stationary knife.

While my improvement is applicable to any type of a corn-harvesting machine, I have shown it applied to a machine of the type patented by Albert S. Peck, January 5, 1892, No. 466,512. In this machine forwardly-projecting prongs embrace the corn on each side of the row, lifting and straightening it as the machine is drawn forward, which prongs confine the stalks and conduct them to the knife that is positioned between them.

My improvement has other features which relate to the specific construction and attachment of the knife or knives, which will be pointed out in the specification and illustrated in the drawings.

In the drawings, Figure 1 is a longitudinal elevation, partly in section, looking onto one of the forwardly-projecting prongs of a corn-harvesting machine, it being understood that a similar prong is located on the other side of the row. Fig. 2 is a plan view showing the knives together with the lower set of forwarding devices that sweep the corn across the knives and to the rear. Fig. 3 is a section across the reciprocating knife, showing the stationary knife as it projects into the stalk passage-way, while Fig. 4 is a perspective view of a stationary knife, removed from the machine.

The machine upon which my improvement is positioned can be any of the many well-known types, and horses can be attached to it to move it through the field in any of the many well-known ways. I have shown it attached,

in the drawings, to a machine having a pair of forwardly-projecting prongs, one prong of which, A, is shown in Fig. 1, while the other prong is of a similar construction, the base of which is shown and lettered B in Fig. 2. These two prongs project forwardly from the machine and embrace the row upon either side and conduct it to the cutting mechanism, which is located across the slot thus formed.

My cutting device consists of a reciprocating knife C, which is attached to the bar D, that is given motion by the vibrating crank-arm E and its shaft E', that is actuated by the pitman E², that receives its power from the forward motion of the machine. Cutting devices of this kind, as thus far explained, are well known and in common use in machines of the Peck type. As an assistance to this knife, as frequently corn is grown in hills containing several large stalks through which the reciprocating knife can hardly penetrate, I place in the stalk-slot a knife F of the form shown in Fig. 4. This knife projects nearly across the slot and is located in such a position in relation to the forwarding devices G, that are positioned on both sides of the stalk row, that it will be swept by these forwarding devices in their onward movement and be kept clean, while any trash or broken stalks or ears will be carried by these forwarding devices from the knife and to the rear.

The knife F has its cutting edge extending outwardly into the path of the row of corn and upwardly and rearwardly, so that it tends to give a slanting cut to the cornstalks. It will be noticed from Fig. 3, which shows the knife bolted to the sill B of the corn-machine, that its cutting edge begins beneath the plane of the reciprocating knife and extends outward, rearward, and upward and stops when it has practically reached the plane of the reciprocating knife. The diagonal or slanting cut thus given is the one given by hand operatives as they cut corn, and has been found to be a very easy cut, while the stopping of the cutting edge in practically the plane of the reciprocating knife causes the reciprocating knife to pass beneath the stalks that have been severed as they are grasped by the chains and carried rearwardly, sliding up the incline of the stationary knife and the inclined way to the rear. The stalks that are

but partly severed have the gash in them so opened that the reciprocating knife will enter it, and thus be relieved from the strain of cutting the entire stalk, while any grass, weeds, or stalks that are not stiff enough to stand cutting by the stationary knife will pass by it and be severed by the reciprocating one.

By reference to Fig. 1, and remembering that a similar prong to A is located on the other side of the stalk-row and that there is located upon it a forwarding device similar to the forwarding device H on the prong A, it will readily be seen that the cornstalk is grasped before it reaches the knife and is kept in a vertical position and carried to the rear. Being thus grasped by forwarding devices located in a plane above that of the knife it is plain that any failure on the part of the knife to cut the corn will produce a heavy draft in the machine, because the corn will have to slip through the forwarding devices or be drawn up by the roots, in either of which events the stalk-slot will become filled and clogging ensue. An easy method of cut and one that has sufficient capacity to do the work thus becomes essential in machines of this type.

As before remarked, the stationary knife must not extend entirely across the stalk passage-way. There must be an opening for grass, trash, weak and lodged stalks to pass by it to the reciprocating knife. Whether this stationary cutting is done with one wide knife or with two narrower ones, leaving the opening to the rear between them in place of at the side, as shown in the drawings, so long as the stationary knives give the slanting cut I see no difference in principle and think my invention covers either construction.

Having now described my invention, what I claim is—

1. In combination in a corn-harvesting machine, a stationary knife located in the stalk passage-way, a reciprocating knife moving

across the stalk passage-way in the rear of the stationary knife, the cutting edge of the stationary knife being inclined in an outward, upward and rearward direction, and ending in practically the same plane as that in which the reciprocating knife moves.

2. In combination in a corn-harvesting machine, a stationary knife located in the stalk passage-way, a reciprocating knife moving across the stalk passage-way in the rear of the stationary knife, forwarding devices so located as to sweep the stalk passage-way over the stationary knife, the stationary knife having an outward, upward and rearward inclined cutting edge which ends in a plane practically the same as that of the reciprocating knife, whereby the stalks are carried to the rear across the cutting edge of the stationary knife and to the reciprocating knife, substantially as and for the purpose specified.

3. In combination in a corn-harvesting machine, a stationary knife positioned in the stalk passage-way and so located as to be swept by forwarding devices that move along it to the rear, a moving knife located to cut across the stalk passage-way and having its cutting edge rearward of the cutting edge of the stationary knife, whereby any stalks and trash that are carried past the stationary knife have an opening in which to be acted upon by the reciprocating knife which opening is wider than the opening in the stalk passage-way at the place where the stationary knife is located.

4. In a corn-harvesting machine in combination with the reciprocating knife, a stationary knife on one side of the stalk passage-way extending into the stalk passage-way and terminating before it reaches the path traversed by the reciprocating blade.

WILLIAM R. BAKER.

Witnesses:

OSCAR LAEDERACH,
ELIZA S. BAKER.