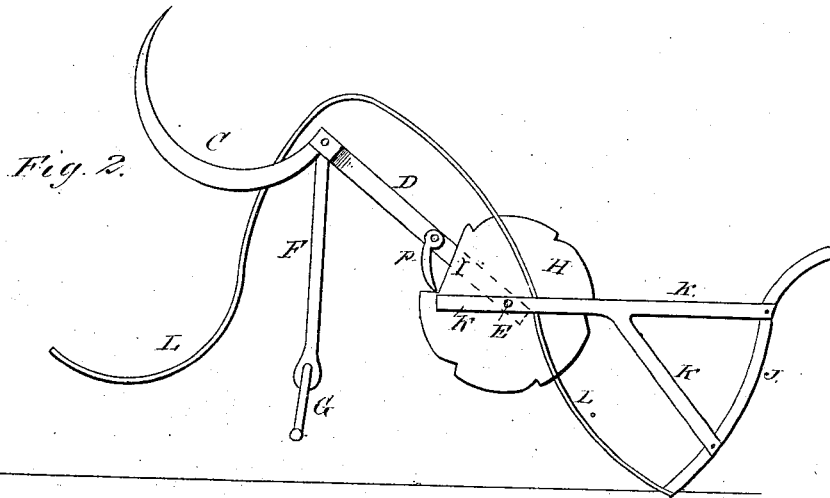
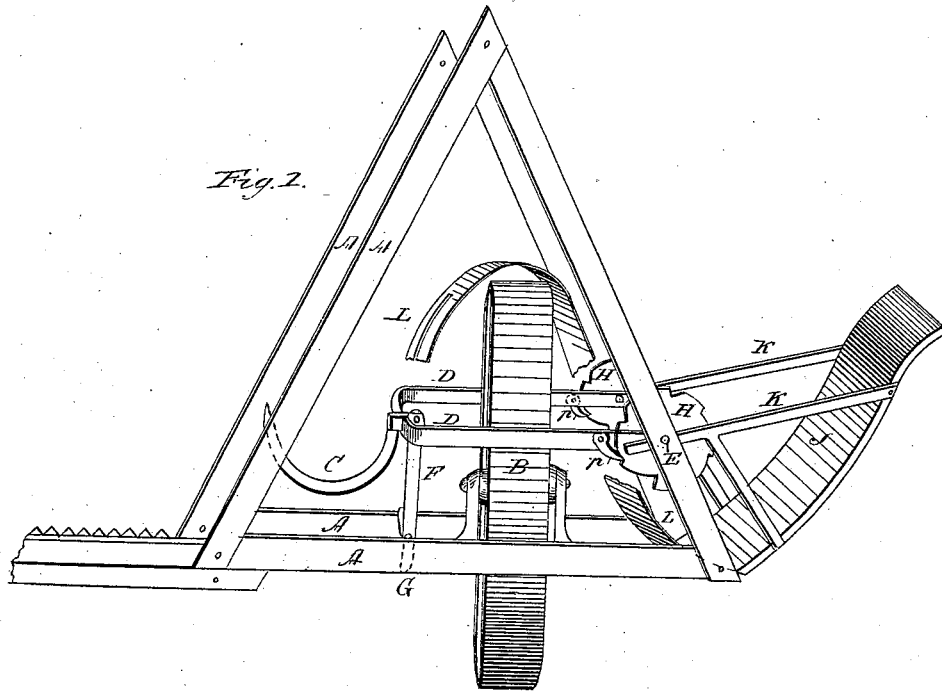


(No Model.)

O. L. CASTLE.
GRAIN HARVESTER.

No. 265,579.

Patented Oct. 10, 1882.



Witnesses,
L. M. Castle
J. H. Levens

Inventor.
O. L. Castle

UNITED STATES PATENT OFFICE.

ORLANDO L. CASTLE, OF UPPER ALTON, ASSIGNOR OF ONE-SIXTH TO THE
McCORMICK HARVESTING MACHINE COMPANY, OF CHICAGO, ILLINOIS.

GRAIN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 265,579, dated October 10, 1882.

Application filed February 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO LANE CASTLE, of Upper Alton, in the county of Madison and State of Illinois, have invented a new and useful Improvement in Grain-Harvesters, of which the following is a specification.

The invention relates to harvesting machines that employ an automatic binding apparatus; and its object is to furnish a suitable and convenient receptacle for the sheaves as they are successively delivered from the binder, which shall retain them until a desirable number have accumulated therein, and then dump them automatically.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a rear perspective of so much of an ordinary harvester as immediately affects the operation of my device, embodying also the device itself; and Fig. 2 is a detail view.

A A represent the frame, and B the driving-wheel.

C is the needle-hook of a binder, adapted to lift the gavel thrown upon it by the rake, as described in my Patent No. 211,293, to the top of the wheel B, where the tying apparatus is placed, and for this purpose having its shank or usual arm divided into the two arms D D, sufficiently spread apart to span and pass the wheel B without interference, and, finally, to admit of being fastened respectively to the sides of the adjacent frame A A by means of the pivot-bolts E E, which furnish them an axis of vertical motion, the said motion being produced through the agency of the link F, connecting the said arms at a point near where they divide with a crank, G, on a shaft below.

The arms D D are furnished with the pawls p p, respectively, which engage with and give motion to the idle ratchet-wheels H H, revolving about the pivot-bolts E E as their respective centers of motion. The said wheels have their notches or teeth of ordinary depth, with the exception of one each, I I, which are so cut away as to allow the pawls p p when falling into them to engage with the ends of the arms K K, respectively, as well as with the teeth themselves, as shown in Fig. 2, all the other teeth allowing no such contact between the said pawls and the said arms.

J is a gate swinging vertically about the pivot-bolts E E as an axis of motion by means of the arms K K, whose extension beyond the bolts E E brings them into proximity to the pawls p p, as seen in Fig. 2. The said gate, swinging vertically, as described, naturally rests firmly with its bottom against the sheath or stationary surface L, in conjunction with which it forms a cradle for the sheaves as they are delivered from the binder over the wheel B, and in which they will accumulate until dumped by the operation of the device thus far described. This operation is as follows: In the very process of lifting the gavel to the tying apparatus and then recovering its original position the needle-hook, with its arms D D, is vibrated vertically about its axis of motion E E through a certain prescribed arc. In the descent of the said hook at each vibration the pawls p p carry their respective ratchet-wheels H H forward, and finally, at the end of a complete revolution of the said wheels, the said pawls, falling into the deep notches I I, above described, engage with the ends of the arms K K, depressing them, and thus lifting the gate J and allowing its burden to fall to the ground. The ascent of the needle-hook at its next vibration withdraws the said pawls, and allows the gate to descend to its former position in readiness for the next sheaf, and this process of alternately gathering and dumping the load will be repeated with every complete revolution of the said ratchet-wheels, while the number of sheaves in the load will depend upon and will equal the number of teeth upon the said ratchets, respectively.

What I claim is—

1. The double-armed needle-hook C, spanning the driving-wheel and vibrated vertically about the pivot-bolts E E, substantially as described.

2. The combination of the needle-hook C and the arms D, having thereon the pawls p, with the ratchet-wheels H, and the arms K of the gate J, substantially as described.

O. L. CASTLE.

Witnesses:

JNO. LEVERETT,
JOS. H. WEEKS.