

E. R. McCALL.
HARVESTER RAKE.

Patented May 17, 1870.

No. 103,217.

fig. 1.

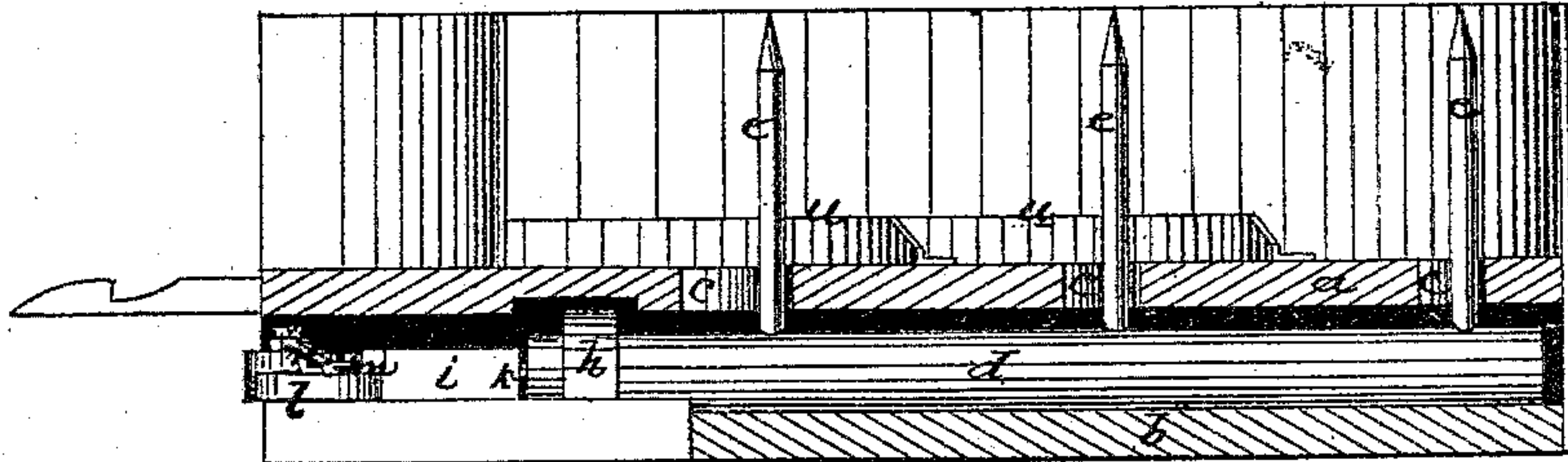


fig. 3.

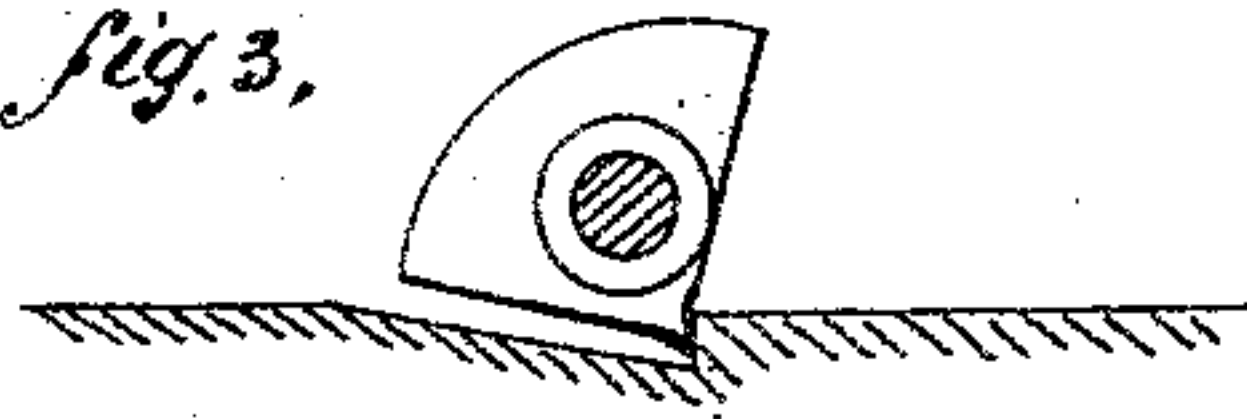
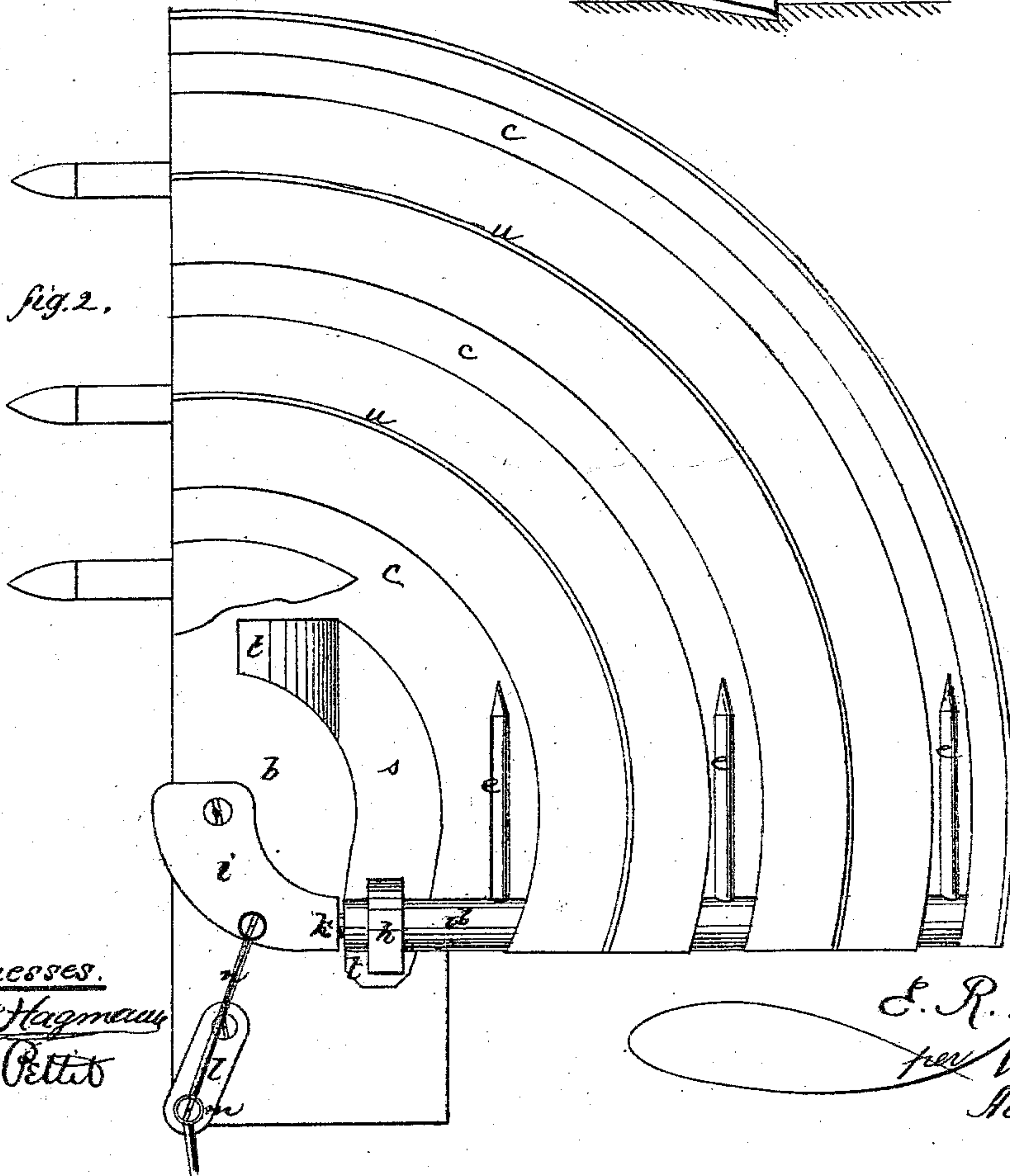


fig. 2.



Witnesses.
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EDWIN R. McCALL, OF SIMCOE, PROVINCE OF ONTARIO, DOMINION OF CANADA.

Letters Patent No. 103,217, dated May 17, 1870.

IMPROVEMENT IN HARVESTER RAKES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDWIN R. McCALL, of Simcoe, in the county of Norfolk, Province of Ontario, Dominion of Canada, have invented a new and Improved Harvester Rake; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming a part of this specification, in which—

Figure 1 is a front elevation; and

Figure 2, a plan view, a portion of the platform being removed.

This invention consists in the combination of a quadrantal tumbler with a rake-shaft, in such a manner as to impart a rocking motion to the shaft at the ends of its vibrations beneath the upper platform, for the purpose of erecting the rake-teeth at the front side of the platform, and turning them down at the rear side, and of preventing such rocking motion from taking place anywhere except at the front and rear sides of the platform.

The invention also consists in the combination of said rake-shaft and tumbler with the vibrating, and the rotating plates, from which the rake-shaft derives its motion.

The invention also consists in the combination of said tumbler with a curved metal way, in the lower platform, on which said tumbler slides, and with recesses in the platform at the ends of the way, which the tumbler enters in order to be turned, so as to raise or lower the rake-teeth.

In the drawing—

a is the upper section, and

b, the lower section of the quadrantal platform.

c are the curved slots in the section *a*.

d, the shaft of the rake-head lying between the two sections.

e, the rake-teeth, projecting from the shaft.

h, a quadrantal tumbler placed vertically on the butt of the shaft.

i, a pivoted plate, from one end of which a pin, *k*, projects into an orifice in the end of the shaft *d* a sufficient distance to form an axis for the shaft to rotate upon.

l, an elliptic plate pivoted to the bottom of the lower platform, and bearing, near its other end, an upright pin, *m*, to which is jointed the end of the pitman *n*, which connects the plate *l* with the plate *i*.

The plate *l* receives the motion which is communicated to the previously described mechanism.

The tumbler *h* is made with two straight sides, at right or acute angles to each other, while the third side may be either straight or curved.

At the corner of the tumbler where the two straight sides join is a projection.

The rotation of the elliptic plate *l* imparts a vibratory motion to the butt-plate *i*, and causes the rake-head to play back and forth from one side of the platform to the other.

The tumbler *h* moves on a curved metal way, *s*, at the ends of which are recesses *t t*, in the lower section *b* of the platform, said recesses having vertical sides, and inclined or straight bottoms.

Suppose the rake-head with the teeth turned down, and one of the straight sides of the tumbler in contact with the metal way *s*, to be approaching the sickle-bar. The elliptic plate *l* is made of such size that, at the termination of each of its semi-revolutions, the tumbler *h* drops into one of the recesses *t*. Having deposited the tumbler in the recess, the next office of the elliptic plate is to take it out therefrom. In accomplishing this, the projection of the tumbler catches on the corner of the metal way, and is thereby detained until the tumbler rotates so far as to present its other straight side to the surface of the metal way.

This movement of the tumbler causes the teeth *e* to stand vertically, so that they sweep the cut grain lying on the platform before them, as they traverse the grooves *c*.

The teeth are compelled to maintain their uprightness of position, as long as the straight side of the tumbler is on the way *s*, inasmuch as the plate *i* holds it down to the way so closely that it has no room for turning until it drops into the other recess *t*. Here the same operation takes place, though in a reverse direction.

The tumbler turns the rake-teeth down, as it passes from the recess, and, in this position, the rake-teeth move again to the point where they are once more erected.

The inclination of the bottoms of the recesses *t* gives the tumbler a leaning in the direction in which it has to rotate on emerging from the recesses.

Curved metal ribs *u u*, are affixed to the top of the upper platform, between and parallel with the slots *c*. The office of the ribs is to prevent the cut grain from being swept across the intermediate spaces into the slots, and to give the grain direction as it moves upon the platform.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The quadrantal tumbler *h*, constructed as described, and combined with the rake shaft *d* in the manner set forth, and for the purpose, both of pro-

ducing the rocking motion of the rake-shaft, and of preventing such rocking motion from taking place anywhere except at the ends of the throw of the shaft.

2. The combination of the rake-shaft *d*, tumbler *h*, vibrating plate *i*, and rotating plate *l*, when all these parts are constructed and arranged to operate as described.

3. The curved metal way *s*, when constructed in the lower platform, and combined with the recesses *t*, and tumbler *h*, in the manner and for the object specified.

EDWIN R. McCALL.

Witnesses:

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