

A. GRAY.
Concaves for Thrashing-Machines.
 No. 156,701. Patented Nov. 10, 1874.

Fig. 1.

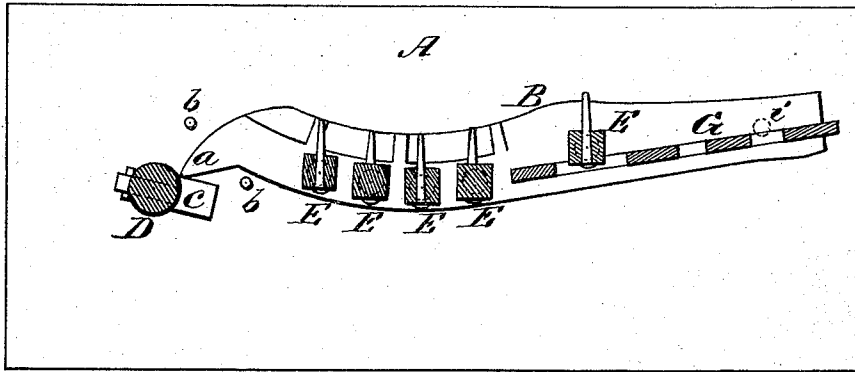
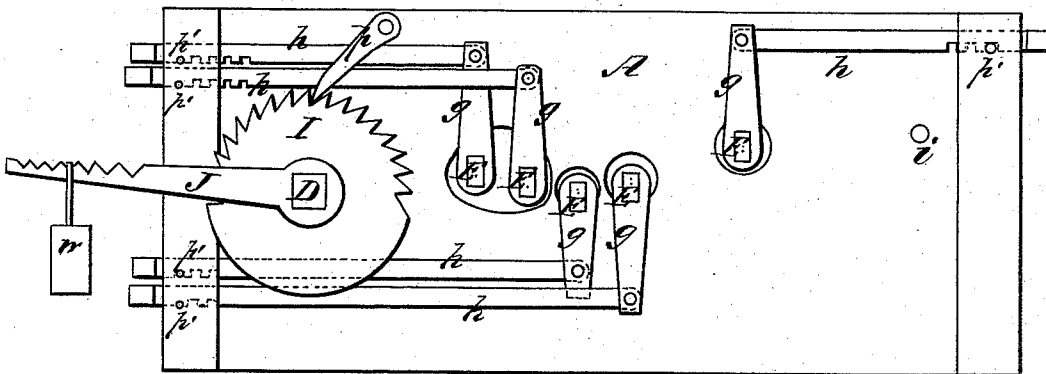


Fig. 2.



WITNESSES

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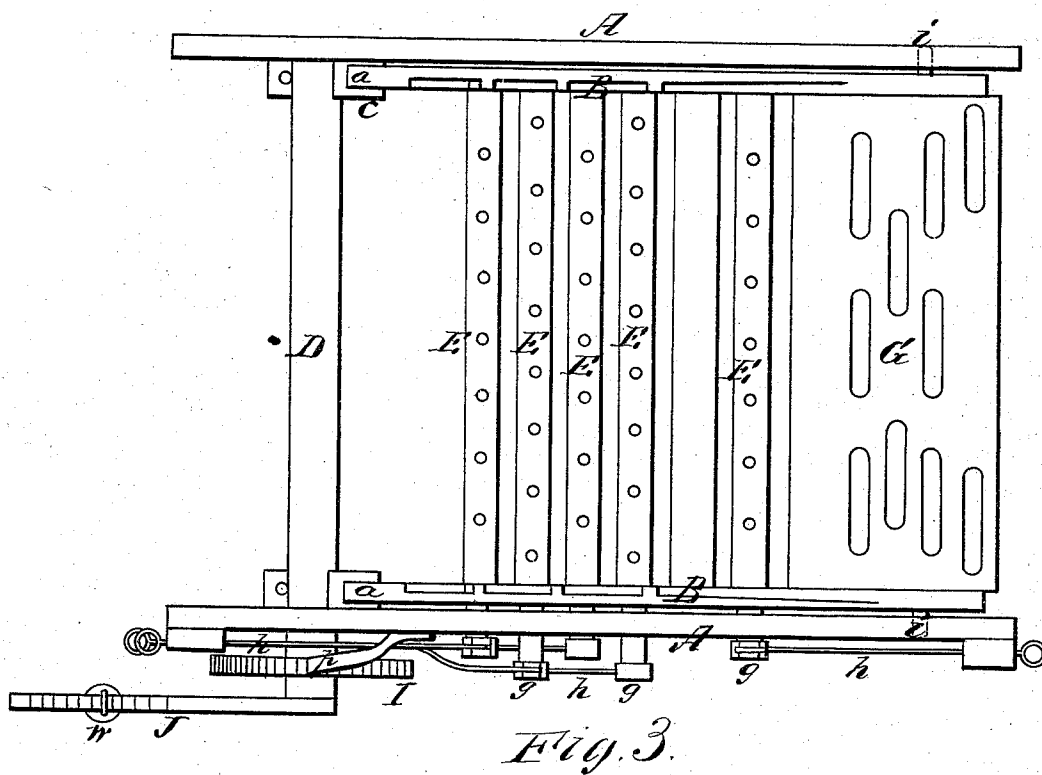
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UNITED STATES PATENT OFFICE

ADAM GRAY, OF OSAGE, IOWA.

IMPROVEMENT IN CONCAVES FOR THRASHING-MACHINES.

Specification forming part of Letters Patent No. **156,701**, dated November 10, 1874; application filed September 12, 1874.

To all whom it may concern:

Be it known that I, ADAM GRAY, of Osage, in the county of Mitchell and State of Iowa, have invented a new and valuable Improvement in Concaves for Thrashing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a sectional view of my concave for thrashing-machines. Fig. 2 is a side view, and Fig. 3 is a top view, of the same.

This invention relates to toothed concaves for thrashing-machines; and it consists in a concave which is pivoted at one end and supported at the other end upon toes projecting from a shaft which is capable of turning about its axis, said shaft having on one end an arm carrying an adjustable weight, whereby the concave is allowed to yield downward in the event of any obstruction getting between it and the thrashing-drum, thus preventing the machine from being broken, as will be fully understood from the following description.

In the annexed drawings, A designates part of the frame or housing of a thrashing-machine, and B B represent the two side cheeks of the improved concave, which cheeks are pivoted at *i i* to the frame A, and curved as shown in Fig. 1. The concave is composed of bars E, having spikes of suitable shape inserted into them, and a grated or slotted plate, G, which latter is rigidly secured to the pivoted end of the concave. The spiked bars E are pivoted to the cheeks B B, so that these bars can oscillate about their longitudinal axes, and on the ends of these bars are fixed crank-arms *g*, to which adjusting-rods *h* are pivoted. The rods *h* have looped handles on

them, and they are notched, as shown in Fig. 2, so that they can be fixed to pins *p'*, thus holding firmly the bars E in any desired position.

It will be seen that by oscillating the bars E about their axes, their spikes can be adjusted nearer to or set farther from the thrashing-cylinder, according to the kind of cereal to be thrashed.

The pointed ends *a a* of the cheeks B B are supported upon arms or toes *c c*, projecting from a rock-shaft, D, which has its end bearings in the frame A, and which carries on one end a ratchet-wheel, I, and an arm, J. A pawl, *p*, is caused to engage with the wheel I when it is desired to positively hold the concave.

When it is desired to allow the concave to yield in the event of undue strain, the pawl *p* is disengaged from the wheel I, and a weight, *w*, is adjusted on the arm J, so as to hold up the concave with a force proportionate to the resistance to be overcome.

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

1. The combination, with the toothed bars E of a thrashing-concave, (said bars being provided with crank-arms *g*,) of the notched rods *h* and pins *p*, as and for the purpose specified.

2. The combination of the pivoted frame B, toothed bars E, arms C, rocking shaft D, and arm J, having adjustable weight *w* upon it, as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ADAM GRAY.

Witnesses:

THOS. C. LANGLEY,
OSCAR A. CALHOUN.