

P. GEISER.
Thrashing-Machines.

No. 141,783.

Patented August 12, 1873.

Fig. 1.

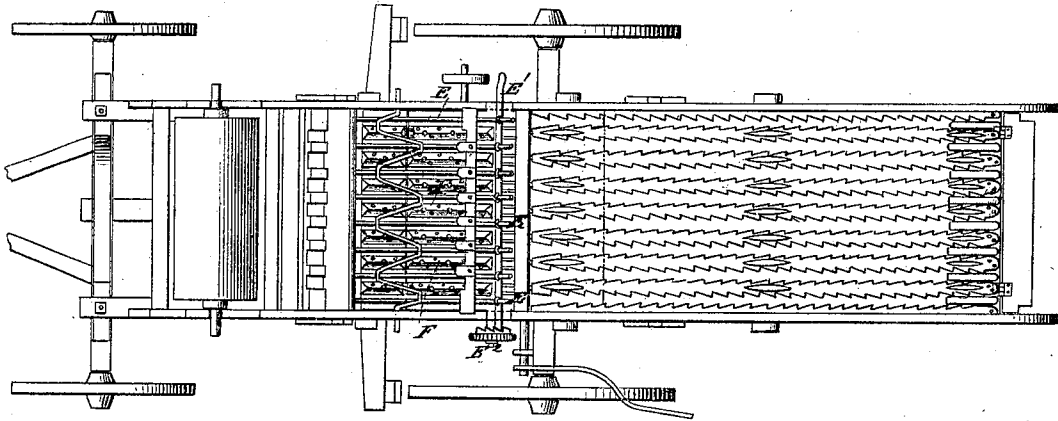


Fig. 2.

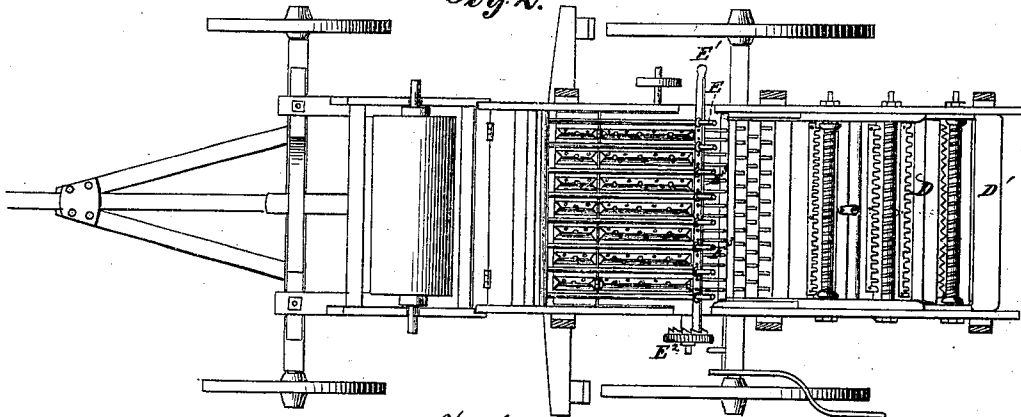
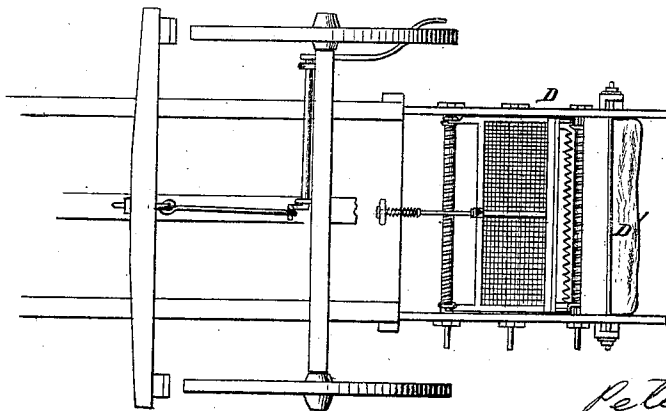


Fig. 3.



Witnesses.
A. Ruppert.
H. Bradford.

Peter Geiser
Inventor.
D. R. Holloway & Co
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Fig. 4.

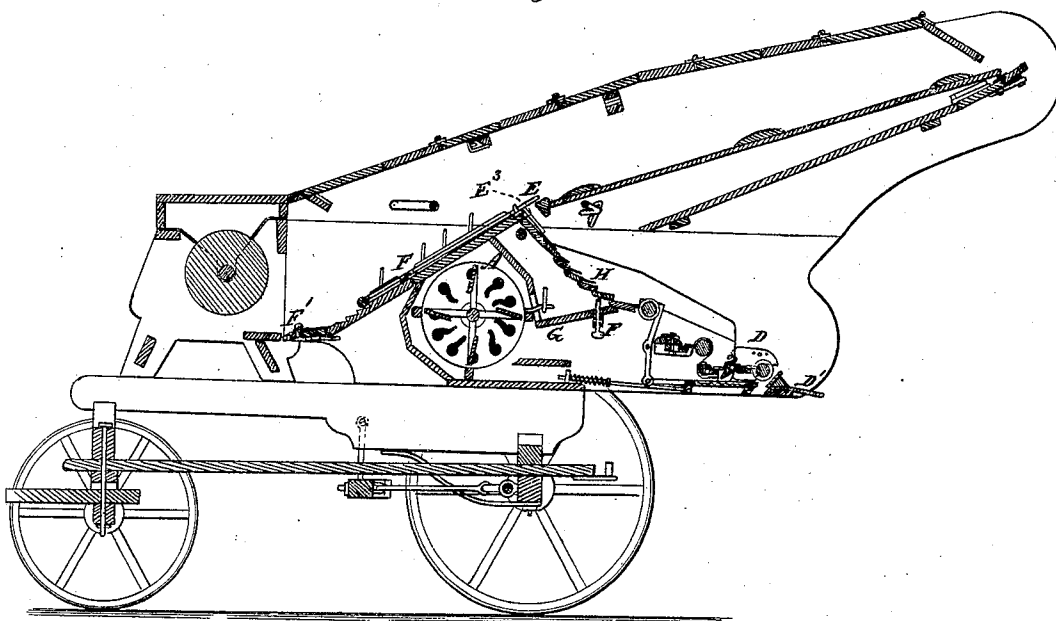


Fig. 5.

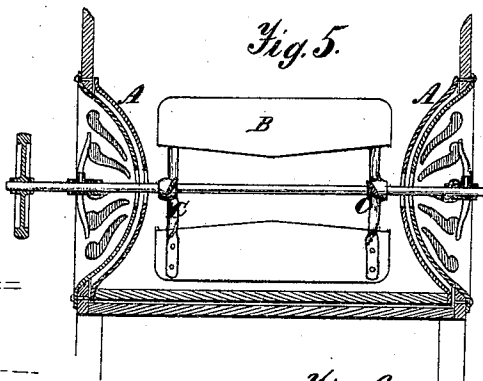


Fig. 7.

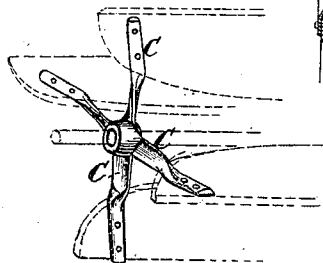
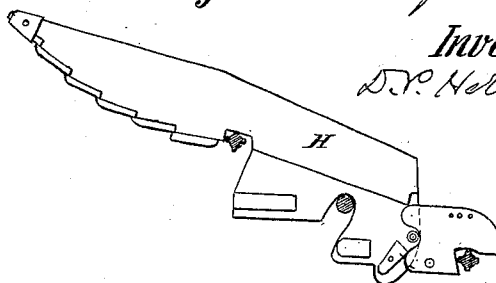


Fig. 6.



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UNITED STATES PATENT OFFICE.

PETER GEISER, OF WAYNESBOROUGH, PENNSYLVANIA.

IMPROVEMENT IN THRASHING-MACHINES.

Specification forming part of Letters Patent No. **141,783**, dated August 12, 1873; application filed June 28, 1872.

To all whom it may concern:

Be it known that I, PETER GEISER, of Waynesborough, in the county of Franklin and State of Pennsylvania, have invented an Improved Grain-Separator, of which the following is a specification:

This invention relates to grain-separators, several of which have been patented by myself and Daniel Geiser, to which I make reference for a more full description of parts not herein fully described. The last of these patents, issued to us jointly on the 17th of November, A. D. 1868, No. 84,106, shows the machine to which the present improvements are more especially intended to be applied. My present improvements consist, first, in the use of concave fan-heads for directing the blast into the center of the fan; second, in using twisted or bevel-edged fan-arms for the same purpose; third, in the additional dividing-shelf at the end of the tail-end shoe; fourth, in combining with the trunk-bottom and first rakes stirring-rods, for a purpose to be explained hereafter; fifth, in combining with the shoe a set-screw passing through the top of the fan-throat, for regulating the action of the knockers on the shoe.

In the annexed drawing, Figure 1 is a plan view with the casing removed. Fig. 2 is another plan of the mechanism, shown when the bars under the second rakes are removed. Fig. 3 is a bottom view of the tail-end shoe. Fig. 4 is a vertical longitudinal section through the middle of the machine. Fig. 5 is a section of the fan and fan-heads; and Fig. 6 is a section of the shoe and knockers. Fig. 7 illustrates the construction of the fan-arms.

The same letters are employed in all the figures in the indication of identical parts.

The air has heretofore been introduced to the fan through register fan-heads. It is desirable that the current of entering air should be admitted as directly as possible to the center of the fan, so as to be delivered as directly as possible against the current of grain falling over the shoe. To assist in this result the register fan-heads A A are made concave, as shown in Fig. 5, with a central opening around the shaft, by means of which the current is introduced into the center of the fan B. To further assist in producing this result the fan-

arms which carry the floats are made beveled or twisted, as indicated at C, Fig. 5. The inclined faces of the arms acting on the entering current tend to force it toward the center of the fan, instead of breaking and diverting the current, as is the case with the ordinary flat fan-arms. In order to separate more of the heavy or coarse materials, such as straws, sticks, thrashed-out heads, &c., which in the machine as heretofore constructed have fallen with the tailings and been passed again through the machine, I have added another dividing-shelf, D', to the tailing-shoe D, which, receiving such coarse materials, delivers them among the chaff, the tailings falling between said shelf and the end of the shoe. This shoe is formed by a series of grooved rollers and serrated plates, and is fully described in said before-recited Letters Patent.

In the machines as heretofore constructed, when the work was finished, a small body of mixed grain and chaff has always been left upon the trunk-bottom under the first rakes, and had to be removed in cleaning out the machine by stirring it out by hand with a stick. To accomplish this more conveniently I have placed on the trunk-bottom a series of parallel rods, E, the upper ends of which are attached by eyes to the transverse rod E¹, to which a vibratory motion is given by ratchet-teeth on a spur-pinion, E², which derives motion from the spur-gearing which drives the rakes, (not shown,) and which may be thrown into or out of gear at will, so that, by shaking the rods, the grain on the trunk-bottom may be worked down and through the trap-door at F'. Other parallel rods E³ are attached to the reciprocating rod E¹, for the purpose of stirring the grain which might lodge on the face of the shoe, in the same manner and at the same time that the rods E act on the grain lodging on the trunk.

The upper shoe H is vibrated by knockers resting on the top of the fan-throat G. In order that the amount of action of the knockers on this shoe may be regulated so as properly to control the delivery of the grain and chaff to the action of the blast in passing from the shoe over the fan to the tail-end shoe D, its lower end rests upon an adjusting-screw, F, passing through the roof of the fan-throat, by means

of which the shoe may be more or less raised and the action of the knockers thereby be increased or diminished; or the shoe may be lifted, if desired, entirely off of the knockers.

What I claim as my invention, and desire to cover by Letters Patent, is—

1. In combination with the shoe and reciprocating rod E^1 , rods E^3 , arranged to operate substantially as set forth.

2. The twisted or beveled arms which carry the fan-blades, arranged to operate substantially as set forth.

3. In combination with the tailing-shoe, constructed substantially as set forth, the additional dividing-shelf D' .

4. In combination with the trunk-bottom and rakes, stirring-rods E , substantially as set forth.

5. In combination with the shoe H and tailing-shoe D and knockers, the set-screw F for regulating the action of the former, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PETER GEISER.

Witnesses:

J. R. RUSSELL,
D. B. RUSSELL.