(No Model.)

I. ESMOND & A. H. FORD.

GRAIN SCREEN.

No. 265,398. Patented Oct. 3, 1882.

Fig. 1.

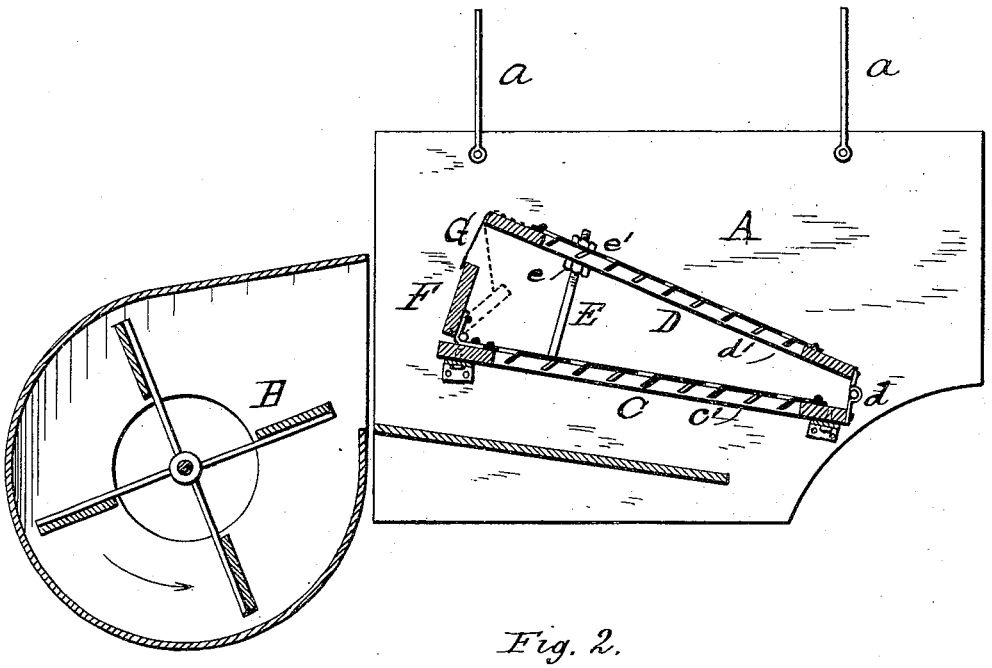
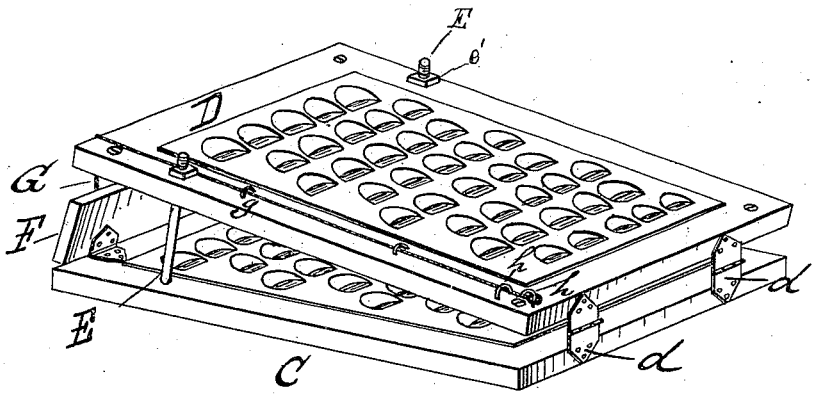


Fig. 2.



Witnesses:
E. F. Stoetting
Chas. Hewitt

Isaac Esmond
Alvin H. Ford
Inventors:
By
Atty.

UNITED STATES PATENT OFFICE.

ISAAC ESMOND AND ALVIN H. FORD, OF CAPRON, ILLINOIS.

GRAIN-SCREEN.

SPECIFICATION forming part of Letters Patent No. 265,398, dated October 3, 1882.

Application filed June 10, 1882. (No model.)

To all whom it may concern:

Be it known that we, ISAAC ESMOND and A. H. FORD, citizens of the United States of America, residing at Capron, in the county of Boone and State of Illinois, have invented certain new and useful Improvements in Grain-Screens; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Our invention relates to the screens which are usually located in the shaking-shoe of a thrashing-machine, and arranged to receive the thrashed straw from the cylinder and carrier, and by the aid of a blast of air from the usual fan separate the grain from the straw and deliver the same in a suitable and usual manner.

Figure 1 is a central vertical longitudinal section of a shoe provided with our screens and located in a common relative position to the fan. Fig. 2 is a perspective of our screens detached from the shoe.

Like letters refer to like parts in both figures.

A represents the shoe, which, by the rods *a a*, is suspended to a thrashing-machine in the usual manner, and B represents the fan-wheel, located as usual with reference to the shoe.

C and D represent two screens. The lower one, C, is firmly but removably attached to the shoe in any suitable and usual manner, while the upper one, D, is connected at its delivery end to the delivery end of the lower one by the hinges *d d*, which are of such length as to separate said ends in order that grain may pass between the screens and be delivered from the lower screen. A rod, E, is secured in the frame of the screen C and passes through the side frames of the screen D, and is at its upper end screw-threaded and provided with nuts *e e'*, one beneath and one above the screen-frame, whereby, in connection with a similar rod located at the opposite sides of the screens, they are adapted to be adjustably held at a desired distance apart at their receiving ends. A wind-board, F, is pivotally secured to the frame of the lower screen, and a cord, G, is secured to its upper edge and passes through suitable guides, *g g*, to hooks *h h* upon the upper-screen frame, which are provided in order to permit of the regulation and control of the blast produced by the fan. Each of the screens consists of a frame to which is secured a sheet of metal, the apertures in which are formed by partially separating in curved lines portions of the sheet and deflecting the partially-separated portions in a downward direction, whereby inverted-cup-shaped tongues *c' d'* are produced, and these are arranged in each screen so that they incline downward and toward the receiving end of the screens, being produced preferably by a punch or cutter that acts to depress the material at the line of separation. The edges of the apertures, as well as those of the tongues, are depressed and produce the cup shape, which acts to diffuse and equalize the blast as it strikes the screens, and causes it to pass through the perforations in curved lines, whereby the passage of the grain downwardly through the apertures is less impeded than would be the case were the blast to pass in direct lines therethrough in the opposite direction, while at the same time the inclined screens aid in the passage of the grain, as can readily be seen.

We do not broadly claim a screen formed with depending inverted-cup-shaped tongues as of our invention; but the forward inclination of the tongues of two adjustable screens, with means for regulating the direction and force of the blast thereon and therethrough, produces advantageous results, as demonstrated by actual operation, and such we deem as of our invention.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of the screen C, wind-board F, cord G, and rod E with the pivotally-connected screen D, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

ISAAC ESMOND.
ALVIN H. FORD.

Witnesses:
ROBERT RIDGE,
A. J. WINNE.