

Grain Fan.

No. 1,354.

Patented Sept. 30, 1839.

FIG. 1.

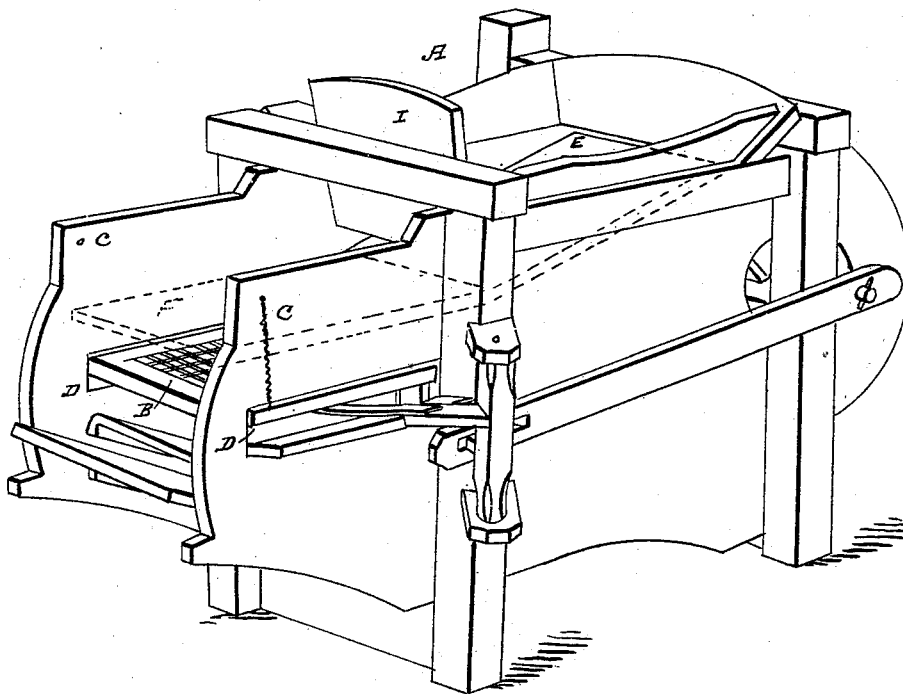
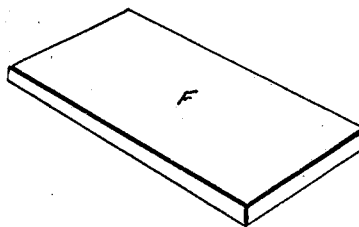


FIG. 2.



UNITED STATES PATENT OFFICE.

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Specification of Letters Patent No. 1,354, dated September 30, 1839.

To all whom it may concern:

Be it known that I, ALFRED ERVIN, of Jefferson, Frederick county, State of Maryland, have invented a new and useful Improvement in Machines for Cleaning Grain, called "Ervin's Improved Fan," which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of the whole machine. Fig. 2 is a view of the board which is placed over the screen when cheat is to be separated from good grain, but which, in the drawing, is represented as detached.

The main body of the fan (marked A) is made like the common wheat fan. The improvement consists in dispensing with the ordinary vibrating shoe and screens and substituting a simple horizontal screen B suspended by cords C or chains to the sides of the fan case and causing the same to vibrate horizontally through rectangular openings D in the sides of the fan case by means of cranks, levers and connecting rods of the usual form, by which arrangement the spaces usually left between the outsides of the screen and the insides of the fan case for the screens to vibrate in are not required, as said horizontal screen vibrates horizontally in the rectangular openings D in the sides of the fan case, and thus the fan case may either be made narrower than usual or the screens may be made wider. The hopper is fixed in the top of the frame and has an inclined bottom E, which extends far enough over the screen to deliver the grain, &c., upon the screen and the hopper is provided with a draw or slide I to regulate the same. There is also a board F, Fig. 2, represented as detached from the machine, made the

width of the fan case inside and of suitable length to be placed horizontally against the end of the inclined bottom and to extend entirely over the screen for the purpose of separating cheat from grain. The good grain, being the heaviest, would fall down over the end of said horizontal board upon the first inclined board, which is made in the usual manner, and the current of air created by the fan driving the cheat over against the second inclined board, which is also made in the usual manner, which would convey it to the bottom of the machine. In cleaning wheat and other grain the horizontal board is removed and the inclined board below the hopper conveys it from the hopper to the screen, which having a vibrating motion riddles the grain, &c., through the meshes of the sieve, when it is met by the current of air from the fan, which drives the chaff, &c., out of the rear end of the machine, while the grain (being heaviest) falls down upon the inclined board below and is conducted to a receiver in the usual manner.

The invention claimed and desired to be secured by Letters Patent consists in—

Having openings in the sides of the fan case for the screen to extend through and vibrate horizontally therein and in attaching to the bottom or shoe of the hopper an additional board extending horizontally over the whole length of the screen to be used when cheat is to be separated from grain, the whole being constructed and operating as described.

ALFRED ERVIN.

Witnesses:

LINGAN BOTELER,
JOHN T. MITCHELL.