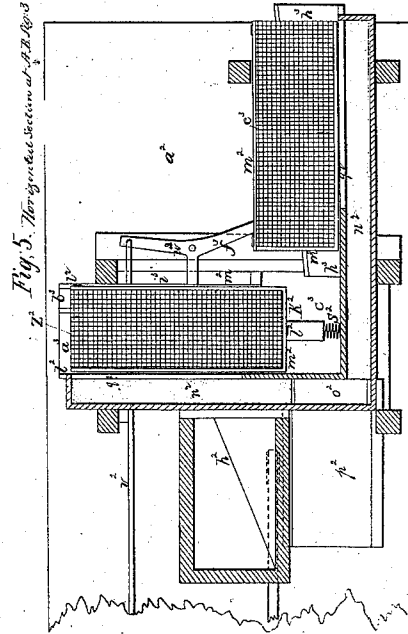
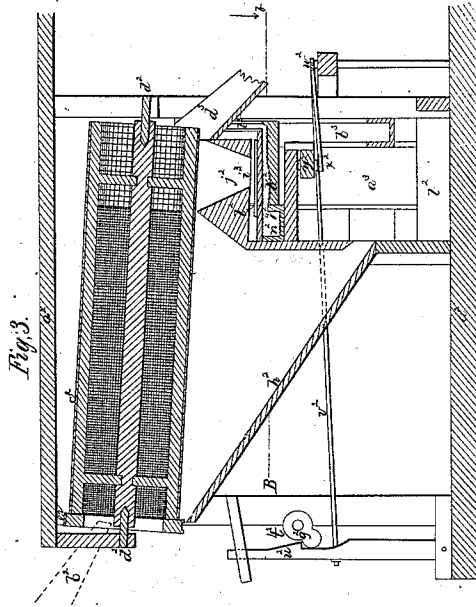
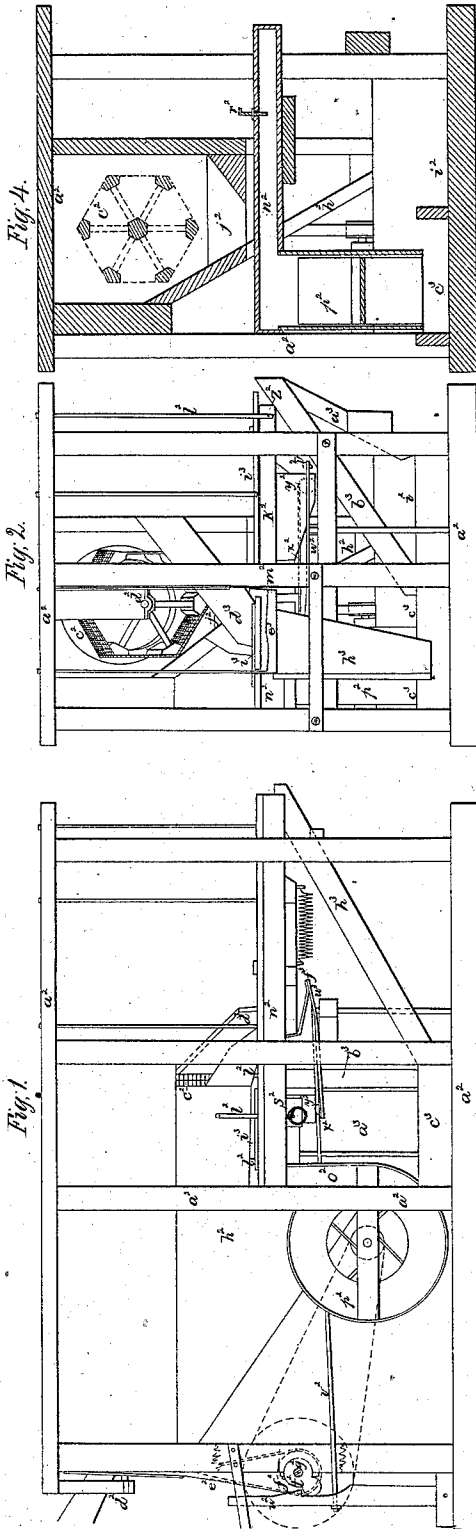


A. Platt.
Buckwheat Fan.

N^o 8,659.

Patented Jan. 13, 1852.



UNITED STATES PATENT OFFICE.

ALFRED PLATT, OF WATERBURY, CONNECTICUT.

BUCKWHEAT-FAN.

Specification of Letters Patent No. 8,659, dated January 13, 1852.

To all whom it may concern:

Be it known that I, ALFRED PLATT, of Waterbury, Connecticut, have invented a certain new and useful Machine for Separating the Kernels from the Hulls After Buckwheat has been Subjected to the Operation of Hulling, and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a front, and Fig. 2, an end elevation; Fig. 3, a vertical section passing through and in the plane of the axis of the rotary screen; Fig. 4, a cross vertical section taken at the line A, *a*, of Fig. 3; and Fig. 5, a horizontal section taken at the line B, *b* of Fig. 3.

The same letters indicate like parts in all the figures.

My invention which relates to the method of separating the hulls from the kernels of buckwheat, consists, in subjecting the mass to a current or currents of air on a shaking table or tables slightly concave, and rendered rough either by being covered with wire gauze or by other means, so that as the mass is agitated and slightly thrown up by the shaking motion, the shells which are the lighter shall be carried off by the current of air, leaving the kernels which are held back by the rough surface of the table or tables.

In the accompanying drawings *a*² represents the frame work of the machine, and *b*² a spout through which the grain as it comes from the hulling machine, is conducted to the inside of a rotating cylindrical screen *c*², the shaft of which runs in boxes *d*², *d*². This screen is driven by a band *e*², from a pulley *f*², on the main shaft *g*. The meshes of this screen, for some distance from the receiving end, are so fine as to only permit the broken pieces of kernel to pass through. These fall onto an inclined chute *h*², which conducts them to a bin *i*², (called the finished bin) and are then in a proper condition to be ground into flour. The remaining portion of the screen to the delivery end, is made with coarser meshes, and what passes through these meshes falls onto an inclined chute *j*² and is delivered onto one end of a shaking table *k*², suspended from the top of the frame by leather straps *l*², *l*², *l*². The surface of this shaking table is straight in the direction of its length, and in the direction of its cross section slightly

concave for about one half the breadth, and the remaining half, flat. The receiving end and the outer edge of the flat part are provided with projecting flanches or ribs *m*². The entire surface of this table is covered with wire gauze to prevent the kernels of grain from sliding over it too freely. Along the outer edge of the concave part of this table, there is a wind pipe *n*², closed at the extreme end, and connecting at the other end with a pipe leading to the nozzle *o*², of a fan blower *p*², of any appropriate construction, which will produce a regular current of air that escapes from the wind-pipe through a long narrow aperture *q*², extending the whole length of the table, and with the lower edge thereof on a level with the surface of the table. The wind pipe is provided at *r*², with a valve or damper by which to regulate the current of air to be discharged from the aperture.

The table is drawn in one direction by a helical spring *s*², which causes it to strike with a jar against the frame, and it is drawn in the opposite direction by a cam *t*², on the main shaft which operates a lever *u*², connected by a rod *v*², with one arm of a lever *w*², the other arm being attached to a strap *x*², that passes over a roller *y*², and attached to the underside of the table. In this way at every rotation of the main shaft, the table is drawn in one direction, and as soon as the cam has passed, it is drawn back by the spring, giving a jar, which not only has the effect of causing the grain on the table to move toward the delivery end *z*², but at the same time throws it up, and with it the hulls, which being of less specific gravity than the kernels, are blown and carried off over the rib or flanch *m*², along the edge of the table. The kernels thus separated from the hulls gradually reach the delivery end, and fall into a chute *a*³, by which they are conducted to the finished bin. The current of wind carries with the hulls some portions of kernel still adhering to the hulls, or from which the hulls have not been stripped; and these being of less specific gravity than the hulled kernels, but of greater specific gravity than the hulls alone, are carried by the current of air out of the concave part of the table, but are caught by the flanch or rib *m*², along the outer edge of the flat part, and these are caused by the jar gradually to move toward the delivery end of the table, where they are discharged onto a chute *b*³, and conducted to

a bin c^3 , from which they are transferred to the huller to be re-hulled.

All the grain that does not pass through any of the meshes of the rotating screen 5 pass out of the delivery end, and are conducted by a spout d^3 , into a shaking table e^3 , constructed and operated in every particular like the one above described, and receiving motion in like manner from an arm 10 f^3 , of the same lever. It is also provided with a wind pipe like the first and for the same purpose. As all or nearly all the grain which is conducted to this table is either not hulled or only partially hulled, the few 15 loose hulls are blown off, and the rest when delivered is conducted by a chute h^3 to the bin c^3 , to be re-passed through the huller.

Over each shaking table and attached to the upper edge of the wind pipe is a shield 20 or cover i^3 . This shield extends to within a short distance of the rib or flanch on the edge of the table, so as to leave a free discharge for the hulls as they are blown off. The under surface of these shields should be 25 on a level with the upper edge of the wind aperture.

The construction of the blower has not been described, as any well known mode of producing a regular and steady blast will 30 answer the purpose. It should be provided with a governor to avoid waste and insure the separation of the hulls from the kernels.

I do not wish to limit myself to the precise form of the shaking tables—as this may

be slightly varied,—nor to the use of wire 35 gauze for covering them, as the surface may be made sufficiently rough to retain the seeds by cutting ridges or scores therein,—nor to the use of a rotating screen to make the partial separation, as a shaking screen may 40 be substituted, and in fact the entire separation may be effected directly on the shaking table or tables. Nor do I wish to limit myself to the use of a rotating fan; as any other mode of producing the regular current 45 or blast, may be substituted.

I have specified that mode of construction which I have essayed with success and from which I have obtained the best results, and I wish to cover all merely formal variations 50 involving the same principle or mode of operation.

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

The method of separating the hulls from 55 the kernels of buckwheat by shaking them on a table or tables made slightly concave and rough, substantially as specified, in combination with a current or currents of air blown over the surface of such table or 60 tables to carry off the hulls while the kernels are retained or held back by the form of the surface of the table or tables, as specified.

ALFRED PLATT.

Witnesses:

CAUSTEN BROWNE,
CHARLES N. BAMBURGH.