D. WATKINS.

Wheat Fan.

No. 3,423. Patented Feb. 2, 1844.

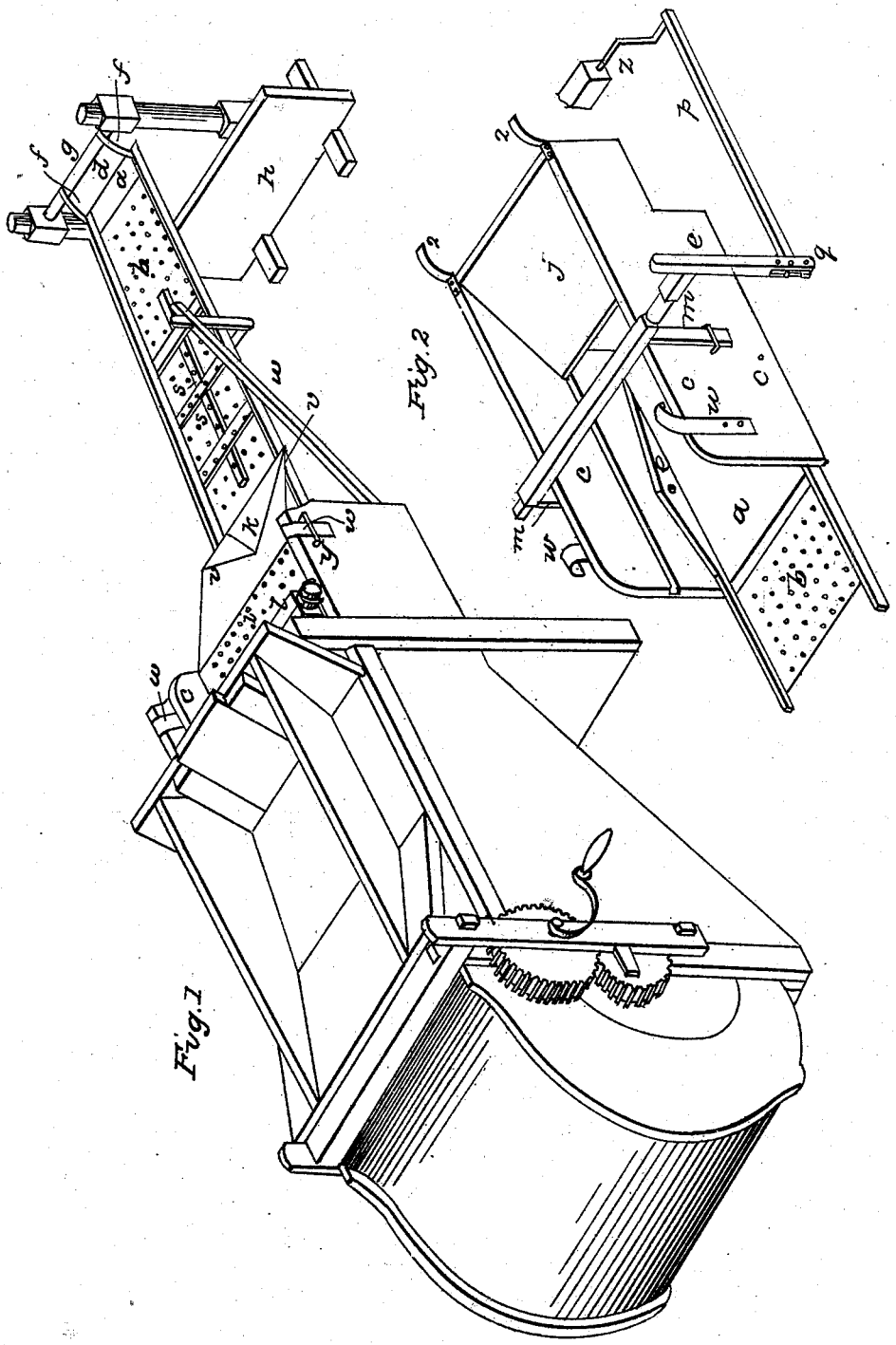

Fig. 1

Fig. 2

UNITED STATES PATENT OFFICE.

DAVID WATKINS, OF PORT REPUBLIC, VIRGINIA.

WHEAT-FAN.

Specification of Letters Patent No. 3,423, dated February 2, 1844.

To all whom it may concern:

Be it known that I, DAVID WATKINS, of Port Republic, in the county of Rockingham, in the State of Virginia, have invented a new and useful Improvement upon the Wheat-Fan in General Use; 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, in which—

Figure 1, is an isometrical projection of the machine entire, and Fig. 2, a view of the shoe and screen attached.

The screen *a*, is constructed of wood having a wire work bottom *b*, oblong in its shape, and tapering from where it is attached to the shoe, *c*, to its mouth, *d*, and may be connected with any wheat fan that will admit of a vibrating motion lengthwise with the machine by means of two wooden pins or iron screws, *e*, *e*, passing through the sides of the screen and shoe and may be attached or detached at pleasure without interfering with the operation of the fan for common purposes. When grain is to be chaffed the screen is suspended at its mouth by two straps *f*, *f*, which pass over the roller, *g*, at the top of the frame, *h*, or made to rest or work upon one, in which case the roller must be movable so as to raise or lower the mouth of the screen; the object is to discharge much or little grain at pleasure. The fine riddle *i* is placed immediately under the feeding board, *j*, in order to carry off any straw or weeds remaining in the grain, which are conducted away by a double discharging spout *k*, made of a square piece of tin or other suitable material bent up at its lower edge in an acute angle which forms the two spouts, *l*, *l*. The upper edge of this spout is placed immediately under the outer edge of the fine sieve *i*, continuing down from thence in an inclined plane until it rests upon and projects over the sides of the screen *a*. The shoe and screw when attached as before described are placed in the mouth of the fan, the sides of the shoe and the fan being parallel, in which place it is supported by means of the two straps *w*, *w*, that are fastened to the sides of the shoe and run perpendicularly up the sides until they arrive at the top, passing over the top of the sides of the fan, on the outside of which there are buckles *y*, *y*, fastened. In these the straps are confined so that the attached shoe and screen may be raised or lowered at pleasure. At the back part of the shoe there are two other straps *z*, *z*, which are fastened on the drum. None of these straps interferes with the vibrating motion of the shoe and screen; these are worked together by a transverse lever shaft *l*, that may be placed above the shoe and resting upon the sides of the fan, or be placed below it, between the sides of the fan and shoe; there are two arms *m*, *m*, one on either side mortised into the transverse lever shaft *l*, at right angles and running perpendicularly either up, or down as the case may be, parallel with the sides of the shoe, upon the outside of which are placed staples *n*, *n*, into which these arms fit. At the end of the transverse lever shaft, *l*, there is an arm or crank *o*, which moves outside of the fan and to which is attached a pitman or vibrating rod *p*, that passes parallel and lengthwise with the fan and is fastened to a small crank *z*, which is inserted into the axle of the air wheel opposite to the moving power, so that when the moving power crank is turned it gives to the shoe and screen a vibrating motion lengthwise with the machines that may be regulated by moving the pitman or rod *p*, up or down in the open mortise at the lower end of the lever arm *o*, as shown at, *q*.

In order that the machine may not become chocked I have placed under it a small shaft *r* into which is mortised two small arms or beaters, *s*, *s*, so constructed as to beat alternately against the screen and knock out anything that might remain fast; the arms run parallel with the screen. Motion is given to them by the backward and forward motion of the shoe and screen to which they are attached by an upright arm or lever *t*, into which one end of the transverse shaft *r* is mortised. The top of said lever *t*, has a tenon, that works loosely in a mortise made in a stationary pitman or rod *u*, which is fastened to the side of the fan.

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

The combination of a horizontal extended screen with the wheat fan, said screen to be operated and constructed as above described.

D. WATKINS.

Witnesses:

I. D. THOMAS,

H. S. ADDISON.