P. B. & A. B. SPRENKLE.

FLOUR-BOLTING MACHINE.

No. 191,482. Patented May 29, 1877.

Fig. 1

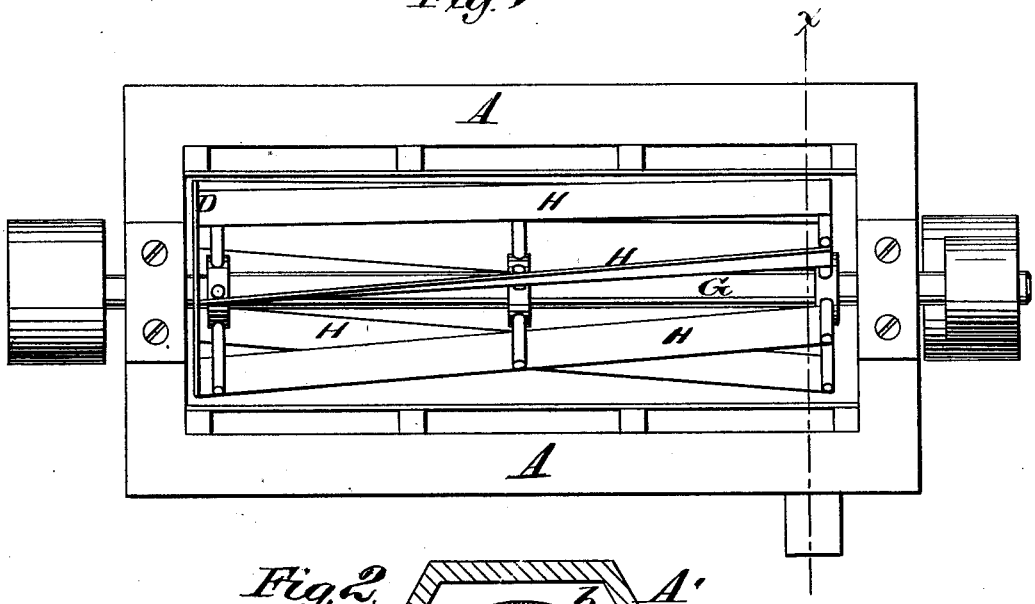
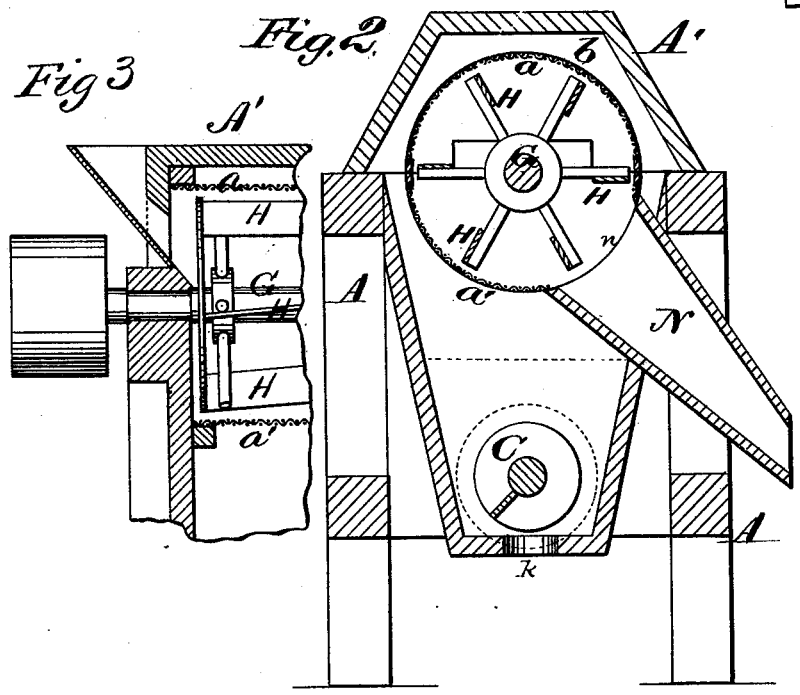


Fig. 2.

Fig 3



WITNESSES

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PETER B. SPRENKLE AND ABRAHAM B. SPRENKLE, OF YORK, PA.

IMPROVEMENT IN FLOUR-BOLTING MACHINES.

Specification forming part of Letters Patent No. **191,482**, dated May 29, 1877; application filed August 5, 1876.

To all whom it may concern:

Be it known that we, PETER B. SPRENKLE and ABRAHAM B. SPRENKLE, of York, in the county of York and State of Pennsylvania, have invented a new and valuable Improvement in Bolting-Machines, for preventing bugs and insects in flour-bolts; and we 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of this invention with the top removed. Fig. 2 is a vertical transverse section of the same. Fig. 3 is a sectional view, showing the hopper, spiral blades, and annular guard.

This invention has relation to means for eliminating from flour to be bolted bugs and insects which eat holes in the bolting-cloth, and thereby destroy it; and it consists in the construction and novel arrangement of the reel-shaped fan, having longitudinal blades; the concave wire-screen, in close relation to the free edges of said blades; the lateral insect-spout, opening into the screen extending above its bottom, and the conveying devices for carrying the flour to the opening through which it is discharged to the bolt, as hereinafter shown and described.

In the accompanying drawings, the letter A indicates the case or frame, constructed in oblong form, and having sufficient height to admit of the location within it of conveying devices below the eliminating screen. The case is designed to be provided with a longitudinal cap or cover, A′, and both case and cover are provided with internal transverse supporting-ribs *b*, whereby the concave cylindrical screen-sections *a a′* are, respectively, connected to the cover and case, and at the same time kept at a sufficient distance from its walls to permit the free passage of the flour through and from the screen to the conveyer below.

Each section of the screen is semi-cylindrical, so that they form, when put together, a complete cylinder of diameter but little greater than the sweep of the fan.

At the discharging end of the screen a lateral peripheral opening, *n*, is made, extending well up on the side above the bottom of the same, which communicates with the insect-spout N attached to the case, and protruding outside the same.

Within the screen is located a longitudinal shaft, G, from which radiate a number of arms, to which are attached longitudinal fan-blades H, all of which are connected by one end with an annular guard, D, which is located just within that end of the screen into which the flour is admitted through the hopper-spout.

The blades H are placed somewhat obliquely with relation to the axial planes, for the purpose of carrying the bugs and insects rapidly forward to the discharge N, through which they are thrown by the blast, as well as by the actual force of the blades. These blades also serve to distribute the flour and press it through the screen, with which their exterior or free edges are in close relation, as indicated in the drawings.

Below the screen is a conveyer, C, of ordinary construction, whereby the flour from the screen is carried to the opening *k*, through which it passes the bolt.

Flour is fed into this machine through a hopper-spout at the front end, and passes into the screen through the circular guard-plate D, which serves to keep the entrance free, and to keep the material in the way of the spiral beaters.

The insects and bugs are driven out by the fan through the spout N, and the flour passing through the screen is discharged to the bolt, as stated above, through the opening *k*.

We are aware that oblique beaters have been used in flour-bolts, and that a spout for insects has been arranged in connection with a bolt having ends extending through the open end of a cylinder-screen; hence we do not claim such devices broadly.

What we claim, and desire to secure by Letters Patent, is—

The combination of the cylinder-screens *a a'*, the reel-fan provided with the oblique blades and annular guard D, and the feed-hopper delivering into the opening of said annular guard, substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

PETER B. SPRENKLE.
ABRAHAM B. SPRENKLE.

Witnesses:
CHARLES ALEXANDER,
GEORGE M. SHETTER.