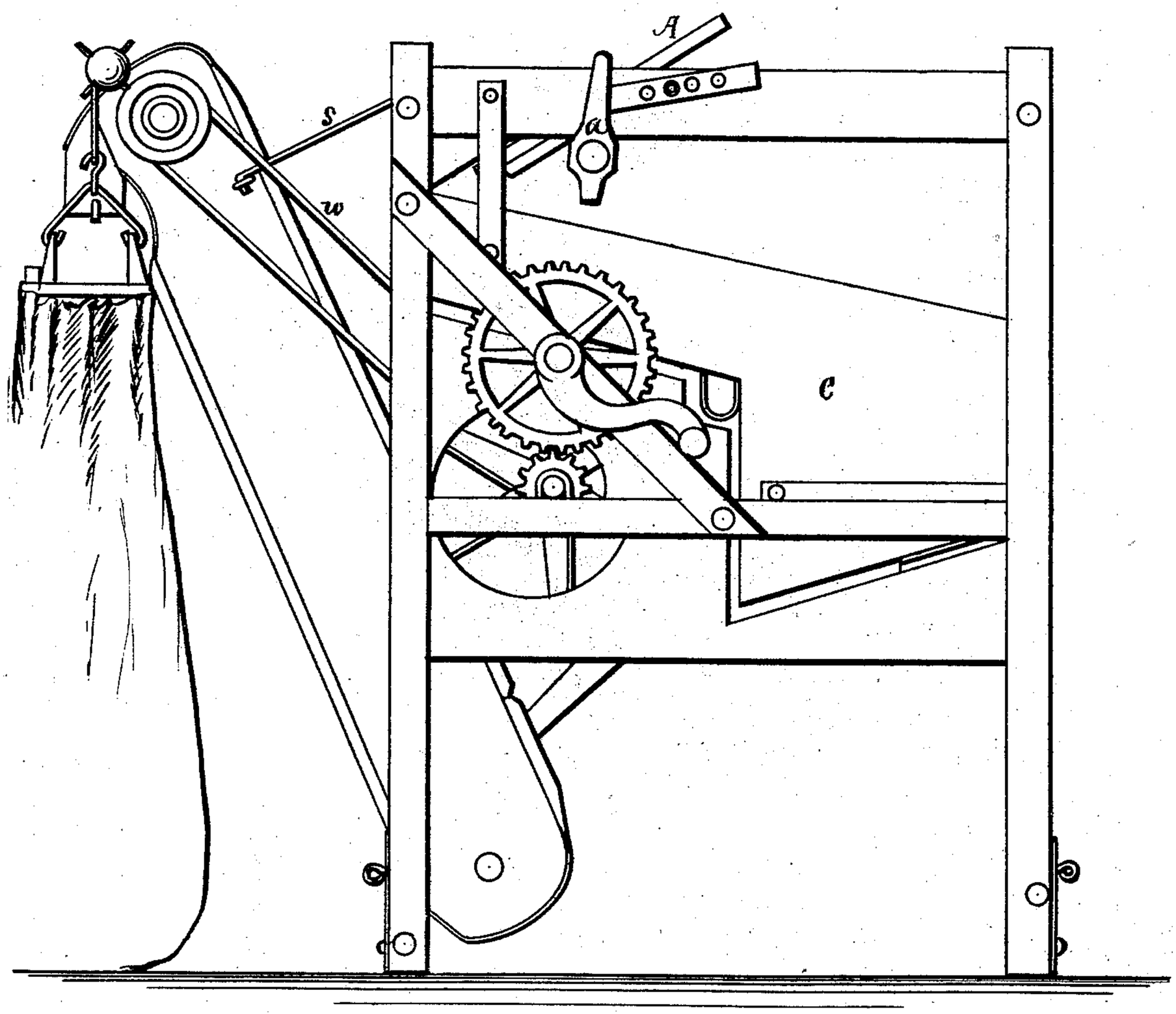
3 Sheets—Sheet 1.

E. M. GILBERT.

Fanning-Mill.

No. 222,130. **Patented Dec. 2, 1879.**

Fig. 1.



WITNESSES
Robert Everett
James J. Sheehy.

By

INVENTOR
Edmund Marshall Gilbert
Edwin J. Lunt
ATTORNEY.

3 Sheets—Sheet 2.

E. M. GILBERT.

Fanning-Mill.

No. 222,130. Patented Dec. 2, 1879.

Fig. 2.

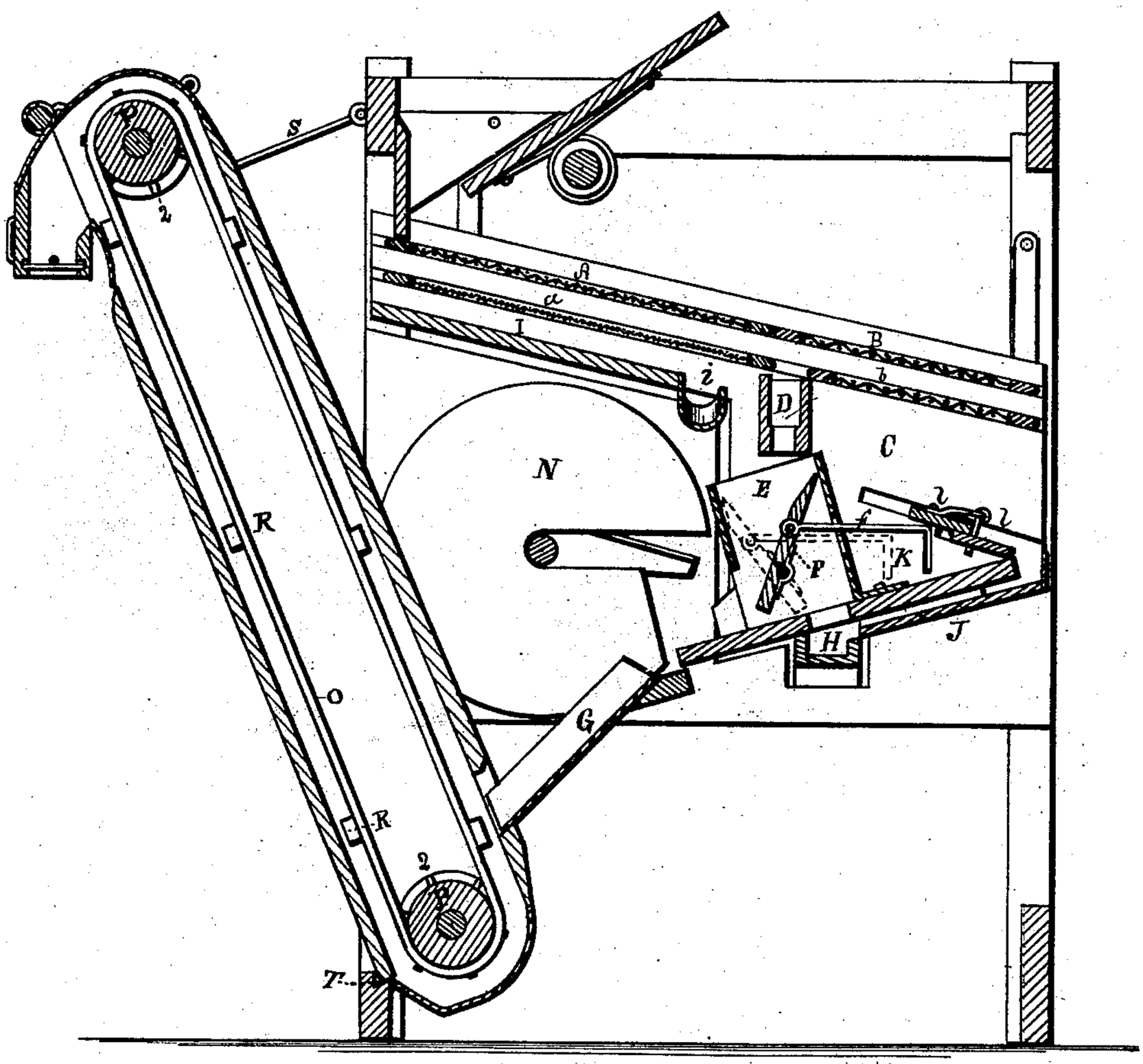
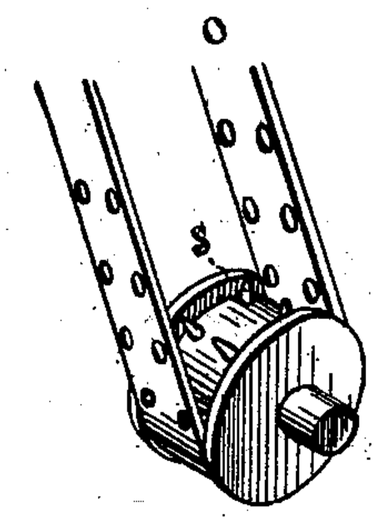


Fig. 3.



WITNESSES

Robert Everett

James J. Sheehy.

By

INVENTOR

Edward Marshall Gilbert

Eldridge J. Smith

ATTORNEY

3 Sheets—Sheet 3.

E. M. GILBERT.
Fanning-Mill.

No. 222,130. Patented Dec. 2, 1879.

Fig. 4.

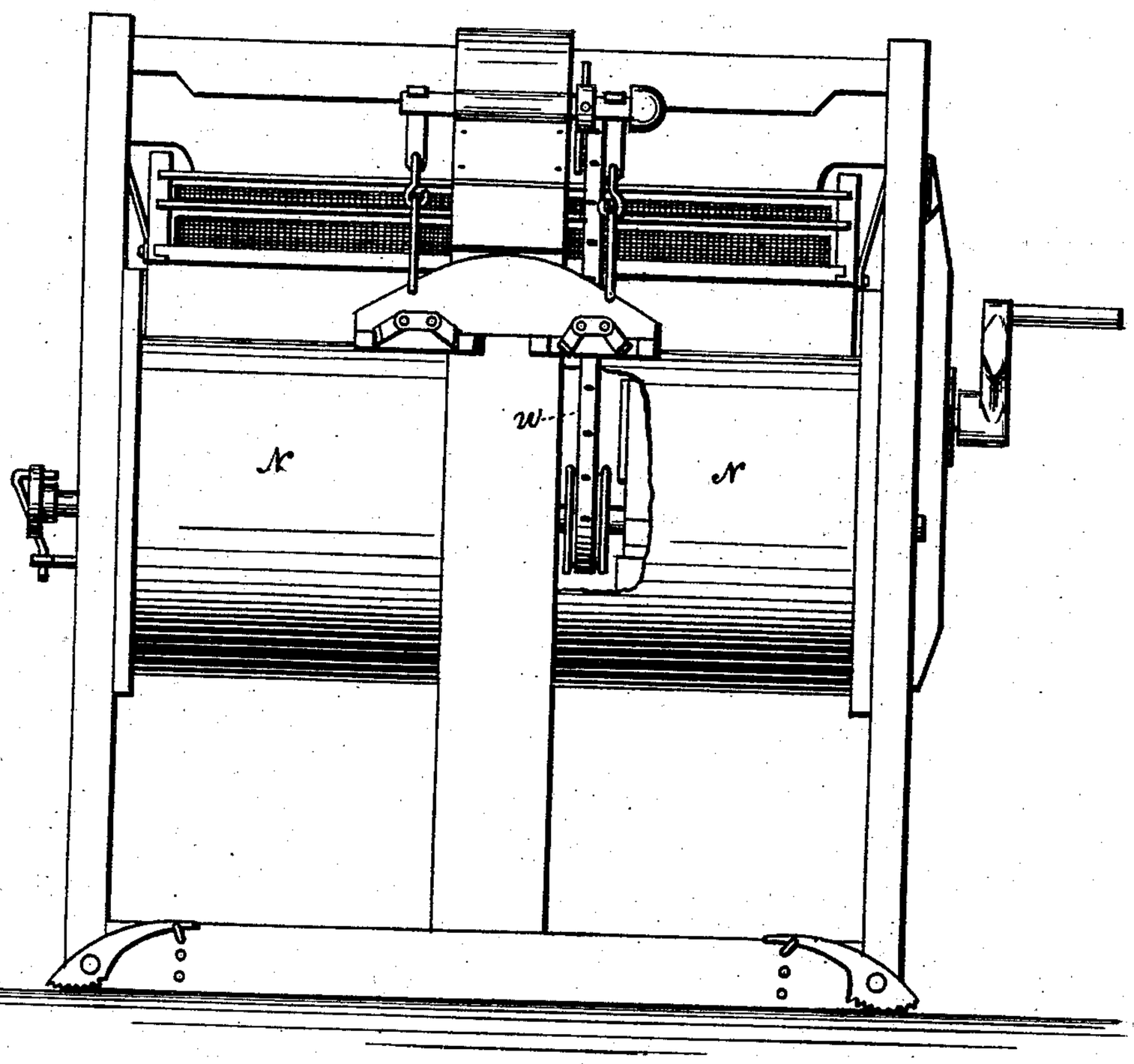


Fig. 5.

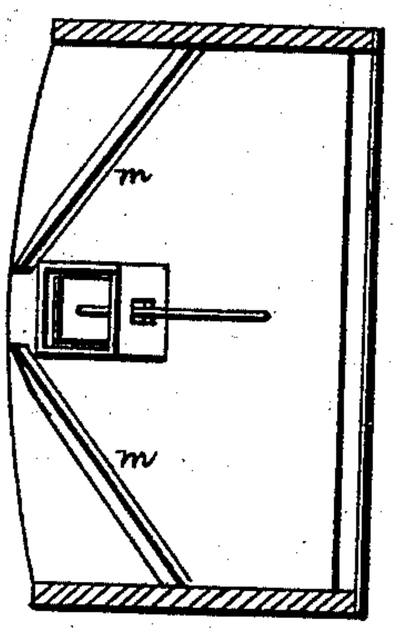


Fig. 6.

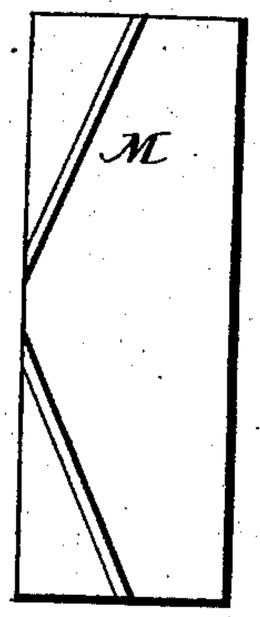


Fig. 7.

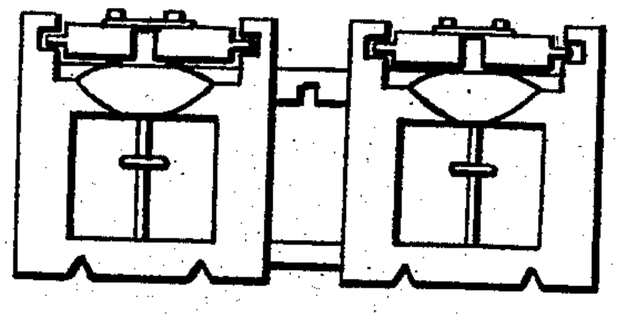


Fig. 8.

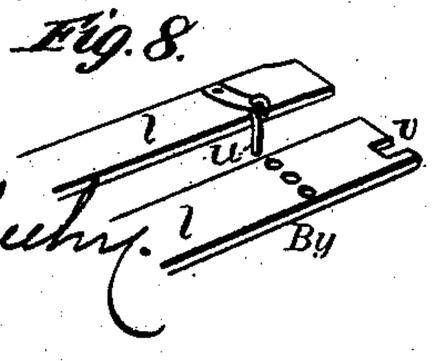


Fig. 9.

WITNESSES
Robert Everett
Jamie J. Shuhy.

INVENTOR
Edward Marshall Gilbert
Eldridge J Smith
ATTORNEY

UNITED STATES PATENT OFFICE.

EDWARD M. GILBERT, OF BYRON, MINNESOTA.

IMPROVEMENT IN FANNING-MILLS.

Specification forming part of Letters Patent No. **222,130,** dated December 2, 1879; application filed May 9, 1879.

To all whom it may concern:

Be it known that I, EDWARD MARSHALL GILBERT, of Byron, in the county of Olmsted and State of Minnesota, have invented certain new and useful Improvements in Fanning-Mills; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 of reference marked thereon, which form a part of this specification.

Figure 1 of the accompanying drawings is a side elevation of my grain-separator. Fig. 2 is a longitudinal vertical section. Fig. 3 is a detail view; Fig. 4, an end view of the mill. Figs. 5, 6, 7, 8, and 9 are detail views of portions of the mill and elevator.

My invention consists in certain improvements in those grain-separators commonly called "fanning-mills," and will hereinafter be more particularly described and claimed.

A *a* in Fig. 2 are screens of fine texture, or about "No. 7" mesh. B *b* represent sieves of coarse texture, of about "No. 9" mesh, fitted into grooves in sides of the shoe C. The said shoe is elongated, so as to extend directly over the drums N N, in which the fans operate, as shown in Fig. 4. This position of the screens A *a* is such as to be out of the way of the air-blast from the fans. D represents a spout arranged to receive the screenings from the first screen, A, and lead them to the spout E. F represents a pivoted cut-off operated by the rod *f* in said spout E, and discharging the grain at will, either into the spout G, leading to the elevator, or into the trough H, out at the side of the mill. The screening-board I and trough *i* receive the screenings from the two sieves A *a*, and lead also to the side of the mill. The screenings from the sieves B *b* fall either upon the bottom board of the shoe K or the grading-board *l l*. In the former instance the grain is led by the guides *m m* in Fig. 5, and discharged into the spout G, leading to the elevator. The grain falling upon the grading-boards *l l* is discharged upon the bottom board, J, of the shoe and into the trough H. The upper grading-board, *l*, is provided with a pin, *u*, at each end to fit in perforations in the lower grading-board. The lower grading-board is secured in position by pins projecting from each inner side of the shoe and fitting in the slot *n* in Fig. 8.

In Fig. 4, N N represent drums, in which the wings of the fan operate. These drums are separated from each other at sufficient distance to admit the elevator-spout between them.

O in Figs. 2 and 3 represents the perforated elevator-belt, into which the pins 2 2 in the upper surface of the pulleys P P operate. Affixed transversely across the elevator-belt are the cleats R, as shown in Fig. 2, about one inch in thickness, which, with the perforations in the belt, serve to lodge the grain in the process of elevating. The elevator-belt is operated by perforated belt *w*, operating on pulleys attached to fan-shaft and the upper pulley-shaft of elevator. The elevator is secured at the top by the hooks S, and the lower portion resting in the recess T.

The perforations in the elevator-belt co-operate with the cleats R to carry up the grain, fewer cleats being required on this account. They prevent choking and permit the elevator-belt to be loose upon the pulleys, thereby diminishing loss of power from friction, &c.

Having thus described the construction and operation of my invention, I claim and desire to secure by Letters Patent—

1. In a grain-separator, the combination of the elongated shoe C, holding the compound screens A B *a b* and extending over the two separated drums N, placed within the frame of the machine, and operating substantially as and for the purposes set forth.

2. The bottom board of the shoe K, substantially as described, provided with guides *m m* and opening H, and arranged in the relation described to spout E, having divider F, and to the elevator, as and for the purposes set forth.

3. The combination, with shoe C, of the spouts D, E, and G, the latter provided with cut-off F *f*, as and for the purpose described.

4. In a grain-separator, the pivoted cut-off F, arranged in spout E, and provided with rod *f*, combined and arranged as and for the purpose described.

5. The combination, with the spout G of the fanning-mill, of the perforated elevator-belt O,

having the cleats R, and the pulleys having the pins 2, constructed and combined substantially as and for the purposes set forth.

6. In a grain-separator, the combination of the hooked rods S S and the recess T with the elevator placed between the drums N and formed with a shoulder, substantially as and for the purposes set forth.

7. In a grain-separator, the elevator, arranged as described with respect to spout G, and supported between the drums N, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWARD MARSHALL GILBERT.

Witnesses:
JO B. KENDALL,
A. J. SLADE.