A. G. & H. W. MOWBRAY.

Middlings Bolts.

No. 144,783. Patented Nov. 18, 1873.

Fig. II.

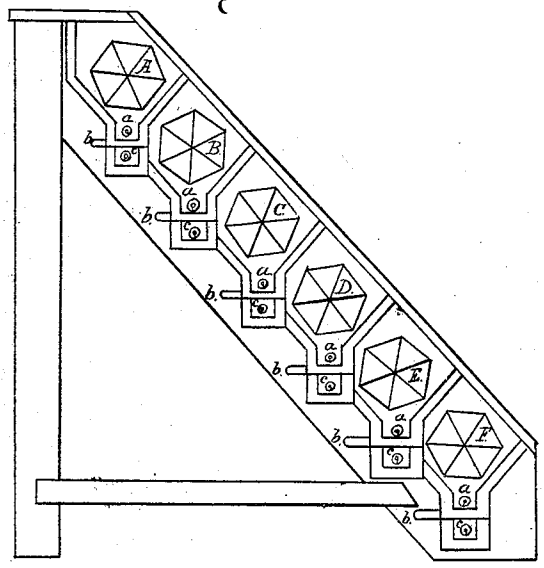


Fig. III.

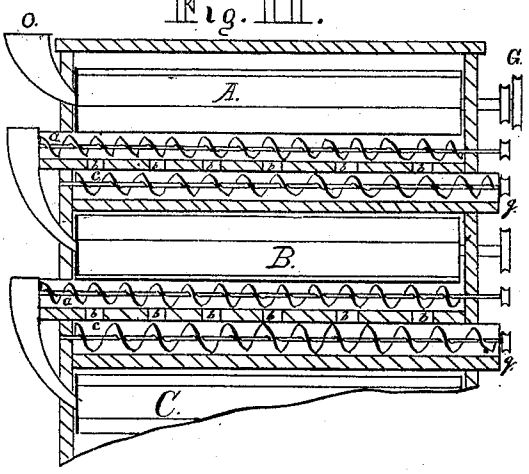
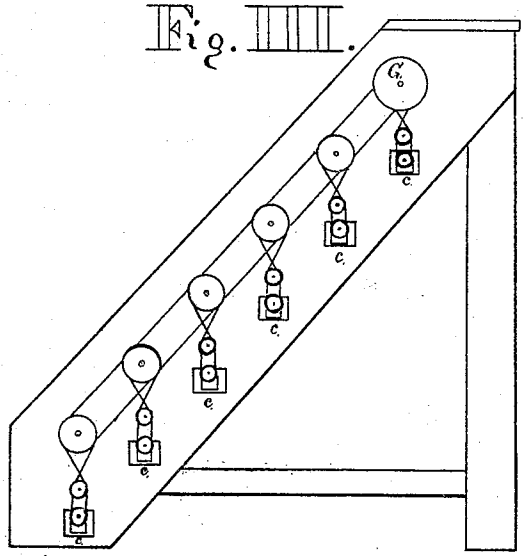


Fig. IIII.



Witnesses:
A. H. Norris
Jos. L. Wildman

Inventors:
A. G. & H. W. Mowbray
By James L. Norris
associate atty.

UNITED STATES PATENT OFFICE.

ALFRED G. MOWBRAY AND HARRY W. MOWBRAY, OF STOCKTON, MINN.

IMPROVEMENT IN MIDDLINGS-BOLTS.

Specification forming part of Letters Patent No. **144,783**, dated November 18, 1873; application filed September 11, 1873.

To all whom it may concern:

Be it known that we, ALFRED G. MOWBRAY and HARRY W. MOWBRAY, of Stockton, in Winona county, Minnesota, have invented certain Improvements in Middlings-Bolts, of which the following is a specification:

This invention relates to middlings-bolts; and consists in the combination of a series of bolts of small diameter, each having two conveyers, with regulating-slides, the construction of which will be hereinafter described, the object being to separate the middlings and fine bran, the latter being carried off at one end, and the former carried to the next bolt, this being repeated until the middlings become clear and pure.

In the drawings, Figure 1 represents an end view of my middlings-bolts, showing their position, &c. Fig. 2 is a sectional plan view; Fig. 3, an end view, showing the ends of conveyer-boxes, and the manner of belting the bolts together.

The letters A, B, C, D, E, and F represent the series of bolts, which are arranged one above the other, as shown, and each having conveyers *a c*, and intermediate slides *b b*. G represents the driving-pulley, and which serves to impart motion to the whole series of bolts by the arrangement of bolts shown in Fig. 3. The middlings are introduced at the spout *o*, where they are carried into the bolt A, and are therein bolted by sifting through the different grades of cloth into the conveyer *a*. The best portion of the product comes through one end of the bolts, and the light bran is carried to the other end, when, by opening the slides *b*, the separated bran is allowed to pass onto the conveyer *c*, which latter carries off the bran at the point *g*, Fig. 2. The middlings are carried by the conveyer *a*, and emptied or caused to pass into the bolt B; (which is covered with a finer grade of cloth from bolt A,) and in this bolt the same operation occurs that is above described, the light bran being carried off at one end, and the middlings deposited in the bolt C. This operation is repeated until the middlings are pure and clear.

We are aware that bolts, conveyers, and slides in the conveyer-box are not new, but such of themselves are not our invention.

By combining a series of bolts of small diameter, each having differently-graded bolting-cloths, and each with its two conveyers and regulating-slide, we are enabled to produce the finest quality of middlings with great economy.

We claim—

The combination of a series of bolts of small diameter, each having two conveyers, *a* and *c*, and regulating-slides *b b*, all constructed and operating substantially as described, for the purposes specified.

In testimony that we claim the foregoing we have hereunto set our hands, this 2d day of September, 1873.

ALFRED G. MOWBRAY.
HARRY W. MOWBRAY.

Witnesses:
R. R. BRIGGS,
ABNER LEWIS.