

(No Model.)

S. McCLURE.

GRAIN SIEVE.

No. 271,497.

Patented Jan. 30, 1883.

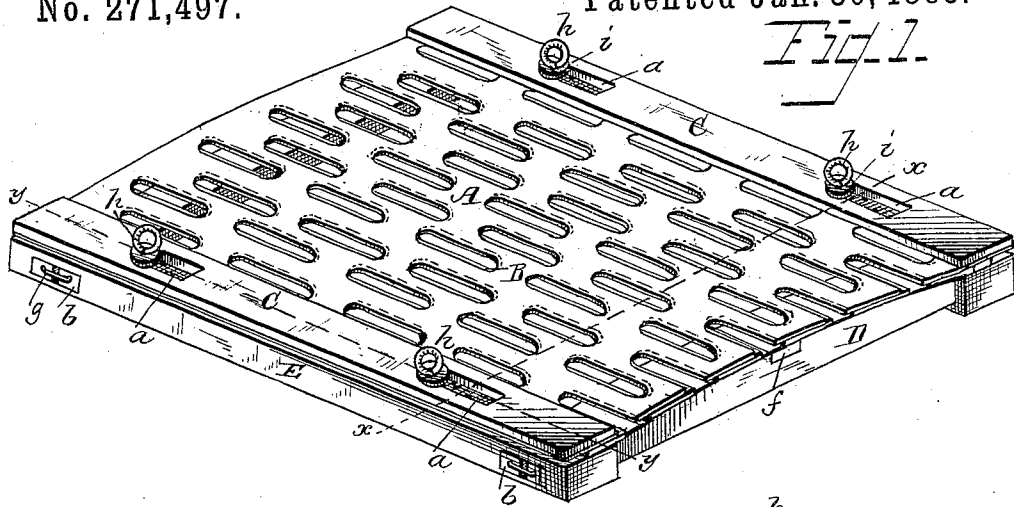


Fig. 1

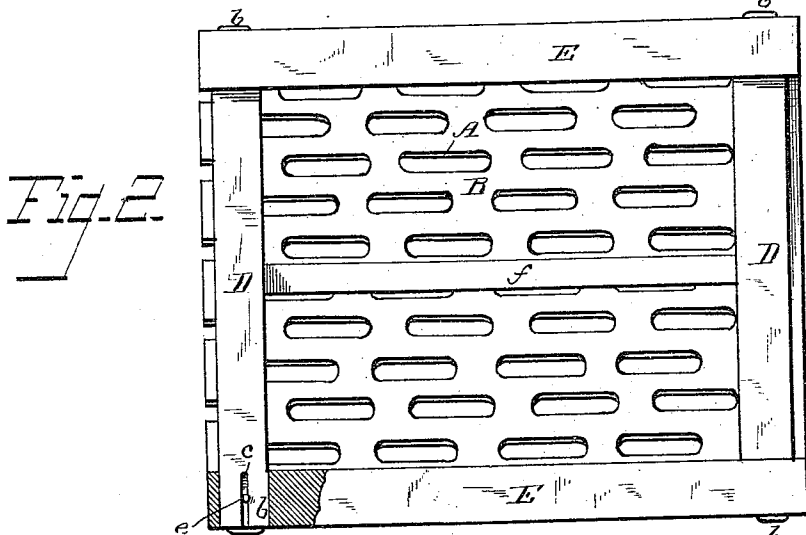


Fig. 2

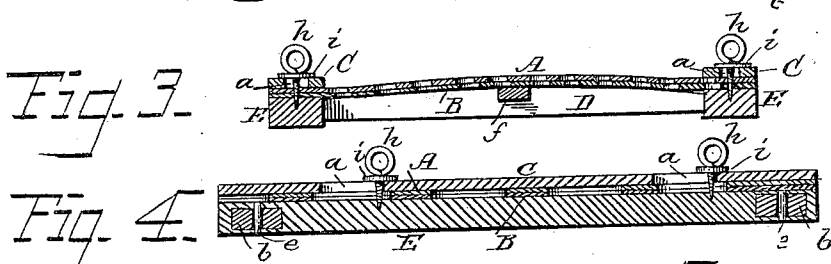


Fig. 3

Fig. 4

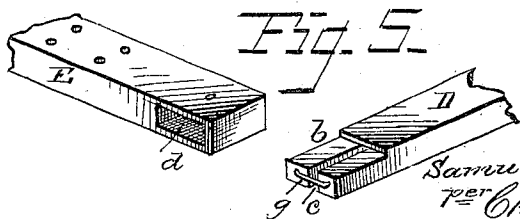


Fig. 5

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# UNITED STATES PATENT OFFICE.

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## GRAIN-SIEVE.

SPECIFICATION forming part of Letters Patent No. 271,497, dated January 30, 1883.

Application filed April 11, 1881. (No model.) Patented in Canada August 12, 1881, No. 13,250.

*To all whom it may concern:*

Be it known that I, SAMUEL McCLURE, a subject of the Queen of Great Britain, residing in the township of Brooke, in the county of Lambton, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Grain-Sieves; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a grain-sieve constructed in accordance with my invention; Fig. 2, an under plan view thereof, partly in section; Fig. 3, a cross-section taken on line *xx* of Fig. 1; Fig. 4, a longitudinal section taken on line *yy*; and Fig. 5, a detail view in perspective, showing the two adjoining ends of the side pieces forming the lower adjustable frame.

The present invention has relation to certain new and useful improvements in that class of grain-sieves wherein are employed two perforated plates adjustable with relation to each other to increase or diminish the size of the perforations or openings.

The object of the invention is to provide a simple and effective means of adjusting and securely holding in position the upper one of the perforated plates, also so constructing the frame to which the lower perforated plate is connected as to increase or diminish its size, in order to adapt it to the size of the shoe of the mills. These objects I attain by the construction, substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A B represent two perforated plates of metal, having their perforations or openings preferably of elongated or elliptical form, said plates being arranged one over the other. The upper plate, A, has rigidly connected to its upper side, and near the edges thereof, braces C, extending the entire length thereof, and parallel with each other, said braces having elongated slots *a* on a line with the elliptical perforations near the edge of the plate. The lower perforated plate, B, is rigidly secured to two sides only of a skeleton frame, the strips D, to which said plate is secured, being formed with tenoned ends *b*, having slots *c*, which enter mortises *d* in the ends of the strips E. Pins *e* pass through the

mortised ends of the strips E, and also through the slots *c* in the tenoned ends *b*, to form guides for the strips E as they are being adjusted. The strips D, to which the plate B is attached, are connected together by a longitudinal brace, *f*, for the purpose of giving increased strength to the sieve, and also to keep both perforated plates together, so as to prevent the introduction of strange bodies between them. The tenoned ends *b* of the strips D have staples *g* connected to them, or the slots *c* are otherwise closed at the outer ends, so that, in connection with the pins *e*, the strips E are prevented from being pulled out too far and detached from the strips D.

By the construction as above described the frame consisting of the strips D E may be lengthened or shortened by the proper adjustment of the strips E, thus adapting the frame to fit any shoe of a mill without cutting away or otherwise injuring the frame in endeavoring to alter it to the size required.

The size of the perforations in the plates are regulated by the adjustment of the top plate, A, the lower plate, B, remaining stationary at all times.

It will be noticed that the slots *a* in the braces C are not only of considerable length, or a length equal to that of the perforations in the plate, but are also of the same width, thus allowing the plate A to be adjusted laterally as well as longitudinally, and diminishing the elongated or elliptical openings or perforations in the plates both lengthwise and crosswise. After the plate A has been properly adjusted it is held stationary by thumb-screws *h* and washers *i*.

In drawing out the strips E to increase the size of the frame it renders it necessary to also change the position of the clamping-screws *h*, so that when the enlargement of the frame is effected the plate A can be longitudinally and laterally adjusted as before. To insure this I provide the strips E with a series of holes for the clamping-screws, as shown in Fig. 5, thus enabling the proper adjustments of the plate A after the frame has been increased in size.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a grain-sieve, the combination, with

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 5 suitable supporting and adjusting means, of two plates having elongated openings or perforations, the upper one of said plates being capable of both longitudinal and sidewise or lateral adjustment to increase or diminish the size of the openings or perforations in the direction of their length and breadth, substantially as and for the purpose set forth.

10 2. In a grain-sieve, the combination, with a stationary perforated plate, B, of the adjustable perforated plate A, side braces, C, having elongated slots *a* of equal or greater length and breadth than the length and breadth of the perforations, and suitable clamping devices for holding the plate in the adjusted position, substantially as and for the purpose specified.

15 3. In a grain-sieve, the combination, with the adjustable perforated plate A, of the stationary perforated plate B, and the frame adapted to be lengthened or shortened and enlarged or diminished in size, substantially as and for the purpose described.

20 4. In a grain-sieve, the adjustable perforated

plate A, in combination with the perforated plate B, the strips D, the strips E, and means for adjusting said strips, substantially as and for the purpose set forth. 25

5. In a grain-sieve, the adjustable perforated plate A, in combination with the perforated plate B, strips D, formed with tenoned ends *b* and slots *c*, and the strips E, having mortised ends *d*, which fit over the tenoned ends of the strips D, substantially as and for the purpose specified. 30

6. A grain-sieve consisting of the perforated plate A, braces C, having elongated slots *a* of the size and form described, the perforated plate B, side strips, D, having tenoned and slotted ends, brace *f*, and the strips E, having mortised ends, the whole being arranged and connected together to operate substantially as and for the purpose specified. 35 40

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Witnesses:

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