

BROOKS & OGDEN.

Grain Screen.

No. 35,360.

Patented May 27, 1862.

Fig. 1.

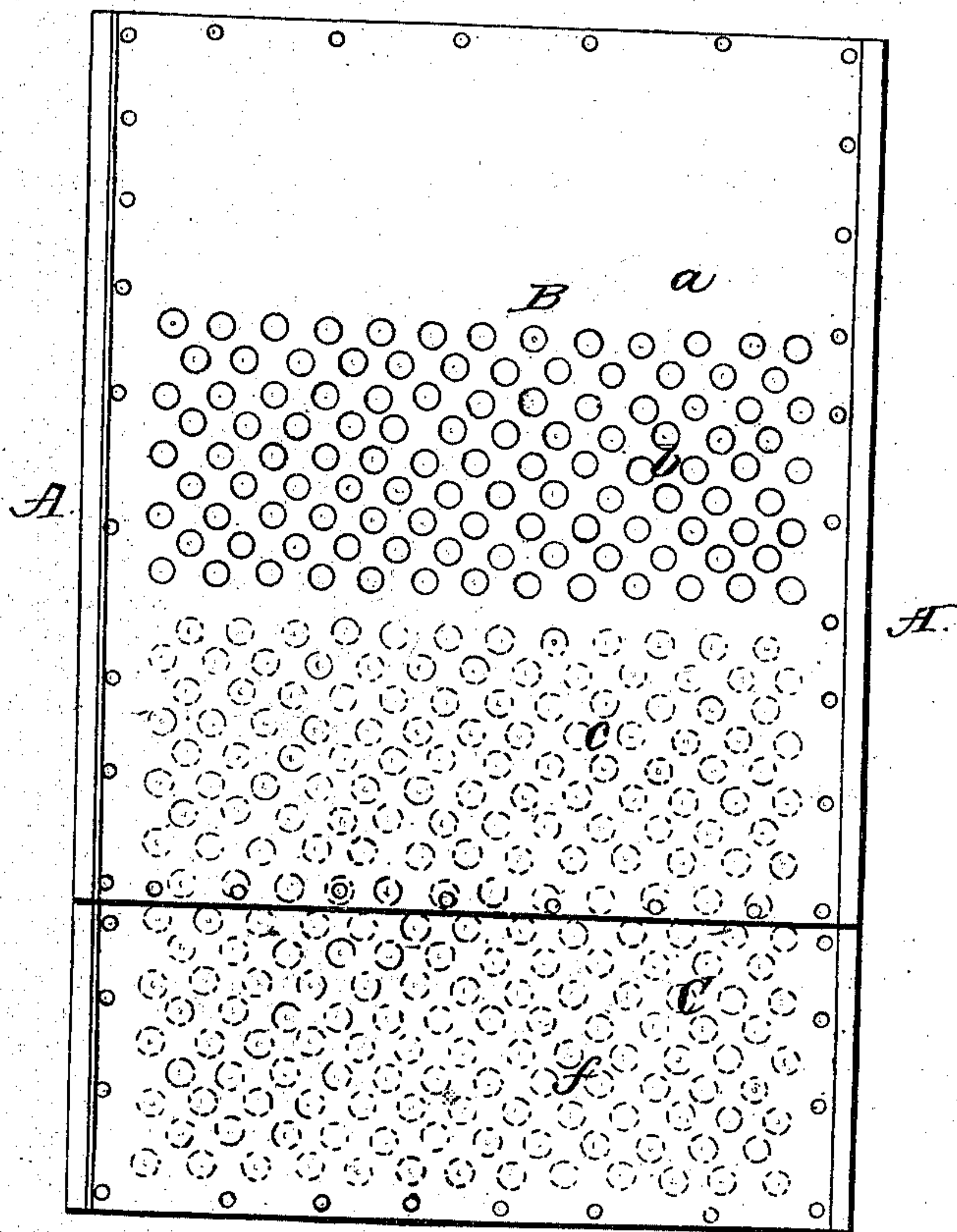
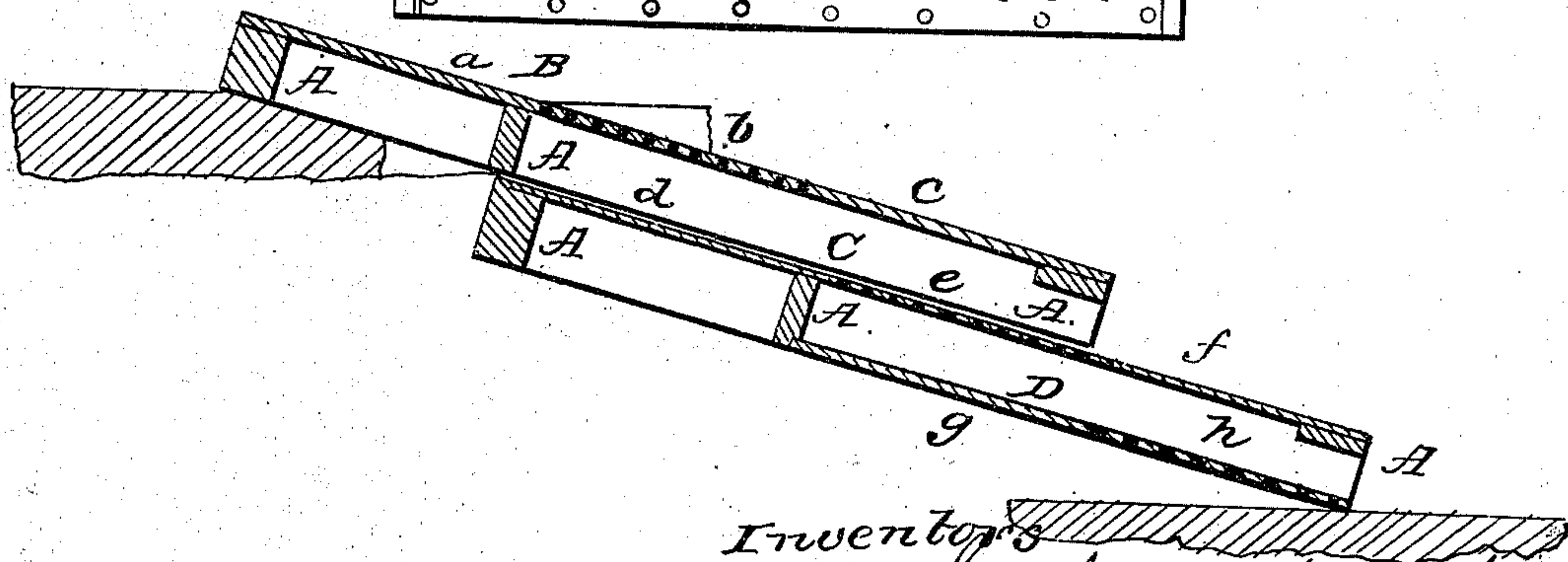


Fig. 2.



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UNITED STATES PATENT OFFICE.

GILBERT BROOKS AND WILLIAM OGDEN, OF WAVERLY, NEW YORK, ASSIGNORS TO THEMSELVES AND WILLIAM BROOKS, OF SAME PLACE, AND C. C. BROOKS, OF ATHENS, PENNSYLVANIA.

IMPROVEMENT IN GRAIN-SIEVES.

Specification forming part of Letters Patent No. 35,360, dated May 27, 1862.

To all whom it may concern:

Be it known that we, GILBERT BROOKS and WILLIAM OGDEN, of Waverly, in the county of Tioga and State of New York, have invented a new and Improved Grain-Sieve; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a top view of the sieve; Fig. 2, a longitudinal vertical section thereof.

Like letters designate corresponding parts in both figures.

The principal object of the invention is to separate wheat from oats; and for the purpose it is to be applied to a common fanning-mill. It is a compound sieve constructed substantially as follows:

Any suitable frame, A, is constructed generally of wood for mounting the sieve upon. The sieve is composed of a number of single sieves or sieve-plates, B C D, and these may be constructed of wood, except generally the perforated portions, which are best made of sheet metal, such as sheet-zinc. Thus each sieve-plate may be made of different pieces, and those of different materials. It is desirable, if not essential, for it to have smooth upper surfaces, and these should be more or less inclined, as shown in Fig. 2, so that the grain will pass over them readily.

The upper sieve-plate, B, is composed of three equal or nearly equal divisions, *a b c*, of which the upper division, *a*, is "solid," or without perforations, the middle division, *b*, provided with numerous perforations large enough to allow wheat to pass freely through, but not oats, unless endwise, and the lower division, *c*, in turn without perforations.

The next plate, C, has also three divisions, *d e f*, the upper and lower divisions, *d f*, being without perforations, and the middle division, *e*, having perforations, like the upper plate, B. This second plate, C, is placed at a little distance below the plate B, parallel or nearly parallel therewith, its upper division, *d*, being directly under the middle division, *b*, of the upper plate, its middle division, *e*, under the third division, *c*, of the upper plate, and its third division, *f*, projecting beyond the said upper plate.

The third plate, D, also has its first division, *g*, without perforations, and situated under the middle perforated division, *e*, of the next upper plate, C, and its second division, *h*, perforated and situated under the third imperforated division, *f*, of the said next upper plate. If this plate D is the last or lower plate of the sieve, it terminates with the second perforated division, *h*, as shown in the drawings; but if there is any plate below it, then it has the third imperforated division projecting still farther onward, just like the plate C above it.

In general, whatever the number of plates, (and these may vary according to circumstances,) all but the lower one are alike, each having three divisions, the upper and lower of which are without perforations and the middle with perforations, and each lower plate having its first imperforated division directly under the second perforated division of the plate next above it, and the other divisions in relative order corresponding, while the lowest plate, D, has only two divisions corresponding in construction and relative position with the two upper divisions of the other plates. It might have the third division also; but that would be entirely unnecessary and require more room.

The compound sieve thus constructed works thus: The grain falls from the hopper only upon the upper division, *a*, of the upper sieve-plate, B, which, being imperforated, causes it to slide or roll down over the next perforated division *b*. Here the wheat falls through the perforations, while the oats, not being able to pass through the perforations, except what few happen to stand endwise thereon, continue on over the third imperforated division, *c*. The wheat, with what few oats, pass through the sieve-plate B with it, next falls upon the upper imperforated division, *d*, of the second sieve-plate, C, and thus being compelled again to roll or slide down over the second perforated division *e*, it falls through the perforations thereof, while the oats pass on over the third imperforated division *f*, unless now and then one, which gets started endwise through a perforation. The wheat then follows the same course upon and through the next sieve-plate to the last one, D, through the perforations of the second division *h*, of which it finally falls

to whatever receives it below. The oats separated by the first sieve-plate, B, falls over the third imperforated division, *c*, thereof, upon the third imperforated division, *f*, of the next sieve-plate, C, where, being joined by the oats separated by said second plate, they next fall upon the third division of the succeeding sieve-plate, if there are more than three sieve-plates, but finally out of the machine, if there are only three sieve-plates. Generally three sieve-plates, B C D, will be found sufficient, although we do not confine ourselves to any particular number of sieve-plates. Thus the grain always falls upon an imperforated and slides or rolls over the perforated divisions of the sieve-plates, thereby separating the oats on the principle stated. The oats, when separated, always proceed over imperforated plates, and are quickly discharged without further impediment, and the wheat has a ready and quick course through the sieve.

The successive perforations of the sieve-plates B C D are indicated in order by black, red, and blue colors in Fig. 1, those below the imperforated divisions being in dotted lines.

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

A compound sieve composed of a succession of sieve-plates, B C D, one over another, and each having imperforated, perforated, and imperforated divisions alternately, and the imperforated and perforated divisions of the several sieve-plates following in succession below one another, substantially as and for the purpose herein specified.

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Witnesses:

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