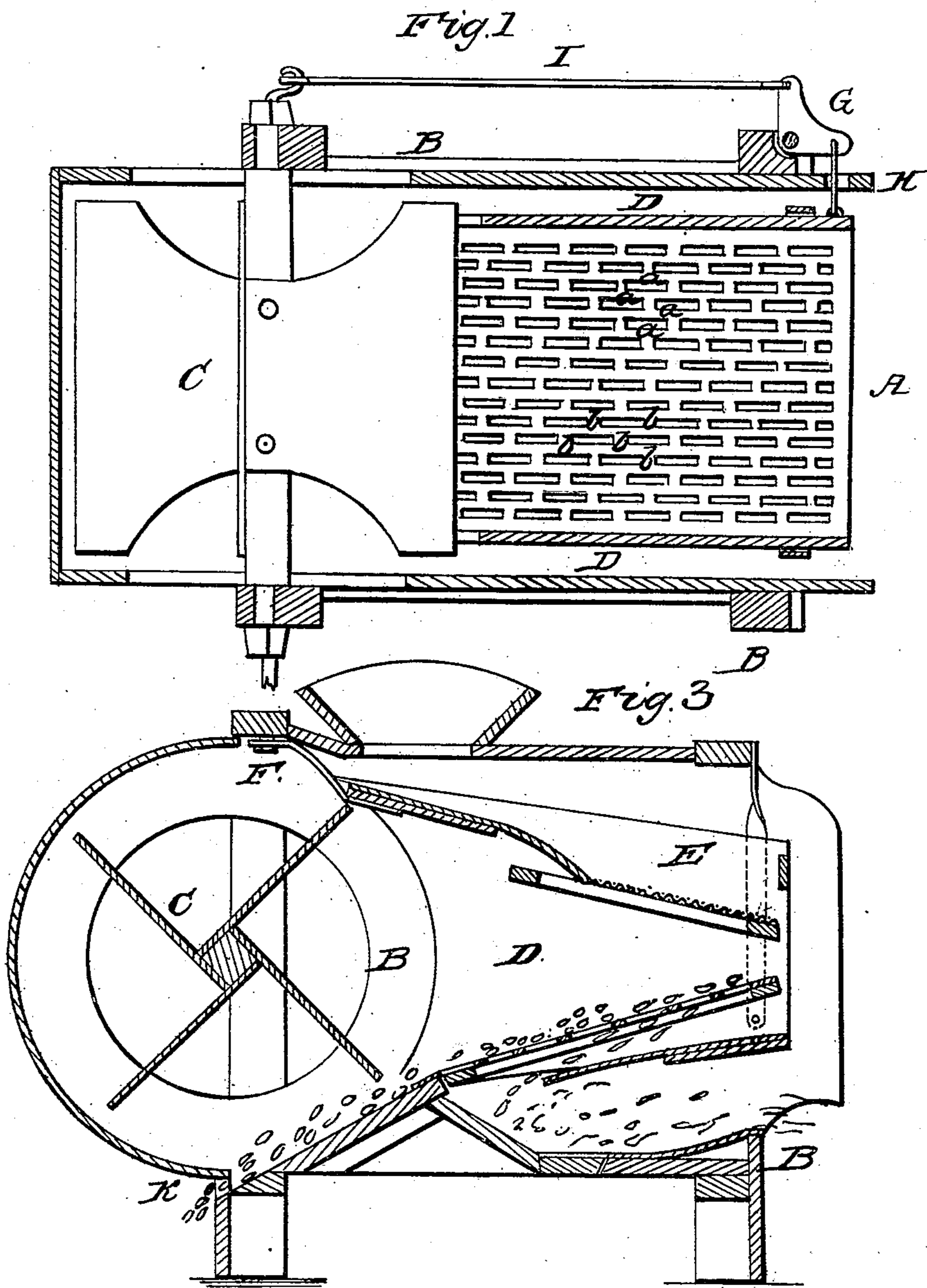


J. FAULKNER.
Grain Separator.

2 Sheets—Sheet 1.

No. 37,440.

Patented Jan. 20, 1863.



Witnesses
Gustave Diderich
D. C. Lawrence
Edwin Brown

Inventor

John Faulkner
by his Atty
Mason Kenrick Lawrence

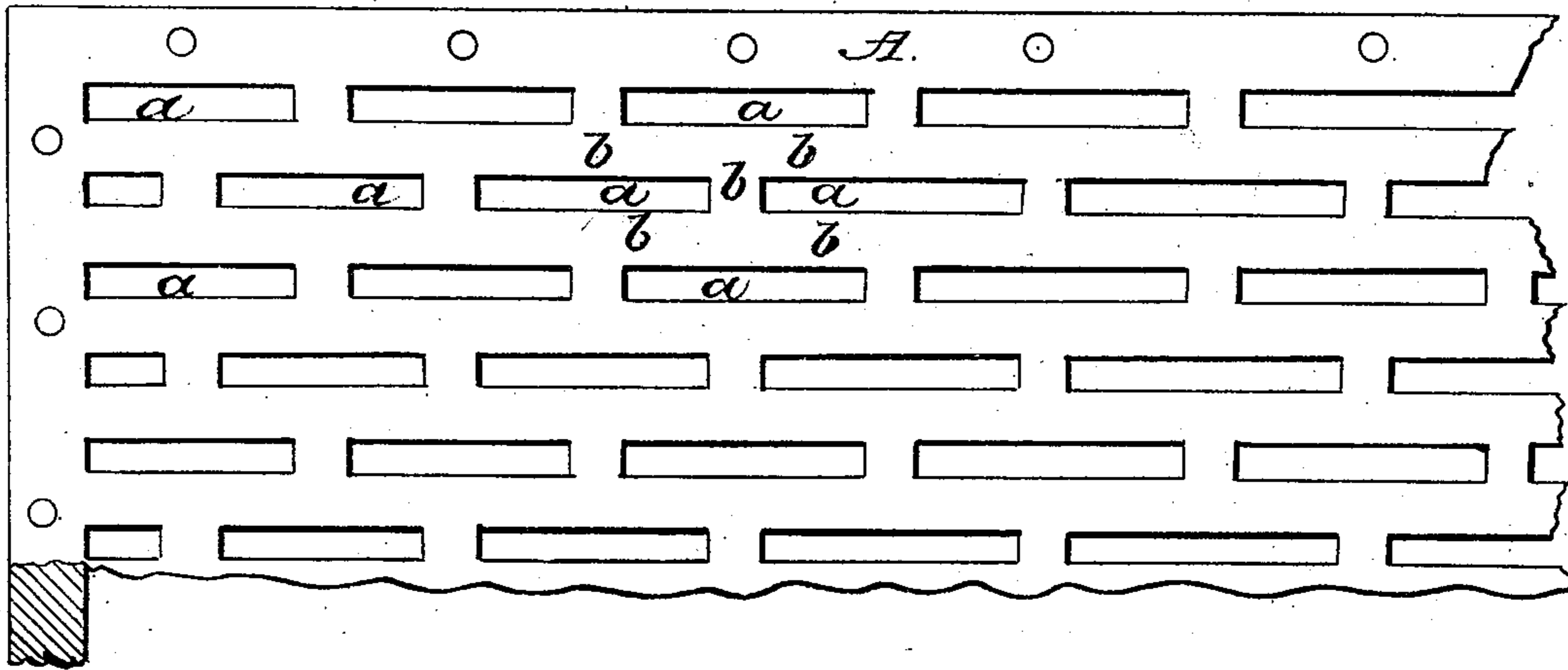
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Fig. 3



Witnesses

Gustave Dietrich
D. C. Lawrence
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Inventor

John Faulkner
by his Atty
Mason Jewett Lawrence

UNITED STATES PATENT OFFICE.

JOHN FAULKNER, OF DANSVILLE, NEW YORK.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. 37,440, dated January 20, 1863.

To all whom it may concern:

Be it known that I, JOHN FAULKNER, of Dansville, in the county of Livingston and State of New York, have invented a new and useful Improvement in Separator-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, forming a part of this specification, in which—

Figure 1 is a horizontal section of a grain-separator with my improved sieve applied in it. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a portion of one of my improved sieves, drawn on a larger scale.

Similar letters of reference in the several figures indicate corresponding parts.

My invention consists in a laterally-vibrating sheet-metal sieve, A, with oblong parallel apertures *a a* through it, when such apertures are so punched between imaginary diagonal lines in the sheet of metal that every four of them inclose solid portions of metal in the form of the letter H, as indicated at *b*, the apertures being longitudinal with the flow of the grain over the sieve, and at right angles, or nearly so, to the lateral movement of the shoe.

The object of my invention is to make a sheet-metal sieve which will readily and thoroughly allow the escape through it of such matter as chess, cheat, &c., mixed with grain, and at the same time retain the good grain and conduct it into the receptacle. To this end it is necessary to have the apertures quite close together and so disposed that the sheet metal shall not be too much weakened by the numerous punctures; also, that such cheat, chess, &c., as may by chance get upon the center portion of the H-figures of the sieve, will certainly be moved sidewise from that point to one or the other of the apertures which are lateral to said center, or forward into an aperture which is in line with said center. These objects I attain by having the apertures which

are on opposite sides of an intermediate line of apertures overlap longitudinally the respective apertures of the said intermediate line, and, in combination therewith, moving the shoe containing the sieve at right angles to the line or length of the apertures.

In the drawings my sieve A is shown arranged in a fanning-mill, B. This mill combines a fan, C, a vibrating shoe, D, a primary wire sieve, E, and my secondary sheet-metal sieve A. The shoe is hung on a pivot, F, at its front end, and by springs at its rear end, and is vibrated by means of an elbow-lever, G, connected by a link, H, to the shoe, and by a rod, I, to the crank of the fan-shaft, as shown. With this arrangement the grain first flows over the primary sieve, and is deprived of sticks, stones, &c. It falls through the meshes of the wire sieve upon the secondary sieve A, and here it is deprived of long foreign matter—such as chess, cheat, &c.—these substances passing down through the oblong apertures. The grain then flows down and passes into a receptacle at the discharge K.

Practical tests have proved that chess and other foul substances are more easily separated and will more readily escape through the apertures arranged as I show, and be more perfectly separated than in any other arrangement of them within my knowledge.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A sheet-metal sieve, A, with apertures *a*, arranged in the manner and for the purpose described.

2. A sheet-metal sieve with apertures *a* in line with the flow of the grain over it and at right angles to the movement of the shoe D of the fanning-mill, in the manner and for the purpose described.

JOHN FAULKNER.

Witnesses:

S. D. FAULKNER,
C. P. JONES.