

HALL & FAULKNER.

2 Sheets—Sheet 1.

Grain Sieve.

No. 34,488.

Patented Feb. 25, 1862.

Fig. 1.

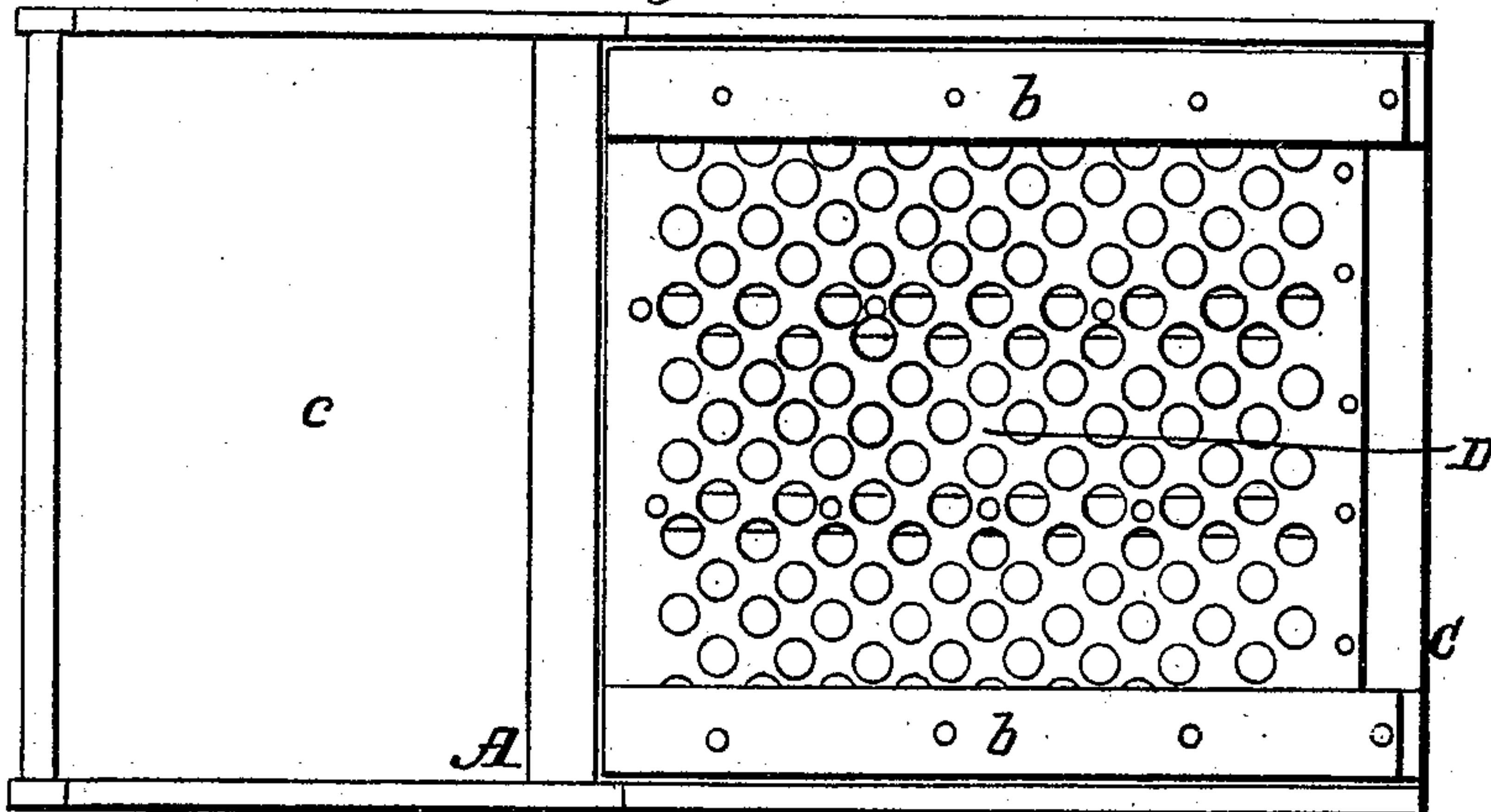


Fig. 2.

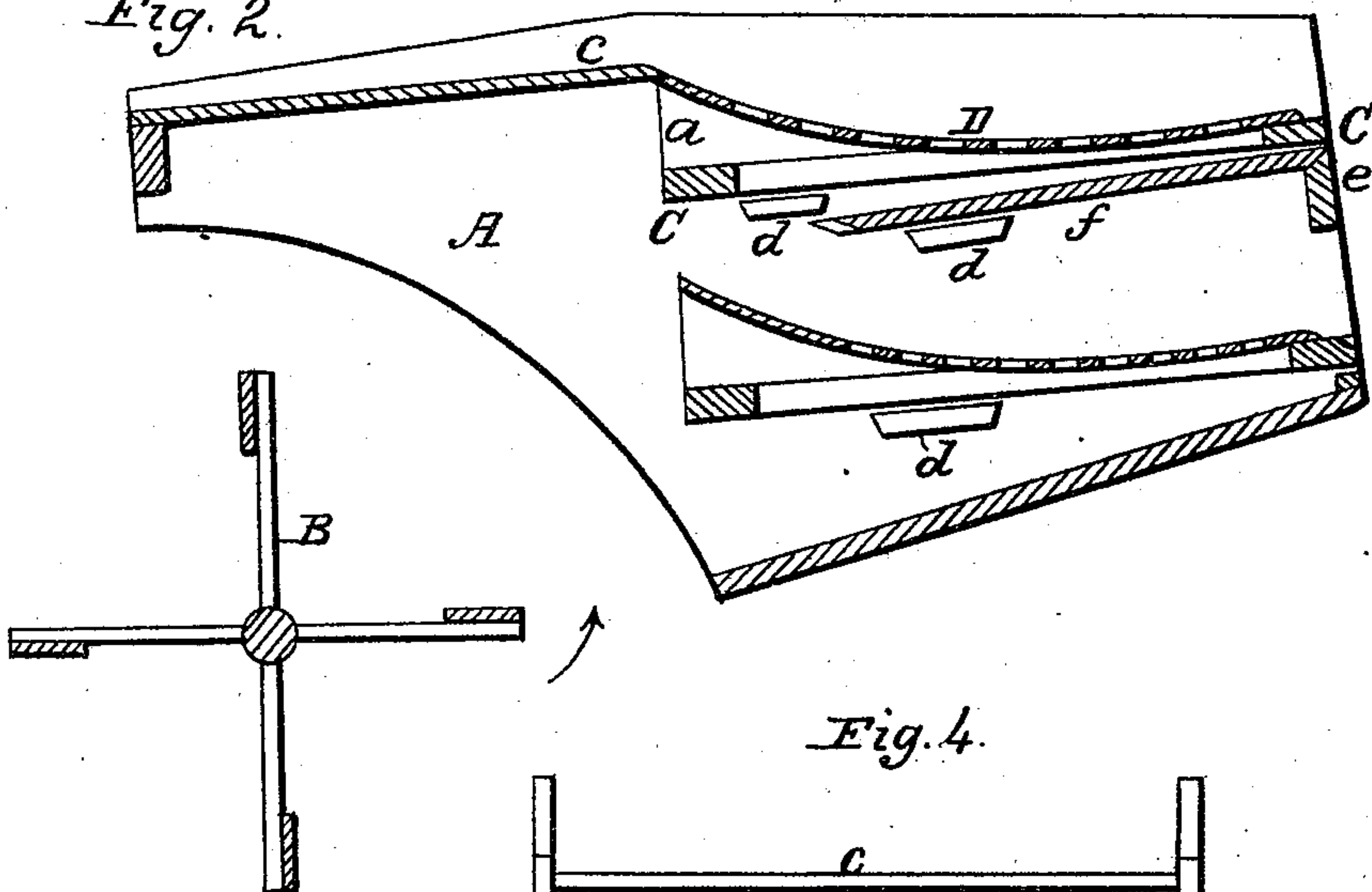
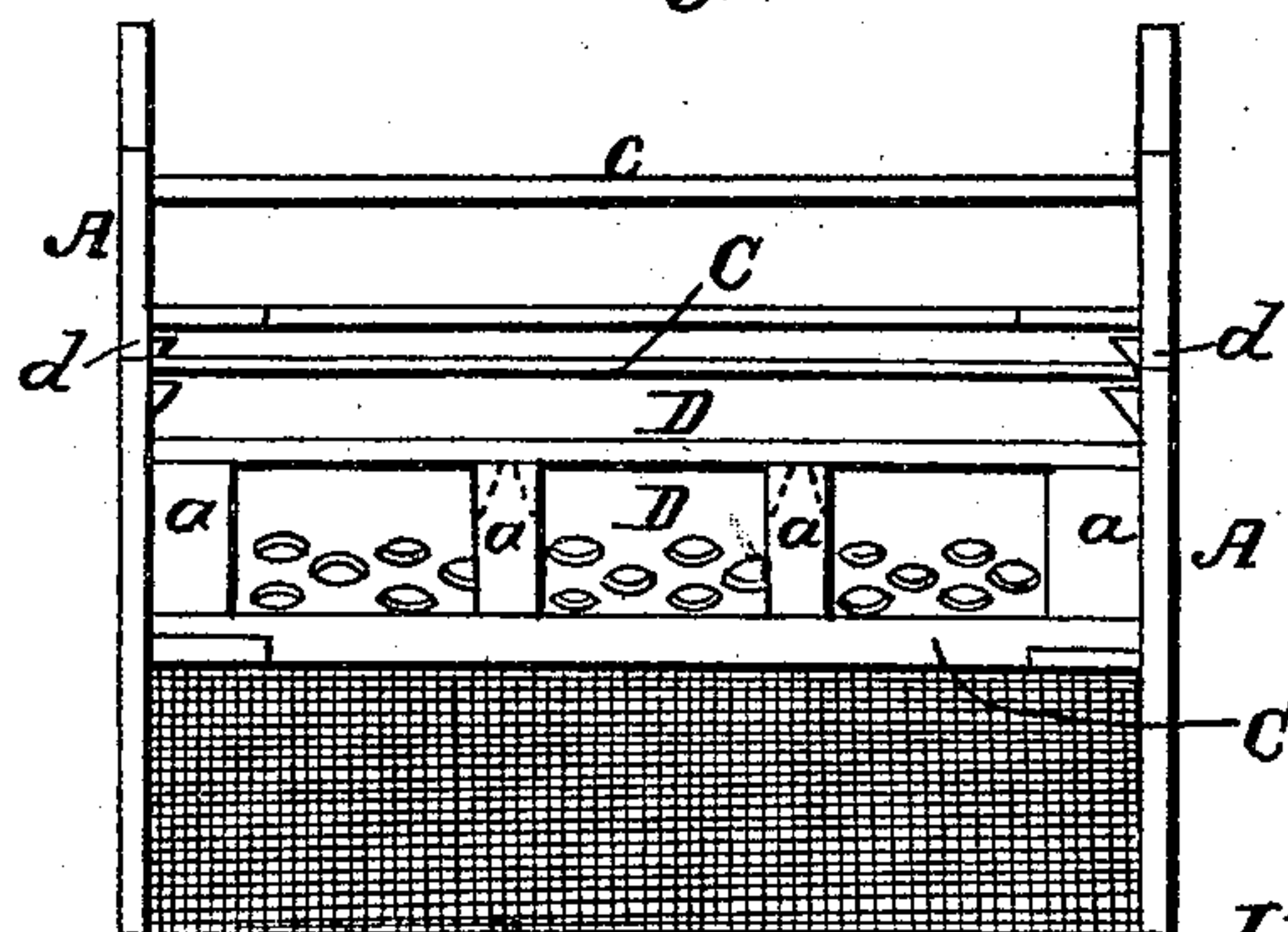


Fig. 4.



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Witnesses:

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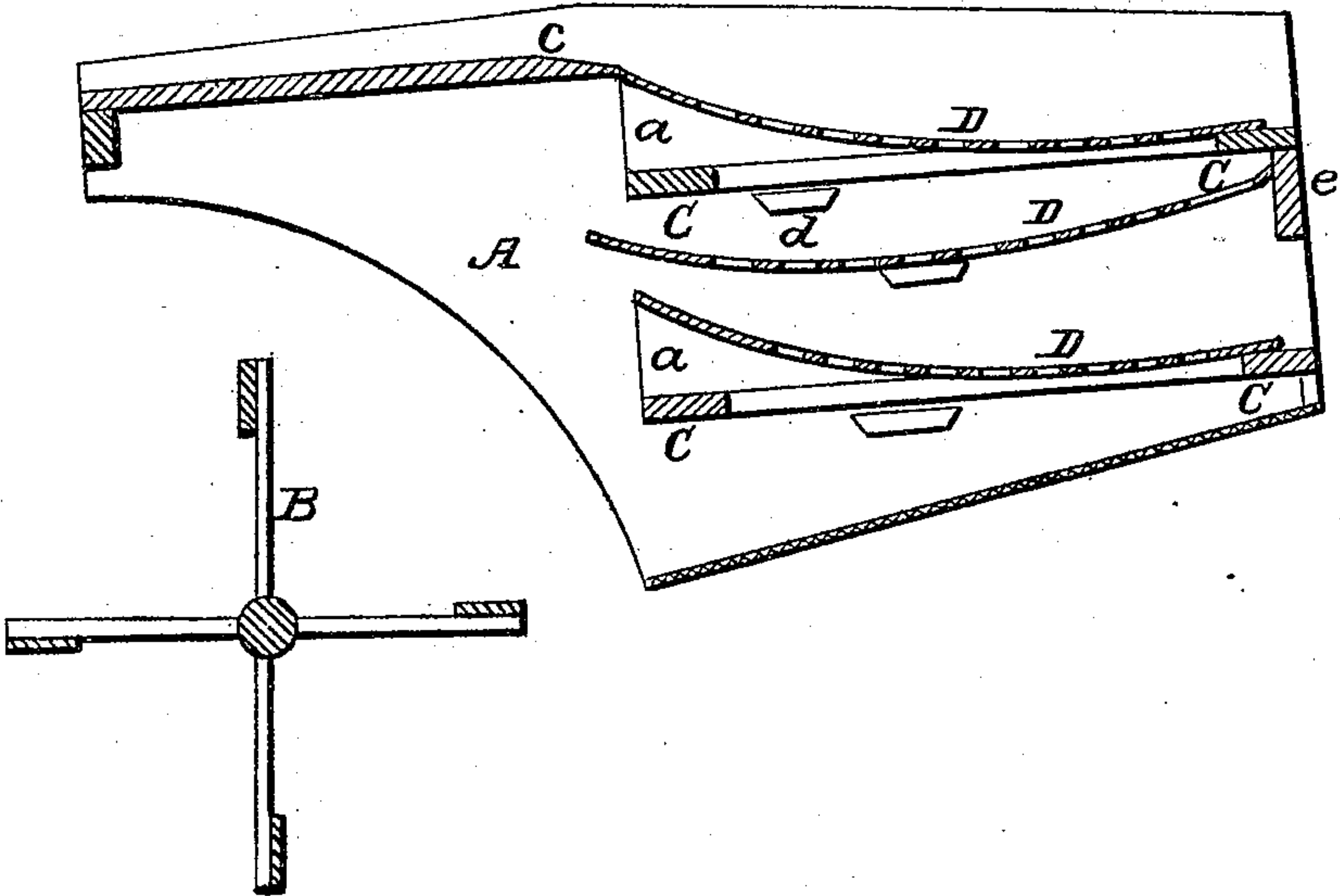
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Fig. 3.



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UNITED STATES PATENT OFFICE.

ASHMAN HALL AND JOHN FAULKNER, OF DANSVILLE, NEW YORK.

IMPROVEMENT IN FANNING-MILLS.

Specification forming part of Letters Patent No. 34,488, dated February 25, 1862.

To all whom it may concern:

Be it known that we, ASHMAN HALL and JOHN FAULKNER, of Dansville, in the county of Livingston and State of New York, have invented a new and useful Improvement in Sieves for Separating Oats, &c., from Wheat; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top view of a fanning-mill shoe with my improved sieve applied to it. Fig. 2 is a vertical longitudinal section of the same with the fan-blower in rear of it. Figs. 3 and 4 are modifications of the shoe with my improved sieves in it.

The same letters of reference in each of the several figures indicate corresponding parts.

The nature of our invention consists in making the sieves of fanning-mill shoes concave longitudinally, so that the blast may perfectly act upon the oats, &c., contained in or mixed with the wheat passing over them.

To enable others skilled in the art to make and use our invention, we will proceed to describe the same with reference to the drawings.

A represents an ordinary fanning-mill shoe; B, the blast-fan thereof.

C is a sieve-frame of rectangular form, with curved inclined seats or side-boards *a a* gradually rising in height from near the center of the length of the frame to its rear termination.

D is a zinc or other metal sieves arranged on top of the seats and frame. The longitudinal section of this sieve presents a curved line, the greatest depth of which is near the rear edge of the sieve. Through the plate of metal of which the sieve is formed circular holes are punched, said holes commencing a short distance from the rear edge of the plate, so as to leave a blank surface, and extending to near the extreme front edge of the plate. The plates thus constructed and arranged on the frames C are secured by means of cleats *b b* and nails.

In applying the sieves to the shoe we have found it well to arrange one just at the termination of the feed-board *c* and have it supported at its rear end by lugs *d d* and at its forward end underneath by a cross-strip *e*. Then to arrange a board *f*, which inclines

backward, a short distance below this sieve. Then to arrange a second sieve underneath this board and above the bottom of the shoe. We also have found it well to substitute a perforated longitudinally concave plate for the board *f* between the upper and lower sieves and to make the bottom of the shoe of wire-gauze, as shown in Fig. 3.

The advantage and operation of our invention may be stated as follows: The wheat in falling upon the upper sieve rolls over the perforated concave surface, and the blast, owing to its striking up against a convex surface, has a more perfect contact with the oats and light foreign substances than it would were the sieve on which they move flat, and thus a very thorough separation of the foreign substances from the wheat is effected. The wheat in escaping through the perforations falls upon the inclined board *f*, and therefrom falls upon the lower sieve, and while on the same is subjected to the blast of the fan, and all finer particles of foreign matter separated thereby from it. From the lower sieve, by escaping through its perforations, it falls upon the bottom of the shoe and passes into the receptacle usually provided.

If the arrangement shown in Fig. 3 is used, the chaff or oats and foreign substances are blown off from the top of the sieves, while the good wheat falls through from one sieve upon another, and finally falls upon the wire-gauze bottom of the shoe, and therefrom runs into the receptacle, the wire-gauze bottom permitting the smallest particles to escape through its meshes in case any should by frictional contact be knocked from the wheat at this stage of the operation.

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

Making that portion of the sieves of fanning-mill shoes which is exposed to the action of the fan-blast concave longitudinally, as shown, for the purposes set forth.

Witness our hands in the matter of our application for patent on improved fanning-mill for separating oats, &c., from wheat.

ASHMAN HALL.
JOHN FAULKNER.

Witnesses:

NORMAN FOSTER,
C. R. KERN.