

J. GRAY.
Grain Winnower.

No. 41,000.

Patented Dec. 22, 1863.

Fig. 1,

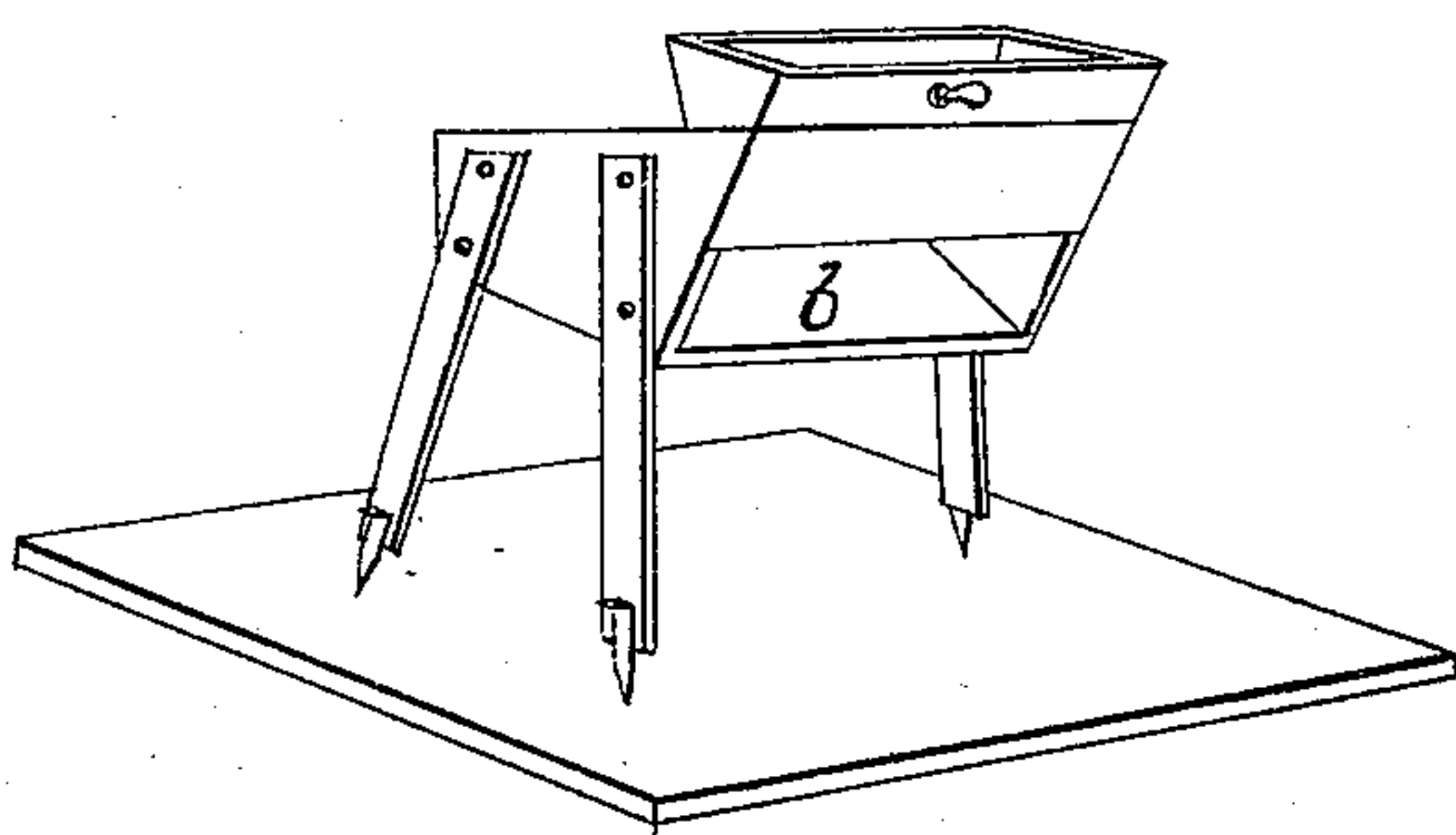


Fig. A,

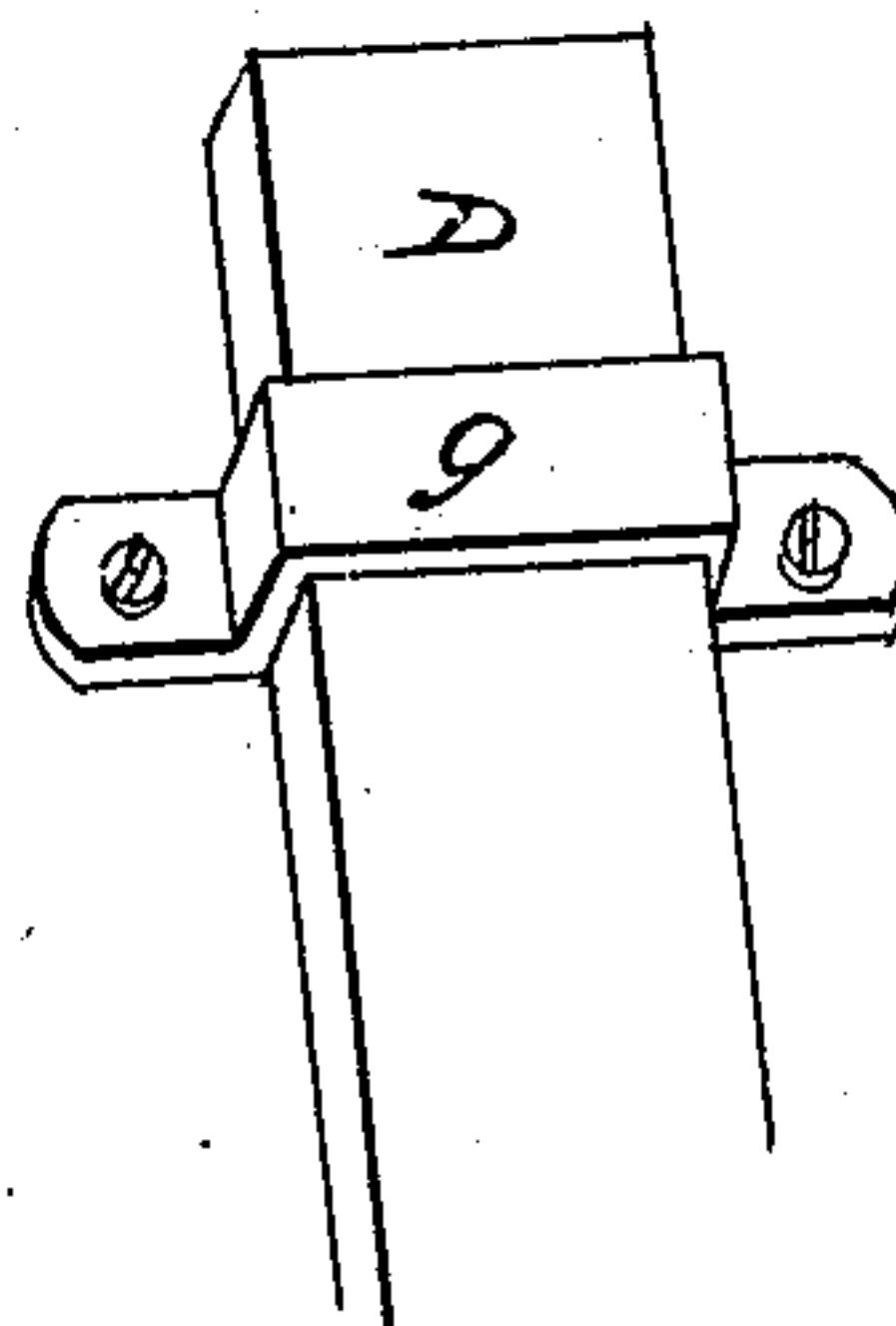
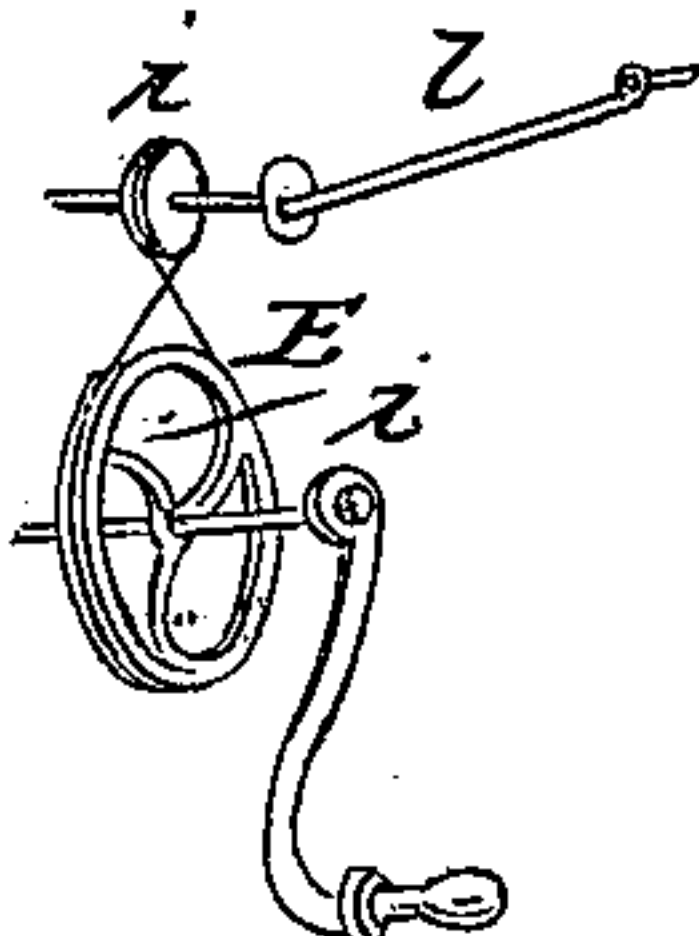
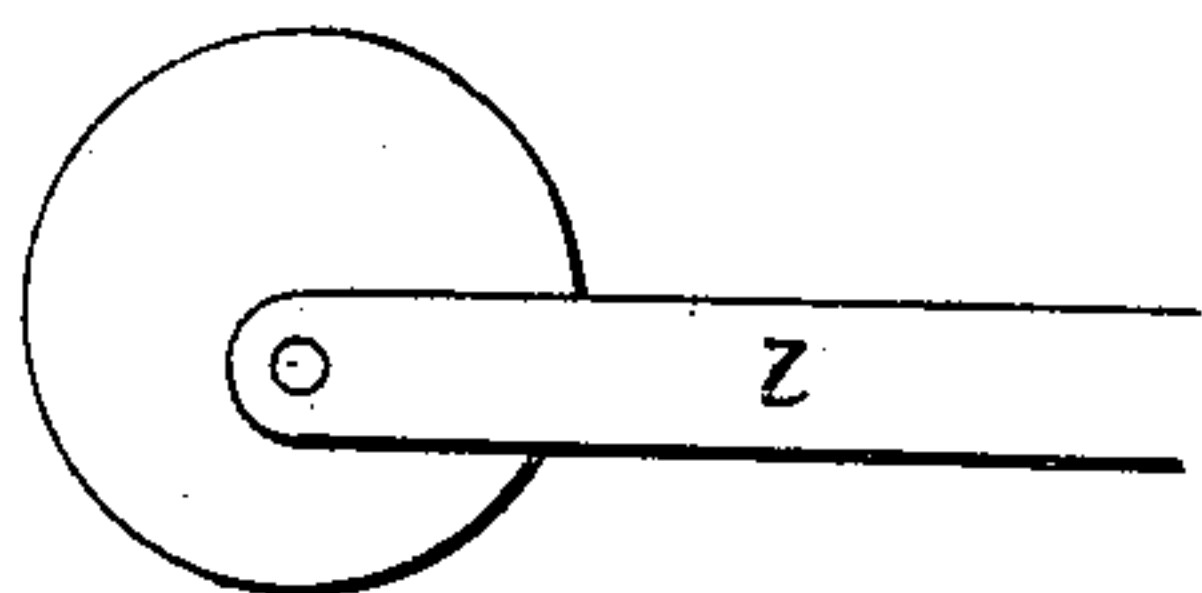
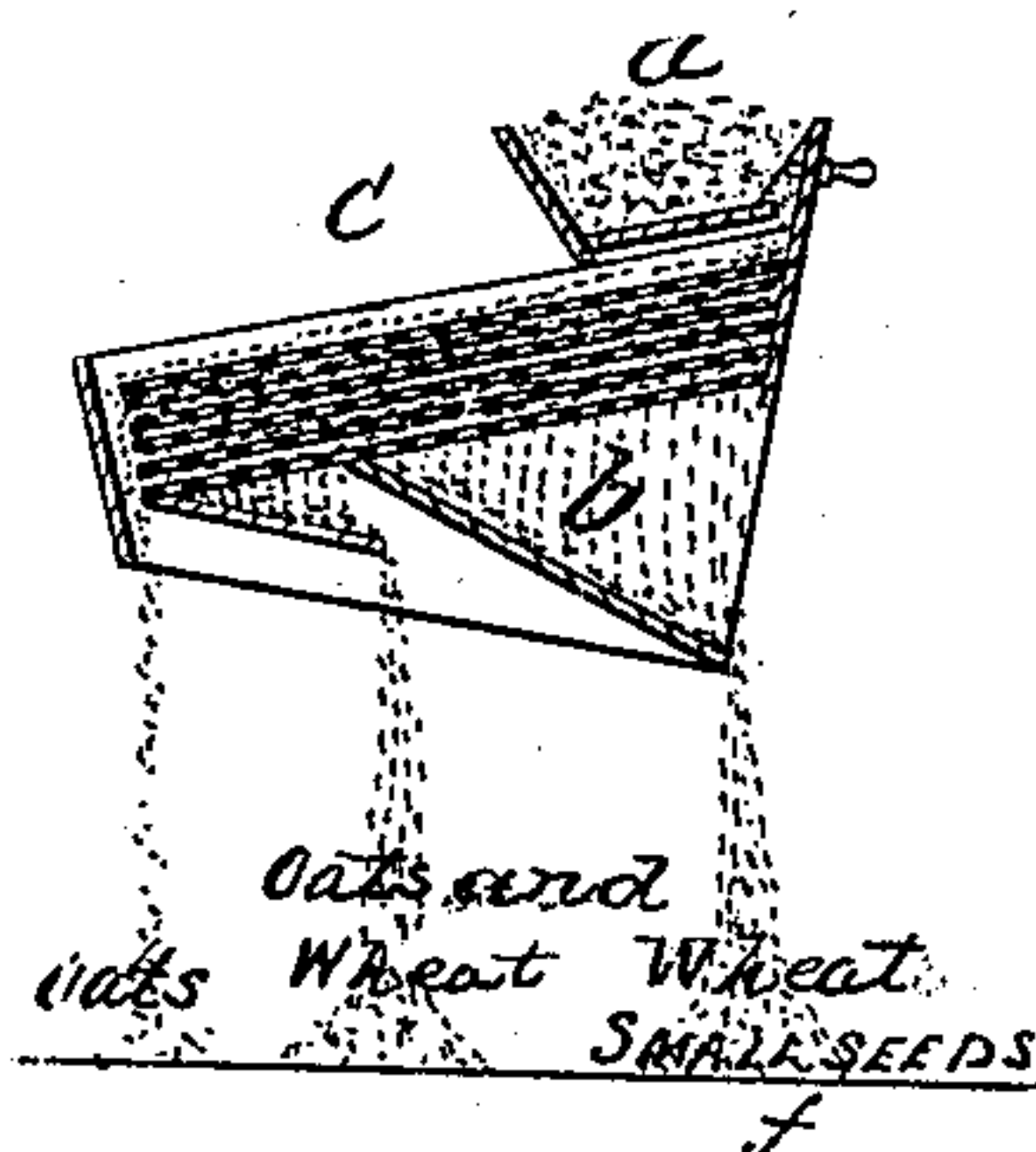


Fig. 2,

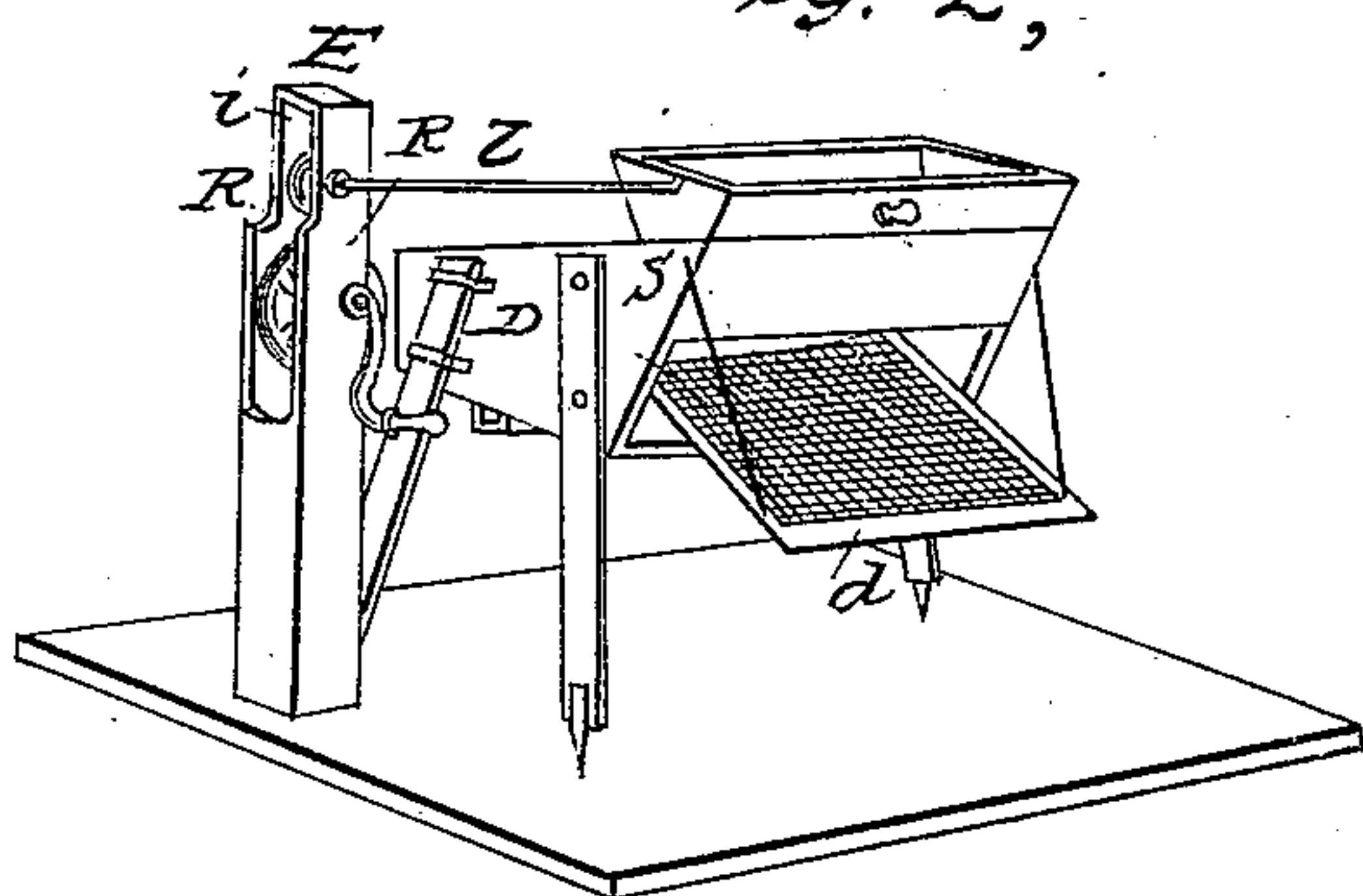
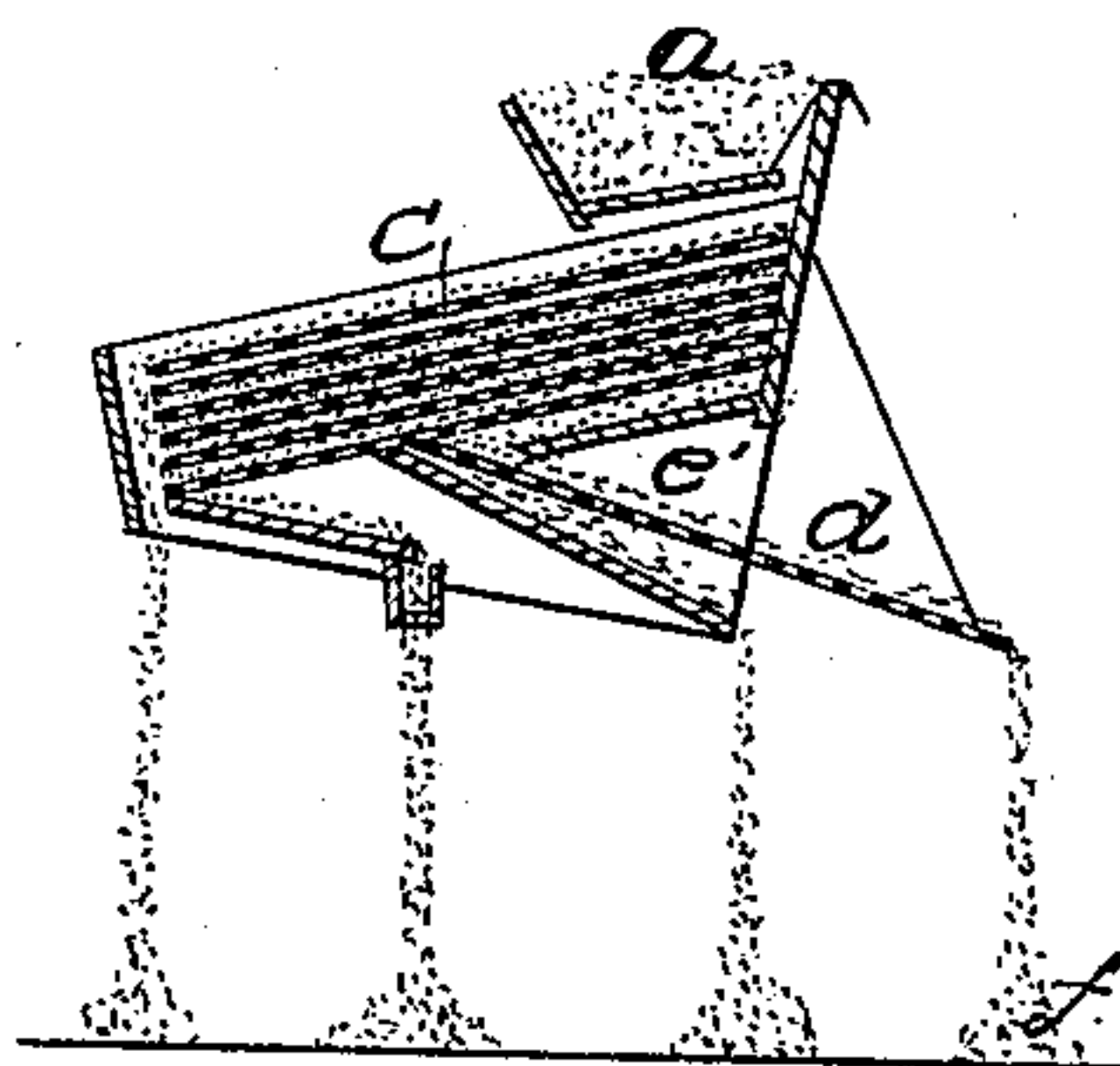


Fig. B,



Witnesses:
J. W. Pitkin
R. L. Dwy

Inventor.
John Gray

UNITED STATES PATENT OFFICE.

JOHN GRAY, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. 41,000, dated December 22, 1863.

To all whom it may concern:

Be it known that I, JOHN GRAY, of the city of Milwaukee and county of Milwaukee and State of Wisconsin, have invented new and useful Improvements to Booth's Compound Shaker for Separating Wheat from Oats and other Kind of Grain; and I do hereby declare that the following is a full and exact description of the said invention and improvements, reference being had to the cuts and drawings hereunto annexed, making a part of this specification, in which—

Figure 1 represents Booth's compound shaker in operation; Fig. A, a sectional view of the same, wherein C represents a set of perforated zinc screens arranged parallel with each other; *a*, the hopper, and *b* an inclined table which conveys the wheat and the small seeds to the floor *f*. Fig. 2 represents Booth's compound shaker, with the application of Gray's improvements attached, consisting of a screen, *d*, a backfall, *e*, slide-legs D, and a crank-power, E. Fig. B represents a sectional view of Booth's compound shaker with the application of Gray's improvements, screen and backfall attached. Fig. D represents the slide-legs and E the crank power.

My improvement to the said shaker consists, first, in the application of one or more screens, *d*, as seen in Fig. B, placed in the wheat-discharge and movable to any desired angle, for the purpose of separating the small seeds, such as cockle and other extraneous seeds, from the wheat and selecting the choicest berries for seed, together with the backfall *e*, which by conducting the wheat and smaller seeds that fall through the sieve C to the upper part of the screens first, give the advantage of the whole surface of said screens.

My second improvement to Booth's compound shaker consists in elevating or depressing the set of zinc sieves C at any desired angle, which is accomplished by means of the slide-legs represented by Fig. D, which are secured to the machine by means of straps and screws, as represented by *g g* or by means

equivalent. This improvement renders one set of sieves suitable for wheat of different-sized berries, thereby producing the same result as if sieves of different-sized holes were substituted.

My third improvement to the said shaker consists in the application of a crank-power. (Represented by Fig. E.) This power is obtained by means of a crank attached to a wheel and pinion, *i i*, placed between two upright posts, R R, connected with the machine by means of an eccentric rod, *l*. The application of this power gives to the machine a quick vibrating motion, thereby causing the wheat to pass through the sieves C, and the oats to glide over the same more readily than when the machine is shaken by hand.

I therefore claim as new and my own invention and desire to secure by Letters Patent of the United States—

1. The combination, with Booth's compound shaker for separating wheat from oats, &c., of the movable screens *d*, together with the backfall *e*, for the purpose of more fully separating the smaller seeds, &c., from the wheat.

2. The application of the slide-legs D to Booth's compound shaker, for the purpose of elevating and depressing the zinc sieves C to any desired angle.

3. The application of the crank-power E and the eccentric-rod L to Booth's compound shaker, said crank-power and eccentric rod being arranged and attached in manner substantially as above set forth, for the purpose of producing upon the machine known as "Booth's compound shaker" a quick vibratory motion.

And I hereby enter my disclaimer to the machine heretofore patented and known as Booth's compound shaker, and claim only the improvements above set forth to said machine.

JOHN GRAY.

Witnesses:

DE WITT DAVIS,
R. L. DAY,