

(No Model.)

G. BEAL.
FLAXSEED CLEANER.

No. 254,590.

Patented Mar. 7, 1882.

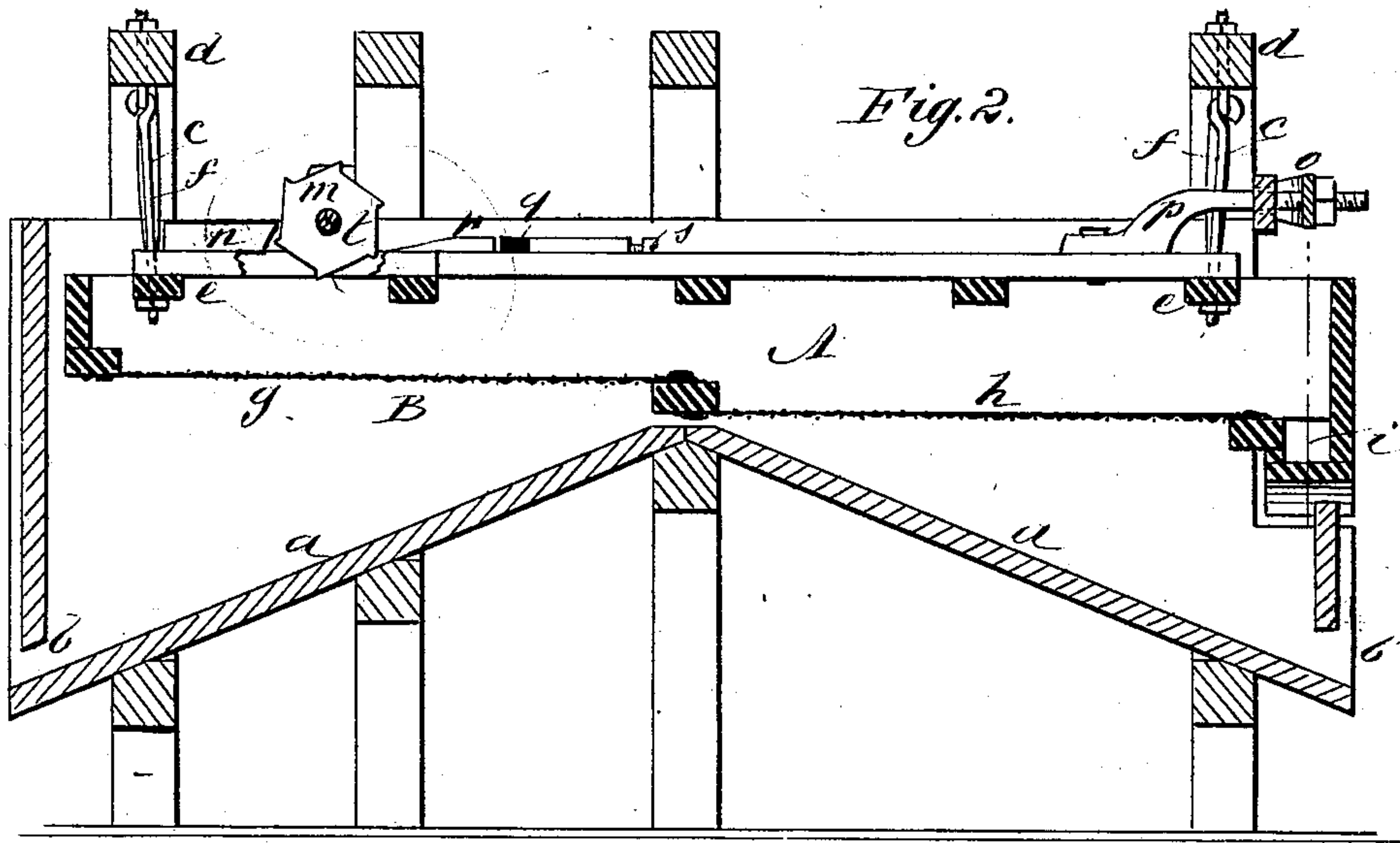
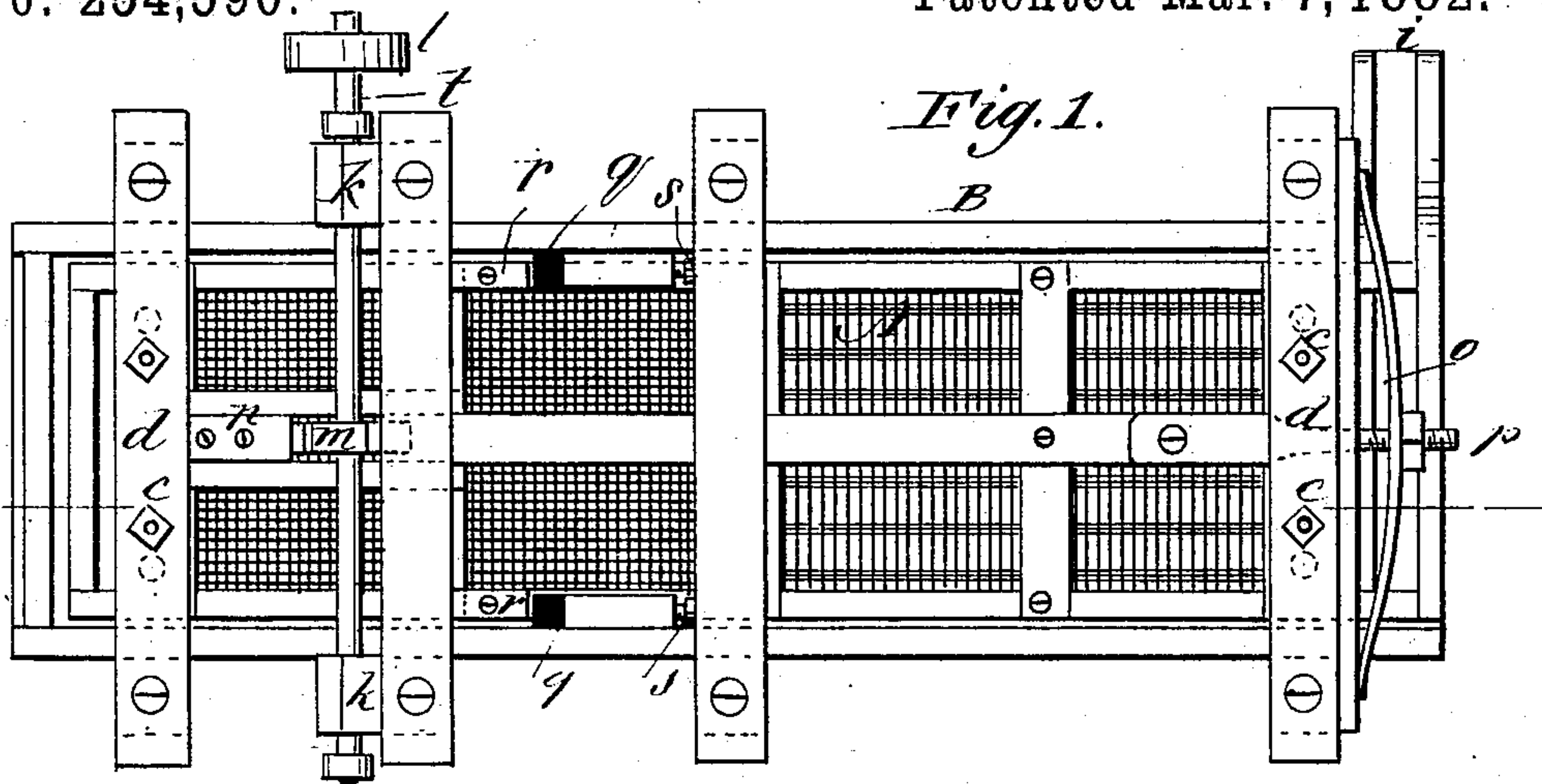
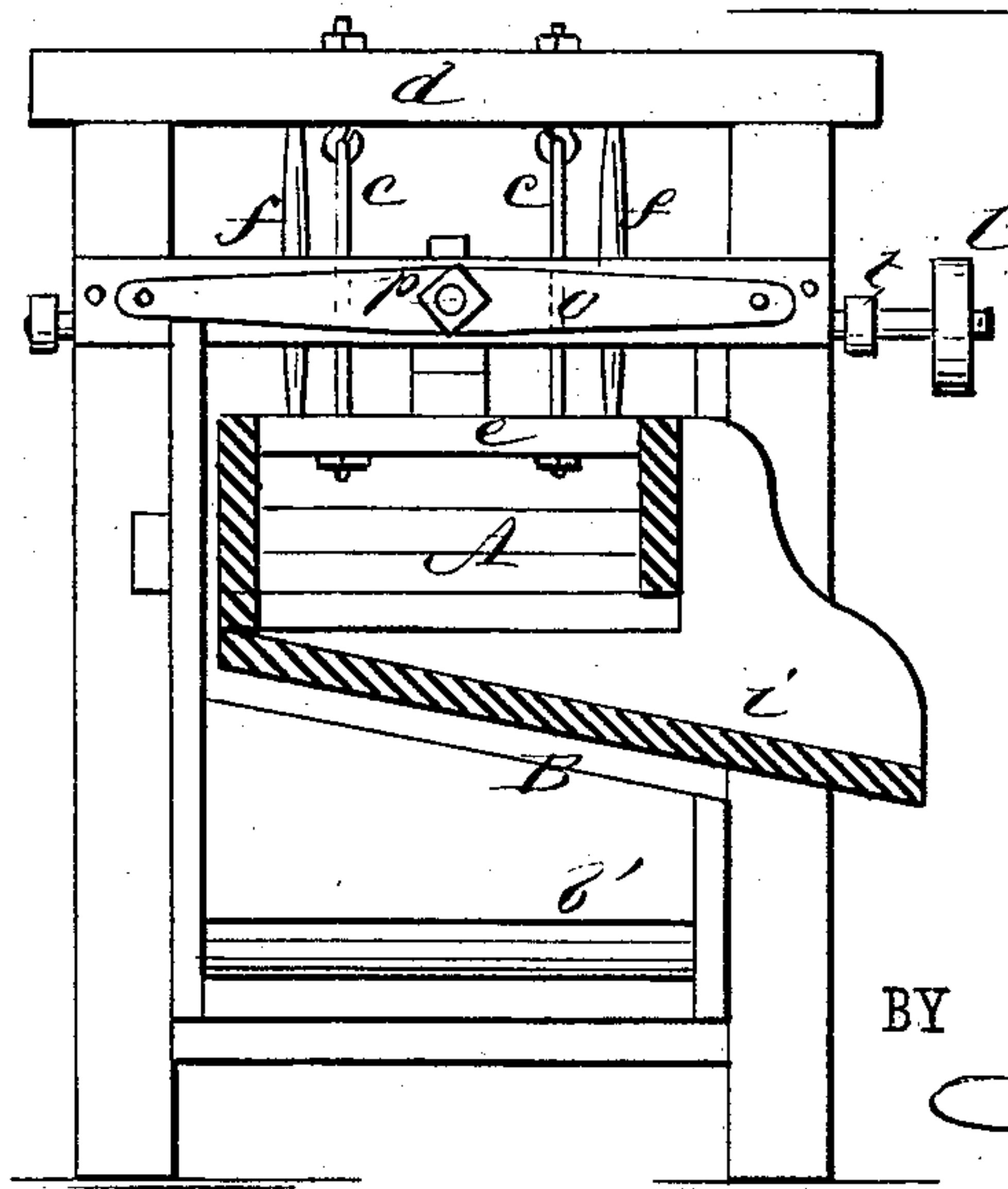


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE BEAL, OF GILMAN, IOWA.

FLAXSEED-CLEANER.

SPECIFICATION forming part of Letters Patent No. 254,590, dated March 7, 1882.

Application filed September 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BEAL, of Gilman, in the county of Marshall and State of Iowa, have invented a certain useful Improvement in Flaxseed-Cleaners, of which the following is a full, clear, and exact description.

My invention relates to machines for screening flaxseed for the separation of chaff and other impurities; and it consists in the combination of parts hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which the same letters of reference indicate the same or corresponding parts in all the figures.

Figure 1 is a plan view of the machine. Fig. 2 is a vertical longitudinal section, and Fig. 3 a transverse section, of the same.

I make use of the vibratory screen A, suspended in a box, B, which is sustained in a suitable frame. The box B has a double-inclined bottom formed by boards *a a*, at the lower ends of which are the discharge-openings *b b'*. The screen A is suspended by links *c c* from the upper cross-bars, *d*, of the frame, the links being connected to cross-bars *e*, attached on the screen. Between the bars *e* of the screen and the bars *d* of the frame there are wooden prop-sticks *f*, two at each end of the screen preferably, which props prevent the screen from rising and insure the desired character of movement. The screen A is divided at or near the middle into two parts—a higher and a lower one—the part *g*, which is the higher and nearer to the feed end, being of finer mesh than the lower part, *h*, which is made coarse enough to allow the flaxseed to pass through it. The portion *h* is also on a lower plane, so that a shoulder is formed which prevents the seed from working back upon the screen *g*. At the lower end is a spout, *i*, leading to one side for delivery of the screenings.

Above one end of the box B is a cross-shaft, *t*, sustained by boxes *k* on a cross-bar, *d*, and carrying a pulley, *l*, for application of power. On the shaft, at its mid-length, is fixed a cam-wheel, *m*, the edge of which is contiguous to a block, *n*, fixed on the screen. The cam-wheel has numerous projecting points for action on block *n*, the end of which is beveled to a proper shape and shod with rawhide, which gives a durable wearing-surface, decreases the

friction and noise, and produces the desired motion.

The frame is fitted at the lower end of the screen with a plate or spring, *o*, and an arm, *p*, from screen B, extends through the spring and is provided with a nut bearing on the outside of the spring, so that by adjustment of the nut the spring will be made to exert more or less force on the screen in the proper direction to retain block *n* in contact with cam-wheel *m*.

I also provide buffers *q*, of rubber, placed on box B at each side of the screen, in front of blocks *r*, that are fixed on the screen for the purpose of arresting the return movement of the screen caused by spring *o*. The buffers *q* are fitted for adjustment endwise by screws *s*, so that the vibration of the screen permitted by the buffers can be shortened or lengthened, as required, to prevent any shock. With the spring *o* and buffers *q*, acting in connection with the cam-wheel, a short and rapid vibratory movement without shock is obtained on the screen. The movement is of a character to insure the separation of the material without risk of spilling and liability of the screen-surface becoming choked.

In operation the screen is in a horizontal or slightly-inclined position. The material is to be fed by a spout to the screen-surface *g*, and during the screening operation a body of material will be on the screen and be worked gradually toward the delivery end. The smaller particles—such as mustard and fox-tail seeds—pass through screen *g* and escape at the opening *b*, the flaxseed pass through screen *h* and out at the opening *b'*, and the remaining material passes off by the spout *i*. The material is supplied to the screen at a uniform rate, and moves forward slowly at a speed regulated by the rapidity and extent of vibration. This insures effective and thorough separation.

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

The combination, with the box B, of the suspended screen A, bars *e*, links *c*, upper cross-bars, *d*, and prop-sticks *f*, arranged substantially as shown and described.

GEORGE BEAL.

Witnesses:

G. E. STOKES,
H. H. GREGG.