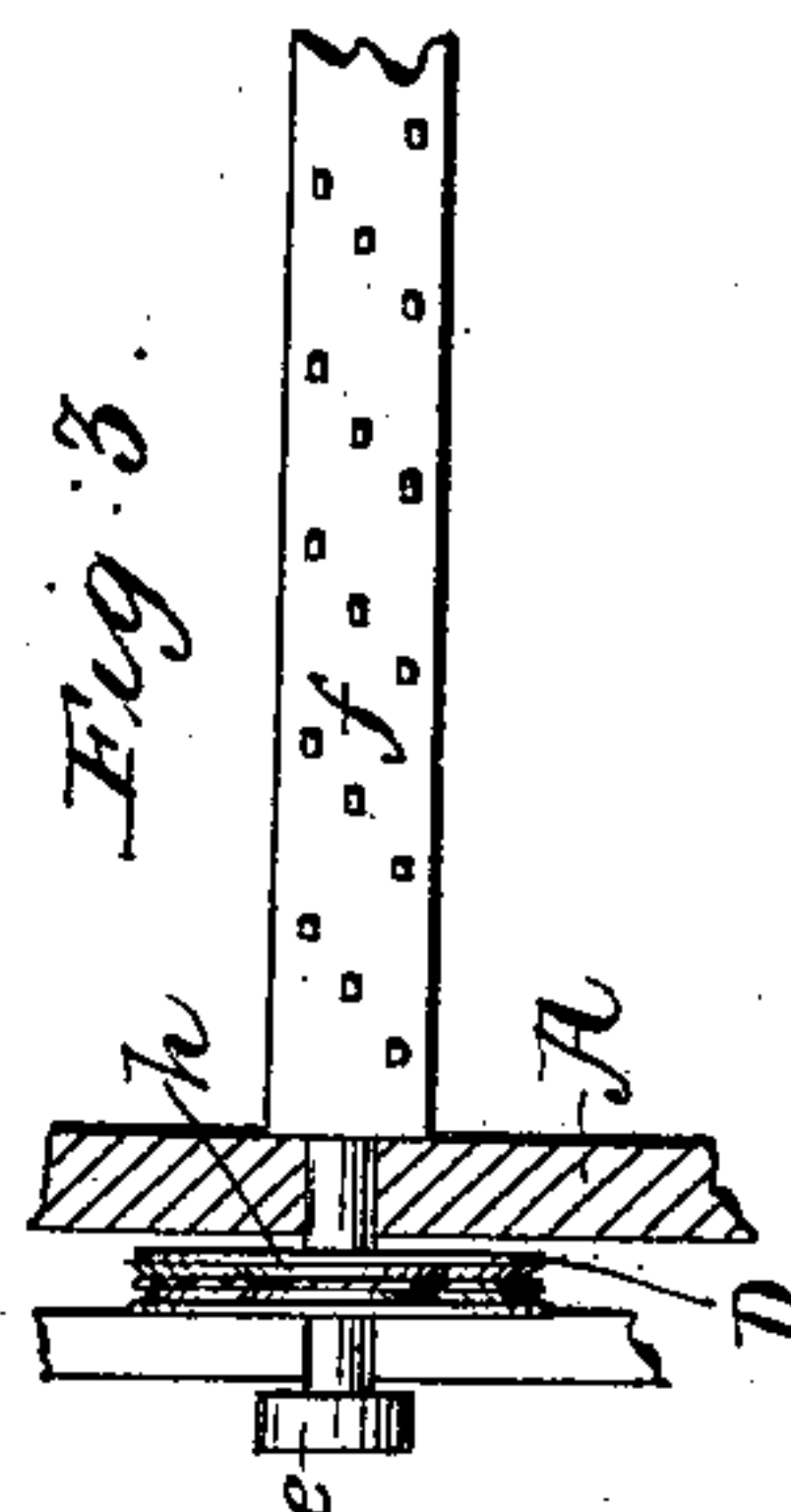
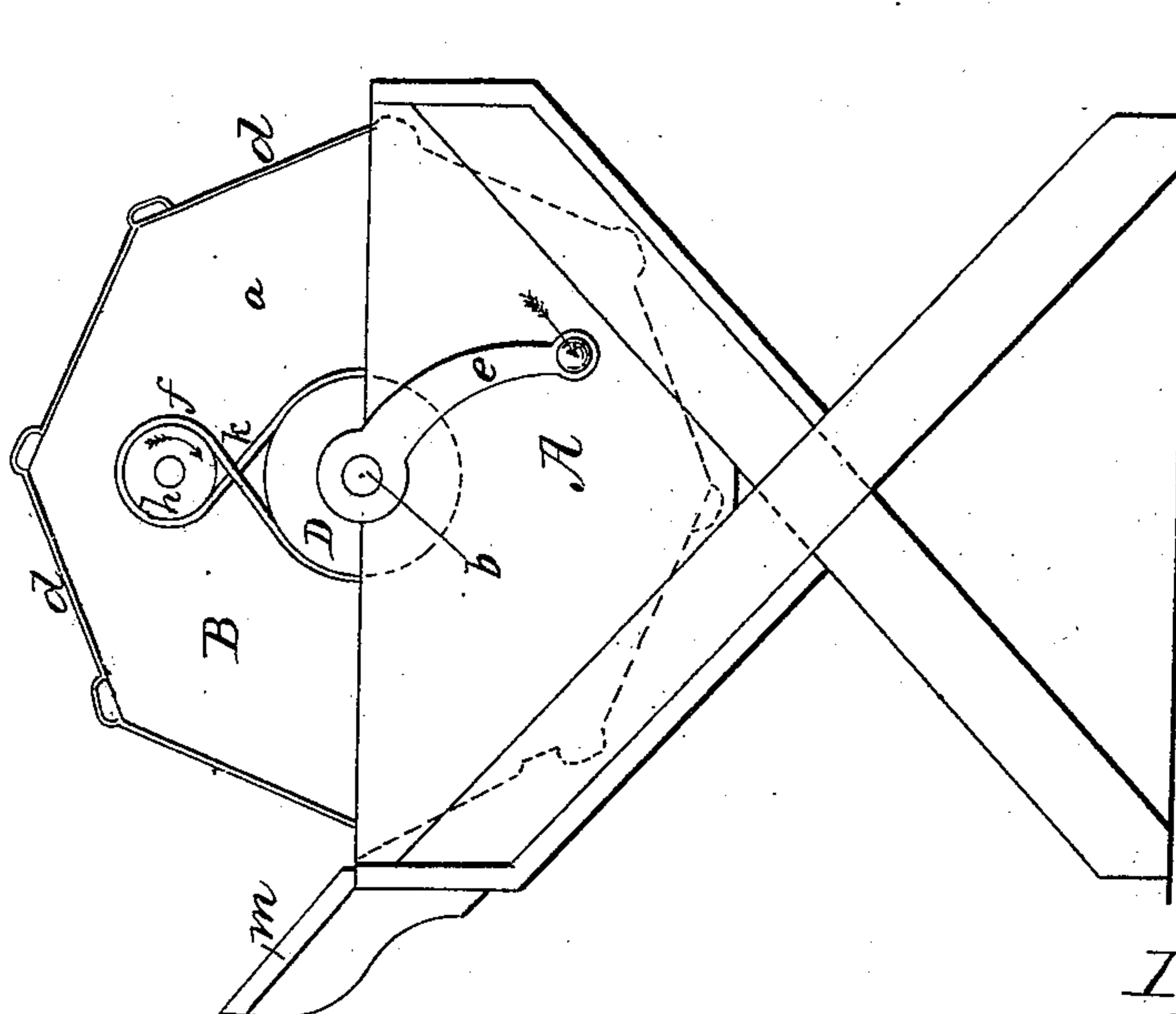
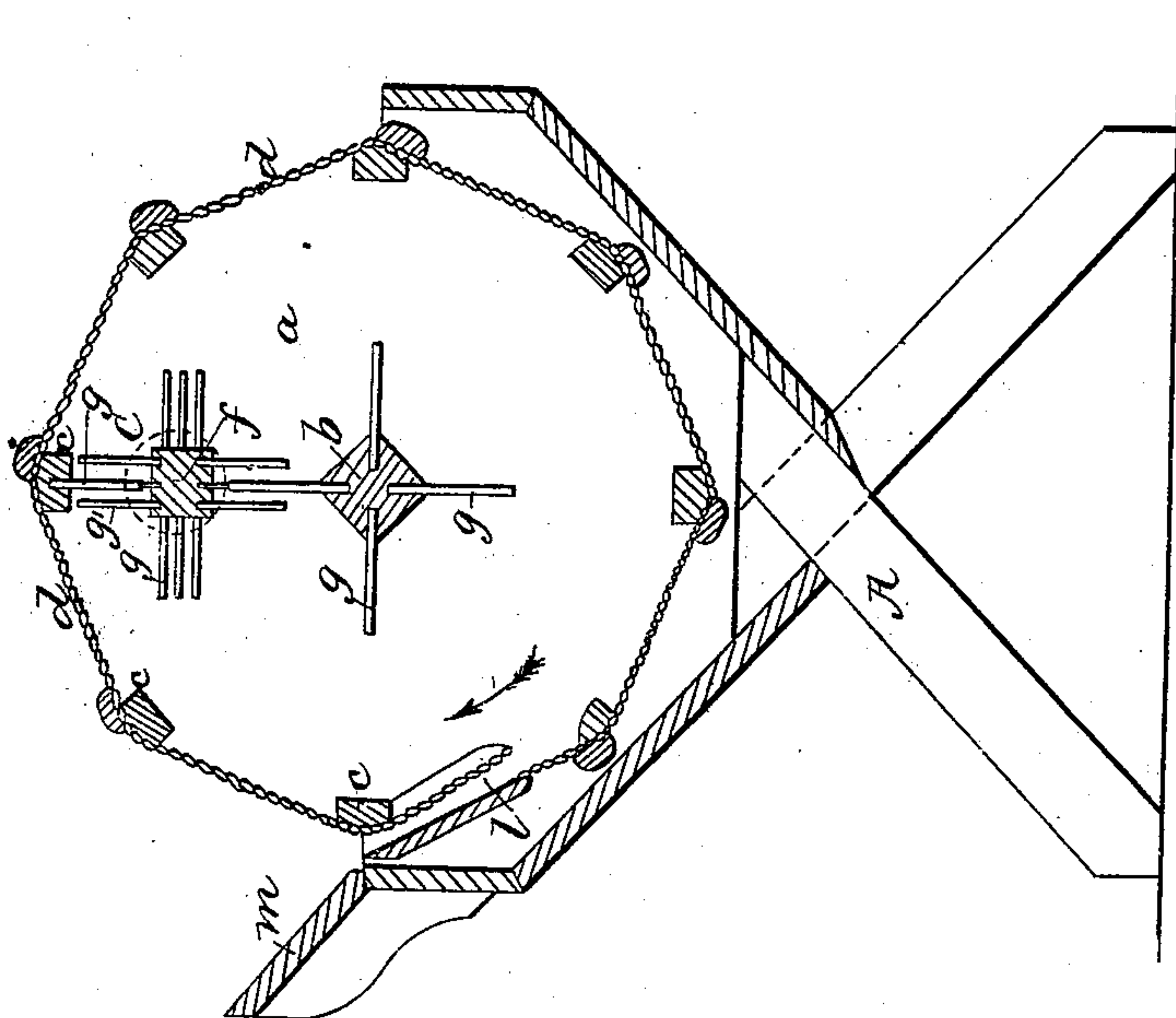


STEVENSON & CRIDER.

Huller and Screen.

No. 42,027.

Patented March 22, 1864.



Witnesses.

Norton
D L Reid

Inventors.

Geo Stevenson and
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UNITED STATES PATENT OFFICE.

GEORGE STEVENSON, OF ZIONSVILLE, AND JOHN J. CRIDER, OF GREENFIELD, INDIANA.

IMPROVEMENT IN HULLER AND SCREEN.

Specification forming part of Letters Patent No. 42,027, dated March 22, 1864.

To all whom it may concern:

Be it known that we, GEORGE STEVENSON, of Zionsville, in the county of Boone, State of Indiana, and JOHN J. CRIDER, of Greenfield, in the county of Hancock, State of Indiana, have invented a new and Improved Huller and Screen; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification.

Our improved huller and screen consists of a rotating frame covered with fine wire-cloth, into which grain or seed to be cleaned is introduced. The slats which form the circumference of the frame are armed with iron pins, which project inward, and the central shaft is also armed with similar pins projecting outward. Arranged within the screen are separate breakers or independent armed wheels, which, operating in combination with the pins above named, serve to break and separate pods, chaff, smut, and other impurities from seed or grain, as will be more fully explained.

In the accompanying drawings, Figure 1 is an end elevation of the apparatus. Fig. 2 is a vertical transverse section.

Like letters indicate like parts in the two figures.

A is the frame of the apparatus.

B is the screen, constructed with two end pieces or heads, *a*, central shaft, *b*, slats or bars, *c*, and a covering of wire-cloth, *d*, the whole supported in journals upon the frame A, and rotated by the winch *e*. Projecting inward from a portion or all of the slats *c* and outward from the faces or periphery of shaft *b* are iron pins *g*.

C is a revolving breaker arranged within the screen B. It consists of a shaft, *f*, armed with iron pins *g'* and journaled in the end pieces or heads *a*, midway between the center and periphery of the latter. One end of the shaft is prolonged through the end piece and receives a sheave, *h*.

D is a fixed sheave, concentric with the screen B and secured to the frame A. A

belt or cord, *k*, passes around the sheave D, and, crossing, passes around the sheave *h*.

The construction and arrangement of the parts above specified are such that as the screen B is rotated the breaker C, with its sheave *h*, is carried around the fixed sheave D, and through the belt or cord *k* receives an independent rotary motion. The projecting pins *g'* upon the breaker, as it revolves, pass through between the pins *g* and project the grain or seed or pods containing seed violently against the pins, thereby effectually separating the grain or seeds from all chaff, hulls, smut, or any adhering impurities.

The wire covering *d*, instead of passing around the frame of the screen and uniting, so as to inclose the space, the ends are lapped and one edge is inclined inward, leaving a narrow space or opening, *l*, and when this opening is made to coincide appropriately with the inclined board *m* of the frame A a convenient hopper is afforded, through which the grain or seed to be cleaned is passed into the screen. When the apparatus is rotated in the appropriate direction for cleaning, as indicated by the arrow, the substance will not escape from the screen, but when rotated slowly in the opposite direction the contents are readily discharged through the opening, and may be received in a receptacle below.

When the apparatus is to be used for cleaning large grain, it will be proper to arrange the projecting pins *g* and *g'* somewhat more open than for small seeds. It may also be best for some purposes to dispense with the pins *g* and depend alone upon the concussive action of the pins *g'*, carried by the breaker.

Any convenient number of breakers similar to C may be arranged in the screen, each operated by a belt and sheave. For most purposes four will be found a suitable number.

The apparatus may be made of any convenient size adapted to the quantity of work to be performed, as it will perform alike on either a large or small scale; and it may be operated by the winch, as shown, or by any suitable motor.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is the following:

1. The revolving breaker C, armed with pins g' , in combination with pins g , projecting from the central shaft, b , and slats or bars c , substantially as described.

2. Operating the breaker C by the fixed

sheave D, cord k , and sheave h , substantially as described.

In testimony whereof we have hereunto set our hands.

GEORGE STEVENSON.

J. J. CRIDER.

Witnesses:

H. NORTON,

D. L. REID.