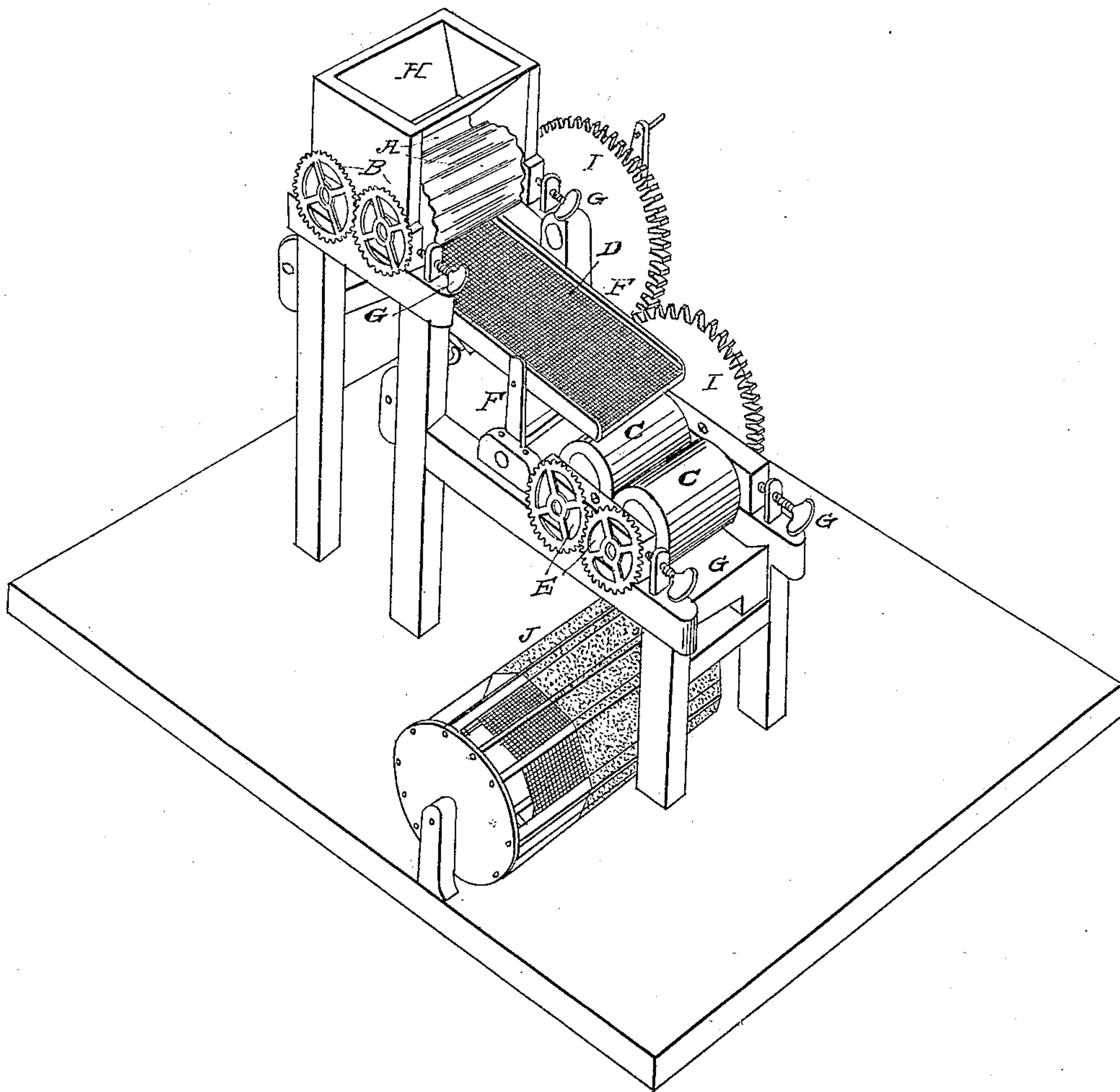


L. S. SWETT.
Graining Gun Powder.

No. 2,362.

Patented Nov. 16, 1841.



Witnesses
W. Ellsworth
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UNITED STATES PATENT OFFICE.

LEONARD S. SWETT, OF CANTON, CONNECTICUT.

MACHINE FOR CORNING OR GRAINING GUNPOWDER.

Specification of Letters Patent No. 2,362, dated November 16, 1841.

To all whom it may concern:

Be it known that I, LEONARD S. SWETT, of Canton, in the county of Hartford and State of Connecticut, have invented a new and Improved Method of Corning or Grain-
5 ing Gunpowder; and I do hereby declare that the following is a full and exact description of the machine and its operation.

The nature of my invention consists in
10 the crushing and corning of the cake, having been compounded and pressed in the usual manner; doing the work more expeditiously, and with less friction and rubbing than in the usual mode.

15 To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation. The machine in whole or in its separate parts may be made of such size as may be
20 desired, but to make the description more plain I shall give something like the proportions as shown in the model, calling the body of the cylinders two feet in length. The frame I compose of four upright posts
25 of convenient height for the workman, say four feet, and set about two feet apart each way; into each of two of these posts is tenoned a girt or side piece, five or six feet in length a little above the middle of the
30 height of the post, and these girts supported at the outer end by short posts. The two long posts on each side are connected by a crosspiece, on which are placed and fitted to turn, two fluted cylinders about two feet
35 in length and one foot in diameter, with gearing on one end of their shafts to cause them to revolve equally. These cylinders lie side by side, and the flutings may be finer or coarser, as experience dictates, and made
40 to match into each other. At the other end of the frame, on the two girts or side pieces are attached two other cylinders with smooth surfaces, lying also horizontally, side by side, geared in the same manner as
45 the fluted ones. On the opposite end to this gearing, on the shaft of one of the cylinders of each pair, is a toothed wheel, and in the center between those wheels is another, matching into each and turning both
50 by means of a crank attached to it.

Beneath the fluted cylinders is placed a fine wire sieve or screen, wide enough to fill the frame and extending in length to the center between the two smooth cylinders,
55 and in a slanting position. This screen is

supported by movable levers, and a sweep attached to a small crank on a shaft passing underneath, on the end of which shaft is a pulley, or pinion, as may be preferred, driven also by the crank wheel, or gearing
60 wheel. This crank gives motion to the screen, shaking it back and forth endwise. Over the fluted cylinders is placed the hopper, into which the cake is placed, when by turning the crank, it passes through be-
65 tween the rollers falling on to the screen below, which being agitated by the crank and sweep, shakes through what is fine enough, and the coarser part slides down the slanting sieve and passes between the
70 smooth faced cylinders into a receiver beneath, and is conveyed into a cylindric screen or bolting reel, which is made in the same manner as heretofore used in a separate de-
75 tached operation, and called a duster; but I attach it to the corning operation to answer a similar purpose, and to save the labor of once handling over.

The bolting reel has a moderate rotary motion communicated to it by pulleys and a
80 belt from the shaft of one of the last or finishing cylinders.

The gearing I prefer to have made partly of iron or other metal, and partly of wooden cogs to match with them for greater safety.
85

The cylinders I prefer to have made either of hard wood with the end of its grain outward so as form the surfaces of the cylinders, or to have them covered with such suitable composition as is not apt to
90 elicit fire by friction or collision. The cylinders are regulated to break finer or coarser by means of screws, or wedges might be substituted if desired.

I do not claim as my invention any sev-
95 eral separate part of this machine, nor any particular shape or size in its construction, or of any particular materials for its construction, any further than necessary to produce the desired effect.
100

What I claim as my improvement and for which alone I ask a patent is—

The combination of the two sets of rollers or cylinders with said screen and said bolting reel, substantially as described in the
105 foregoing specification.

LEONARD S. SWETT.

Attest:

W. W. ELLSWORTH,
JAMES G. BOLLES.