

(No Model.)

G. L. MERRILL.  
PRESERVING APPARATUS.

No. 391,907.

Patented Oct. 30, 1888.

Fig. 1.

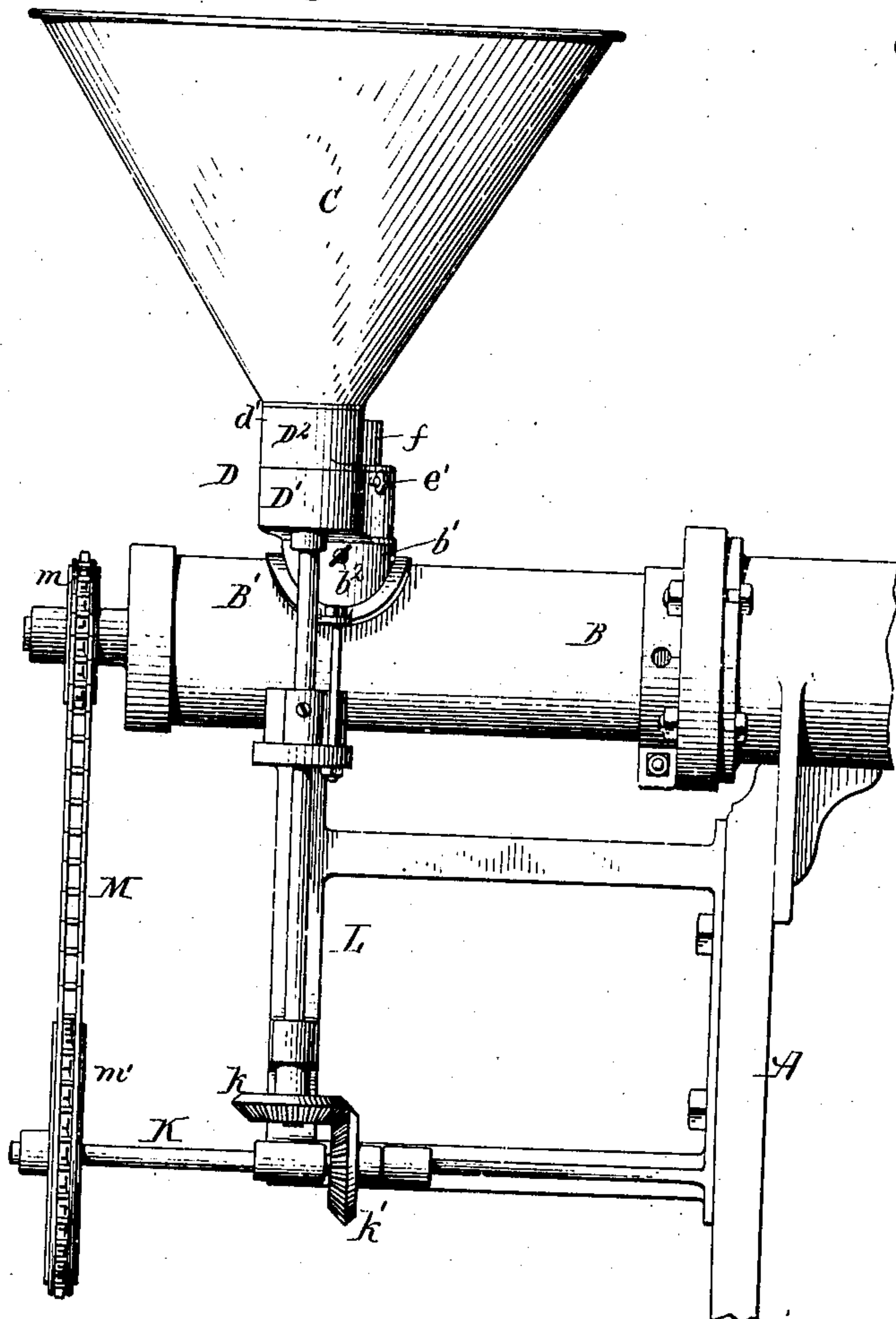


Fig. 2.

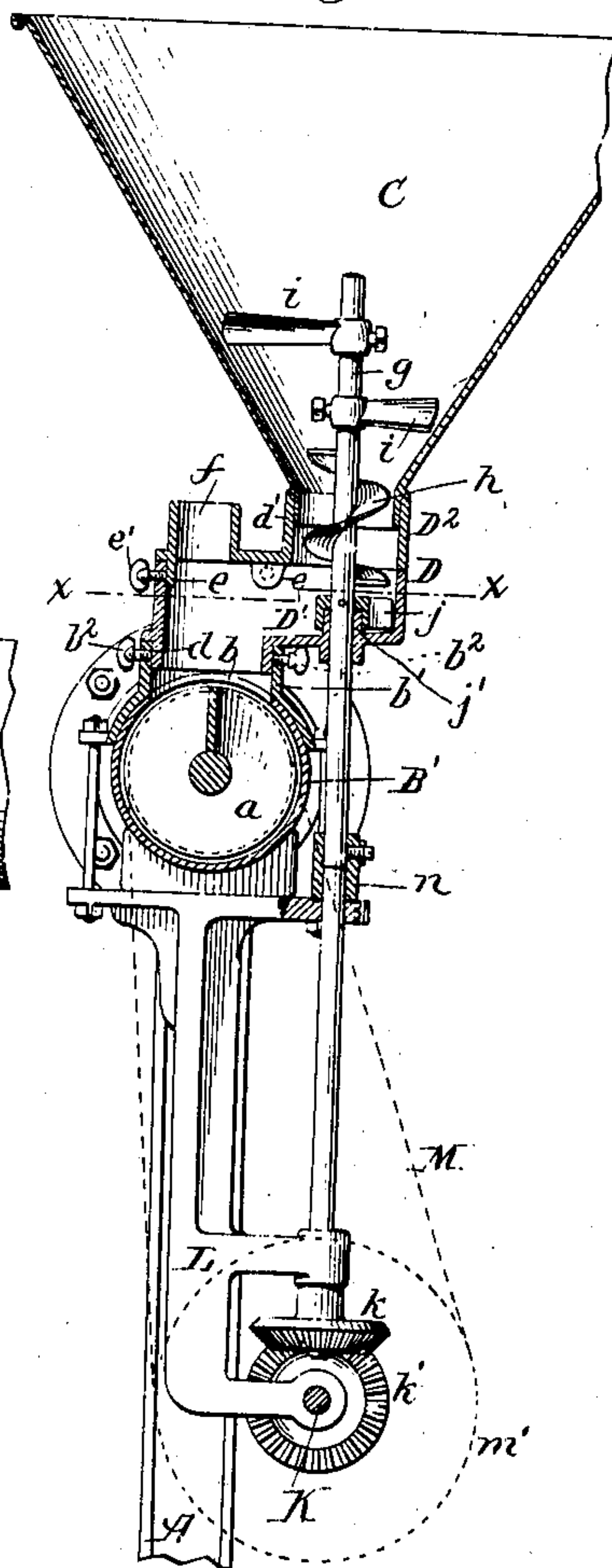
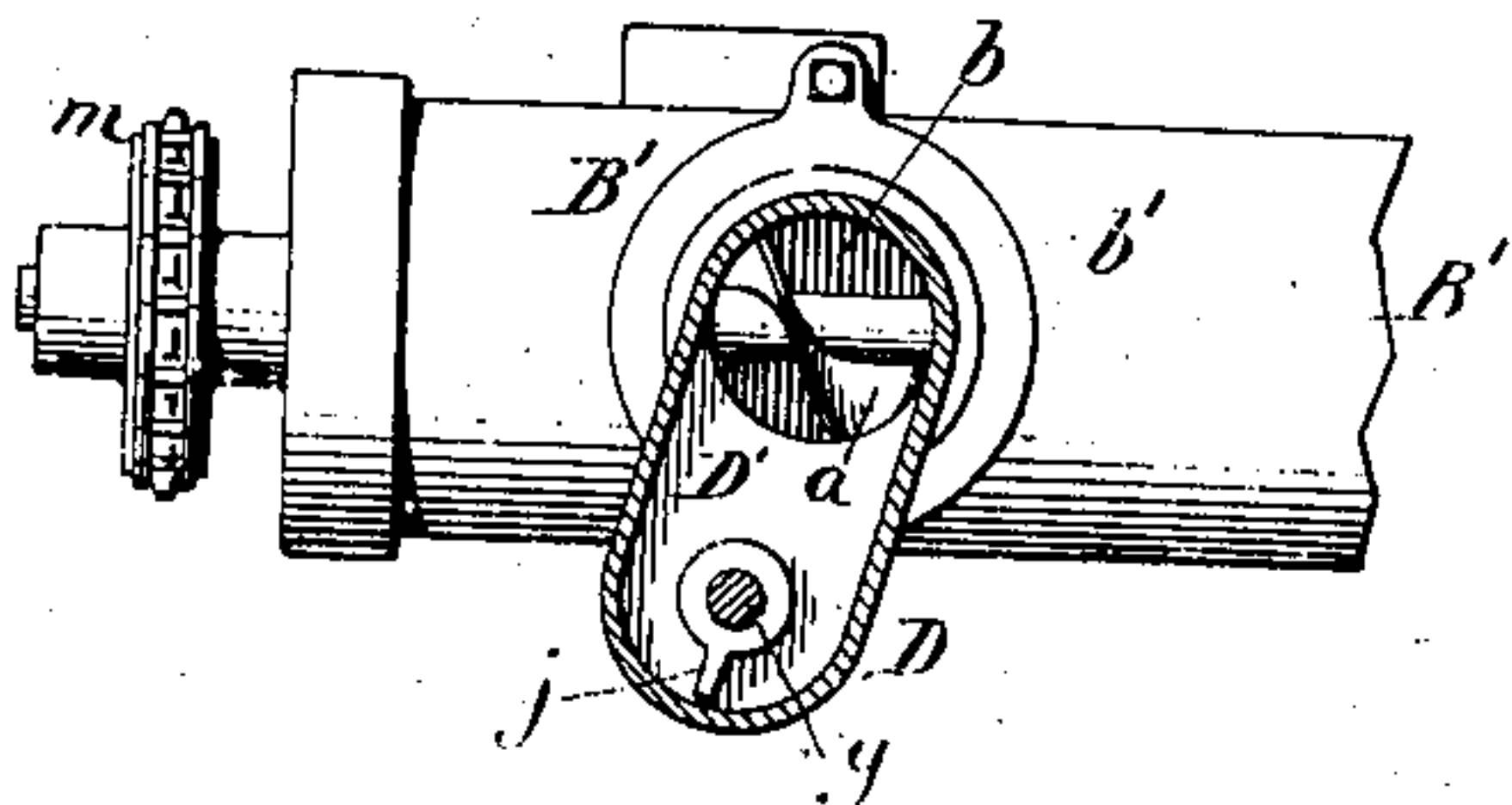


Fig. 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

GAINS LEWIS MERRILL, OF SYRACUSE, NEW YORK.

## PRESERVING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 391,907, dated October 30, 1888.

Application filed July 5, 1888. Serial No. 279,043. (No model.)

*To all whom it may concern:*

Be it known that I, GAINS LEWIS MERRILL, of Syracuse, in the county of Onondaga and State of New York, have invented new and useful Improvements in Feed Mechanisms for Corn-Cooking Machines, of which the following is a specification.

This invention relates to the automatic feeders which are connected with machines in which green corn is cooked or treated preparatory to canning the same, and which have the object to receive the corn and juices and deliver the same to the chamber in which the material is cooked or treated.

Previous to my invention automatic feeders have been used which consist, principally, of a feed-hopper and a rotating agitating or feeding device which is arranged within the feed-hopper, and which is provided with driving mechanism above the feed-hopper.

The object of my invention is to improve the construction of this class of automatic feeders and to render the same more convenient and satisfactory in their operation.

The invention consists of the improvements which will be hereinafter fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved automatic feeder. Fig. 2 is a vertical cross-section of the same. Fig. 3 is a horizontal section in line *x*, Fig. 2.

Like letters of reference refer to like parts in the several figures.

A represents the supporting-frame of the machine; B, the front portion of the cooking-chamber, in which the material is cooked or treated, and through which it is moved by a screw or conveyer, *a*, in a well-known manner.

B' is the feed-chamber, secured to the front end of the cooking-chamber B and delivering the material to the same, forming, practically, a continuation of the cooking-chamber, and closed at its front end, except where the shaft of the conveyer *a* passes through the same.

C is the feed-hopper, which is arranged above the feed-chamber B' and on one side of the latter, and which receives the corn and juices to be treated. The feed-chamber B' is provided in its upper portion with an opening, *b*, around which is secured an upwardly-projecting collar, *b'*, provided in its side with a set-screw, *b*<sup>2</sup>.

D represents a lateral conduit connecting the lower end of the feed-hopper C with the collar *b'* on the feed-chamber B', and conducting the material from the feed-hopper to the feed-chamber. This conduit is composed of a lower part, D', and an upper part, D<sup>2</sup>. The lower part, D', has at one end a downwardly-projecting collar, *d*, which enters the collar *b'* of the feed-chamber, and is secured therein by the set-screw *b*<sup>2</sup>. The upper part, D<sup>2</sup>, has at its opposite end an upwardly-projecting collar, *d'*, in which the lower end of the feed-hopper is secured by soldering or otherwise. The upper part, D<sup>2</sup>, is secured on the lower part, D', by lips *e*, formed on the upper part, and set-screws *e'*, bearing against said lips and attached to the lower part. This construction of the parts permits them to be readily separated when required to be cleaned.

*f* represents a steam-escape passage formed in the top of the lateral conduit D over the opening *b* in the feed-chamber, and through which the steam entering the feed-chamber escapes freely before it can reach the feed-hopper.

*g* represents the vertical shaft of the stirring mechanism, which is arranged in the feed-hopper, and which consists of a feed-screw, *h*, arranged partly in the lower portion of the feed-hopper and partly in the lateral conduit D, and arms *i*, secured to the shaft *g* above the feed-screw.

*j* represents a wiper or arm secured to the shaft *g* below the feed-screw, near the bottom of the lateral conduit D, for accelerating the flow of the material through the lateral conduit. The hub of this wiper is made hollow on its under side and overhangs an upwardly-projecting collar, *j'*, formed on the bottom of the lateral conduit around the shaft *g*, whereby the liquid is prevented from flowing downwardly along the shaft through the opening in which the shaft is arranged. The upright shaft *g* extends downwardly on one side of the feed-chamber B', and is driven at its lower end by bevel-wheels *k k'* from a horizontal shaft, K, which latter is journaled in an extension, L, of the main frame. The horizontal shaft K is driven from the shaft of the conveyer *a* by sprocket-wheels *m m'* and a drive chain or belt, M. The shaft *g* is composed of two parts, which are connected by a coupling-sleeve, *n*,



so that the upper part, to which the stirrers are attached, can be lifted out of the feed-hopper when these parts are required to be cleaned.

My improved construction of the stirrer mechanism leaves the top of the feed-hopper unobstructed, so that free access can be had to the same. It does not contain any journals over the feed-hopper from which oil can drip into the hopper, and it is simple and compact.

10 I claim as my invention—

1. The combination, with the chamber in which the material is treated, closed at its front end and provided in its top with an inlet opening for such material, of a feed-hopper arranged 15 above said chamber and on one side thereof, a conduit extending laterally from the lower end of said hopper to the top inlet of said chamber, stirrers arranged in said hopper, an upright stirrer-shaft extending downwardly 20 through said hopper and said conduit on one side of said chamber, and driving-gear connected with said shaft below said conduit, substantially as set forth.

2. The combination, with the chamber in which the material is treated, of a feed-hopper 2 and a conduit extending laterally from the hopper to said chamber, and provided with a steam-escape opening in its top on one side of the hopper, substantially as set forth.

30 3. The combination, with the chamber in

which the material is treated, of a feed-hopper, a conduit extending laterally from the hopper to said chamber and composed of top and bottom portions, and fastening-screws whereby the top and bottom portions are detachably secured together, substantially as set forth. 35

4. The combination, with the chamber in which the material is treated, of a feed-hopper, a conduit extending laterally from the hopper to said chamber, an upright shaft extending 40 downwardly through said hopper and conduit, a feed-screw secured to said shaft in the mouth of the hopper, and a wiper secured to said shaft above the bottom of the conduit, substantially as set forth. 45

5. The combination, with the chamber in which the material is treated, of a feed-hopper, a conduit extending laterally from said hopper to the chamber, an upright shaft passing 50 through the bottom of said conduit, an upwardly-projecting collar formed on said bottom around the shaft, and a wiper secured to the shaft above said collar, and having a hollow hub which overhangs the collar, substantially as set forth. 55

Witness my hand this 20th day of June, 1888.

G. LEWIS MERRILL.

Witnesses:

W. Y. WALRATH,

W. B. GERE.

It is hereby certified that the name of the patentee in Letters Patent No. 391,907' granted October 30, 1888, for an improvement in "Preserving Apparatus," was erroneously written and printed "Gains Lewis Merrill," whereas said name should have been written and printed *Gaius Lewis Merrell*; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 13th day of November, A. D. 1888.

[SEAL.]

D. L. HAWKINS,

*Assistant Secretary of the Interior.*

Countersigned:

R. B. VANCE,

*Acting Commissioner of Patents.*