(No Model.)

C. W. TREMAIN.

STARCH SEPARATOR.

No. 300,165. Patented June 10, 1884.

Fig. 1.

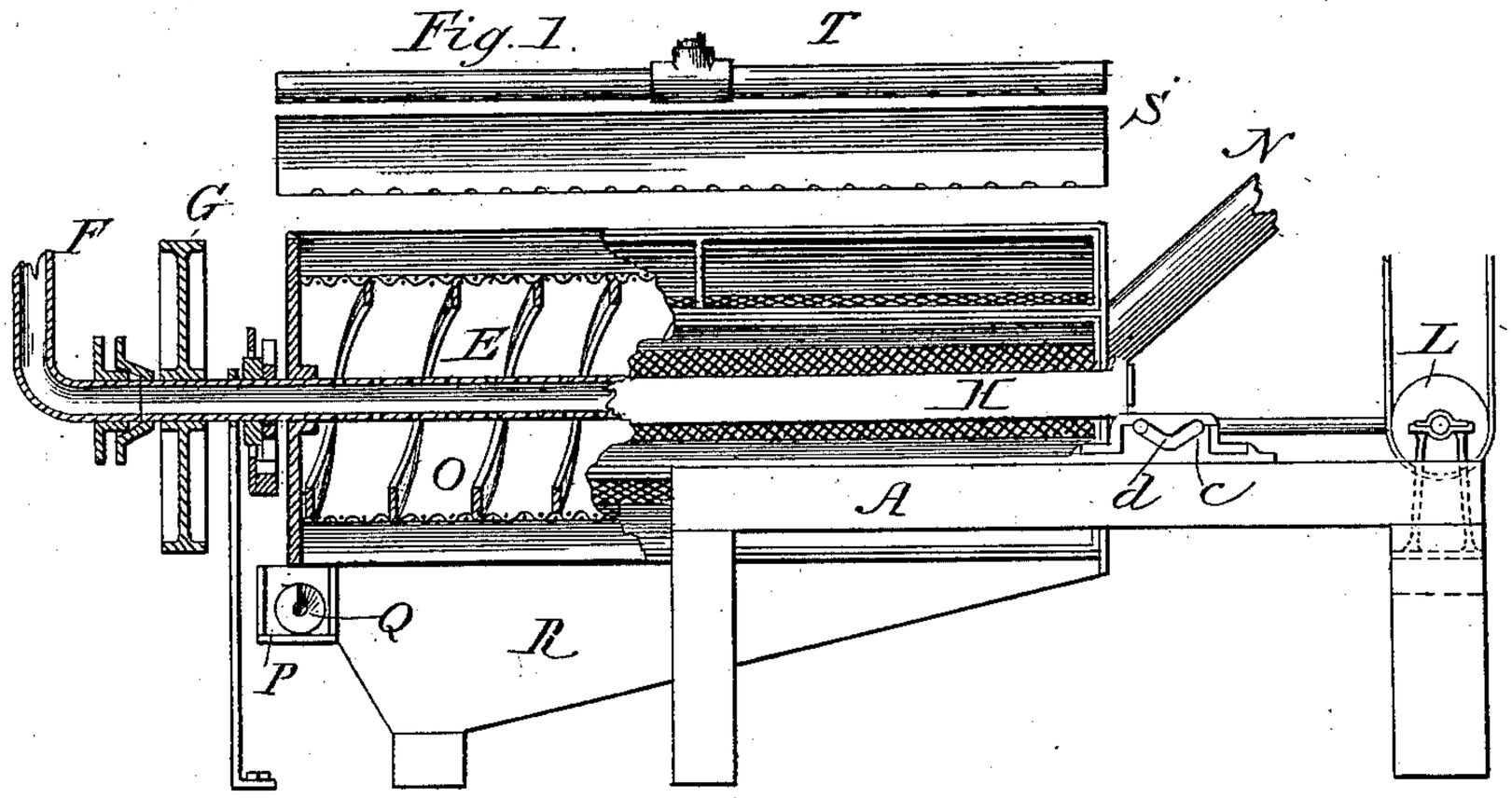


Fig. 2.

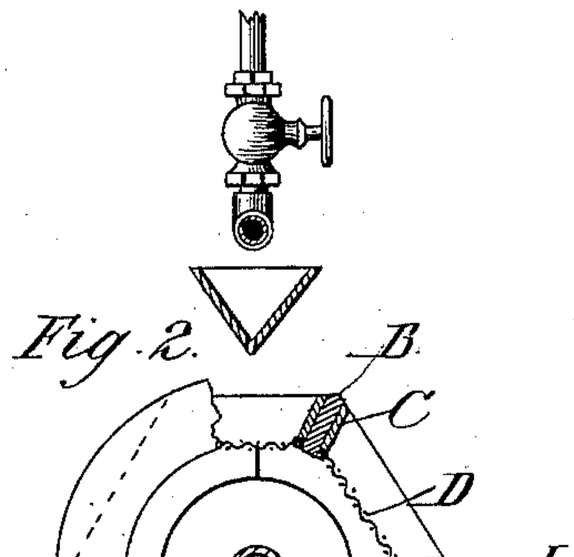


Fig. 7.

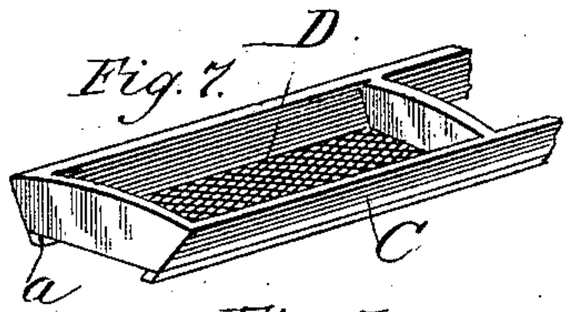


Fig. 6.

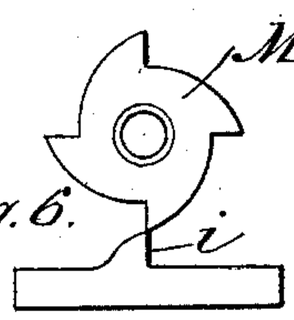


Fig. 5.

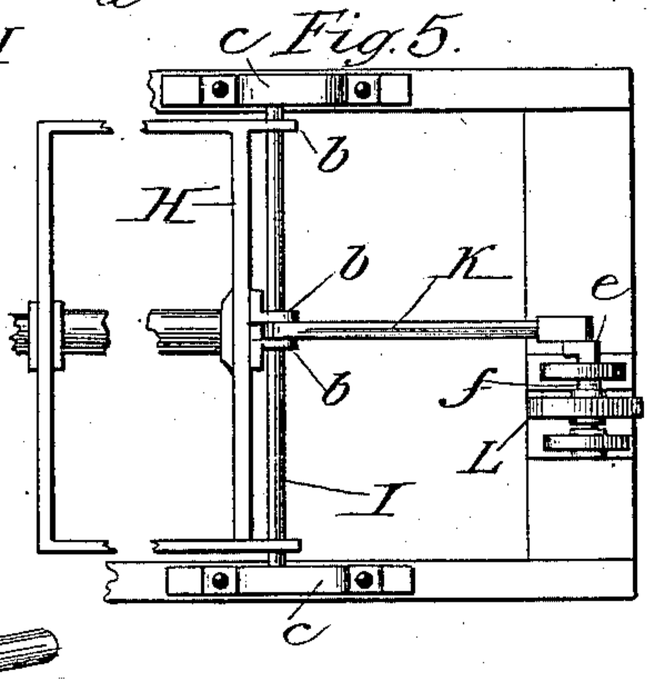


Fig. 4.

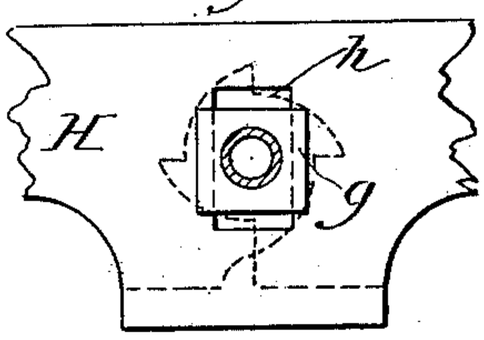
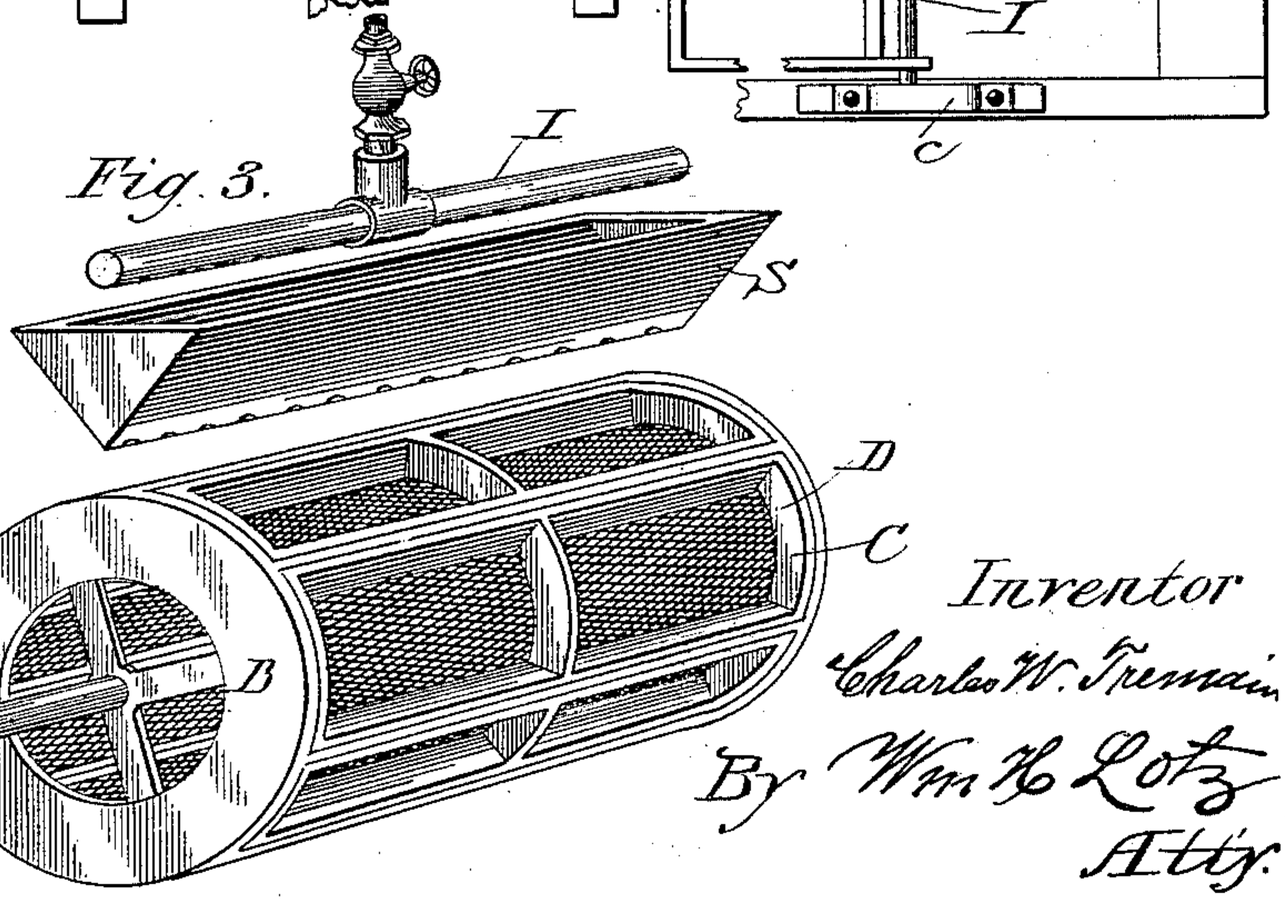


Fig. 3.



Witnesses
J. Van Housen
M. J. Clagett

Inventor
Charles W. Tremain
By Wm H Lotz
Atty.

UNITED STATES PATENT OFFICE.

CHARLES W. TREMAIN, OF CHICAGO, ILLINOIS.

STARCH-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 300,165, dated June 10, 1884.

Application filed March 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. TREMAIN, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Starch-Separators, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improved machine for the manufacture of starch.

The object of the invention is to obtain a machine by which the starch will be thoroughly separated from the cereals, &c.; and to that end it consists of the novel devices and combination of devices, as will be described.

Reference will be made to the accompanying drawings, in which Figure 1 is an elevation of the machine, partly in section; Fig. 2, a rear elevation thereof; Fig. 3, a perspective of the separating-frame; Figs. 4, 5, 6, and 7, details of parts of the machine.

Like letters refer to like parts in each view.

A represents the supporting frame-work of the machine. B is a frame, which consists of suitable end pieces and longitudinal ribs connecting the same. Between the longitudinal ribs of frame B frames C are placed, said frames being provided with screen-cloths D, and the side pieces thereof formed tapering to form a close joint with the ribs referred to, said ribs being also tapering, and further to provide for a close joint between the parts, rubber strips *a* are secured to the lower edge of each side piece of frame C. Frame B, constructed as above described, is mounted on a hollow perforated shaft, E, which is connected to a water-supply pipe, F, and upon said shaft a driving-pulley, G, is mounted. A frame, H, surrounds frame B, and upon the rear of said frame H there are formed lugs or projections *b*, through which a rod, I, is passed, said rod having bearings in boxes *c*, mounted on frame A, and provided with V-shaped slots *d*, as shown. Connected to rod I is a rod, K, which, at its opposite end, is secured to a crank-arm, *e*, formed on one end of a shaft, *f*, which has suitable bearings in frame A, and upon which is mounted a driving-pulley, L. At its front end shaft E is mounted in a sliding box, *g*, which moves in an opening, *h*, formed in frame H, and keyed to said shaft is a wheel, M, of the shape shown in Fig. 6, while a projecting lug, *i*, is formed upon said frame. N is the feeding-spout; O, a screw conveyer situated within frame B; P, the discharge-spout, provided with conveyer Q; R, a hopper situated below frame B, and S a perforated trough suspended above said frame, and from which water from perforated pipe T is discharged thereupon.

The operation is as follows: Motion is imparted to shaft E and frame B, and water from pipe F discharged through the perforations in the shaft to the interior of the frame. The pulpy matter is then fed to the frame, and motion imparted to shaft *f*, and through the connections described a reciprocating and a trip motion is imparted to the frame B in addition to the rotary motion described. During this operation the starch is separated, and drops through the meshes of the screen-cloths to the hopper situated therebelow, while the foreign matter is carried to the discharge-spout by the screw conveyer, and water from trough S serves to keep the meshes of the screen-cloths clear.

It will be understood that with but slight changes my machine may be used as a grain-separator and for other like purposes.

What I claim is—

1. In the machine described, a screen and screen-frame, in combination with suitable belt-connections for imparting a rotary motion thereto, a rod connected to said frame and mounted in V-shaped journals, and suitable belt-connections for imparting a reciprocating and trip motion to said frame and screen, as described.

2. In the machine described, the combination, with a screen, a screen-frame, and a conveyer situated therein, of suitable belt-connections for imparting a rotary motion thereto, a rod connected to said frame and mounted in V-shaped journals, and suitable belt-connections for imparting a reciprocating and trip motion to the parts, as described.

3. In the machine described, the combination, with a screen and screen-frame mounted

on a perforated shaft, of a water-supply pipe connected to said shaft, suitable belt-connections for imparting a rotary motion thereto, a rod connected to said frame and mounted in V-shaped journals, and suitable belt-connections for imparting a reciprocating and trip motion to the parts, as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. TREMAIN.

Witnesses:
M. J. CLAGETT,
LOUIS NOLTING.