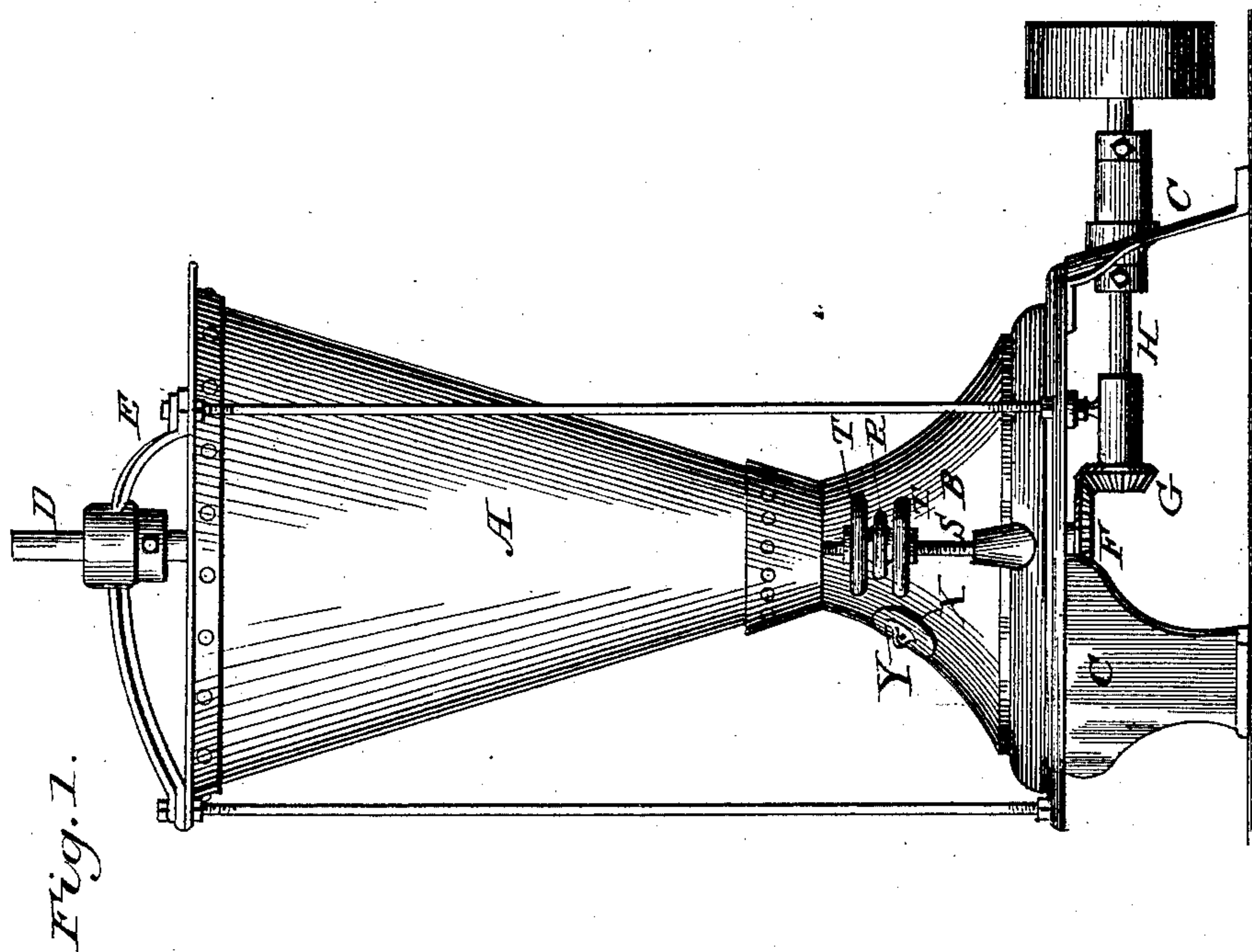
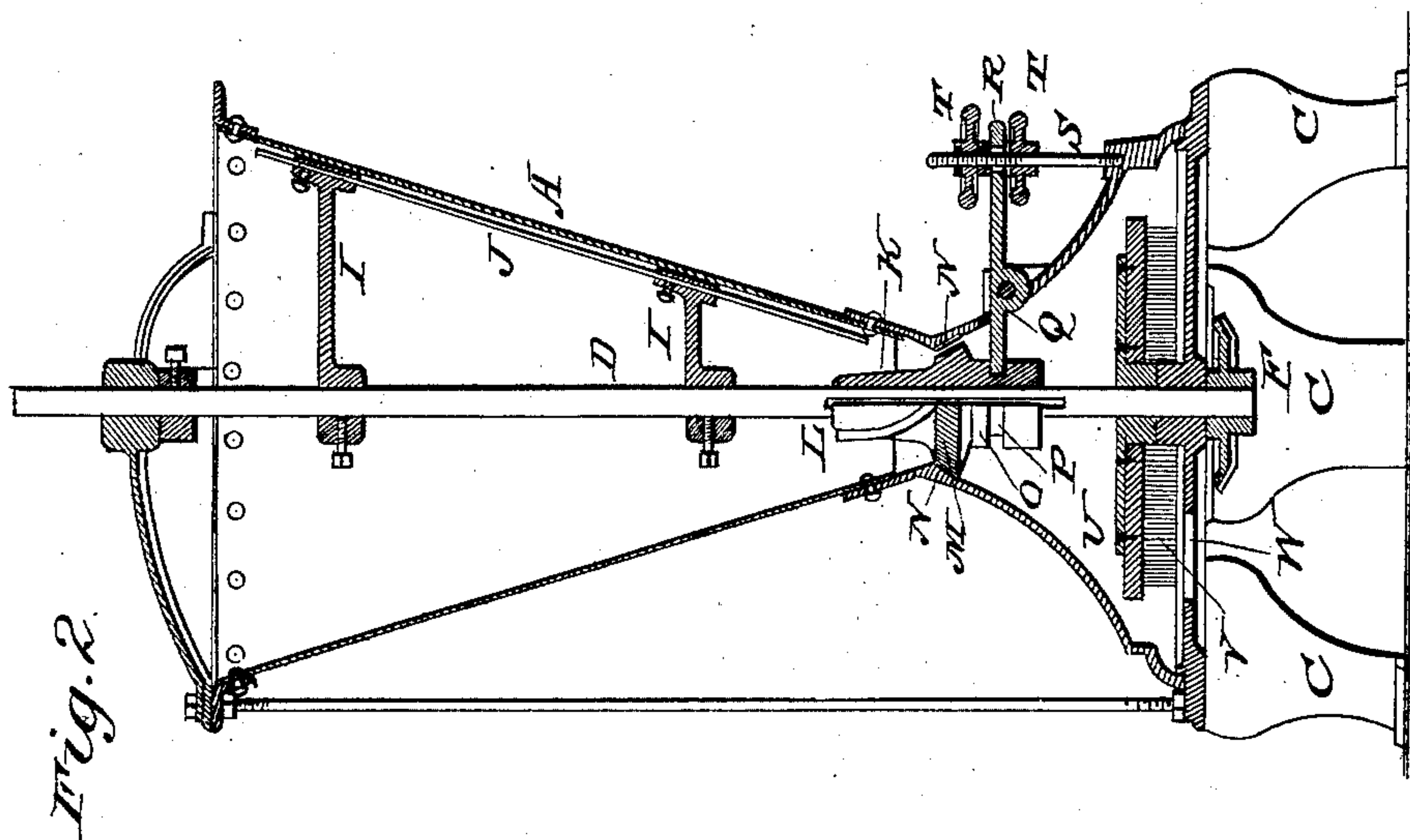


(No Model.)

J. DAWSON.
MACHINE FOR MIXING FLOUR.

No. 310,126.

Patented Dec. 30, 1884.



WITNESSES:

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Att. fecer

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UNITED STATES PATENT OFFICE.

JAMES DAWSON, OF WILMINGTON, DELAWARE.

MACHINE FOR MIXING FLOUR.

SPECIFICATION forming part of Letters Patent No. 310,126, dated December 30, 1884.

Application filed August 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES DAWSON, a citizen of the United States, and a resident of Wilmington, in the county of New Castle and State of Delaware, have invented certain new and useful Improvements in Machines for Mixing Flour; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of my improved flour-mixer, and Fig. 2 is a vertical section of the same.

Similar letters of reference indicate corresponding parts in both the figures.

My invention has relation to machines for mixing flour and the sweepings or leavings in the different portions of the machinery in a flour-mill, for the purpose of feeding them back to the bolting-reels again; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates an inverted conical chamber, which is placed upon the top of a flat conical chamber, B, which is mounted upon suitable supports, C, and a shaft, D, is journaled vertically in the chambers, axial to them, in bearings in the bottom of the flat conical chamber, and in bearings in a spider, E, at the wide-open top of the upper inverted conical chamber. This shaft receives a rotary motion by any suitable gearing or connection, a cog-wheel, F, being shown in the drawings attached to the lower end of the shaft, which cog-wheel engages a pinion, G, upon the drive-shaft H, and the portion of the shaft within the inverted conical chamber is provided with a number of radial arms, I, which are connected at their ends with downwardly-inclined rods J, which are parallel with the walls of the chamber, and which revolve very close to the same. A cone, K, revolves with and slides upon the shaft at the junction of the inverted conical chamber and of the flat conical chamber, and the upper portion of the cone is provided with a spiral flange, L, which is revolved

within the lower end of the inverted conical chamber, while a corrugated portion, M, of the cone registers with a corrugated portion, N, in the upper end of the flat conical chamber, forming a grinding mechanism. The lower reduced portion, O, of the cone has an annular groove, P, into which the inner end of a lever, Q, which is pivoted in the side of the flat conical chamber, projects; and the outer end of this lever is formed with an eye, R, through which a screw, S, projects, which screw is secured to the base of the machine, and two hand-wheels, T, having threaded central perforations, fit and turn upon the screw—one above and one below the eyed end of the lever—serving to adjust the angle of the lever, and consequently the proximity of the corrugated portion of the cone to the corrugated portion at the top of the flat conical chamber. A number of arms, U, project from the lower end of the vertical shaft near the bottom of the lower chamber, and these arms are provided with brushes V, or similar sweepers or gatherers, which may sweep the mixed flour into the discharge-aperture W in the bottom of the conical chamber. The flat conical chamber is provided with a hand-hole, X, covered by means of a plate and yoke, Y, through which access may be had from the exterior of the chamber to the interior of the same.

It will be seen that all the flour and sweepings and leavings from the several machines of a flour-mill may all be fed into the upper inverted conical hopper, where they are stirred and mixed by means of the stirrer-arms and the inclined rods, which travel around the sides of the chamber, whereupon the spiral flange upon the cone feeds the mixed material to the corrugated portions of the cone and of the top of the flat conical vessel, between which corrugated portions any lumps or coarser particles are ground, whereupon the mixed article falls into the flat conical chamber, from which it is swept out by means of the sweeping-arms into the discharge-spout, which carries it to the bolting-reel, where it again may be subjected to the bolting process.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The herein-described machine for mixing

flour, comprising the inverted conical mixing-chamber provided with the spider formed with the central bearing at its upper end, the lower flat conical chamber formed with its inner
5 sides corrugated at its top, and formed with a vertical bearing, and with an outlet-aperture in its bottom, a vertical shaft having means for revolving it, and journaled axially within the conical chambers in the bearings, stirrer-
10 arms connected by means of inclined scraper-rods, said arms projecting radially from the upper portion of the shaft, the grinding-cone formed with the upper flanged portion, the corrugated middle portion, and the grooved
15 lower portion, as described, the lever formed

with an eye at its outer end and pivoted in the wall of the flat conical chamber, means, substantially as described, for adjusting the angle of the said lever, the sweeper-arms projecting radially from the lower portion of the shaft, 20 and the sweepers secured to the said arms, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JAMES DAWSON.

Witnesses:

WM. A. KIMMEY,
AUGUST PETERSON.