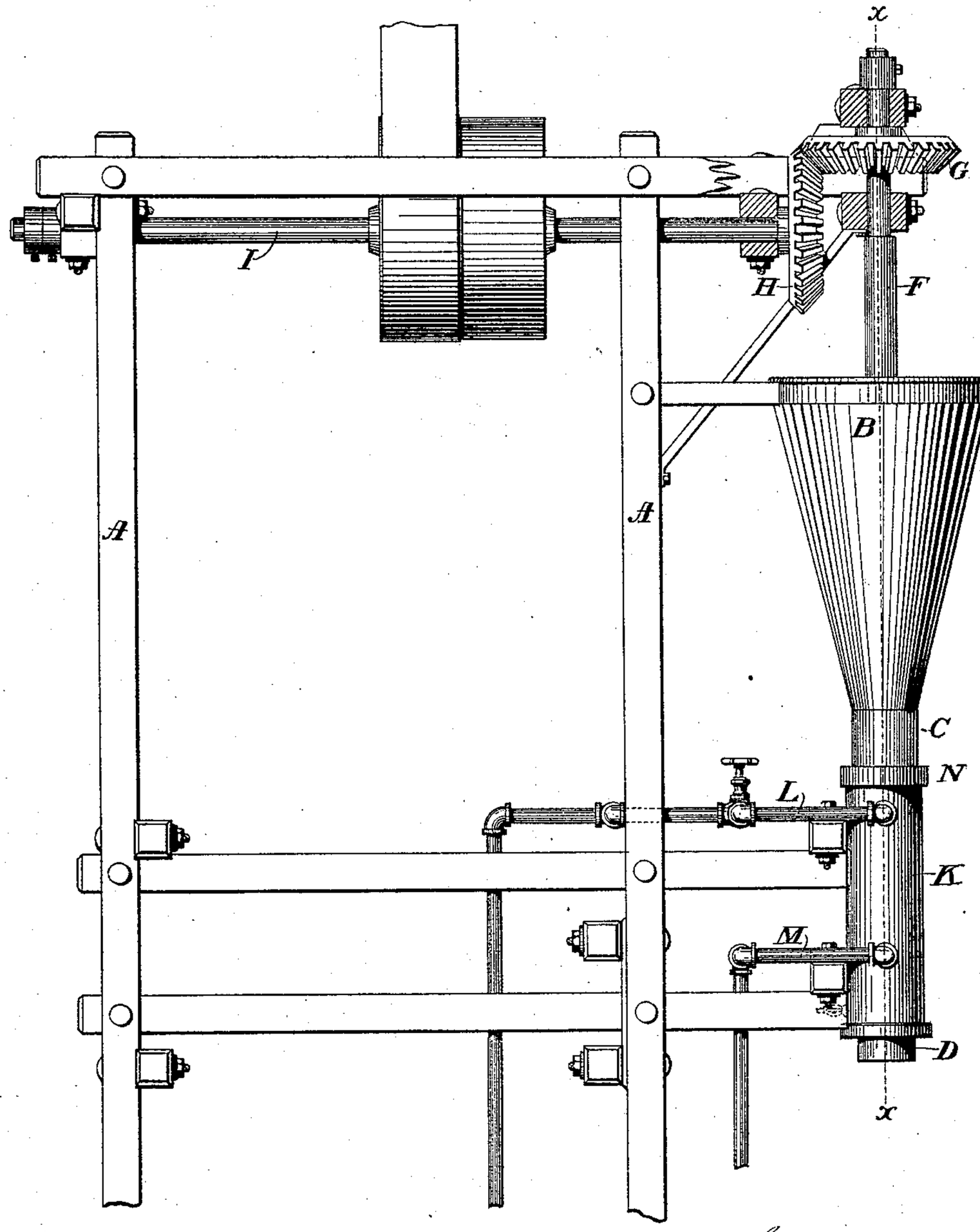
(No Model.) 2 Sheets—Sheet 1.

L. SIGMUND.

CHEESE PRESS.

No. 572,455. Patented Dec. 1, 1896.

Fig. 1.



Witnesses.

Frank P. Prindle.

Henry C. Hazard.

Inventor.

Louis Sigmund by

Prindle and Russell his attys

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

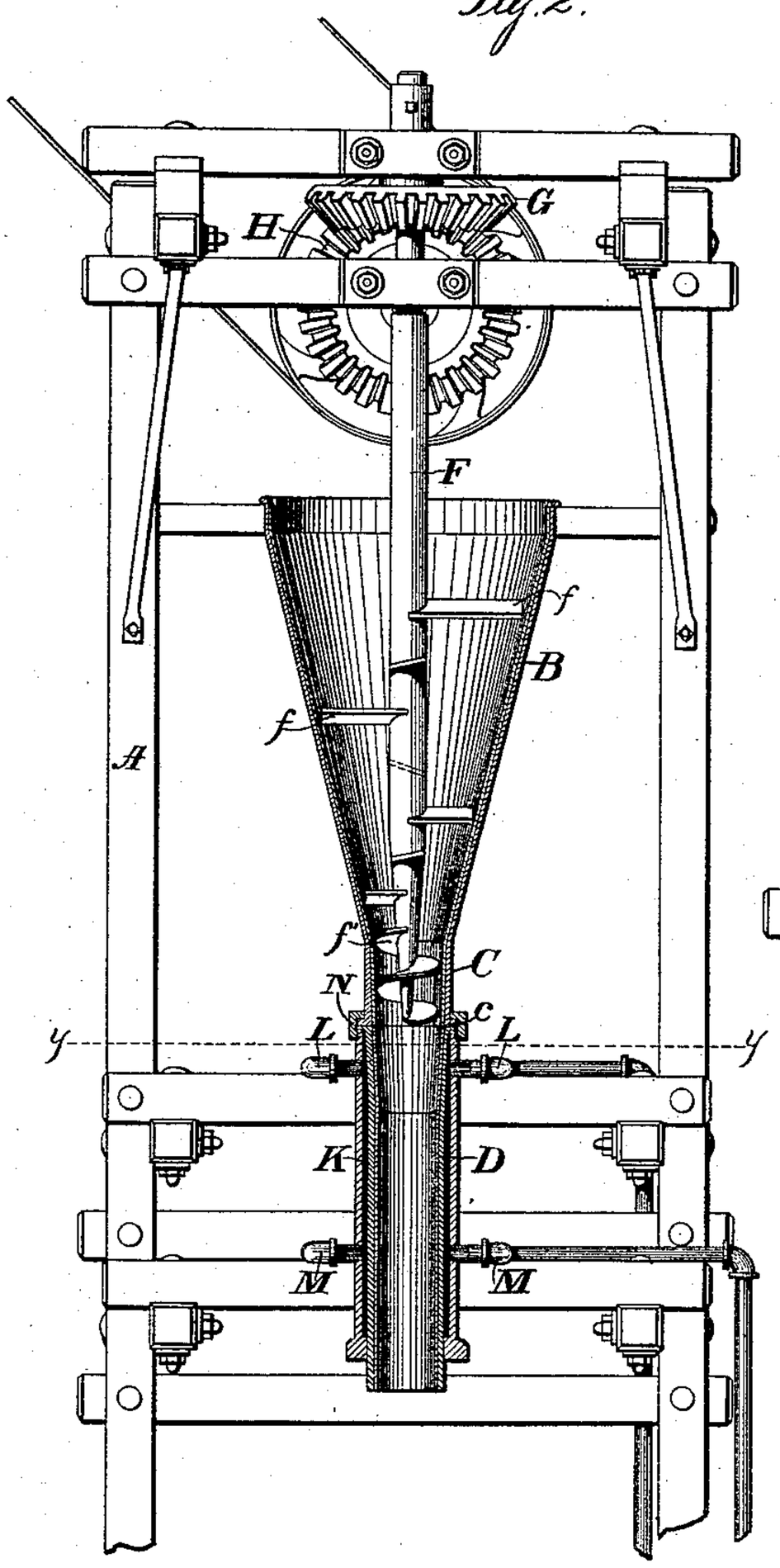
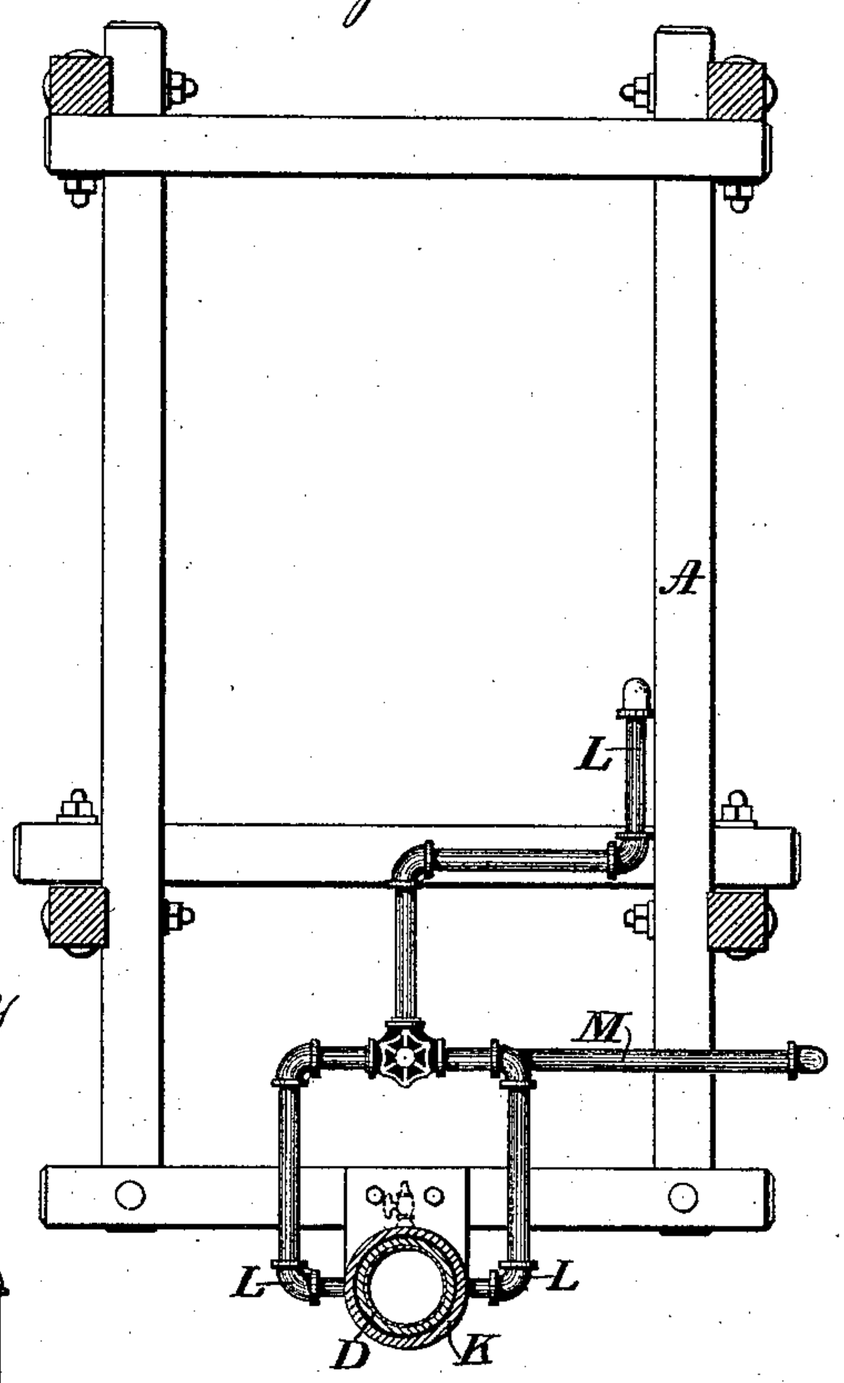


Fig. 3.



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UNITED STATES PATENT OFFICE.

LOUIS SIGMUND, OF NAPERVILLE, ILLINOIS.

CHEESE-PRESS.

SPECIFICATION forming part of Letters Patent No. 572,455, dated December 1, 1896.

Application filed August 13, 1895. Serial No. 559,112. (No model.)

To all whom it may concern:

Be it known that I, LOUIS SIGMUND, of Naperville, in the county of Du Page, and in the State of Illinois, have invented certain new and useful Improvements in Cheese-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a view in side elevation of my cheese-press; Fig. 2, a vertical section on line *x x* of Fig. 1, and Fig. 3 a horizontal section on line *y y* of Fig. 2.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to provide a machine for making cheese which will be thoroughly practical and will turn out a superior grade of cheese; and to such ends said invention consists in the cheese-press having the construction and combination of parts substantially as hereinafter specified.

In the carrying of my invention into practice I support from a suitable frame A, composed of wooden bars or beams bolted together, a funnel-shaped hopper B, arranged with its axis in a vertical line and with its larger and receiving end upward. At the lower end of the hopper is a short tubular extension C, that internally tapers inwardly toward its lower end, from which extends a comparatively long tube or cylinder D, having an interior that tapers inward slightly from the upper end downward for about one-third its length, the diameter at the upper end being the same as the internal diameter of the lower end of the extension C.

Arranged centrally within the hopper B and extension C is a vertical shaft F, that is journaled within suitable bearings provided upon the frame and to which is secured a bevel-gear G, that meshes with a like gear H upon a horizontal driving-shaft I. Within the hopper B the shaft F is provided with a spirally-arranged series of radial arms or blades *f f*, that have their faces arranged at an incline, so that as they cut up or disintegrate the curd they will feed the same downward through the hopper. The portion of the shaft within the extension C is tapered down to a point, and upon it is a screw conveyer *f'*, that engages and forces the material downward.

Surrounding the cylinder D is a jacket K, between which and the cylinder is left a space for steam to heat the latter, steam being admitted near the upper end of the cylinder through pipes L and L, entering the jacket upon diametrically opposite sides, and discharged therefrom near the lower end through pipes M and M, also entering the jacket at opposite points. The upper end of the jacket is threaded to engage a coupling N, that is flanged to overlap a flange *c* at the bottom of the hopper extension C, between which flange and the upper end of said jacket a flange upon the upper edge of the cylinder is clamped and thus all three parts held together by the single coupling N.

The interior of the cylinder is coated or lined with pure block-tin, and the screw is similarly coated, which material, after much experiment, I have found will not cause such discoloration of the cheese as occurs where other metals are used. For a like reason the hopper proper is made of sheet-tin or other sheet metal lined with tin, and the hopper extension C, which is preferably of cast brass or bronze, is also lined with tin.

The operation of my press is as follows: The shaft F being rapidly revolved, the curd is placed in the hopper, and, moving downward therethrough by gravity and the feeding action of the arms *f* and *f*, is cut very fine by the latter. Upon reaching the screw *f'* the latter forces the finely-subdivided curd through the hopper extension C and into and through the cylinder, the tapered portions of both of which, by offering resistance to the passage of the curd, cause the same to be closely packed or compressed into a coherent solid block by the time it emerges from the cylinder. During the passage of the curd through the cylinder steam is circulated through the jacket surrounding the same for the purpose of lubrication, and as such steam is admitted and discharged upon the two sides of the cylinder a perfectly uniform temperature all around the latter can be maintained, so as to result in the desired amount of heat being applied to the entire surface of the curd

in the cylinder. Lack of uniformity in the heat results in the scorching of the cheese if the heat be too great, or if it be too little in the adhesion of the cheese to the cylinder and its consequent crumbling or breaking. One or the other of these results is bound to occur if, for instance, steam is admitted only at one side of the cylinder.

After a batch of curd has been run through the press it is desirable to clean the latter, and for this reason the connection between the hopper and cylinder is one that permits of their ready and easy separation.

Having thus described my invention, what I claim is—

1. In a cheese-press, the combination of a hopper having a flanged extension, a cylinder having a flange abutting against the flange of said extension, a jacket encircling the cylinder, with its end engaging the cylinder-flange, and a flanged coupling engaging the jacket and the hopper-flange, substantially as and for the purpose shown.

2. In a cheese-press, the combination of a hopper having a flanged extension, a cylinder, having a portion of its interior tapered, and provided with a flange abutting against the flange of said extension, a jacket encircling the cylinder, steam-pipes communicating with the space between the jacket and cylinder, at opposite points, and a flanged coupling, engaging the jacket and the hopper-flange, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of July, 1895.

LOUIS SIGMUND.

Witnesses:
GEORGE W. ALSEHULER,
E. T. PRINDLE.