## A A SELLA,

Mashing Machine,

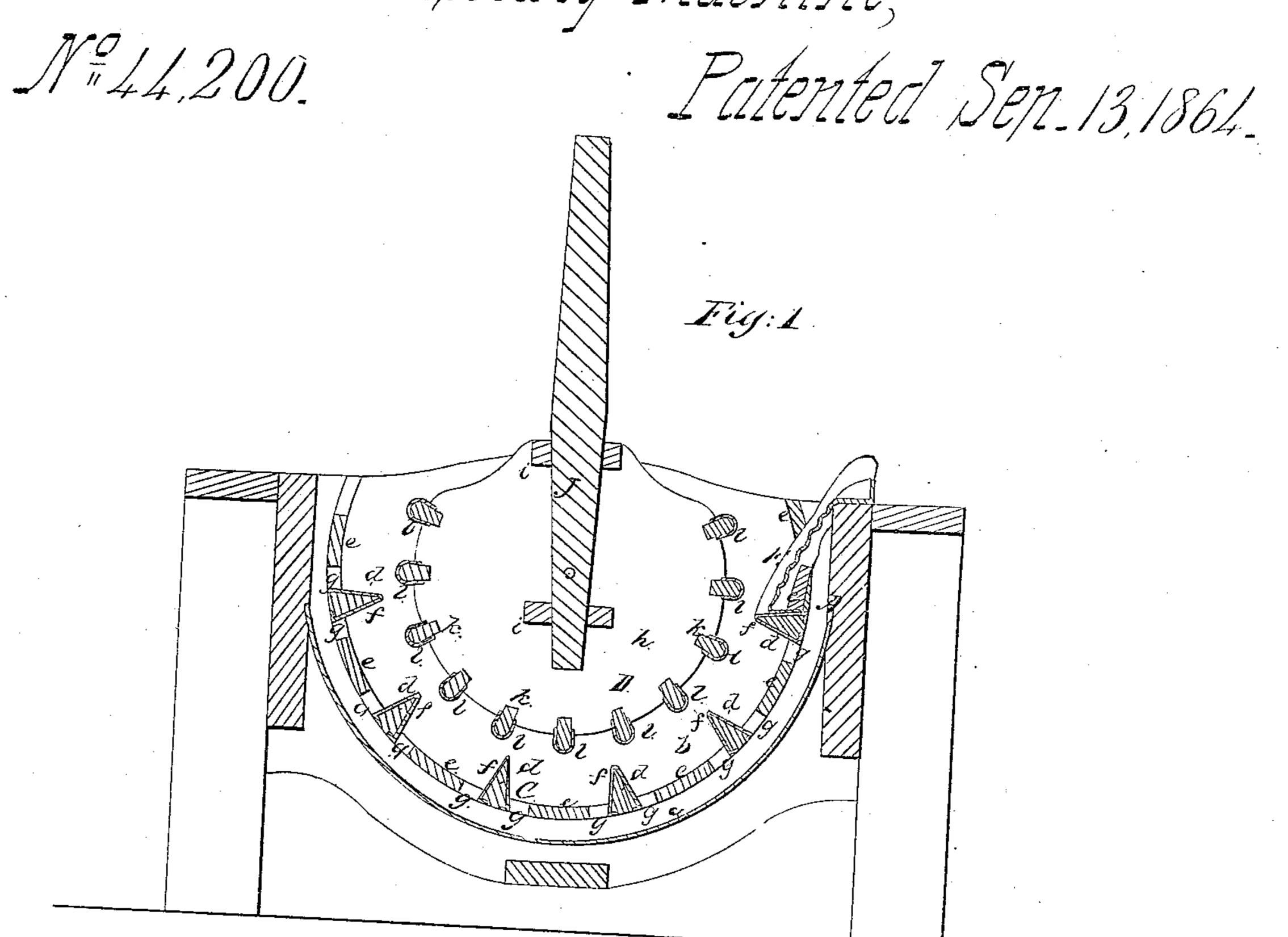
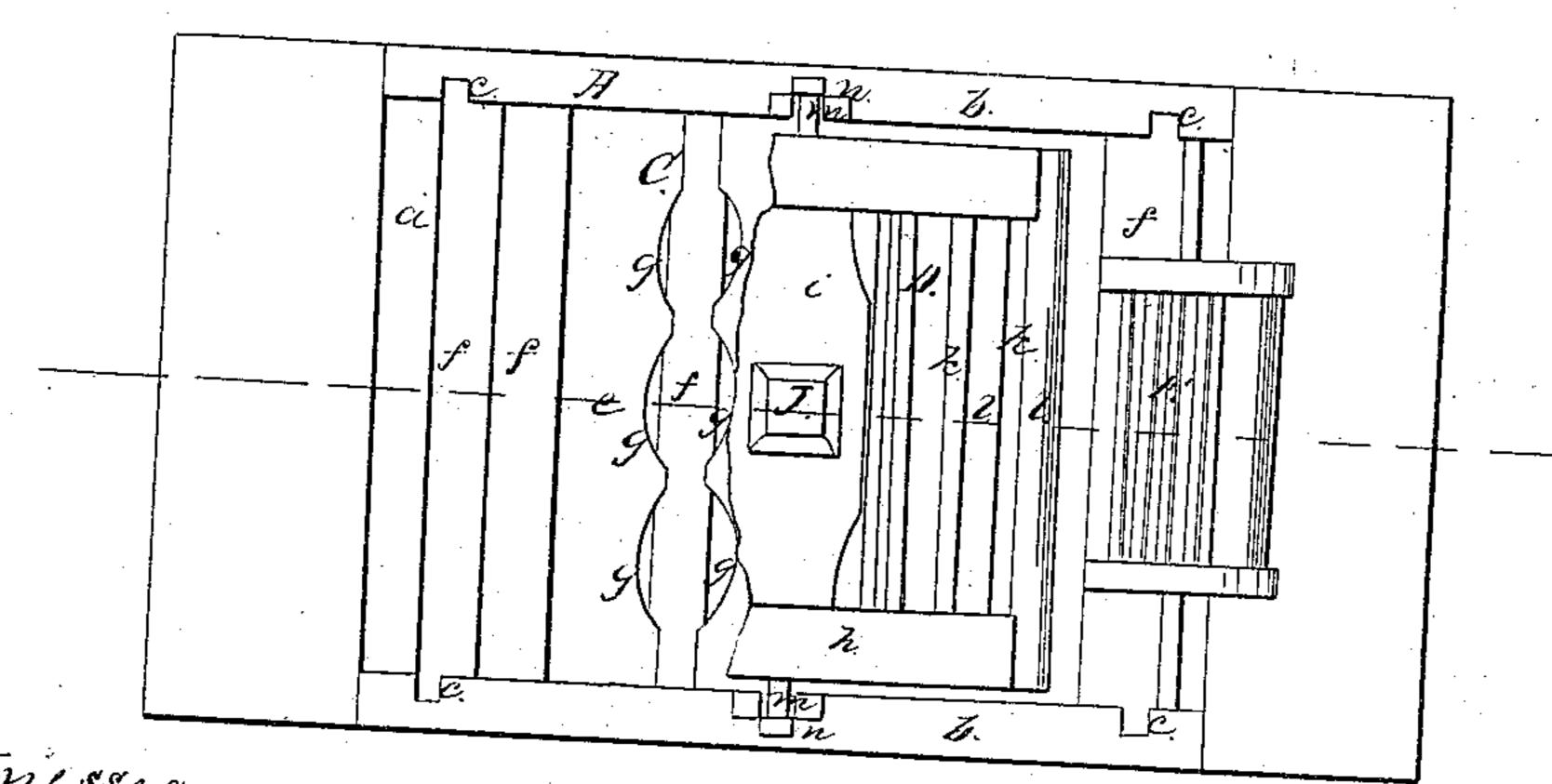


Fig: 2.



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## United States Patent Office.

A. A. KENT, OF OWATONNA, MINNESOTA.

## IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 44,200, dated September 13, 1864.

To all whom it may concern:

Be it known that I, A. A. Kent, of Owatonna, in the county of Steele and State of Minnesota, have invented a new and Improved Clothes-Washing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line x, Fig. 2; Fig. 2, a plan or top of the same, a part of the rubber being in section.

Similar letters of reference indicate corre-

sponding parts.

This invention relates to a new and improved clothes-washing machine of that class in which an oscillating rubber and a stationary concave are used; and it consists in a novel manner of constructing the concave—to wit, with projections, covered with zinc, and arranged as hereinafter shown and described, and also in covering the projections of the rubber with zinc, and employing metal bearings for the journals of the rubber, all being arranged as hereinafter set forth, whereby an exceedingly durable machine is obtained, and one which will not be liable to wear or injure the clothes.

A represents the suds-box, which is provided with a semicircular bottom, a, of zinc, and supported at any convenient height by a suitable framing, B. The sides b b of the suds-box are of wood, and in the inner surface of each side there is made a simicircular groove, c, concentric with and a short distance above the bottom a. (See Fig. 1.)

O represents a concave, which is composed of alternate projecting V-shaped bars d, and flat strips or slats e, the bars and slats being of wood, with their ends fitted in the grooves c. The bars d are covered with zinc, f, and the slats e are notched at each edge, as shown at g, to admit of the suds passing freely through the concave.

D is a rubber, composed of two sides, h h, which form the greater portion of a circle, and are connected by one or more cross-bars, i i, in which an upright bar or handle, j, is fitted. Around the edges of the sides h h there are slats k, the ends of the latter being fitted in recesses in the sides h, the slats projecting beyond the sides and rounded and covered with zine, l.

To the upper slat k, at one side of the concave C, there is attached a stationary handrubber, E, which is designed for rubbing such portions of the clothes which the machine will not fully cleanse. The rubber D is provided at each side with journals m, which are fitted in metal bearings nn, the latter being inserted in grooves made in the upper edges of the sides b b of the suds box A. These bearings n may be cast in proper form. The clothes, it will be seen, are subjected to the necessary pressure and rubbing between the rubber D and the concave C, the zinc-covered slats k and bars d acting upon the clothes, while the notches or openings g admit of the suds passing through the concave and the dirt settling on the bottom a. The zinc covering of the slats k and bars d prevents the clothes being injured or torn, while it adds greatly to the durability of the machine. The metal bearings n n also prevent wear.

I do not claim, broadly, a zinc bottom for a washing-machine; but

I do claim as new and desire to secure by Letters Patent—

The concave C, composed of a series of alternate bars, d, and slats e, the former being covered with zinc, f, and the bars and slats fitted at their ends in semicircular grooves e, made in the inner surfaces of the sides b b of the suds box, in combination with a rubber, D, provided with slats k, with or without a zinc covering, l, substantially as and for the purpose set forth.

A. A. KENT.

Witnesses:

ALSON SELLECK, I. B. CROOKER.