(No Model.)

G. T. REISS & J. W. SEE.

FILTER PRESS PLATE.

No. 302,867. Patented July 29, 1884.

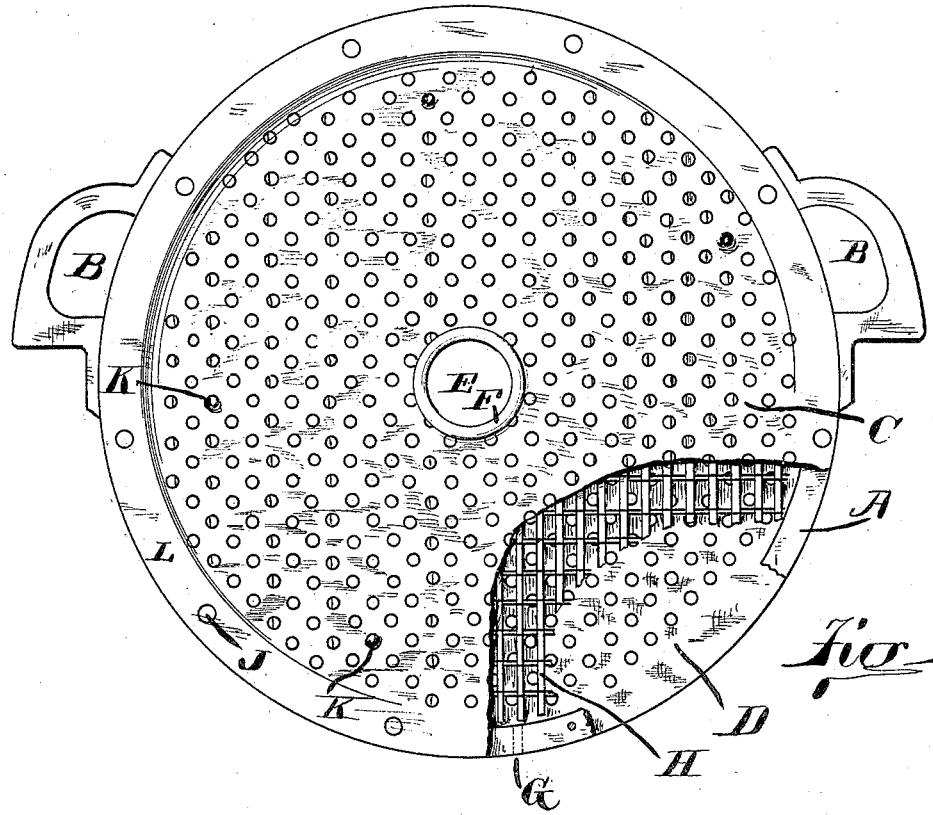

Fig 1

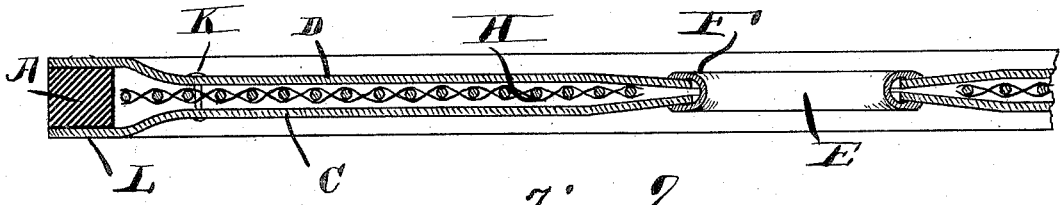

Fig 2

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UNITED STATES PATENT OFFICE.

GEORGE T. REISS AND JAMES W. SEE, OF HAMILTON, OHIO, ASSIGNORS TO THE NILES TOOL WORKS, OF SAME PLACE.

FILTER-PRESS PLATE.

SPECIFICATION forming part of Letters Patent No. 302,867, dated July 29, 1884.

Application filed June 18, 1884. (No model.)

To all whom it may concern:

Be it known that we, GEORGE T. REISS and JAMES W. SEE, both of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Filter-Presses, of which the following is a specification.

This invention pertains to that class of filter-presses in which is employed a series of chamber-sided plates secured together so as to form a series of chambers, the chambers being lined with cloth and connected with a source of supply under pressure.

Our invention relates to the construction of the cell-plates for such filter-presses. Our improvement permits of the plates being made entirely of wrought metal, and therefore extremely light and thin. In our construction we also avoid the necessity for machine-finishing the surfaces which form the pressure-tight joints at the margins of the plates.

Our invention will be understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a face view of a filter-press plate illustrating our improvement, and Fig. 2 a radial section of the same on a larger scale.

In the drawings, A represents the marginal frame of the plate, formed with parallel side faces; B, the usual handles and rests secured thereto; C, a disk of perforated sheet metal, having a diameter equal to that of the frame, and seated against one of the side faces of the frame; D, a similar plate seated against the opposite face of the frame; E, the central hole through the disks; F, a metal eyelet margining the hole E and uniting the two disks at the center; G, discharge-holes through the frame at the bottom for permitting the outflow of material from the cavity between the disks; H, a disk of wire-cloth interposed between the two perforated disks.

The cloths are applied and the plates used precisely the same as is usual with plates having corrugated bodies integral with the frames and provided with inset panels of perforated sheet metal. The faces L of the sheet metal at the frame are sufficiently true to form a pressure-tight joint with the filter-cloths, and when pressure is applied to the press the portion of the disks within the frame bulges inward, forming the usual chambers. The wire-cloth prevents the inner faces of the disks coming into contact with each other, and permits the passage of the liquid entering through the perforations of the disks downward to the discharge-openings. The disks are secured to the frame by rivets or screws J, and, if desired, the dishing of the disks may be made permanent by means of an occasional rivet, as illustrated at K.

The plates may be made in circular, square, or other form desired.

Instead of the wire-cloth H, corrugated sheet metal may be used, the sole object of the wire being to prevent contact of the disks, and at the same time permit the downward passage of the liquids.

The eyelet E produces a smooth central opening not at all liable to damage the cloths.

We claim as our invention—

A filter-press plate formed of two perforated sheet-metal disks, a marginal frame interposed between the two disks, and a separating-disk of wire-cloth or its equivalent interposed between the disks within the marginal frame.

GEORGE T. REISS.
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Witnesses:
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