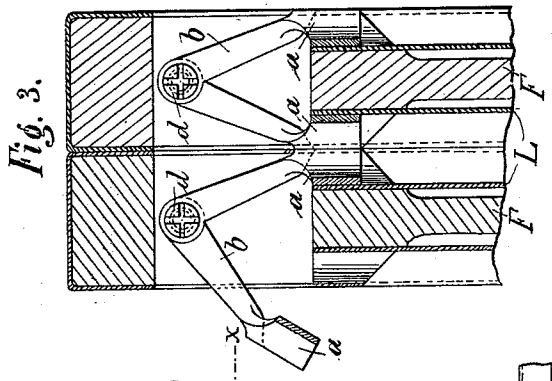
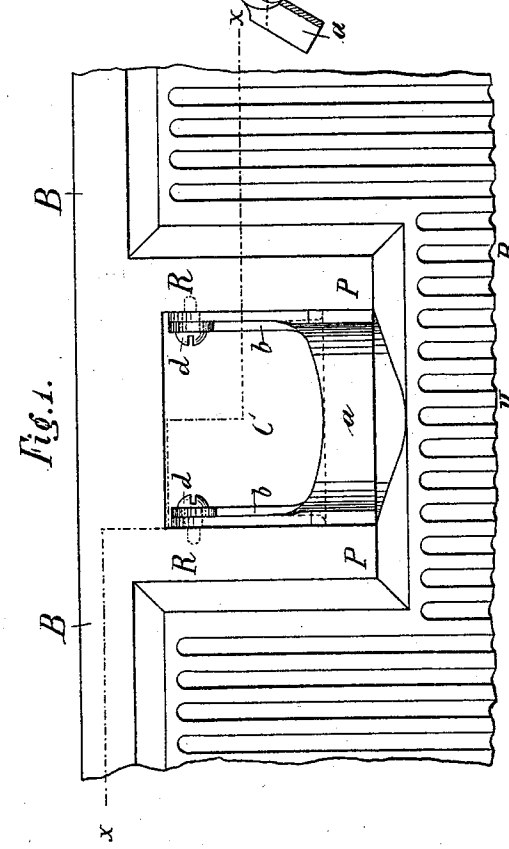
(No Model.)

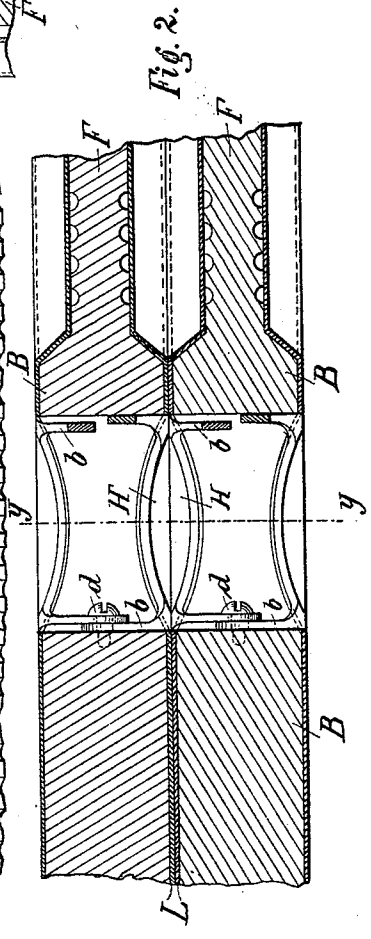
H. BEEG.

FILTER PRESS.

No. 521,697. Patented June 19, 1894.







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UNITED STATES PATENT OFFICE.

HANS BEEG, OF DURLACH, GERMANY.

FILTER-PRESS.

SPECIFICATION forming part of Letters Patent No. 521,697, dated June 19, 1894.

Application filed January 23, 1894. Serial No. 497,741. (No model.) Patented in Germany June 24, 1892, No. 67,036; in France June 30, 1892, No. 209,498, and in Austria-Hungary January 23, 1893, No. 5,774 and No. 16,098.

To all whom it may concern:

Be it known that I, HANS BEEG, engineer, a subject of the Emperor of Germany, residing at Durlach, Baden, German Empire, have invented new and useful Improvements in Filter-Presses, (for which I have obtained patents in Germany, No. 67,036, dated June 24, 1892; in France, No. 209,498, dated June 30, 1892, and in Austria-Hungary, No. 5,774 and No. 16,098, dated January 23, 1893, and applied for patents in Russia June 17, 1893, No. 7,328, and in Belgium December 13, 1893, No. 8,599,) of which the following is a specification.

My invention has reference to improvements in filter-presses and it consists essentially in constructing the several webs of the filter-plates with projecting rims and with depressed inlet portions, and combining with the same clamping-plates fitting the depressed portions and adapted to compress the cloth when the plates are pressed together, so as to prevent the passage of fluid behind the cloths.

The nature of my said invention will best be understood, when described in connection with the annexed drawings, in which—

Figure 1 is a face view of a filter-plate constructed according to my invention,—part being broken away. Fig. 2 is a section on the line *x*, *x*, Fig. 1. Fig. 3 is a section on the line *y*, *y*, Fig. 2.

Similar letters of reference designate corresponding parts.

Referring to the drawings, the letter F designates the web of a filter-plate which, as usual, is corrugated or grooved and covered by a suitable cloth L. The web is provided on opposite sides with projecting rims B between which the cloths are compressed when the plates are forced together. In each web is formed a transverse passage C. These passages form a common fluid inlet channel when the plates are placed together. The rims B surround the passage C, with the exception of the portions (marked H) on opposite sides of the plate, where depressions are formed. These depressed portions H form, when the plates are placed together, the fluid inlets to the plates. They are preferably made concave in form and quite smooth. The cloth is cut out opposite the passage C and drawn inwardly inside of the rim to lie flat against the face of the web.

a a are clamping plates shaped to exactly fit into the depressed portions H. In this example, these plates are attached to arms *b* pivoted at *d* to the web, and said plates can be turned up when the cloth is to be applied to the web. In practice the clamping plates are made of sheet iron and constructed to abut when the filter-plates are placed together. In forcing the filter-plates together the clamping-plates are necessarily forced against the cloths and press the same firmly against the depressed portions H. Other means may, however, be employed for securing the clamping-plates to the web and for causing the same to compress the cloths.

What I claim as new is—

1. In a filter-press, filter-plates provided with projecting rims having depressed portions forming fluid inlets, transverse passages communicating with said portions and forming a common fluid channel; combined with clamping plates fitting the depressed portions and adapted to compress the cloth at the fluid inlets, substantially as described.

2. In a filter-press, filter-plates provided with depressed portions forming fluid inlets when the plates are placed together, and clamping-plates pivoted to said filter-plates and adapted to compress the cloth at the inlets, substantially as described.

3. In a filter-press, filter plates provided with depressed portions forming fluid inlets when the plates are placed together, combined with clamping-plates constructed to fit said depressed portions and to abut when the plates are placed together, substantially as described.

4. A filter plate provided with depressed portions on opposite sides, and pivoted clamping plates for securing the cloth at the depressed portions, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HANS BEEG.

Witnesses:
AUGUST SCHABER,
GUSTAV BEER.