

(No Model.)

J. KROOG.

MEANS FOR SUSPENDING PLATES AND FRAMES IN FILTER PRESSES.

No. 364,827.

Patented June 14, 1887.

Fig. 1.

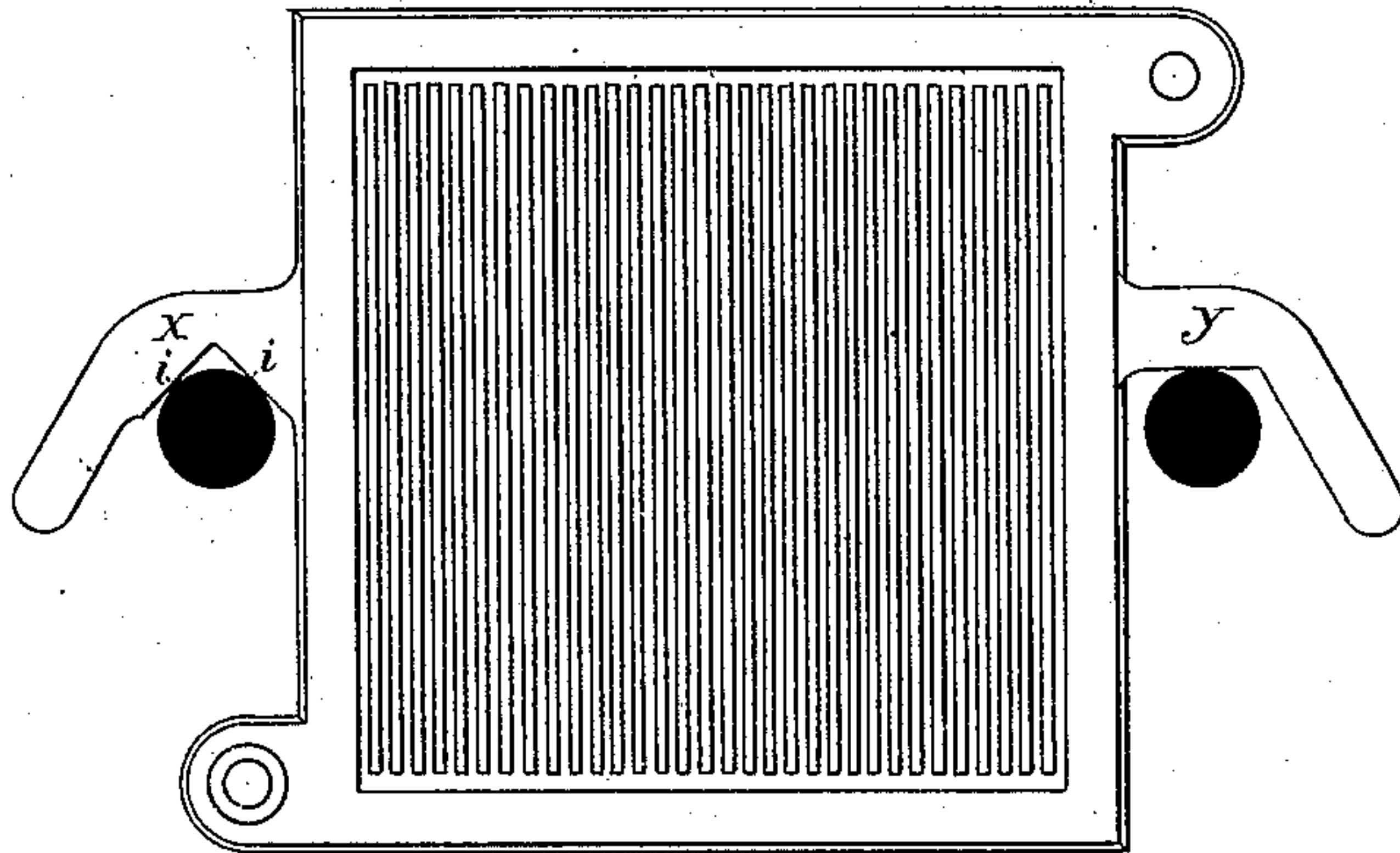
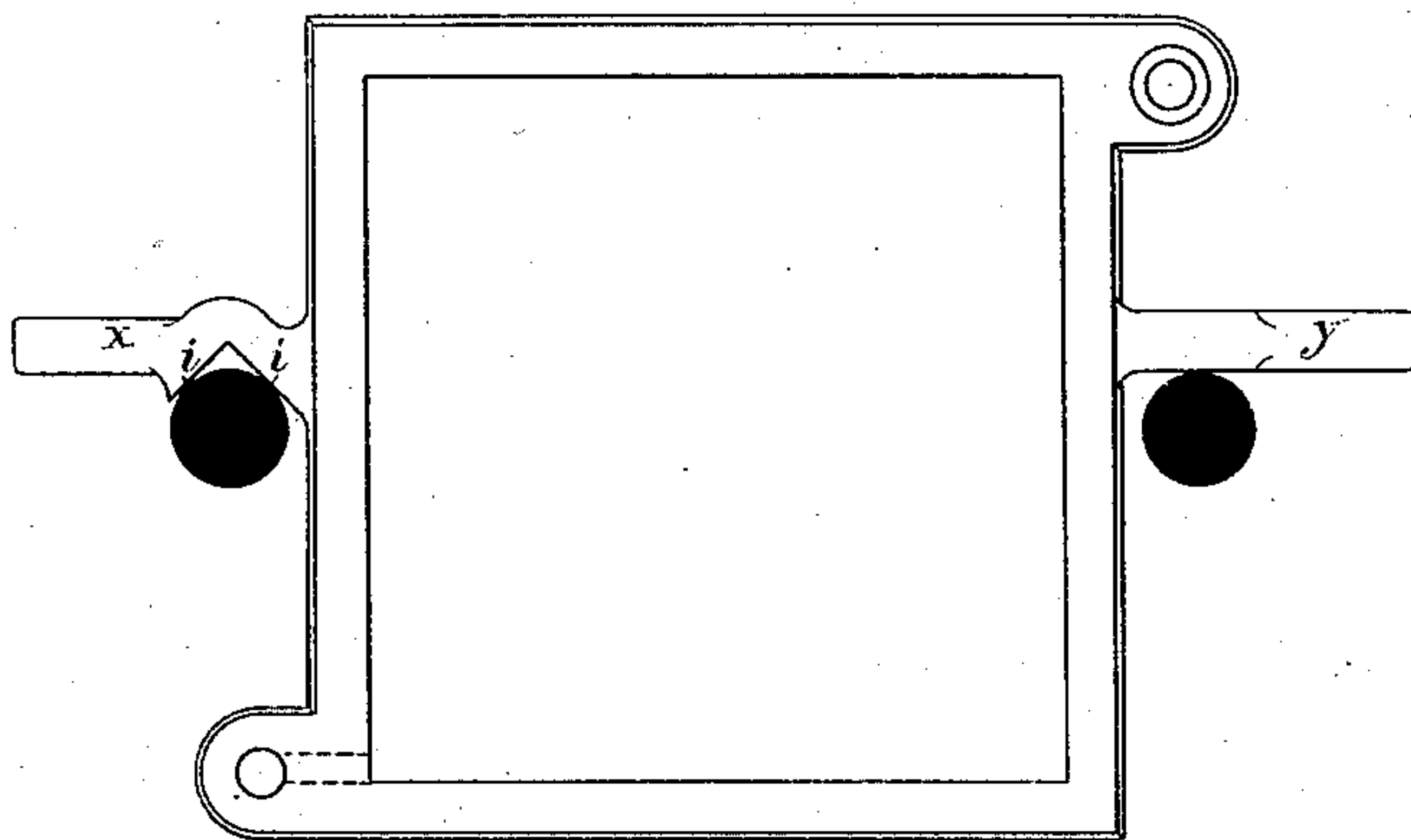


Fig. 2.



Witnesses.

J. A. Rutherford
Robert Everett

Inventor.

Johann Kroog.
By James L. Norr
Atty.

UNITED STATES PATENT OFFICE.

JOHANN KROOG, OF HALLE-ON-THE-SAALE, PRUSSIA, GERMANY.

MEANS FOR SUSPENDING PLATES AND FRAMES IN FILTER-PRESSES.

SPECIFICATION forming part of Letters Patent No. 364,827, dated June 14, 1887.

Application filed March 16, 1887. Serial No. 231,148. (No model.)

To all whom it may concern:

Be it known that I, JOHANN KROOG, of the city of Halle-on-the-Saale, in the Kingdom of Prussia, and German Empire, have invented
5 a certain new and useful Improvement in Means for Suspending Plates and Frames in Filter-Presses, of which the following is a specification, reference being had to the accompanying drawings, and to the letters of
10 reference marked thereon.

This invention relates to improvements in means for suspending plates and frames in filter-presses.

In the old means for suspending the plates and frames as heretofore generally employed it very
15 frequently occurs that whenever the said plates and frames are fitted between the bars or spindles somewhat tightly they get hitched, this being most likely to occur in such cases where
20 the substance to be filtered is hot so as to expand the said plates and frames, or where the filtering-cloth projects somewhat and is caught between the filtering-plate and bar or spindle.

In trying to obviate this difficulty by fitting
25 the plates and frames loosely between the bars one is very apt to encounter another disadvantage, which is caused by the fact that the canals or conduits do not fit upon each other exactly enough, and that the free space in a
30 frame never meets the same surface of filtering-cloth.

The object of my said invention, therefore, is to avoid both difficulties by constructing the handles of the filtering-plates and of their
35 respective frames in such a way as to admit of fitting them loosely between the bars, and still securing a correct position of the corresponding canals or conduits with regard to each other.

40 In the accompanying drawings, illustrating

my invention, Figure 1 is a side view showing some of the filtering-plates in their supporting-frame; and Fig. 2, a side view of the frame, omitting the filtering-plates.

My invention, therefore, consists in forming
45 the handles, as shown in the accompanying drawings, in which it will be noted that the one handle, *x*, is formed with an angular surface in such a manner as to rest roof-like on the round surface of the bar or spindle below
50 it, and touching the latter only at the two points *i i*, while the other handle, *y*, on the opposite side, lies flat and straight on its bar or spindle. It will be seen that in this arrangement the
55 corresponding canals on shoving the several plates and frames together will fit together with mathematical trueness center upon center. At the same time the plates and frames are fitted quite loosely between the bars without any danger of their getting hitched, and,
60 moreover, the free space of the frame will always meet the same surface of the filtering-cloth.

Having thus described my invention, what I claim as new, and desire to secure by Letters
65 Patent, is—

A frame for the filtering-plates of filter-presses, having at one edge a handle, *x*, provided with the angular surface to form two
70 bearing-points, *i i*, and at the opposite edge having a handle, *y*, provided with the flat bearing-face, substantially as and for the purpose described.

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

JOHANN KROOG.

Witnesses:

A. D'HEUREUSE,
EMIL WOLF.