

E. FEIX.

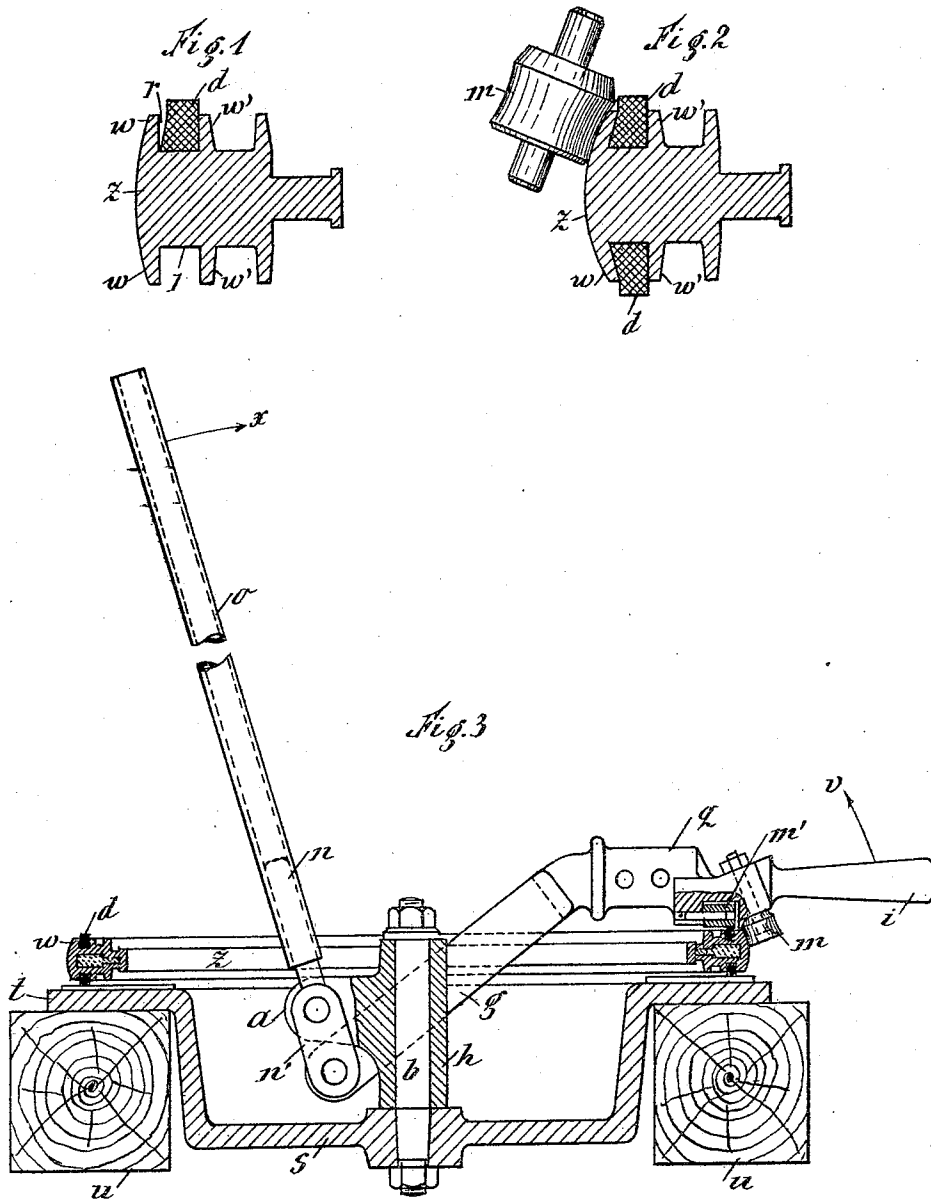
METHOD OF SECURING RESILIENT PACKING IN THE GROOVES OF METALLIC FILTER
PRESS FRAMES.

APPLICATION FILED FEB. 19, 1909.

Patented Dec. 28, 1909.

2 SHEETS—SHEET 1.

944,423.



Witnesses
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Fig. 4

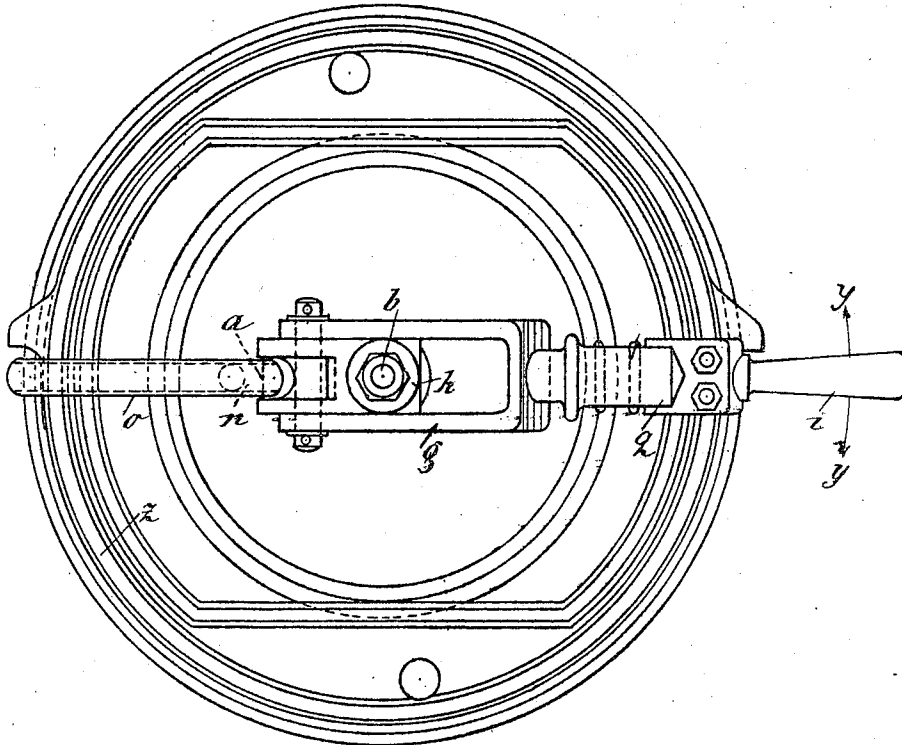
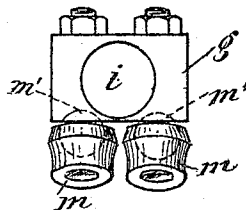


Fig. 5



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UNITED STATES PATENT OFFICE.

ERNST FEIX, OF BODENBACH, AUSTRIA-HUNGARY.

METHOD OF SECURING RESILIENT PACKING IN THE GROOVES OF METALLIC FILTER-PRESS FRAMES.

944,423.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed February 19, 1909. Serial No. 478,905.

To all whom it may concern:

Be it known that I, ERNST FEIX, a subject of the Emperor of Austria-Hungary, residing at Bodenbach, in Bohemia, Austria-Hungary, have invented certain new and useful Improvements in the Method of Securing Resilient Packing in the Grooves of Metallic Filter-Press Frames, of which the following is a specification.

Hitherto the well known rubber packings provided with edges of dove-tail shape were secured in the filter press frames by providing the frame with a slightly smaller dove-tail shaped groove into which the rubber packing was forced, this being possible owing to its elasticity, in order to insure a firm grip and to avoid its becoming loose accidentally. It has also been proposed to secure the rubber packings in cast grooves, not having a dove-tail shape, by vulcanizing or even by means of some adhesive material. These two last processes have been hitherto used in the case of cast tin frames such as are used for beer filters, for it is technically impossible to produce a dove-tail shaped groove by means of iron tin-casting molds (chilled castings).

The method forming the subject of this invention relates to the securing of dove-tail shaped rubber packing in beer filtering frames which are of cast tin and the grooves of which, therefore, when they come from the casting mold, have not the shape of a dove-tail, but on the contrary the lateral walls are at a right angle to the bottom surface and parallel to each other, as shown in Figure 1 of the drawing, which shows a section of the groove in the edge of the frame as cast. Fig. 2 shows the same groove during treatment by the method herein described. Figs. 3 to 5 show a preferred form of device for rolling the grooved wall *w* against the rubber packing *d*; Fig. 3 showing a cross-section; Fig. 4 a ground-plan, and Fig. 5 a detail view of a portion of the device on an enlarged scale.

The method consists in introducing the rubber packing *d* which has a dove-tail shaped cross-section, into the parallel walled groove *r* of the tin frame *z*, shown in cross-section, the outer wall *w* (or the inner one *w'*) of the groove being thereupon rolled inwardly (or outwardly) by means of any suitable rolling apparatus, so that the original groove with parallel walls is converted

into a dove-tail shaped groove corresponding to the dove-tail shape of the rubber packing (Fig. 2), and thus the rubber packing secured in its groove.

An important advantage of this process is that the rolling is effected with such power that the rubber packing, in as far as it is situated in the groove after compression, is subjected to such a high pressure that the joint between the rubber packing and the tin frame or the walls of the groove becomes thoroughly air tight so that no liquid can enter the joint.

A circular disk *s* rests on a foundation *u*, the edges of said disk being formed into an annular flange *t* which rests on the said foundation. In the center of the disk *s* is secured a bolt *b* on which is disposed a casing *h* carrying a rotatable double lever on a corresponding projection *a*. The one arm *n* of this double lever is provided with a removable tube *o* the other arm *n'* is attached by bolts to a fork *g*, on the part *q* of which the flange-compressing rollers *m* and the pressure rollers *m'* for the rubber packing *d* are rotatably mounted. The part *q* is also provided with a handle *i*.

The rolling of the grooved wall or flange against the rubber packing is effected as follows:—The fork *g* is moved upwardly by means of the handle *i* in the direction of the arrow *v* (Fig. 3) in order to allow the filter frame *z* to rest on the flange *t*. The said filter frame is placed on the flange *t* and centered thereon to correspond to the bolt *b*, being then secured by means of clamps or other suitable means. The fork *g* is now moved back to the position shown in Fig. 3, the rollers *m* resting against the grooved wall *w*. The tube *o* is then placed upon the lever arm *n* and pressure is exerted upon the said tube in the direction of the arrow *x* (Fig. 3), whereby the rollers *m* are pressed against the grooved wall *w*. By turning the fork *g* by means of the handle *i* around the circumference of the filter frame *z* in the direction of the arrow *y* (Fig. 4) the grooved wall is gradually rolled against the rubber packing, the rollers *m'* pressing the rubber packing *d* into the groove from above.

The rolling process itself is not limited to the dove-tail shape given by way of example in the drawing and described in the specification, but the rubber packing or the groove can be given any other desirable

shape suitable for the purpose of rolling. Instead of tin as mentioned, any other plastic metals which appear suitable for the purpose, could be used.

5 What I claim as my invention and desire to secure by Letters Patent is:—

The method of securing resilient packing in the grooves of metallic filter press frames consisting in compressing one wall of the
10 groove against the loosely introduced pack-

ing to insure an air-tight joint, substantially as set forth.

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

ERNST FEIX.

Witnesses:

LEOPOLD SCHMIND,

ARTHUR SCHWEINBURY.