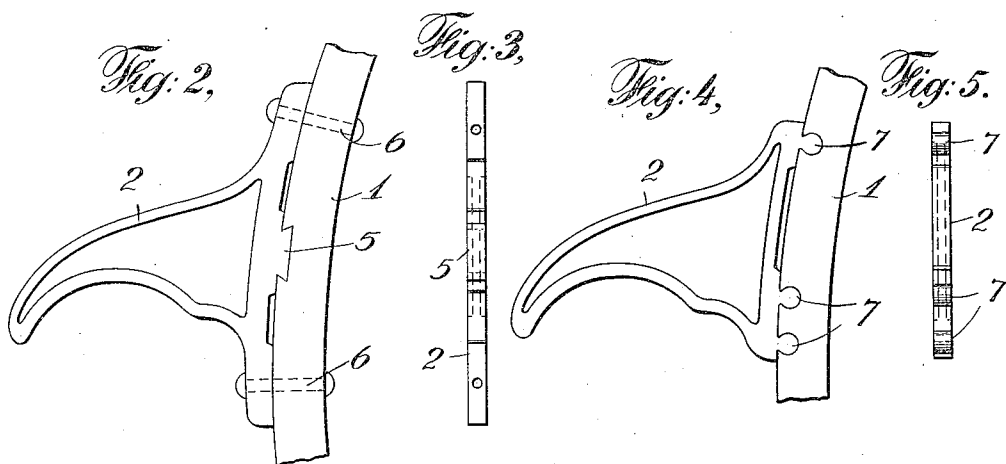
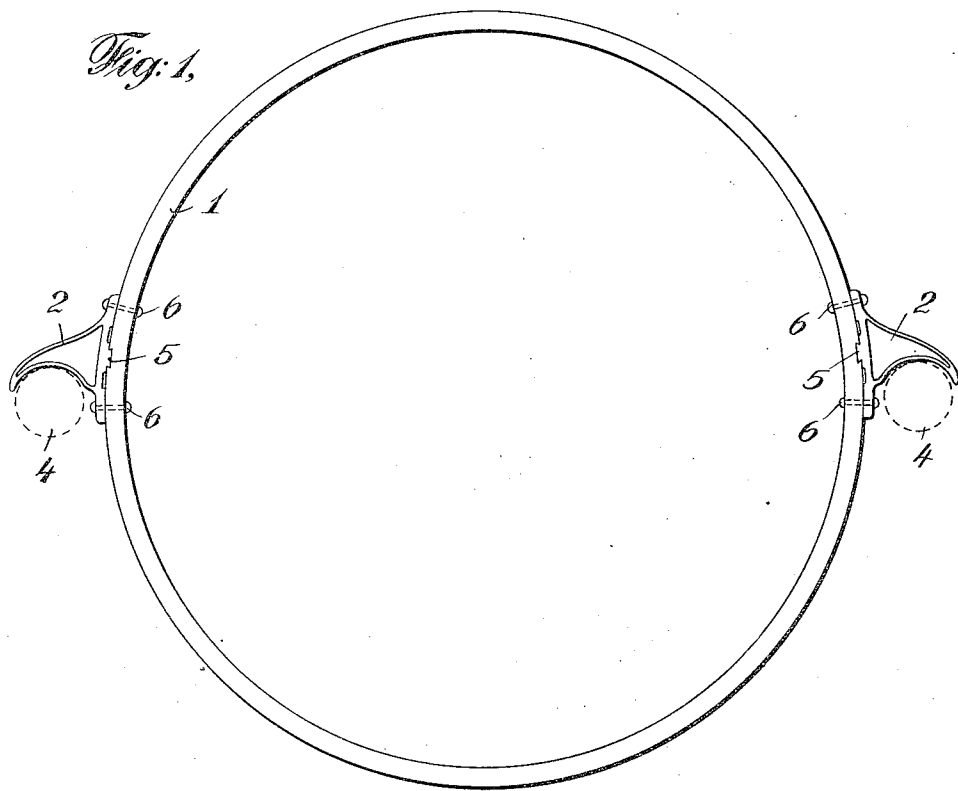


G. ELY.
 FILTER PRESS RING.
 APPLICATION FILED JUNE 28, 1911.

1,031,920.

Patented July 9, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE ELY, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO CARBONDALE MACHINE COMPANY, OF CARBONDALE, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

FILTER-PRESS RING.

1,031,920.

Specification of Letters Patent.

Patented July 9, 1912.

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To all whom it may concern:

Be it known that I, GEORGE ELY, a citizen of the United States of America, and a resident of Pittsburgh, county of Allegheny, and State of Pennsylvania, have invented certain new and useful Improvements in Filter-Press Rings, of which the following is a specification.

My invention relates to improvements in filter press rings, and comprises an improved construction for connecting to such rings the lugs by which such rings are supported on the side rods of the filter press.

The object of my invention is to connect such rings and lugs in an improved and simple manner.

I will now proceed to describe my invention with reference to the accompanying drawings, in which two constructions embodying my invention are illustrated, and will then point out the novel features in claims.

In said drawings: Figure 1 shows a front elevation of a filter press ring provided with lugs connected to the ring according to one of the constructions embodying my invention, and Fig. 2 is a fragmentary elevation, on a larger scale, illustrating the same construction. Fig. 3 is a detail view of the lug shown in Fig. 2, looking toward the base of the lug. Fig. 4 is a fragmentary side elevation illustrating an alternative and preferred construction, and Fig. 5 is a detail view of the lug shown in Fig. 4, looking toward the base of the lug.

Referring first to Figs. 1, 2 and 3, 1 designates the filter press ring, and 2, 2, designate lugs secured to said ring, and designed to support the same on the side rods 4 (indicated in dotted lines in Fig. 1) of a filter press. These lugs are required to support considerable weight, and it is important that they shall be so secured to the ring 1 that they shall not work loose, or sag, and that the pressure of these lugs shall be distributed over a considerable portion of the periphery of the ring. To this end, the lugs are made broad at the base, in the plane of the ring; and since mere bolts or rivets are unsatisfactory means for sustaining the load to be transferred from the ring to the lugs, each lug is provided with a key or projection, 5, preferably of dovetail form, as shown especially in Fig. 2, fitting into a cor-

responding groove in the periphery of the ring. Such key, by fitting closely into the corresponding groove of the ring, serves to locate the lug accurately with respect to the ring, and furthermore to transfer to the lug the load on the ring; and the fastening means, if any, other than the said dovetail key and groove, may be simple rivets which are readily applied by unskilled labor. Such rivets, when employed, are merely under tension; the shearing stress, due to the load on the ring, being carried by the projection 5.

In the alternative construction, shown in Figs. 4 and 5, the use of such rivets is avoided altogether, by providing the lug with a plurality of projections, here designated by numerals 7, fitting into corresponding grooves of the ring 1. As the tensional stress to be withstood by these projections is greatest near the lower end of the base of the lug, two of these projections or keys are provided near such lower end of the lug base, another similar projection being provided near the top of the base of the lug. In the construction shown in Figs. 4 and 5, these projections or keys 7 are of bulbous profile, the grooves in the ring, into which they fit, being of corresponding form—preferably circular in section. Such grooves may be formed very readily by means of a drill. Since the stress is much greater near the lower end of the lug than near the upper end thereof, two projections or keys 7 are provided near such lower end.

In both constructions shown, the lugs are put in place on the ring 1 by a lateral movement. The construction shown in Figs. 4 and 5 obviates any occasion for use of fastenings other than the keys 7 themselves.

What I claim is:—

1. A filter press ring comprising in combination a rigid ring, and a supporting lug secured thereto the base of which extends, in the plane of the ring, through a considerable distance, said ring and lug being provided the one with a rigidly attached key and the other with a correspondingly formed recess, into which said key fits.

2. A filter press ring comprising in combination a ring and a lug the base of which extends, in the plane of the ring, through a considerable distance, said ring and lug secured together by a plurality of keys formed

on one of said members and fitting into correspondingly-formed recesses in the other of said members, a plurality of said keys located near the lower end of the base of the lug.

5 3. A filter press ring comprising in combination a ring and a lug, one of said members provided with projecting keys of approximately circular section fitting into

open slots of approximately circular section in the other of said members.

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

GEORGE ELY.

Witnesses:

WALTER W. KING,
GEO. F. ROBINSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."