

Feb. 16, 1932.

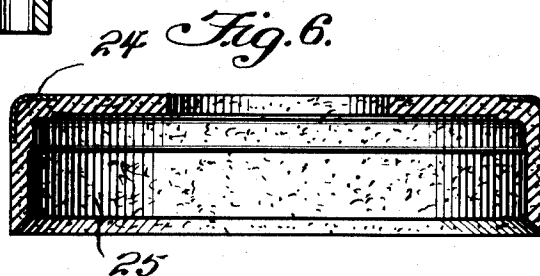
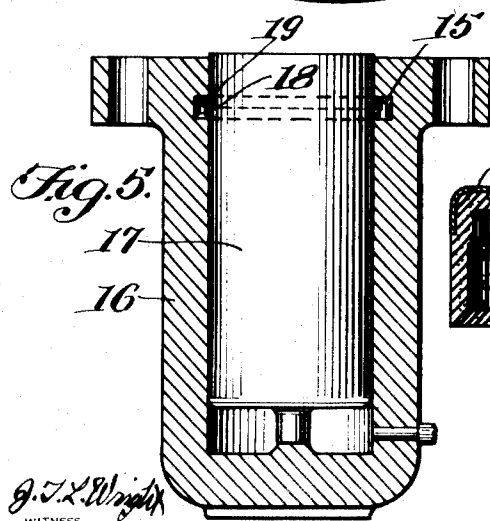
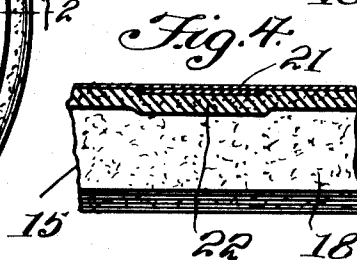
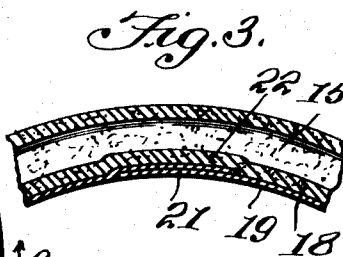
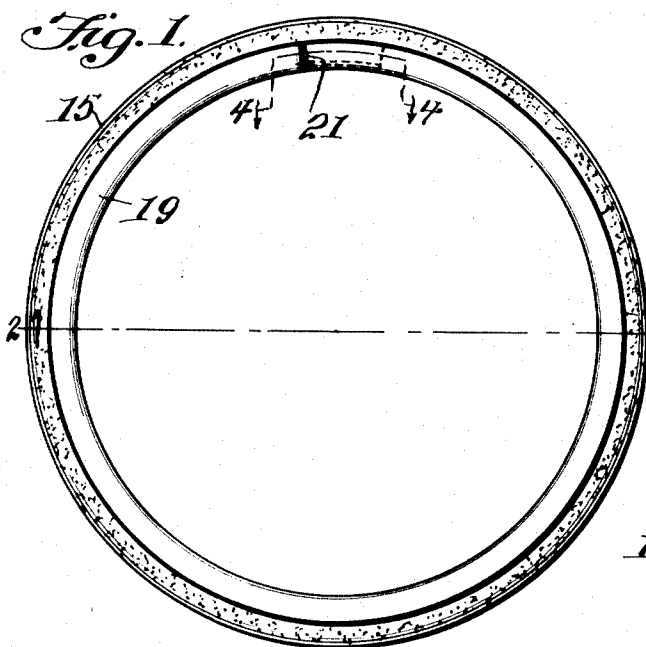
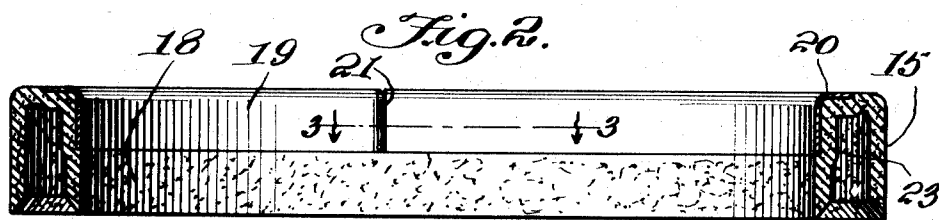
C. T. SOWDEN

1,845,939

PACKING PROTECTOR

Filed March 11, 1930

2 Sheets-Sheet 1



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WITNESS

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2 Sheets-Sheet 2

Fig. 7.

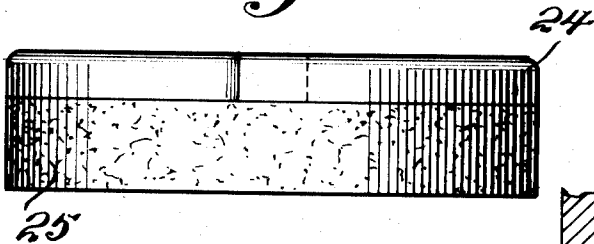


Fig. 9.

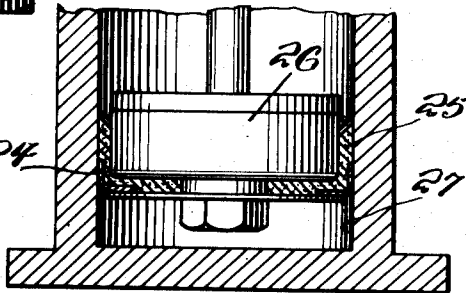


Fig. 8.

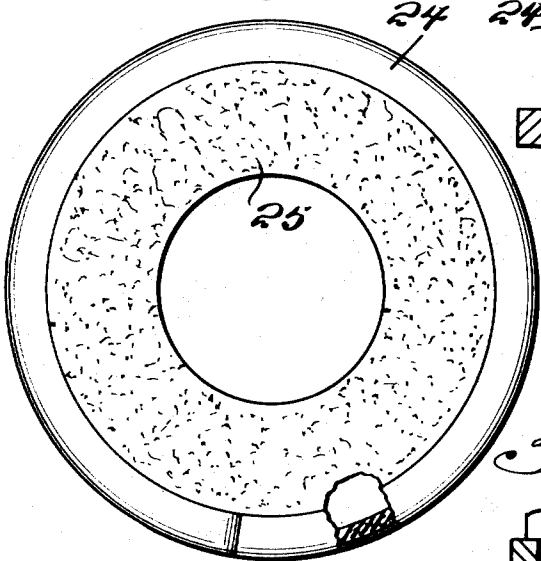


Fig. 11.

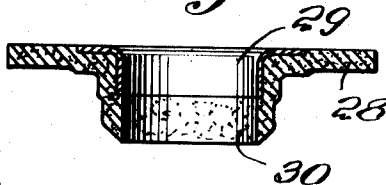


Fig. 12.

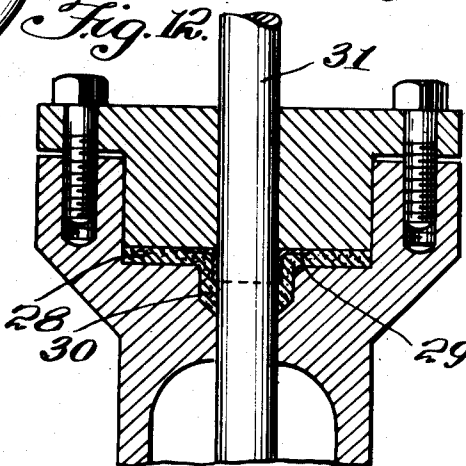
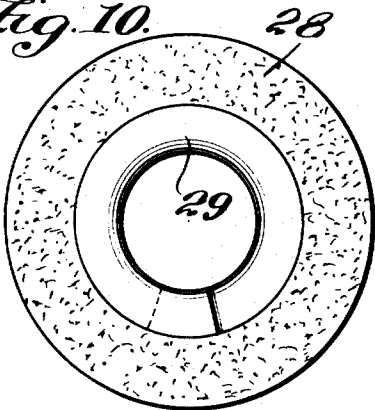


Fig. 10.



WITNESS

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PACKING PROTECTOR

Application filed March 11, 1930. Serial No. 434,986.

This invention relates to packings designed for use between a reciprocatory member and a stationary member, such as a ram piston and cylinder, a pump piston and cylinder, or a rod and cylinder, the primary object of the invention being to provide a packing in which the surface subjected to the greatest wear will be provided with a protector, and thus materially reduce wear without reducing the efficiency of the packing.

Another object of the invention is the provision of a protector which may be applied flush with the working face of the packing, and which will expand and contract to adapt itself to the inequalities of the members with which the packing is used.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claim.

In the drawings:—

Figure 1 is a plan view of a U packing constructed in accordance with the invention and equipped with the protector.

Figure 2 is an enlarged sectional view on the line 2—2 of Figure 1.

Figure 3 is a fragmentary section on the line 3—3 of Figure 2.

Figure 4 is an enlarged fragmentary section on the line 4—4 of Figure 1.

Figure 5 is a sectional view through the cylinder of a ram and illustrating the use of the packing shown in Figures 1 to 4.

Figure 6 is a sectional view of a cup packing equipped with the invention.

Figure 7 is an elevation of the packing shown in Figure 6.

Figure 8 is a plan view of the same with parts broken away and shown in section.

Figure 9 is a view illustrating the cup packing in use.

Figure 10 is a plan view showing the invention in connection with a flange leather.

Figure 11 is a sectional view of the same.

Figure 12 is a sectional view illustrating the flange leather in use.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 15 indicates a U packing designed for use with a ram as shown in Figure 5 of the drawings. In this figure the ram cylinder is shown at 16 and the piston at 17.

The working face 18 of the packing 15 which is opposed to the ram or piston 17 is of course subjected to the greatest amount of wear. In order to reduce this wear without reducing the efficiency of the packing, the working face 18 has applied thereto a ring 19 of metal. This ring is angular in cross section and extends over the edge of the packing, and the latter is provided with an annular recess or seat 20 which receives the ring. This recess is equal in depth to the thickness of the ring so that the latter will be flush with the face of the packing and the working face will include a section formed by the ring 19.

The ring is split with the adjacent ends overlapped as indicated at 21 in Figures 3 and 4 of the drawings, and one of these ends is offset and is seated within a depression 22 provided in the packing so as to provide a flush outer face. The ring is made of resilient metal so that both the packing and the ring will adjust themselves to any inequalities of the ram or piston 17 or other member with which the packing is used. The packing 15 is inwardly offset as shown at 23 so as to provide proper thickness behind the ring.

In Figures 6 to 9 inclusive a cup packing is shown provided with a wear ring 24. This ring 24 is similar in all respects to the ring 19 except that it is designed to be used upon the outer corner of the packing 25 instead of the inner corner as shown in the preceding figures of the drawings.

In Figure 9 the packing 25 is shown as applied to a piston 26 and engages the walls of a cylinder 27, so that the ring 24 will extend partially over the working face of the packing.

In Figures 10 to 12 a flange leather packing 28 is shown. In this packing the wear ring 29 is arranged around the inner edge so as to extend downward over a portion of the

working face 30 which is engaged by the reciprocatory rod 31 shown in Figure 12 of the drawings.

The rings for both the cup packing of Figure 6 and the flange leather packing of Figure 11 may be split with their ends overlapped as described in connection with the packing shown in Figures 1 to 4. However, if desired the wear rings may be of endless construction for use with certain types of machines.

In the foregoing description it is understood that the term "packing" also applies to the commonly accepted leather crimp used as packing in hydraulic machinery.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claim.

Having described the invention what is claimed is:—

A packing ring comprising an angular body, said body being hollow and having rectangularly disposed wall surfaces, the inner wall surface having a depression formed therein and a split ring having overlapping ends, one end being snugly received in the depression and the other end lying against the first mentioned end for the full length of the depression.

In testimony whereof I affix my signature.
CHARLES T. SOWDEN.

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