

H. F. BUSCH.  
CORK ARTICLE AND METHOD OF MAKING SAME.  
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1,263,849.

Patented Apr. 23, 1918.

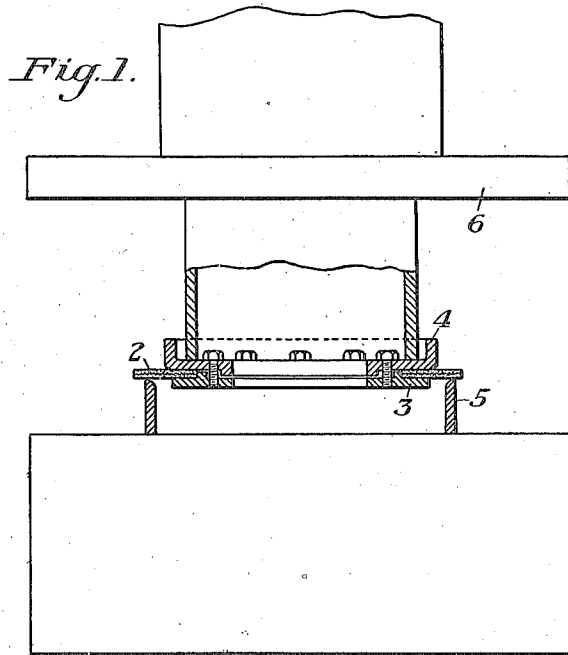


*Fig. 2.*

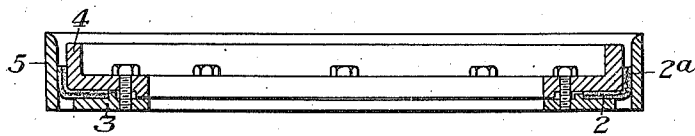


*Fig. 3.*

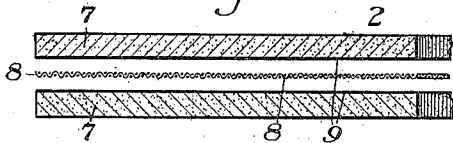
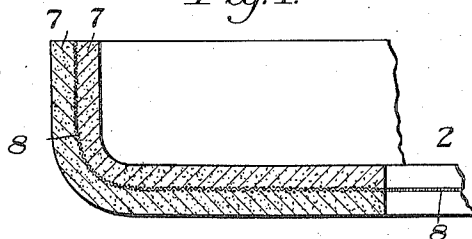


*Fig. 4.*



WITNESSES

*R. A. Balderson*  
*G. B. Blum*

INVENTOR

*H. F. Busch*  
*by Debever, Bymer & Corbridge*  
*Attys.*

# UNITED STATES PATENT OFFICE.

HERMAN F. BUSCH, OF MILLVALE, PENNSYLVANIA, ASSIGNOR TO ARMSTRONG CORK COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## CORK ARTICLE AND METHOD OF MAKING SAME.

1,263,849.

Specification of Letters Patent. Patented Apr. 23, 1918.

Application filed September 19, 1917. Serial No. 192,204.

*To all whom it may concern:*

Be it known that I, HERMAN F. BUSCH, a citizen of the United States, residing at Millvale, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Cork Articles and Methods of Making the Same, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which:—

Figure 1 is a side elevation partially in section of a press and mold for shaping one form of articles.

Fig. 2 is a sectional view through the mold shown in Fig. 1 on a larger scale, showing the article in the mold or form.

Fig. 3 is a detail sectional view on a larger scale through the several blank forming members, and

Fig. 4 is a detail sectional view through a portion of a finished article.

This invention relates to an improvement in shaped cork articles and the method of making the same, and particularly relates to a method for making flanged packing rings for pumps, hydraulic and pneumatic machinery.

The object of this invention is to provide a cheap and efficient method for making shaped articles from cork which will retain their shape indefinitely. Also to provide an article of a character which can be used as a substitute for leather.

Heretofore a large number of packing rings of this character were made from leather, and due to the scarcity of leather of the proper quality for making packing rings of this character, the cost is almost prohibitive. By my improved method I am enabled to make packing rings from natural cork or artificial cork at a very low cost, and which have all of the wearing and packing qualities of leather. I also provide a packing ring which will retain its shape as readily as a leather packing.

The precise nature of my invention will be best understood by reference to the accompanying drawings, which will now be described, it being premised, however, that various changes may be made, without departing from the spirit and scope of my invention, as defined in the appended claims.

Referring to the accompanying drawings, the reference character 2 designates an as-

sembled blank from which a packing ring is formed. This blank is built up of two members 7—7 consisting preferably of sheets of natural or artificial cork and an intermediate reinforcing member 8 which have been cemented to each other with a sizing glue, such as red albumen, casein, or any other glue which will set under heat. This blank is clamped between the members 3 and 4 for retaining it in position during the forming operation. After the blank has been clamped in position, the blank, together with the holder, is forced into a retainer 5 by means of a press 6, or any other device, to shape the flange 2<sup>a</sup>, as shown in Fig. 2. This flange is retained in position between the flanged portion of the member 4 and the ring 5. The entire former, together with the shaped blank are then placed in a suitable oven to bake the shaped article and set the sizing, which oven is usually heated up to a temperature of about 180° to 225° F.

After the article has been given the proper heat treatment, it is removed from the former and is ready to be placed in a cylinder, or applied to any other piece of machinery to be packed.

It will readily be understood by those familiar with the art, that a single sized member may be used in connection with a reinforcing member or without such member, or two cork members may be cemented to each other with sizing glue without any intermediate reinforce.

I prefer, however, to form the blanks of several artificial cork members 7—7 cemented to a reinforcing fabric member 8, by means of the sizing glue 9, which is applied to the adjacent sides of the cork members, or to both sides of the reinforcing member. The three members are then shaped in forming devices, such as shown in Figs. 1 or 2, or other devices suitable for the particular kind of work for which the shaped articles are to be used.

If desired, any suitable water proofing material may be incorporated with the granules of cork when making up the sheets to water-proof the structure and the reinforcing material may be cemented to the sheets with a sizing glue of water proof quality.

The advantages of my invention result from the provision of a cork article made from a sheet blank having a sizing incorpo-

rated therewith to retain the article in its shaped condition after it has set, as well as a method for readily shaping cork articles from sheet blanks. By the term "sizing",  
5 as used in my broader claims, I intend to cover any substance or compound either applied to the surface of sheet cork or incorporated with the cork particles of artificial sheet cork; and which when such sheet is  
10 shaped under heat and pressure will act to retain the sheet cork in its shaped form.

I claim:

1. As a new article of manufacture, a flanged article, formed by subjecting a substantially flat sheet of cork having sizing material incorporated therein, to heat and pressure to thereby bend and shape it to the desired flanged form, and held to its shape by the sizing material, substantially as described.  
20

2. As a new article of manufacture, a flanged cork packing ring formed by shaping artificial sheet cork under heat and pressure and held to shape by sizing incorporated therewith, substantially as described.  
25

3. The method of making shaped articles from sheet cork which consists in cutting two members from sheets of artificial cork, cementing said members together by cement  
30 or sizing, capable of setting under heat, placing the compound blank so made in a former and therein changing the shape of

the blank to the desired finished form, and retaining the shaped article in the former under the action of heat until set, substantially as described. 35

4. The method of making shaped articles from cork which consists in providing two blank members cut from sheets of artificial cork, superposing said members upon each other with an interposed reinforce and uniting said members and reinforce by cement or sizing capable of setting under heat, then placing the compound blank in a former and changing the shape of the blank therein to the desired form and holding the shaped article in the former under the action of heat until set, substantially as described. 45

5. As a new article of manufacture, a flanged packing composed of reinforced sheet cork and held to shape by sizing incorporated therewith and set under heat, substantially as described. 50

6. As a new article of manufacture, a shaped packing composed of two pieces of sheet cork and an interposed reinforce, the three members being united by sizing material which has been set under the action of heat and which acts as a shape retainer for the article, substantially as described. 55 60

In testimony whereof, I have hereunto set my hand.

HERMAN F. BUSCH.