

No. 768,984.

PATENTED AUG. 30, 1904.

E. GEORGE, JR.
PUMP DIAPHRAGM.

APPLICATION FILED FEB. 5, 1904.

NO MODEL.

FIG. 1.

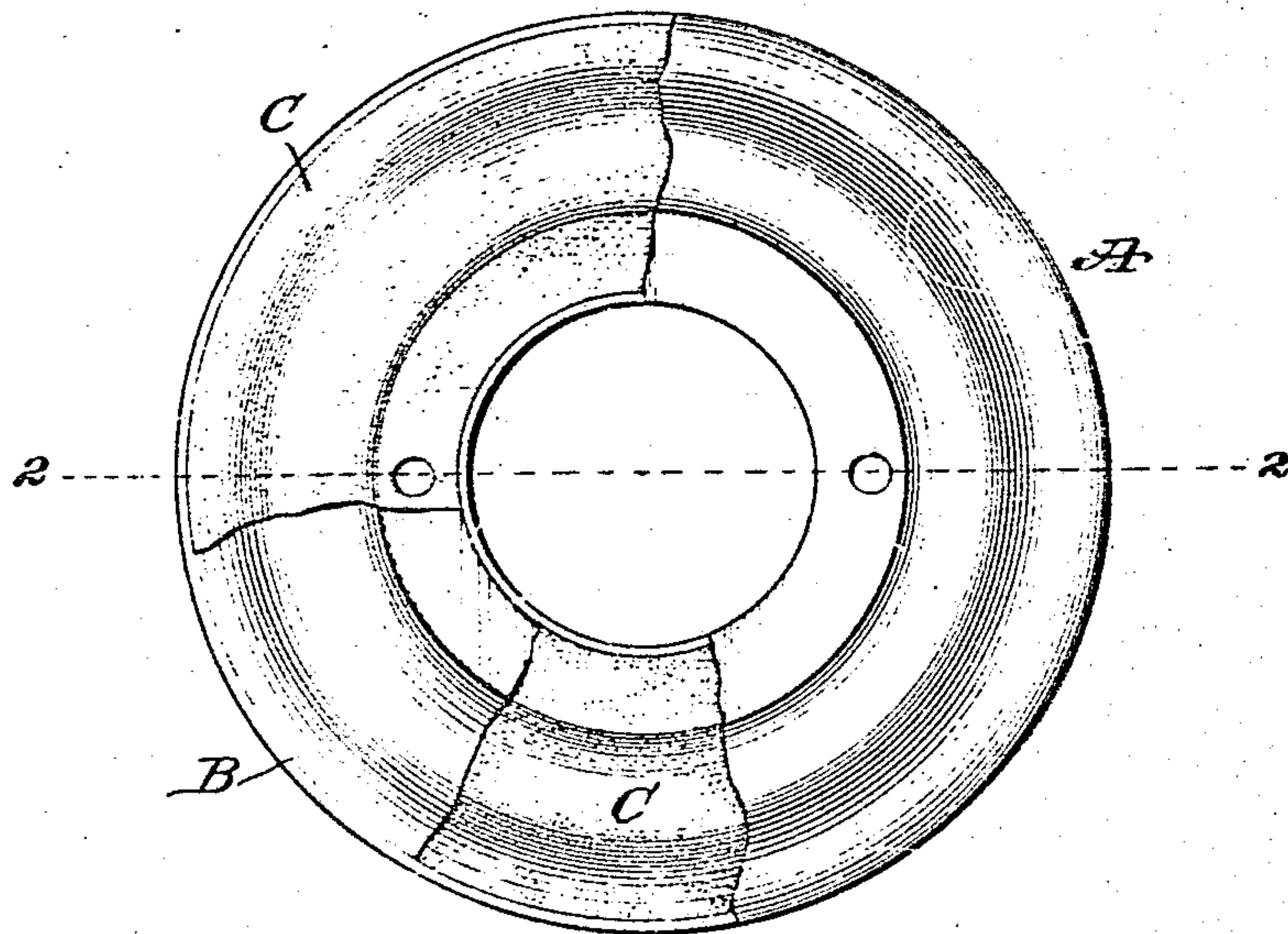
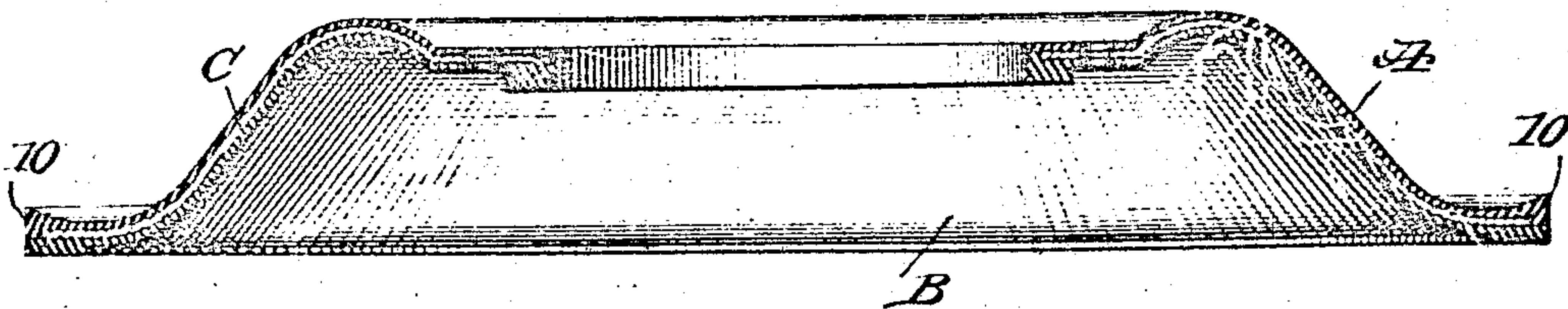


FIG. 2.



WITNESSES:

Wm. H. H. H.
Wm. H. H. H.

INVENTOR

Edwin George Jr.

Wm. H. H. H.
ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWIN GEORGE, JR., OF NEW YORK, N. Y.

PUMP-DIAPHRAGM.

SPECIFICATION forming part of Letters Patent No. 768,984, dated August 30, 1904.

Application filed February 5, 1904. Serial No. 192,128. (No model.)

To all whom it may concern:

Be it known that I, EDWIN GEORGE, JR., a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Pump-Diaphragm, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a diaphragm for pumps in which a flexible material is used between the upper and lower rubber sections of the diaphragm, which intermediate material is non-porous and serves to more or less stiffen the outer members or sections, thereby greatly adding to the lifetime of the diaphragm as a whole and rendering it much more serviceable than similar diaphragms for the same purpose.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of the improved diaphragm with parts broken away, and Fig. 2 is a section taken on the line 2-2 of Fig. 1.

The pump-diaphragm is of the usual formation or may be given any desired shape, and consists, as customary, of an outer member A, of rubber, and an inner member B, of similar material; but heretofore canvas has been introduced between these two members; but said canvas soon deteriorates under the conditions of usage, and thereby renders the diaphragm practically useless in a comparatively short space of time. Instead of using canvas as the intermedium I employ a rawhide member C, which is made to conform practically to the conformation of the outer and the inner members A and B. This rawhide intermediate member C is non-porous and will withstand a great amount of pressure, and consequently adds materially to the strength of the body of the diaphragm -

namely, the outer and the inner sections, above referred to. This intermediate rawhide section C is cemented in any suitable or approved manner to the outer and the inner rubber elastic sections or members A and B, and in order that the edge of the intermediate section shall be properly protected an annular flange 10 is formed at the margin of the outer member C of the diaphragm, as is shown in Fig. 2, and this flange 10 is cemented or otherwise securely fastened to the marginal portion of the inner or lower member B, at the said marginal portion of the lower or inner member B may be and preferably is more or less thickened, so as to give stability to the marginal portion of the diaphragm as a whole.

Under the foregoing construction it is obvious that the rawhide intermediate section accomplishes greater results than the customary intermediate canvas section, as the said intermediate rawhide section adds to the stability of the outer and inner rubber sections and serves to prolong the lifetime thereof without in any material sense lessening the pliability of the diaphragm as a whole.

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

1. A pump-diaphragm, consisting of an outer and an inner member of rubber, and an intermediate member of rawhide, as set forth.

2. A pump-diaphragm, consisting of an outer and an inner member of rubber and an intermediate member of rawhide, which intermediate member is secured to the outer and the inner members, and a protective flange at the outer margin of one of the rubber members, which protective flange guards the marginal portion of the intermediate or rawhide member, as described.

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

EDWIN GEORGE, JR.

Witnesses:

JOHN P. HANSEN,
WILLIAM DUFFY.