

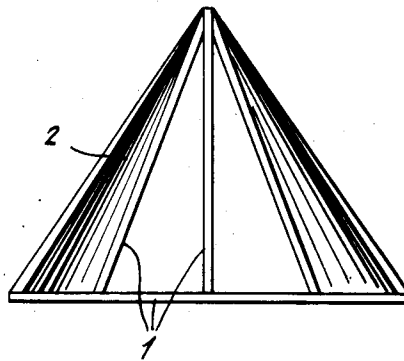
Sept. 10, 1935.

E. SCHÄFER

2,013,792

SEAMLESS DIAPHRAGM

Filed Jan. 9, 1934



INVENTOR
ERICH SCHAEFER
BY *H. S. Swann*
ATTORNEY

UNITED STATES PATENT OFFICE

2,013,792

SEAMLESS DIAPHRAGM

Erich Schäfer, Berlin, Germany, assignor to Telefunken Gesellschaft für Drahtlose Telegraphie, Berlin, Germany, a corporation of Germany

Application January 9, 1934, Serial No. 705,838
In Germany February 8, 1933

3 Claims. (Cl. 181—32)

This invention relates to diaphragms for acoustic apparatus and the like. The object of the invention is to provide a seamless diaphragm made from fibrous material, preferably "cast carton" for acoustic purposes.

Diaphragms of fibrous material are fundamentally known in the prior art. However, while these diaphragms are quite serviceable in practice, they nevertheless suffer from the drawback that they lack sufficient rigidity for high or heavy-duty requirements in acoustical work. According to the invention these drawbacks are obviated by placing reinforcement ribs or fins or stiffening skeletons of refined and alloyed light metal (aluminum or beryllium alloys) or other hard and light substances in the mold during the process of making the diaphragm so that the finished diaphragm presents stiffening ribs or skeletons that are wholly or partly embedded or surrounded by fibrous material.

The drawing shows an exemplified embodiment of the basic idea of the invention, the idea

here disclosed being applied to a cone diaphragm. The fins or ribs or reinforcement members being of plain or profiled form, are made of alloyed light metal and are indicated at 1. They are embedded into the diaphragm consisting of fibrous material 2.

What I claim is:

1. The method of manufacturing a diaphragm which consists in molding a diaphragm of fibrous material around a reinforcing frame of rigid material.

2. A diaphragm comprising a rigid reinforcing frame and a fibrous mass molded around said frame and formed into the desired diaphragm shape.

3. A seamless diaphragm comprising a reinforcing skeleton of a light metal alloy and a molded fibrous material surrounding said skeleton so that said skeleton is imbedded in said fibrous material, said fibrous material being formed into a cone.

ERICH SCHÄFER.