

No. 726,485.

PATENTED APR. 28, 1903.

W. R. WHITNEY.  
INSULATING MATERIAL.  
APPLICATION FILED MAY 24, 1902.

NO MODEL.

Fig. 1.

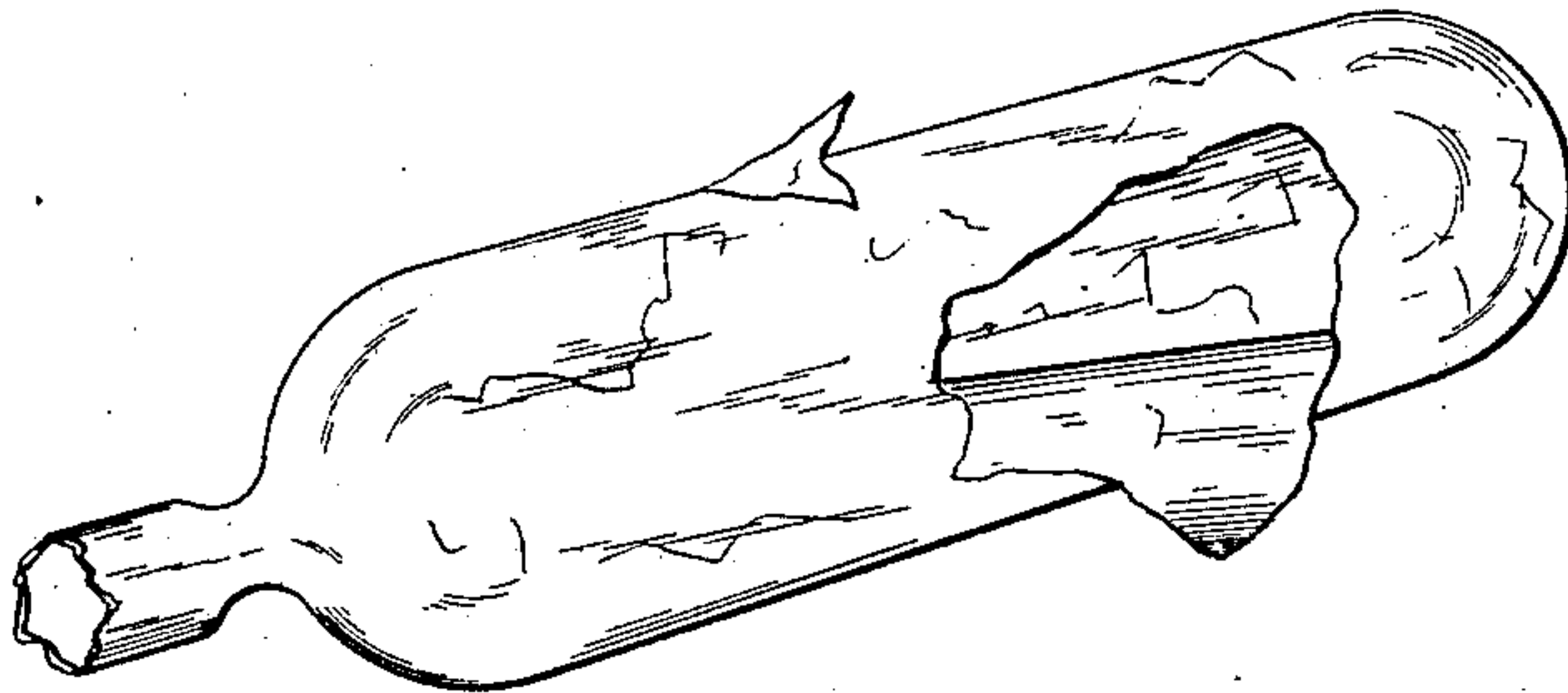


Fig. 2.

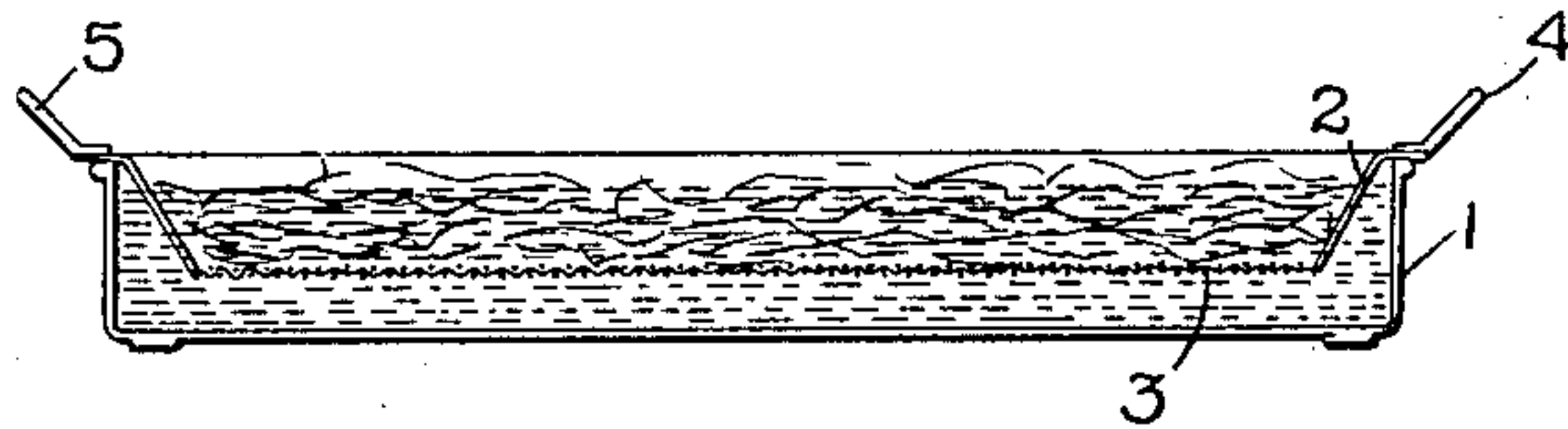
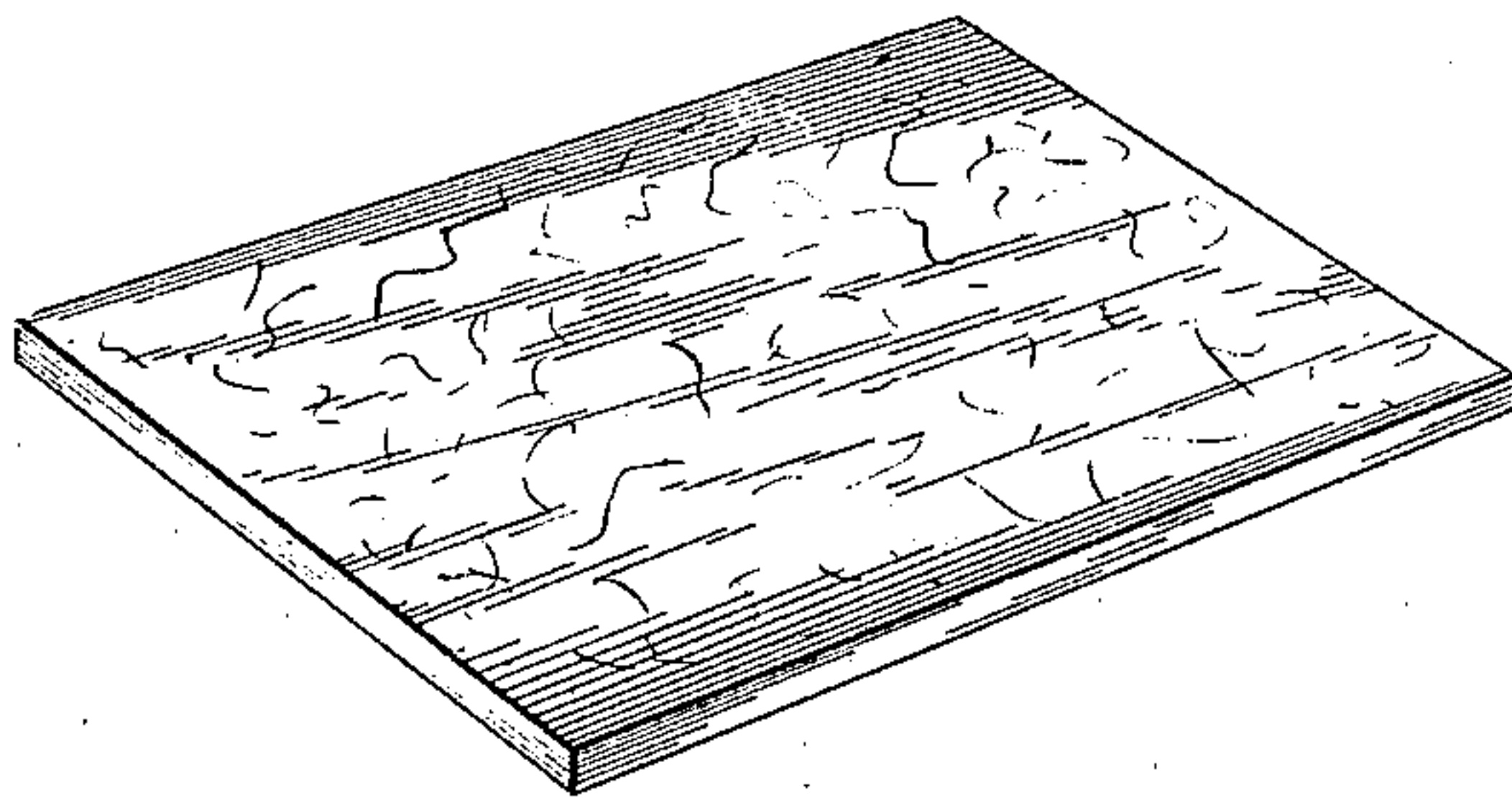


Fig. 3.



Witnesses.

*Erving R. Kummer.*  
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Inventor.  
Willis R. Whitney.  
by *Allen S. Davis*  
Atty.

# UNITED STATES PATENT OFFICE.

WILLIS R. WHITNEY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

## INSULATING MATERIAL.

SPECIFICATION forming part of Letters Patent No. 726,485, dated April 28, 1903.

Application filed May 24, 1902. Serial No. 108,781. (No specimens.)

*To all whom it may concern:*

Be it known that I, WILLIS R. WHITNEY, a citizen of the United States, residing at Boston, county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Insulating Material, of which the following is a specification.

With but little difficulty it is possible to blow glass into exceedingly thin sheets of several inches area, in which condition the glass becomes very flexible. I find that a very valuable insulating material can be formed by compacting or pressing together sheets or flakes of this glass with a suitable flexible binding material, such as shellac, boiled linseed-oil, paraffin or other wax, or the like.

The novel features which are characteristic of my invention I have set forth with particularity in the appended claims, the invention itself being described in detail in the following specification, which is to be taken in connection with the accompanying drawings, in which—

Figure 1 represents the production of the glass sheets or flakes; Fig. 2, a mode of treating the glass with binding material, and Fig. 3 a finished sheet of the insulating material.

Fig. 1 shows a bulb of blown glass, the blowing of which has been continued until the walls of the bulb have been so reduced in thickness that the bulb has commenced to break into sheets or flakes, as indicated. In practice the bulb when it has reached this condition of extreme thinness is broken or shattered into numbers of films or thin sheets, which as they fall may be collected in a suitable receptacle. These sheets or flakes may be treated with a binding material in a number of different ways, one of which is represented in Fig. 2, in which 1 is a receptacle for the binding material, which in the present instance may be paraffin-wax, maintained in a fluid condition by heat suitably applied.

Mounted within the tray or receptacle 1 is a cooperating tray 2, having a bottom formed of a cloth, wire screen, or the like. When the tray 2 is superposed upon the tray 1, the insulating material in the tray 1 passes up through the meshes of the tray 2, as will be readily understood. Sheets or films of the blown glass described above are then spread evenly over the bottom of the tray 1 to any desired depth. After the glass has been thoroughly saturated and has been matted down more or less the tray 1 is lifted out of the tray 2 by its handles 4 5, the surplus insulating material then draining off through the screen 3 into the tray 1. A light pressure may be applied to facilitate the operation. The mass or sheet of treated glass sheets or flakes is then stripped from the bottom of the tray 2 and may then be pressed in a suitable press or permitted to dry and harden without pressure, as desired. The plate of insulating material may be then trimmed or cut up into the shape desired in the finished article, as indicated in Fig. 3.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. An insulating material formed of very thin sheets or films of an artificial vitreous substance cemented or held together in the desired shape by means of a suitable binder.

2. An insulating material consisting of very thin sheets or films of glass cemented together by a flexible binding material.

3. As an article of manufacture, a plate of insulating material formed of films or sheets of glass held together by a flexible binding material.

In witness whereof I have hereunto set my hand this 22d day of May, 1902.

WILLIS R. WHITNEY.

Witnesses:

BENJAMIN B. HULL,  
HELEN ORFORD.