

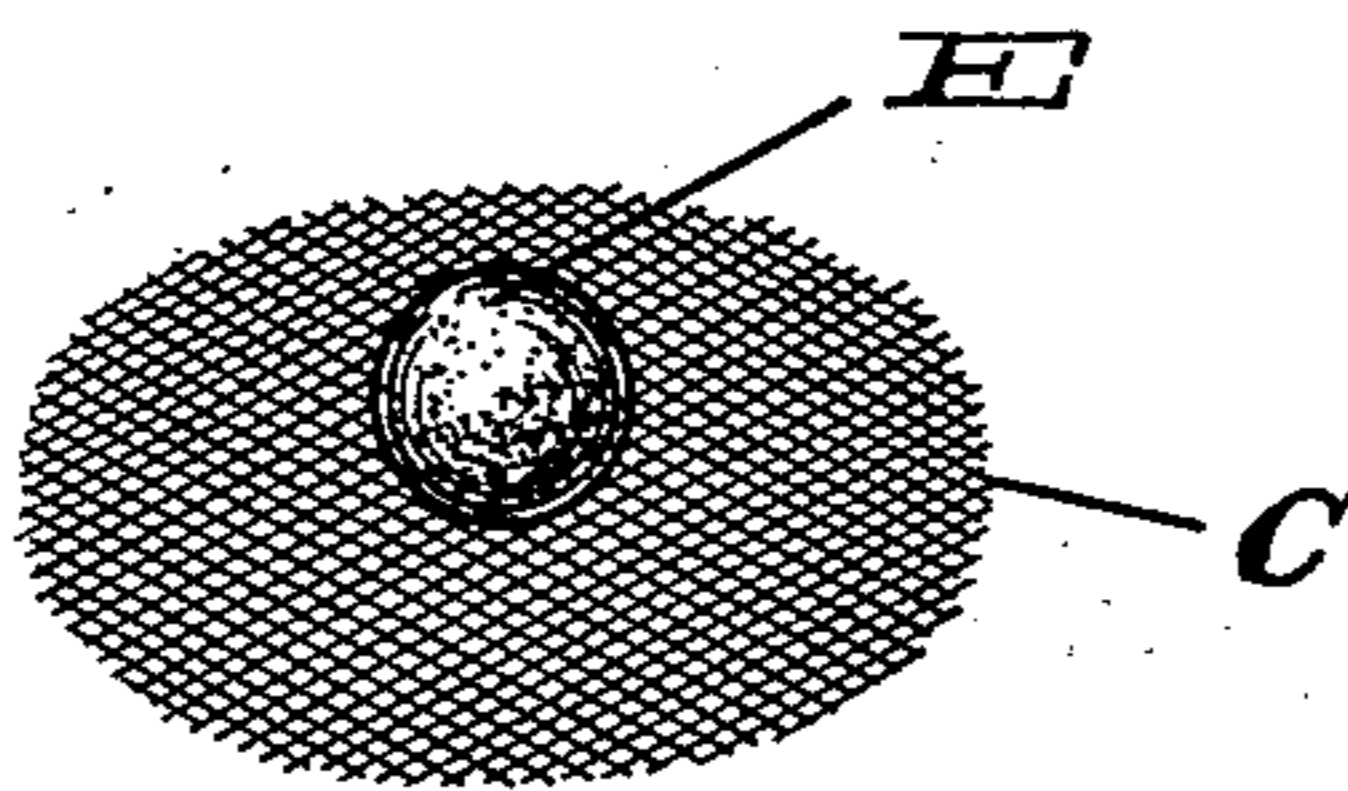
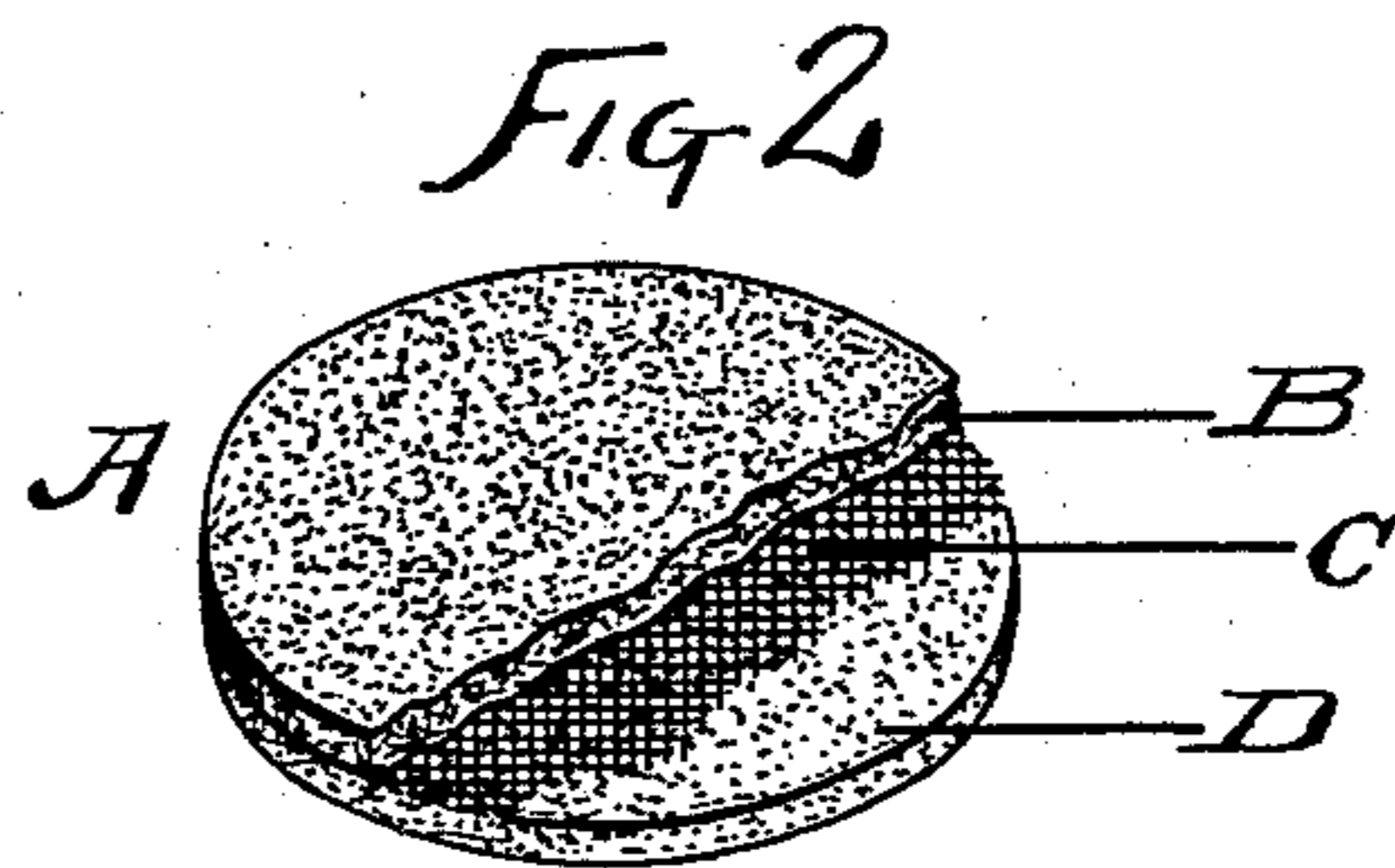
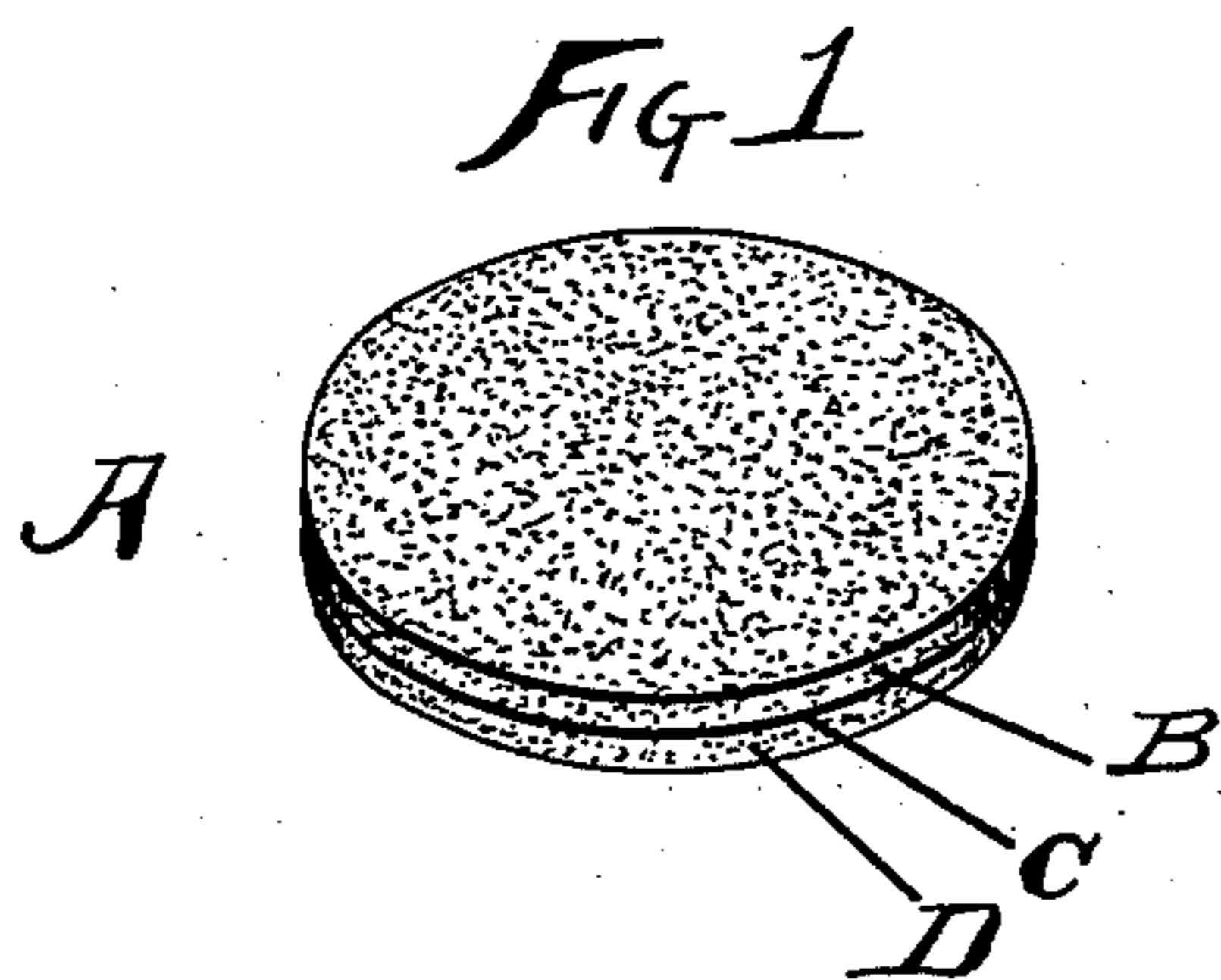
(No Model.)

C. H. BUNDY.

SEAL.

No. 296,921.

Patented Apr. 15, 1884.



*Fig 3*

Witnesses:

*John Foreman*  
*W. A. S. S. S.*

*Charles H. Bundy*  
*by James W. See*

Inventor

Attorney

# UNITED STATES PATENT OFFICE.

CHARLES H. BUNDY, OF MIDDLETOWN, OHIO.

## SEAL.

SPECIFICATION forming part of Letters Patent No. 296,921, dated April 15, 1884.

Application filed February 23, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. BUNDY, of Middletown, Butler county, Ohio, have invented certain new and useful Improvements in Seals, of which the following is a specification.

This invention relates to waxen seals for packages, letters, &c., which are to be sealed by means of a flat mass of wax or resin applied by heat and impressed with a device.

In the ordinary act of sealing, a stick of sealing-wax is set ablaze, and drops of the melted wax allowed to fall upon the place to be sealed till a sufficient quantity has accumulated, after which a device is impressed upon the soft mass by a suitable sealing-instrument. There are many objections to this common, I may say universal, method of sealing. Of a stick of sealing-wax, a certain quantity only is used, the stub ends of the stick being generally considered as waste. This waste represents to an express company an enormous sum of money, very much larger than the trivial character of a single seal would lead one to suppose or believe. The sticks of sealing-wax, being of more or less brittle matter, become broken into short pieces and disinterested employes cannot be depended upon to practice economy by uniting these short pieces into lengths fitted for use, whereby results another very serious cause of waste. The object of the wax upon a package is merely to bear evidence of the integrity of closure by means of the perfection of the device impressed upon the wax; hence the least quantity of wax which will receive a perfect impression of the sealing device would be sufficient for all sealing purposes. Employes of a shipping company cannot be brought to a recognition of this fact; hence they deposit at each sealing-point an amount of wax sufficient in some cases for a dozen perfect sealings, whereby results another serious cause of waste. Seals are surreptitiously violated in two distinct manners. A sealed flap may be lifted and the seal broken in a single line across its face, this line corresponding with the flap-line of the package. The lifting of the flap thus leaves one-half of the seal upon the body of the envelope, or whatever it may be, while the other half comes up with the flap. The seal is restored by replacing the parts neatly, and applying suffi-

cient heat to the seal to neatly unite the joint of separation along the flap-line. If this be neatly done, a mere scar, at most, will appear. Another plan is to lift the seal bodily from the body of the envelope, or whatever it may be, and allow the whole of the seal to rise with the flap, the restoration being effected by the application of slight heat upon the edges of the seal at its point of contact with the flap. The lifting of a seal bodily from paper results from the imperfect adhesion of the wax to the paper, and this imperfect adhesion is due to the fact that, in the act of applying, the wax, no matter how hot it may be when it drops from the blazing stick, becomes surface-chilled on its way to the paper, and even perfectly chilled by contact with the cold paper. A seal of brittle wax upon a package during shipment is liable at all times to become fractured, and it is the knowledge of this fact that leads the unthinking employe to build up thick and heavy seals at great expense of wax. It is so common to find seals fractured by ordinary handling during shipment that the function of a seal, as an indication of integrity, is liable to be lost sight of.

My invention relates to a manufactured wafer of sealing composition to be softened by heat, constructed of proper proportions as to dimension to secure a perfect adhesion and impression, and provided with an interior fiber bond, which absolutely prevents the separation of the seal across the flap-line, and at the same time secures in an accidentally-fractured seal its full utility as a seal.

The invention will be understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of one of my improved seals, ready for application; Fig. 2, a similar view with portions broken away so as to exhibit the structure; and Fig. 3, a perspective view, illustrating a process of manufacturing the seals.

In the drawings, A represents the wafer complete; B, the upper stratum of the wafer, which is to be of any usual or suitable composition of wax or resin; C, the middle stratum of fibrous sheet, such as cloth of very light or open structure; and D, a lower stratum similar in material to the upper stratum.

While the structure of the wafer has been

described as stratified, I desire to explain that both the upper and lower strata of wax are in fact integral, the fibrous net-work C being simply located within the body of the wax, 5 which is massed upon its face and through its interstices. The entire wafer is exceedingly thin—as thin as is consistent with a proper sealing impression.

In applying these wafers they are laid upon 10 the points to be sealed and heat applied to their upper surfaces by suitably directing the heat from a flame upon them. The result is a complete liquefaction of the entire body of the wax and the heating of the paper below. 15 The adhesion is thus perfect, and the impression is made as usual. Another method of application is to heat the wafer before it is laid in place, which may be done by holding the same in a light pair of tweezers over the 20 source of heat, or by holding it by means of a handle-like tag, which may, if desired, be formed upon the wafer at the time of manufacture.

It will be readily understood that a seal 25 formed in this manner cannot be parted at the flap-line. Its adhesion is too perfect to permit of its leaving the paper bodily. Its extreme thinness gives peculiar elasticity and

avoids much liability toward breaking; and the net-work maintains the integrity of the structure in case it should become accidentally fractured.

The wafers are manufactured by being punched from a suitably-prepared compound sheet; or punchings of the net-work may have 35 the wax applied by the application of heat, as may be understood from Fig. 3, in which C is a punching of the net-work, and E a mass of the wax laid upon it. If heat be applied, the wax will melt and run, evenly distribut- 40 ing itself over and through the netting, affecting the two sides of the netting in a sufficiently equal manner.

I claim as my invention—

1. A seal formed of a waxen or resinous 45 compound, and containing a fibrous netting or web, substantially as and for the purpose set forth.

2. As a new article of manufacture, sealing-wafers formed of a fibrous net-work or web 50 coated with a waxen or resinous compound, for the purpose set forth.

CHARLES H. BUNDY.

Witnesses:

L. D. McADAMS,

THOS. BISHOP.