

C. H. MERRY.
CARRIER FOR COMPRESSED FIBROUS MATERIALS.
APPLICATION FILED DEC. 26, 1908.

974,904.

Patented Nov. 8, 1910.

Fig. 1.

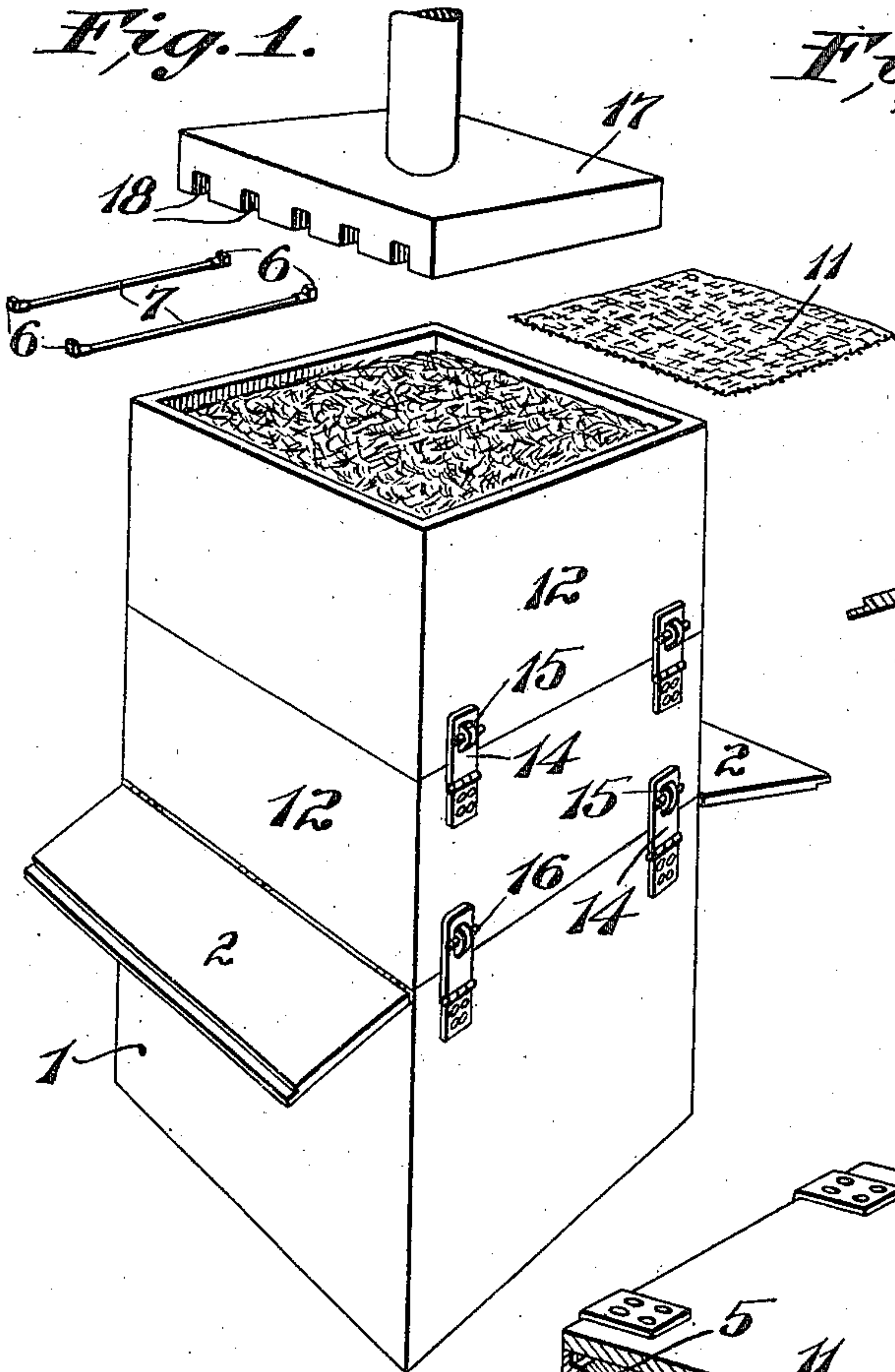


Fig. 2.

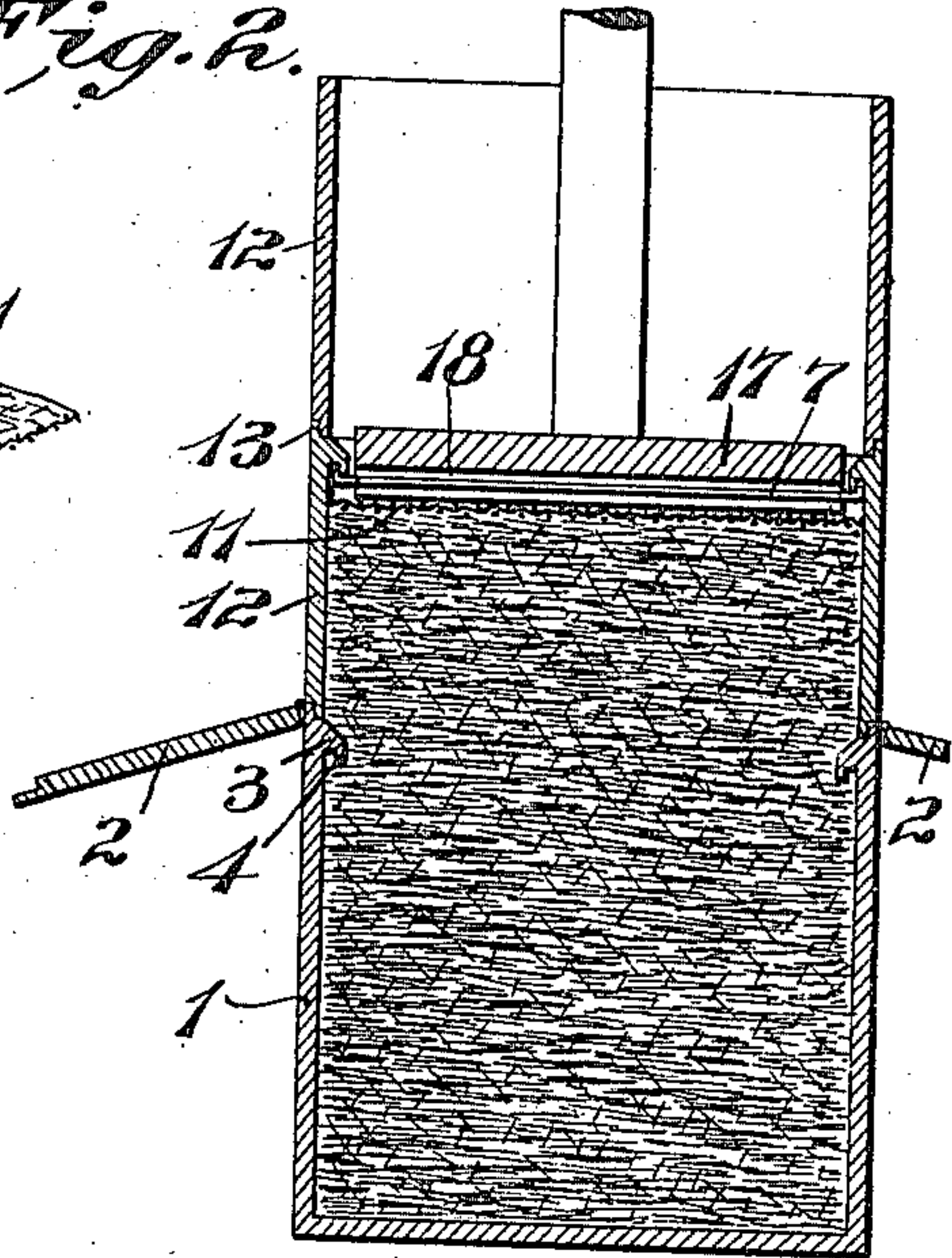


Fig. 3.

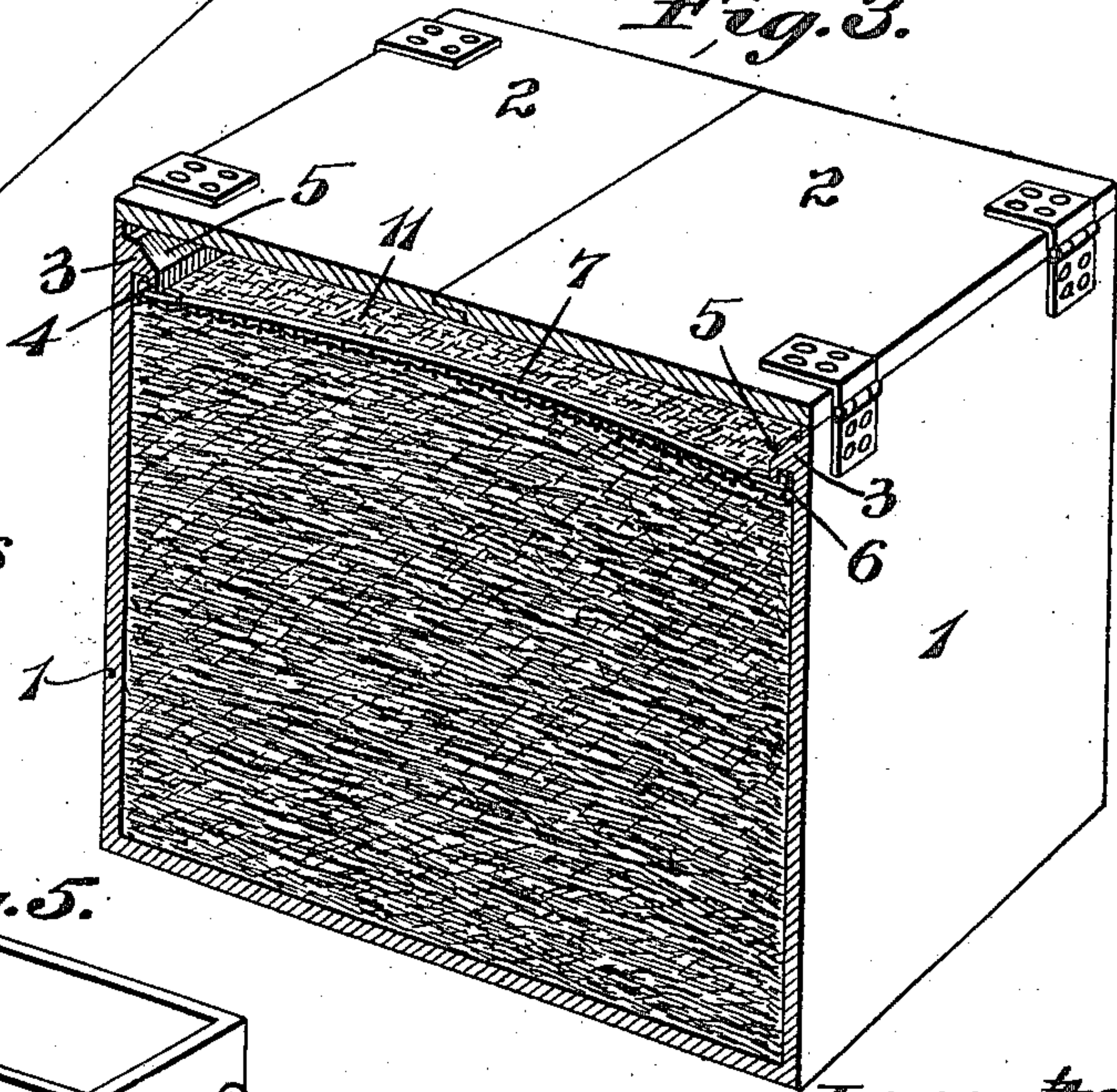


Fig. 4.

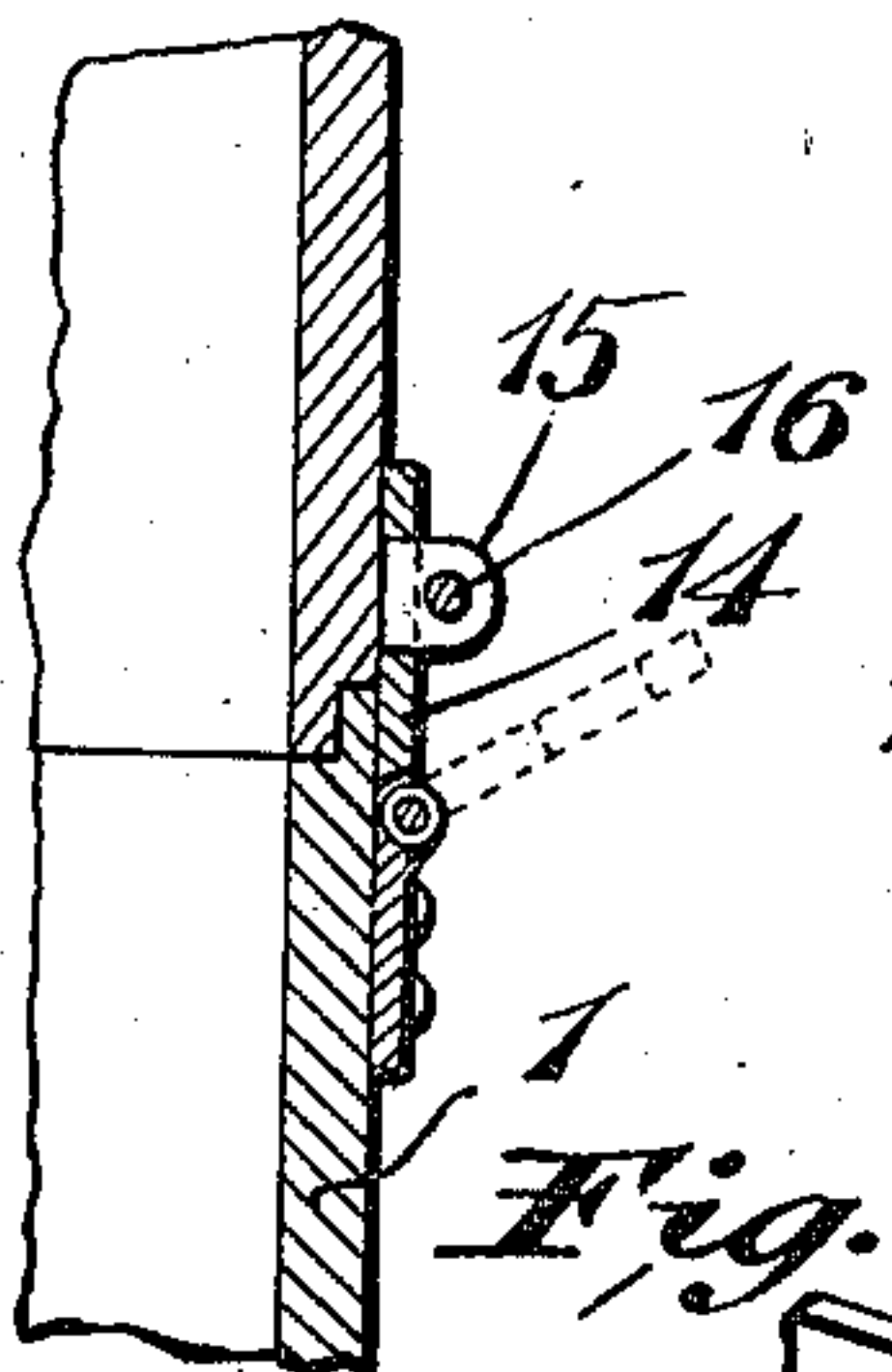
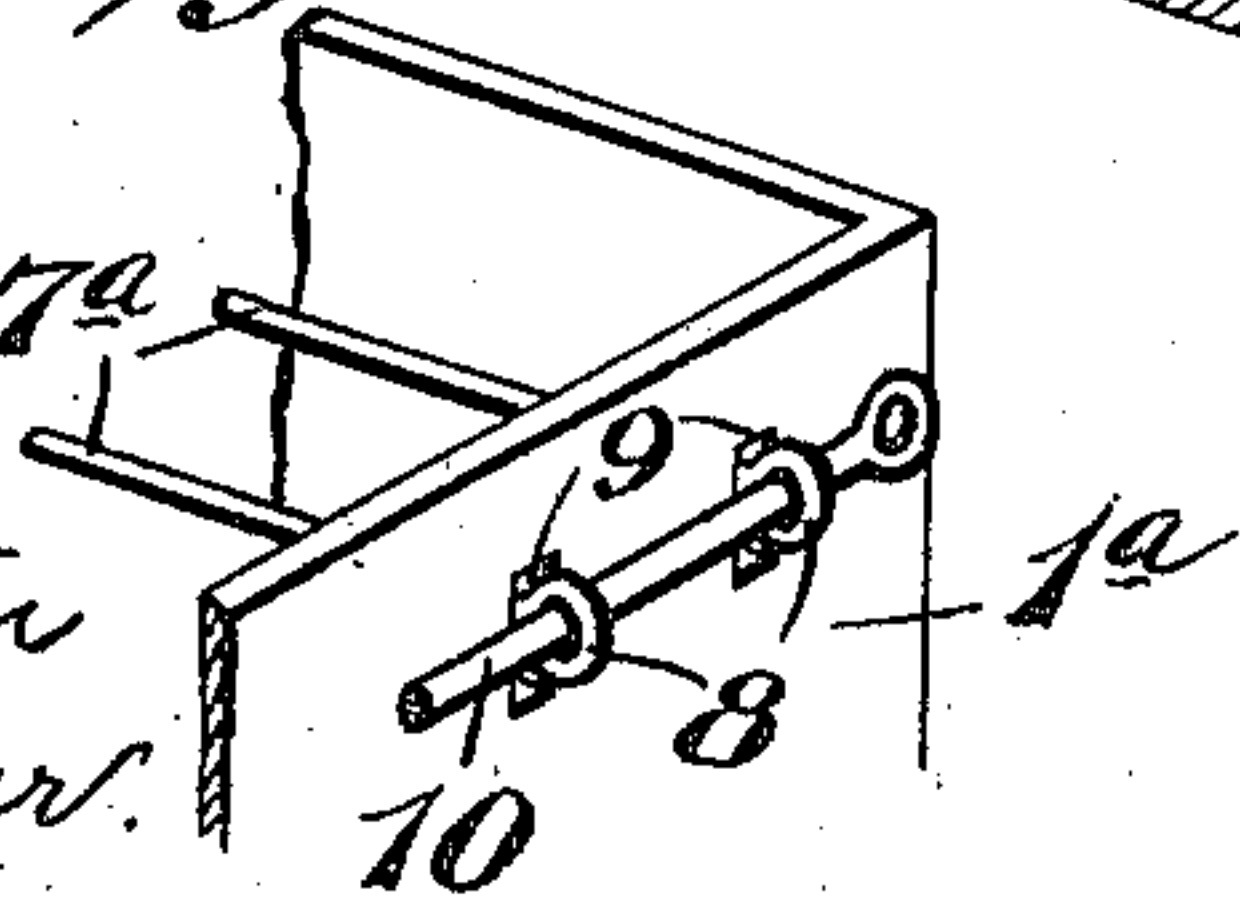


Fig. 5.



Witnesses:
G. A. Pennington
Edgar T. Farmer.

Inventor:
C. H. Merry
By *[Signature]*
Attys

UNITED STATES PATENT OFFICE.

CHARLES H. MERRY, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO NATTA A. MERRY, OF ANACORTES, WASHINGTON.

CARRIER FOR COMPRESSED FIBROUS MATERIALS.

974,904.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed December 26, 1908. Serial No. 469,443.

To all whom it may concern:

Be it known that I, CHARLES H. MERRY, a citizen of the United States, and a resident of the city of St. Louis, and State of Missouri, have invented a new and useful Carrier for Compressed Fibrous Materials, of which the following is a specification.

This invention relates to carriers for compressed cotton and similar fibrous materials. The invention has for its principal objects to protect the material from damage, to avoid undue waste, to secure and utilize a maximum tonnage within a minimum space, and to attain certain other advantages hereinafter more fully appearing.

The invention consists in the parts and in the arrangements and combinations of parts hereinafter described and claimed.

In the accompanying drawing forming part of this specification, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a schematic perspective view illustrating devices used in connection with the carrier for compressing and holding the material therein; Fig. 2 is a vertical cross-section through a carrier with supplemental filler frames thereon and illustrating the material as partially compressed; Fig. 3 is a view partly in vertical cross-section and partly in perspective showing the carrier closed with the material finally compressed therein; Fig. 4 is a fragmentary section illustrating means for releasably securing the carrier and the supplemental filler frames together; and, Fig. 5 is a fragmentary perspective view illustrating a modification of the retaining device for the compressed material.

Cotton is usually baled for shipment and the only protection it has against damage is the cloth covering which is often incomplete and ineffective as against the action of the elements. The bale ties are relied upon to hold the bale intact. Therefore, the bales cannot be compressed beyond a certain density, and owing also to the usual shapes of the bales, the full tonnage capacity of transportation facilities is not utilized.

According to my invention, it is preferable to employ a rectangular receptacle or carrier 1 into which the cotton or similar fibrous material to be shipped or stored may be compressed. It is further desirable that the carriers be made in the form of inter-

changeable units for unit freight cars and water transportation facilities. In this way, a greater quantity of cotton and the like may be handled and shipped or stored within a given space. By making the carriers or units 1 strong enough the cotton may be compressed to a greater density than in the case of ordinary bales and the carrier may be closed and sealed if so desired so as to fully protect the contents thereof. The carriers may also be re-shipped containing other commodities and things and thereby be kept in constant use.

The unit or carrier 1 may be provided with hinged or other suitable covers 2.

Extending across the inner faces of opposite side walls of the unit near the top thereof are shoulders or ledges 3 having depending inner edges 4 and inclined or chamfered upper portions 5. The depending edge portions 4 of the shoulders 3 are adapted to cooperate with hooked end portions 6 of flexible strips or cords 7 which are adapted to be stretched across the top of the compressed mass of material within the carrier to retain the same therein. The compressed material by its tendency to expand holds the hooked portions 6 of the retaining strips or cords 7 securely under the depending edge portions 4 of the ledges or shoulders 3. Preferably, the retaining strips are of a length to be drawn substantially taut when their hooked end portions are placed under said ledges before the pressure of the compressing device is relieved from the material within the unit or carrier.

In Fig. 5 a modification of the retaining strips and securing device therefor is illustrated. In this modification the strips 7^a are provided at their extremities with eyes or loops 8 which are projected through openings 9 in opposite side walls of the unit or carrier 1^a. The looped ends 8 of said strips may be placed in alinement so as to receive a common securing bar 10 which may be locked or sealed in any desirable manner. If desired, however, each of the several retaining strips 7^a may obviously be provided with an individual securing device.

In practice, the number of retaining strips used is governed by the size of the unit or carrier and the density to which the cotton or other material is compressed therein. It is preferable to place a sheet of stout cloth or other fabric 11 between the top of

the compressed material and the retaining strips whereby the compressed material is prevented from bulging or swelling outwardly between said strips to any great extent.

When it is desired to release the compressed contents of the unit or carrier it is only necessary to cut the strips or to unfasten the ends thereof from engagement with the sides of the unit.

In order to facilitate the filling and compressing of the loose fibrous material into the units or carriers, it is preferable to provide a supplemental filler frame or frames 12 which may be made interchangeable with said units. Preferably, these filler frames are provided with counter-part rabbeted or interlocking top and bottom edges 13 which are adapted to fit like edge portions at the opening end of the unit. Suitable securing devices, as for example, hasps or loops 14 may be hingedly mounted adjacent to one edge on opposite sides of each unit or frame so as to cooperate with lugs or projections 15 on the adjoining edge of the attached frame or unit. The lugs 15 may be perforated to receive locking pins 16 if so desired.

The depth of the supplemental filler frames is governed by the condition of the loose fibrous material and the size of the carrier and density to which it is desired to compress the material in said carrier.

The principal object in providing the separable sectional filler frames is to facilitate the filling and compressing the material into the carrier in cases where the travel or stroke of the plunger of the compress is limited. In most cases two sections or frames will be sufficient and the compressing may be accomplished in two separate operations. That is, two separate compresses will be used successively. It is, therefore, necessary to provide one of the filler frames (the lower one) with holding devices for the retaining strips similar to those on the carrier.

In practicing my invention, two sections of supplemental filler frames are preferably placed on the unit or carrier to be filled and the parts thus assembled are securely locked together. The loose fibrous material is filled into the substantially enlarged unit or carrier until said material is nearly level with the top of the upper section and the cloth 11 is then laid on top of the loose material. The filled receptacle is then placed beneath the plunger of a compress having thereon a platen or head 17 which is provided with a

plurality of parallel grooves 18 in its under face through which the retaining strips 7 or 7^a may be passed. The plunger is actuated to press the platen upon the mass of material with the cloth interposed therebetween. When the material is compressed below the top of the lower filler frame, the retaining strips are passed through the grooves in the platen and secured at their ends to the opposite sides of the frame as shown in Fig. 2. The platen may then be withdrawn and the upper filler frame may be removed. The carrier with the single filler frame may then be moved beneath another compress platen or raised with respect to the platen which initially compressed the material. The plunger may then be actuated to finally compress the material into the carrier where it is retained by the retaining strips and cloth after the platen is removed. The covers may then be closed and sealed, if desired, in any suitable manner. In some cases, the material may be compressed into the carrier by a single operation or stroke of a plunger instead of two or more successive operations.

Obviously, the devices admit of considerable modification without departing from my invention. Therefore, I do not wish to be limited to the exact constructions and arrangements shown.

What I claim as my invention and desire to secure by Letters Patent is:

The combination with a tight receptacle having an open side and also having overhanging ledges on the inner faces of opposite side walls near the open side of the receptacle, said receptacle having a mass of fibrous material compressed therein, of means for retaining the compressed material within the receptacle, said means comprising a sheet of woven material covering the body of compressed material and a plurality of straps laid over said covering sheet and having hooked end portions engaged under said overhanging ledges on the inner faces of the opposite side walls of the receptacle and held in place by the resilience of the compressed material.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses, this 23rd day of December, 1908, at St. Louis, Mo.

CHARLES H. MERRY.

Witnesses:

G. A. PENNINGTON,
J. B. MEGOWN.