

No. 629,450.

Patented July 25, 1899.

W. C. LOEFFEL.

FOLDING PACKING.

(Application filed May 22, 1899.)

(No Model.)

Fig. 1.

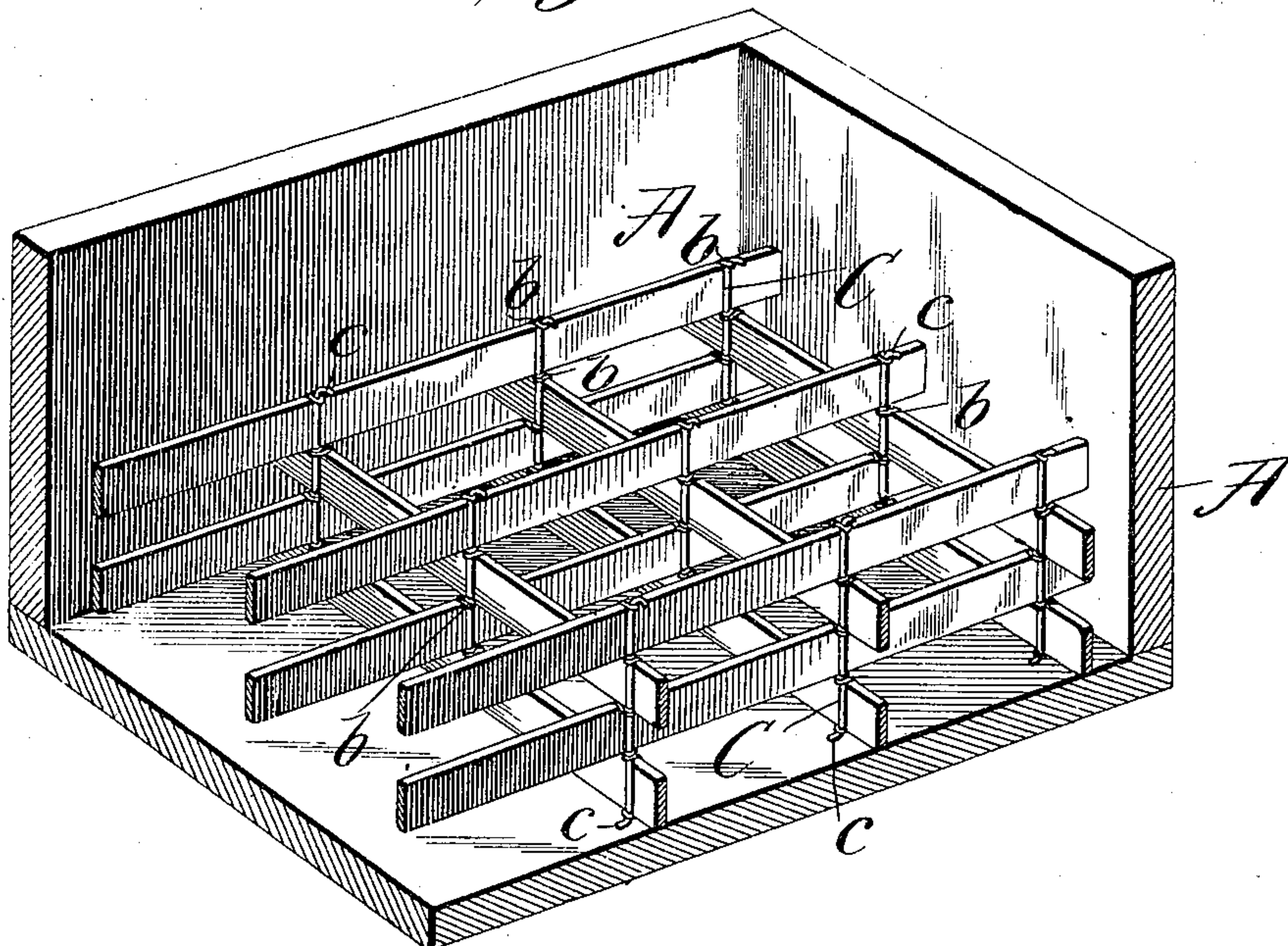


Fig. 4.

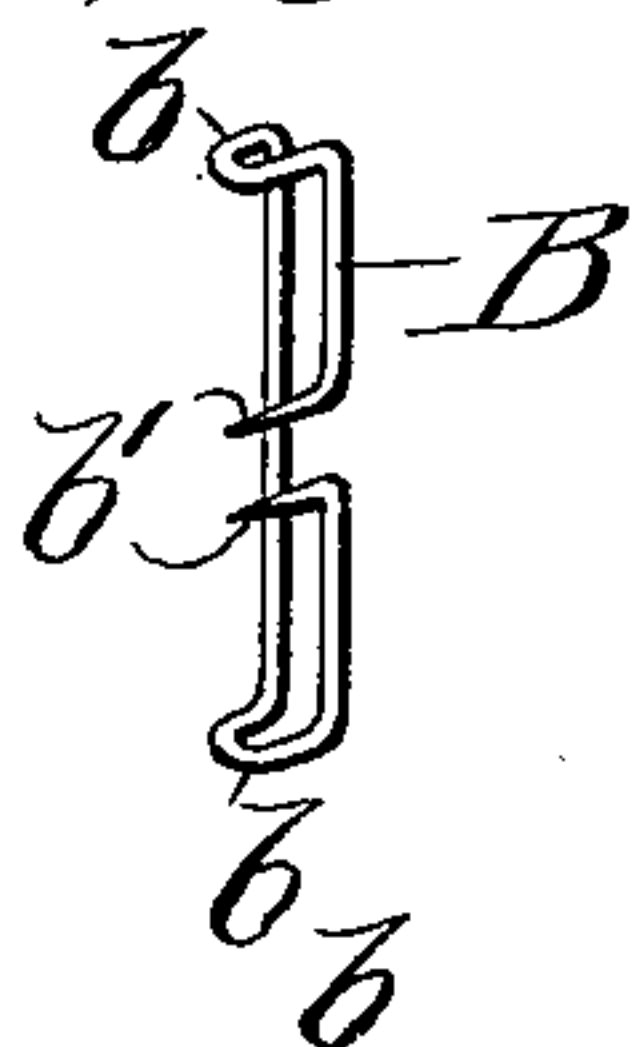


Fig. 5.



Fig. 6.



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Fig. 2.

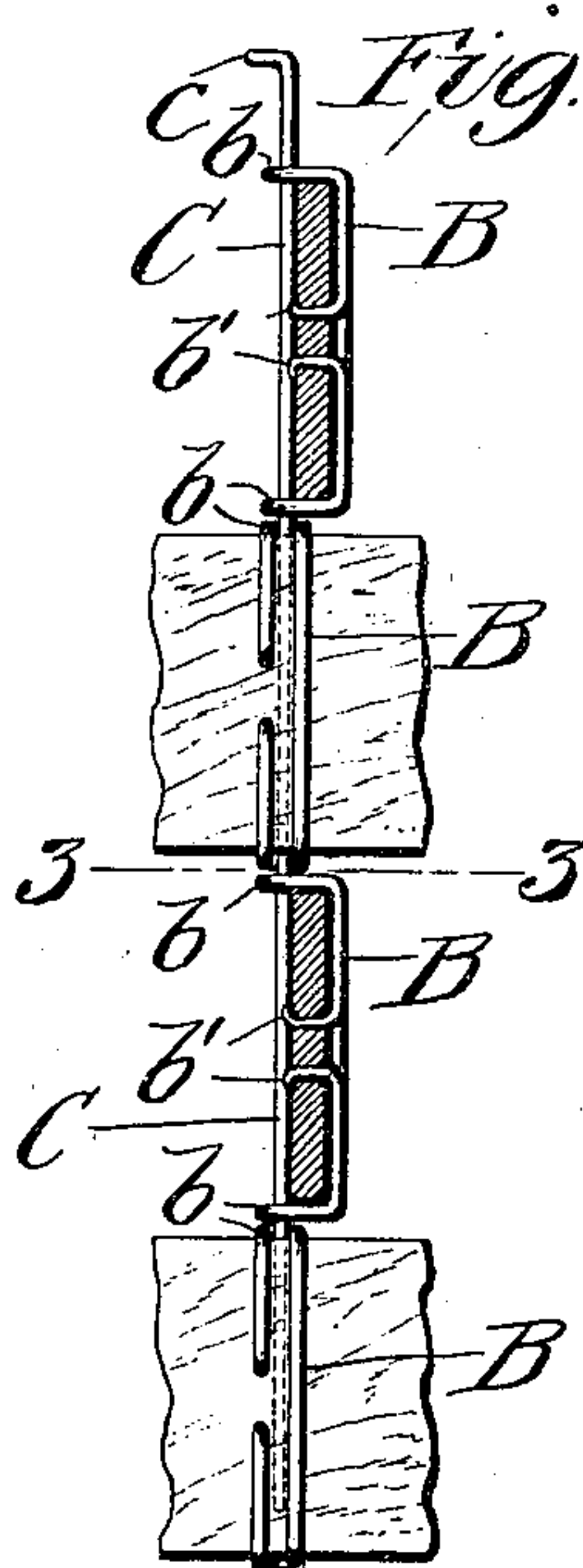


Fig. 3.

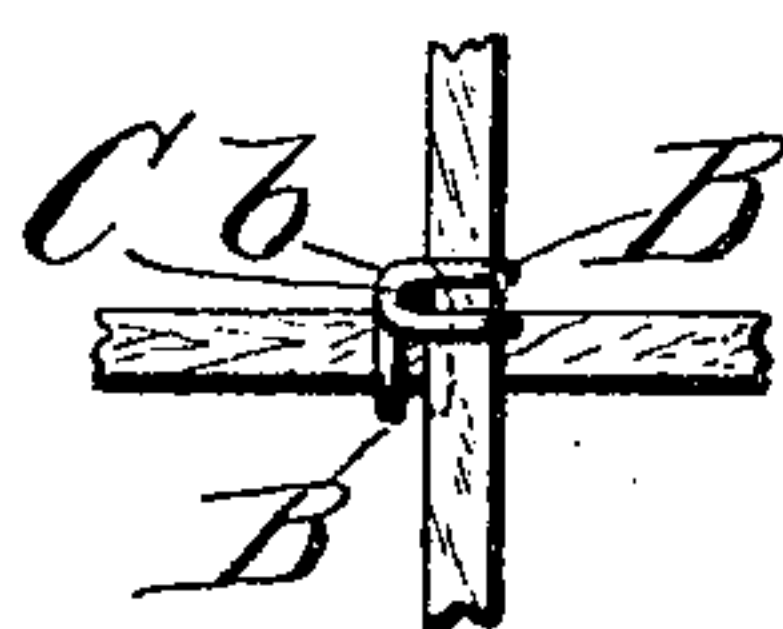


Fig. 7. Fig. 8.

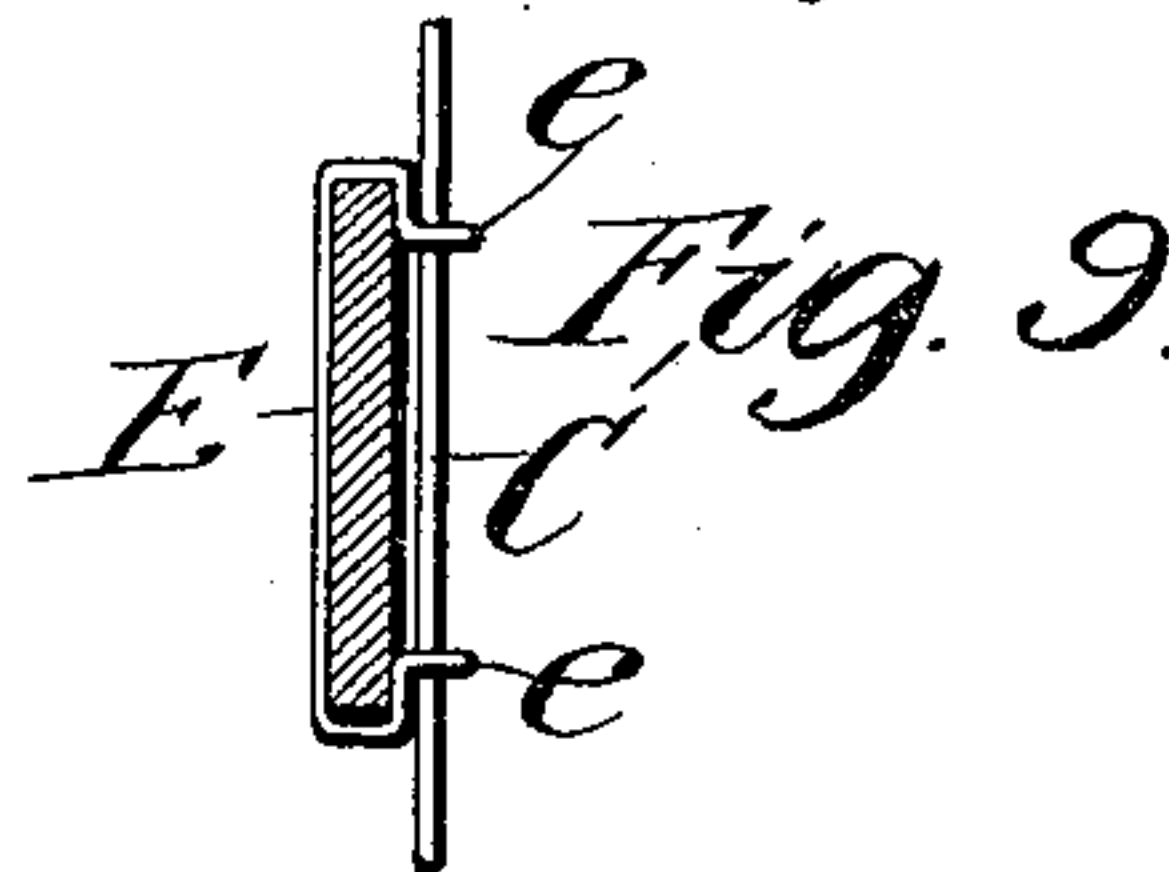
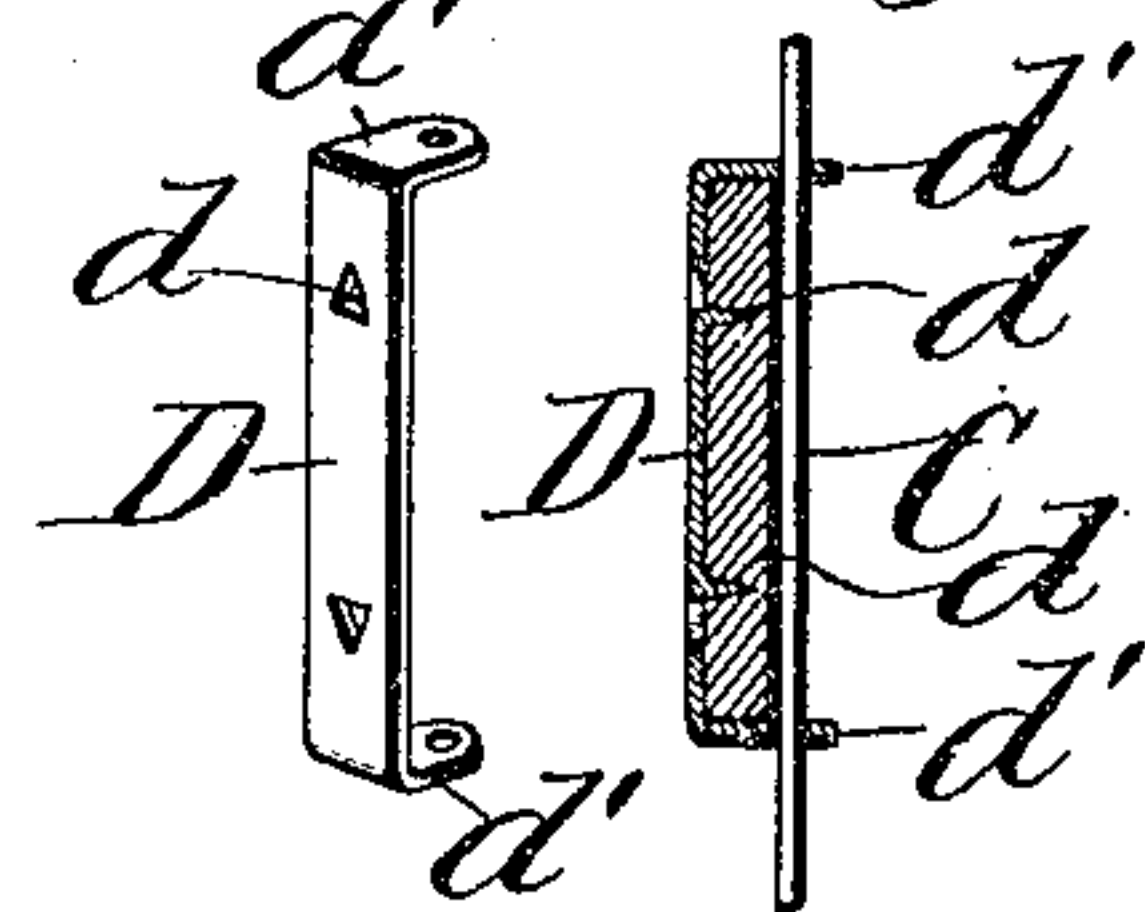


Fig. 10.



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# UNITED STATES PATENT OFFICE.

WILLIAM C. LOEFFEL, OF ST. LOUIS, MISSOURI.

## FOLDING PACKING.

SPECIFICATION forming part of Letters Patent No. 629,450, dated July 25, 1899.

Application filed May 22, 1899. Serial No. 717,785. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM C. LOEFFEL, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Folding Packings, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a detail view of my improved folding packing in position in a portion of a box. Fig. 2 is an enlarged vertical sectional view through said folding packing. Fig. 3 is a horizontal sectional view on line 3 3, Fig. 2. Fig. 4 is a detail view of one of the wire clips used in connection with my improved folding packing. Fig. 5 is a detail view of a modified form of clip. Fig. 6 is an elevational view of the clip shown in Fig. 5. Fig. 7 is a modified form of clip, illustrating the same as being stamped or otherwise shaped from sheet metal. Fig. 8 is a sectional view illustrating the manner of attaching the clip shown in Fig. 7. Fig. 9 is a modified form of a sheet-metal clip. Fig. 10 is a top plan view of the same as applied to a strip of my improved packing.

This invention relates to a new and useful improvement in folding packing especially adapted for use in boxes or other inclosures for spacing apart frangible articles.

The object of my present invention is to construct a cheap form of clip which is easily applied to strips forming the packing, said clips affording means of attachment between said strips, and also by receiving a pivot rod or wire, acting as a hinge, enabling the packing to be folded when not in use.

With this object in view the invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described and afterward pointed out in the claims.

In the drawings, A indicates a portion of a box, in which is shown a section of my improved packing in position. The packing consists of parallel strips arranged on different planes, which strips when in an operative position intersect each other to form proper spaces

to receive the articles to be packed. At the intersection of these strips are arranged securing devices, which consist of eyes or perforated ears, through which are passed pivot rods or wires, which hold the strips against vertical displacement and also act as hinges by which the strips may be folded one upon the other.

B indicates a clip which, as shown in Figs. 1 to 6, consists of a wire bent into suitable shape to provide eyes at its extremities, which project beyond the edges of the strips, the ends of said wires being bent so as to be embedded in the strips and hold the clips against displacement.

b indicates the eyes above referred to, which are spaced apart a sufficient distance to receive the strip between them, said eyes projecting beyond the farther edge of the strip. The body portion of the clip rests against what I will term the "back" of the strip, while the two ends *b'* of the wire pierce the strip and are clenched on the face thereof. When the clips are in position, the bent securing ends and the projecting eyes prevent any undue movement of the clip on the strip. The strips being provided with these clips equidistant apart are then arranged so that the eyes of one series of strips will register with the eyes of the clips on the next adjacent series, which last-mentioned series of strips are arranged at an angle to those first placed in position.

The packing being built up with as many series of strips as desired, a rod or wire C is threaded through the registering eyes until the end of said rod projects beyond the last eye of the series, when the same is bent over at *c*, as shown in Fig. 1. The other end of this rod is likewise bent over, so that this pivot-wire in function acts as a binding medium to hold the packing together, as well as serving the purpose of a fulcrum on which the different strips are pivoted.

Fig. 2 shows the wire C being passed through the registering eyes of clips on different series of strips.

In Figs. 7 and 8 I have shown the clip as being made of sheet metal, the body portion D thereof being struck up at *d*, the struck-up portions being adapted to be embedded in the strips to hold the clip in position. Each



end of the clip is bent at an angle to form ears  $d'$ , which are perforated for the passage of the wire C.

In all forms of clips heretofore described  
 5 the body portion of the clip rests against what I have termed the "back" of the strip, while the eyes or ears through which the pivot-wire is to be passed project beyond the front face thereof, so that when said pivot-wire is  
 10 inserted it materially assists in holding the clip in position. It will be noted that the pivot-wire in the above-described constructions rests against the face of the strip.

In Fig. 9 the modification shown is of a  
 15 sheet-metal clip, the body portion E resting against the back of the strip, while the ends are bent over and inwardly on the front face, so that the ears  $e$  will be located within the lines of the strip. The material of the clip  
 20 resting against the front face in this construction acts as a wear-surface for the pivot-rod and serves to protect the strip from abrasion thereby; also, by reducing the surface with which the rod contacts the friction is corre-  
 25 spondingly reduced.

I am aware that minor changes in the arrangement, construction, and combination of several parts of my device can be made and substituted for those herein shown and de-  
 30 scribed without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

35 1. In a packing, the combination with strips,

of clips secured to said strips equidistantly, and pivot wires or rods passing through said clips to bind the packing together; substantially as described.

2. In a packing, the combination with strips, 40 of clips secured to one side of said strips and extending over and beyond the opposite side of said strips, and a binding rod or wire which passes through the projecting ends of said clip; substantially as described. 45

3. In a packing, the combination with strips, of clips whose ends are bent over and project beyond one face of said strips, and a rod or wire which passes through registering open- 50 ings in the projecting ends of said clips; substantially as described.

4. In a folding packing, the combination with parallel strips arranged to intersect each other, clips secured to the several strips at their points of intersection, and pivot wires 55 or rods engaging said clips for binding the strips together; substantially as described.

5. The herein-described clip for use in packing, the same consisting of a wire bent to form eyes at the extremities of the clip, the ends of 60 said wire being bent to form securing devices, whereby said clip is held in position; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, 65 this 18th day of May, 1899.

WILLIAM C. LOEFFEL.

Witnesses:

F. R. CORNWALL,  
 A. S. GRAY.