

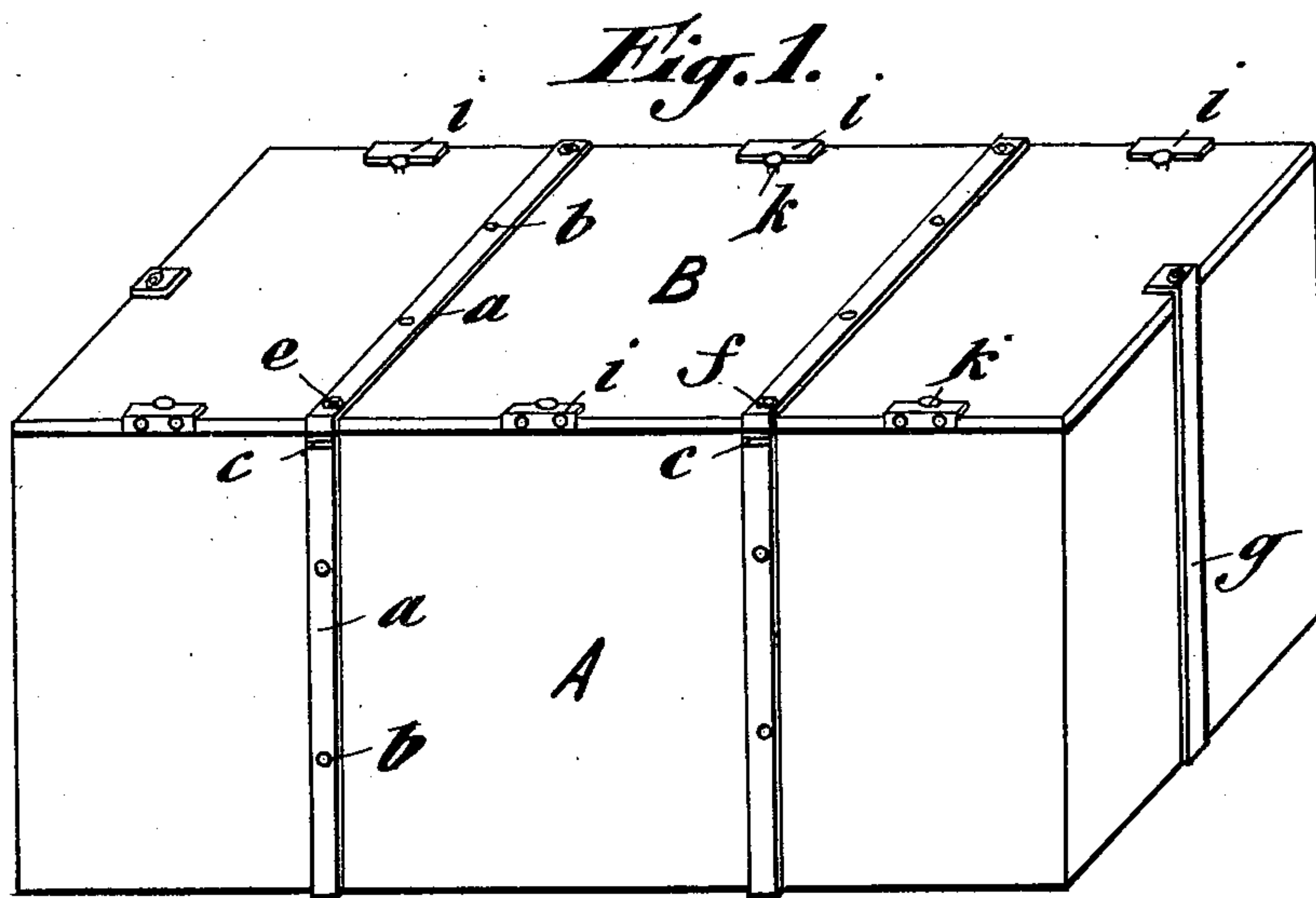
No. 646,536.

Patented Apr. 3, 1900.

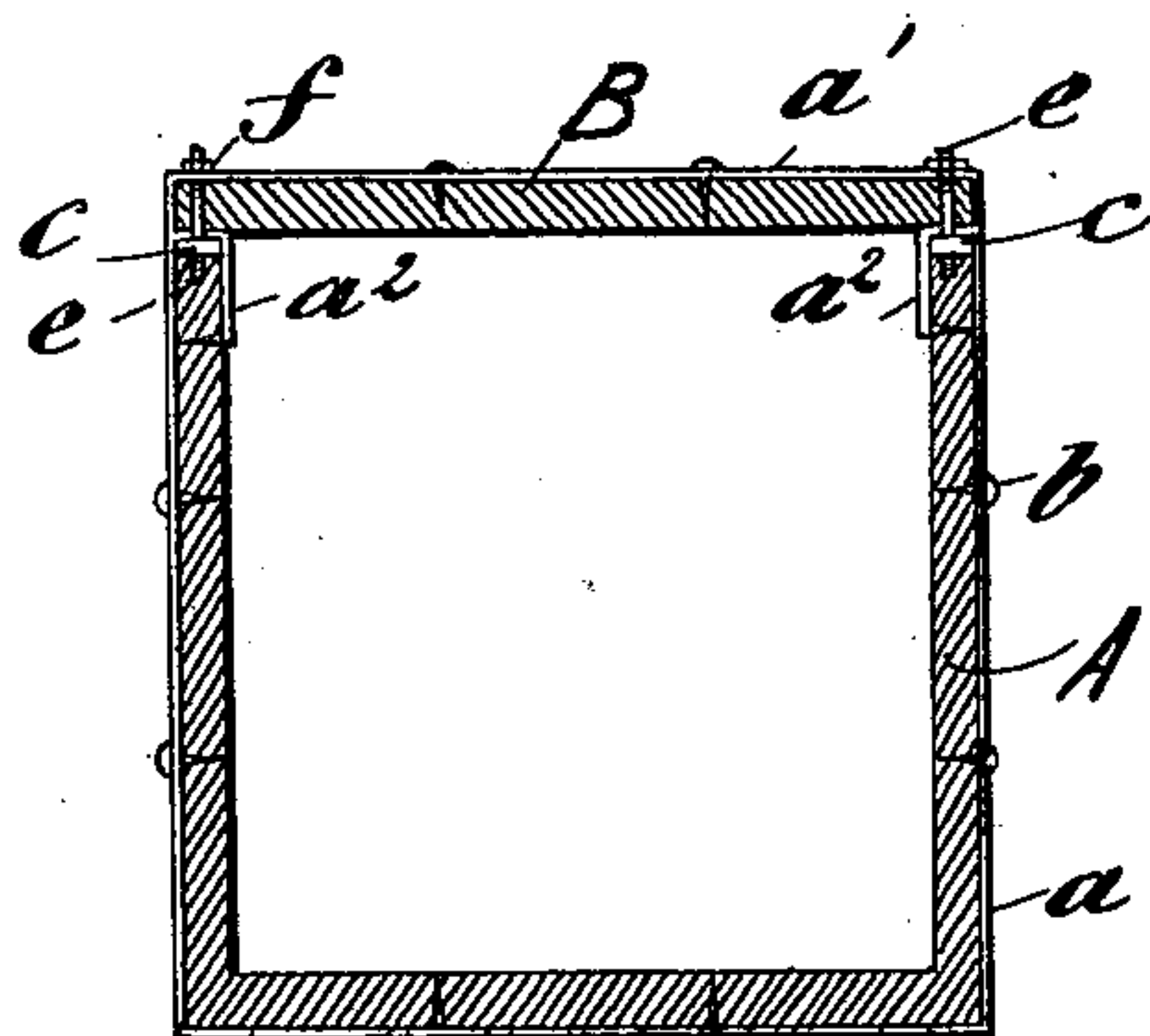
E. DOERING.  
PACKING CASE.

(Application filed July 19, 1898.)

(No Model.)



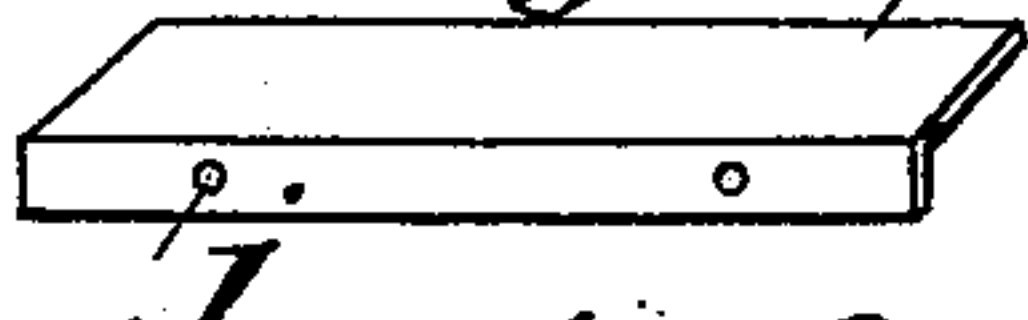
*Fig. 2.*



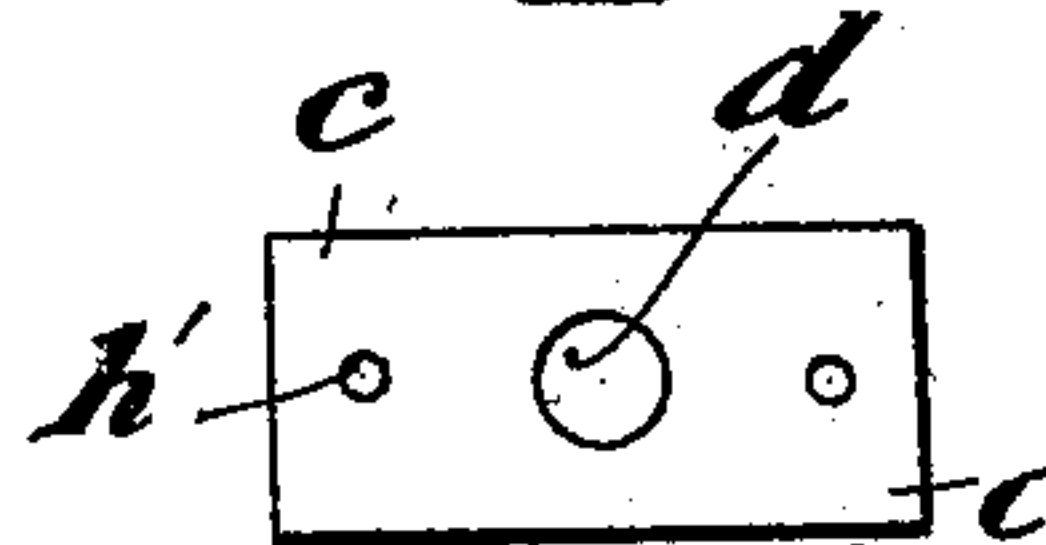
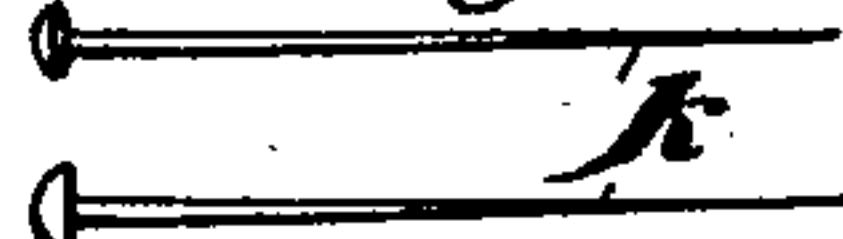
*Fig. 3.*



*Fig. 5.*



*Fig. 6.*



*Fig. 4.*

Witnesses:  
Thomas M. Smith.  
Richard C. Maxwell.

Inventor:  
Ernest Doering.  
J. Walter Douglas  
Attorney.

# UNITED STATES PATENT OFFICE.

ERNST DOERING, OF BERLIN, GERMANY.

## PACKING-CASE.

SPECIFICATION forming part of Letters Patent No. 646,536, dated April 3, 1900.

Application filed July 19, 1898. Serial No. 686,343. (No model.)

*To all whom it may concern:*

Be it known that I, ERNST DOERING, a citizen of the Empire of Germany, residing at Berlin, Germany, have invented certain new and useful Improvements in Packing-Cases, of which the following is a specification.

The present invention relates to packing-cases; and the special object thereof consists in certain improvements made in these cases to provide a strong and cheap closing which does not injure the wood of the case, and consequently allowing of its being employed several times.

The packing-cases heretofore in use generally offer the following inconveniences: The edges of the cover and case split when the nails are driven in or withdrawn, and the points of the nails penetrate into the interior of the case and damage the goods it contains. Moreover, through want of solidity the cases frequently open or break during the transport. These inconveniences are suppressed with cases provided with the improvements contemplated as an object by the present invention by surrounding these cases with sheet-iron bands held in place by a special arrangement, as more fully described and claimed hereinafter.

In the annexed drawings is shown a packing-case, my improvements being applied thereon, and a nail-fixing device.

In the drawings, Figure 1 is a perspective view of a case with the improved shutting arrangement. Fig. 2 is a side vertical section of the same. Fig. 3 shows a plan view of a tightening-nut. Fig. 4 is a plan view of a lock-plate. Fig. 5 is a perspective view of a protecting-plate, and Fig. 6 shows two nails with different forms of heads.

Referring to the drawings, A represents a wooden packing-case having a lid or cover B. Around the case and lid are arranged sheet-iron straps or bands  $a$ ,  $a'$ , and  $g$ , which are secured to the case and lid preferably by nails  $b$ . At the upper edge of the walls of the case A and at the ends of the straps  $a$ ,  $a'$ , or  $g$ , secured to said walls, are provided the locking-plates  $c$ , having a central perforation or opening  $d$  and end perforations  $h'$ , through which perforations  $h'$  nails or screws are adapted to be passed, as hereinafter described. Passing through the straps  $a$ ,  $a'$ , or  $g$  of the

cover B are rods or bolts  $e$ , the threaded ends of which are adapted to engage and traverse the opening  $d$  in the lock-plate  $c$ . Upon the upper end of the bolt  $e$  is provided a nut  $f$ , having the perforations  $h$ , adapted to be turned into alinement with the perforations  $h'$  of the lock-plate  $c$ , so that a nail driven through a perforation  $h$  to lock the nut  $f$  to the cover B will enter and pass through a perforation  $h'$  in the plate  $c$  to the lock-plate  $c$  to the walls of the case A. Upon the lid or cover B, intermediate of the straps or bands  $a$ ,  $a'$ , and  $g$ , are arranged protecting-plates  $i$ , of angle-iron, adapted to surround and protect the edge of the lid or cover, as illustrated in Fig. 1. The preferred form of nails  $k$  to be used in securing the lid to the case is indicated in Fig. 6.

The case A and the lid B are respectively surrounded by iron bands  $a a'$  in place of the fastening-laths heretofore in use, and the said iron bands have been previously perforated to allow the nails  $b$  to pass. The upper edges of the walls of the case are notched to receive the lock-plates and the ends of the bands  $a$  without these latter projecting from the surface of the wood. The lock-plates  $c$  being previously fitted into the grooves of the walls of the case, the bands  $a$  have their ends  $a^2$  curved over these plates, said ends being beveled and sunk into the inner face of the walls of the case, Figs. 1 and 2. The lock-plates  $c$  are provided with holes  $d$  for the passage of bolts  $e$ , also passing through and projecting from the lid B, being pressed upon the bands  $a$  by the nuts  $f$ , screwed on the bolts  $e$ , Figs. 1, 2, and 4, the bands  $a'$  of the lid have holes at their ends, through which pass the rods  $e$ . Said bands are also held by the nuts  $f$ , Fig. 1.

The shutting of the case may be obtained by a number of bands  $a a'$ , which vary in accordance with the size of said case. Moreover, its lateral walls are provided with bands  $g$ , secured to the bottom and lid of the case, Fig. 1.

To prevent unscrewing of the nut  $f$ , this latter and the lock-plate  $c$  are respectively provided with holes  $h h'$ , receiving small pins, securing the nut in place, Figs. 3 and 4.

When the case is to be loaded, the loaded string is attached to the threaded rod  $e$  below



the lock-plate *c*. Then the ends of this string are passed through the wood of the lid or through the holes *h h'* of the lock-plate and of the nut, Figs. 3 and 4.

5 The above-described shutting is sufficient with most cases and allows of utilizing the cases several times, since they are not damaged or injured. However, with cases of larger size nailing may be applied with advantage. For this purpose the edge of the lid is provided with bevel-shaped or angular protecting-sheets *i*, secured to said lid by means of nails passing through holes *j*, made in the vertical wall of the sheet, Figs. 1 and 5.

15 The lid *B* is nailed on the case by means of nails *k*, the heads of which pressing upon the horizontal wall of the sheet *i*, while the nail is guided by an oblique groove made for the purpose in the edge of the case, so as to incline the nail from the interior toward the exterior in order to avoid the nail passing into and projecting from the interior of the case. The result of this arrangement is that the edge of the lid cannot split and that the wood cannot be damaged by withdrawing the nails, because the pincers or other tool employed for wrenching out the nails is here suitably laid on the protecting-sheet.

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

35 1. In a packing-case and cover, threaded rods projecting from the upper edges of the walls of the case, lock-plates arranged in said upper edges and surrounding said rods, said plates being provided with perforations,

sheet-iron bands secured to the walls of the case and having their ends turned over the lock-plates and secured to the inside of the case, complementally-arranged sheet-iron bands secured to the cover and perforated to permit the threaded rods to pass, nuts secured to the threaded rods outside the cover and having end perforations, and means adapted to pass through the perforations of the nuts and lock-plates to lock said nuts, substantially as and for the purposes described.

2. In a packing-case and cover, threaded rods projecting from the upper edges of the walls of the case, lock-plates arranged in said upper edges and surrounding said rods, said plates having end perforations, sheet-iron bands secured to the sides and bottom of the case and having their ends turned over the lock-plates and secured to the inside of the case, sheet-iron bands secured to the cover and perforated to permit the threaded rods to pass therethrough, nuts secured to the threaded rods outside the cover and having end perforations, and nails adapted to pass through the end perforations of the nuts and lock-plates and to enter the walls of the case, substantially as and for the purposes described.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

ERNST DOERING.

Witnesses:

GUSTAV ADOLPH SCHLIMPERT,  
P. T. SCHNEBEL.