

(No Model.)

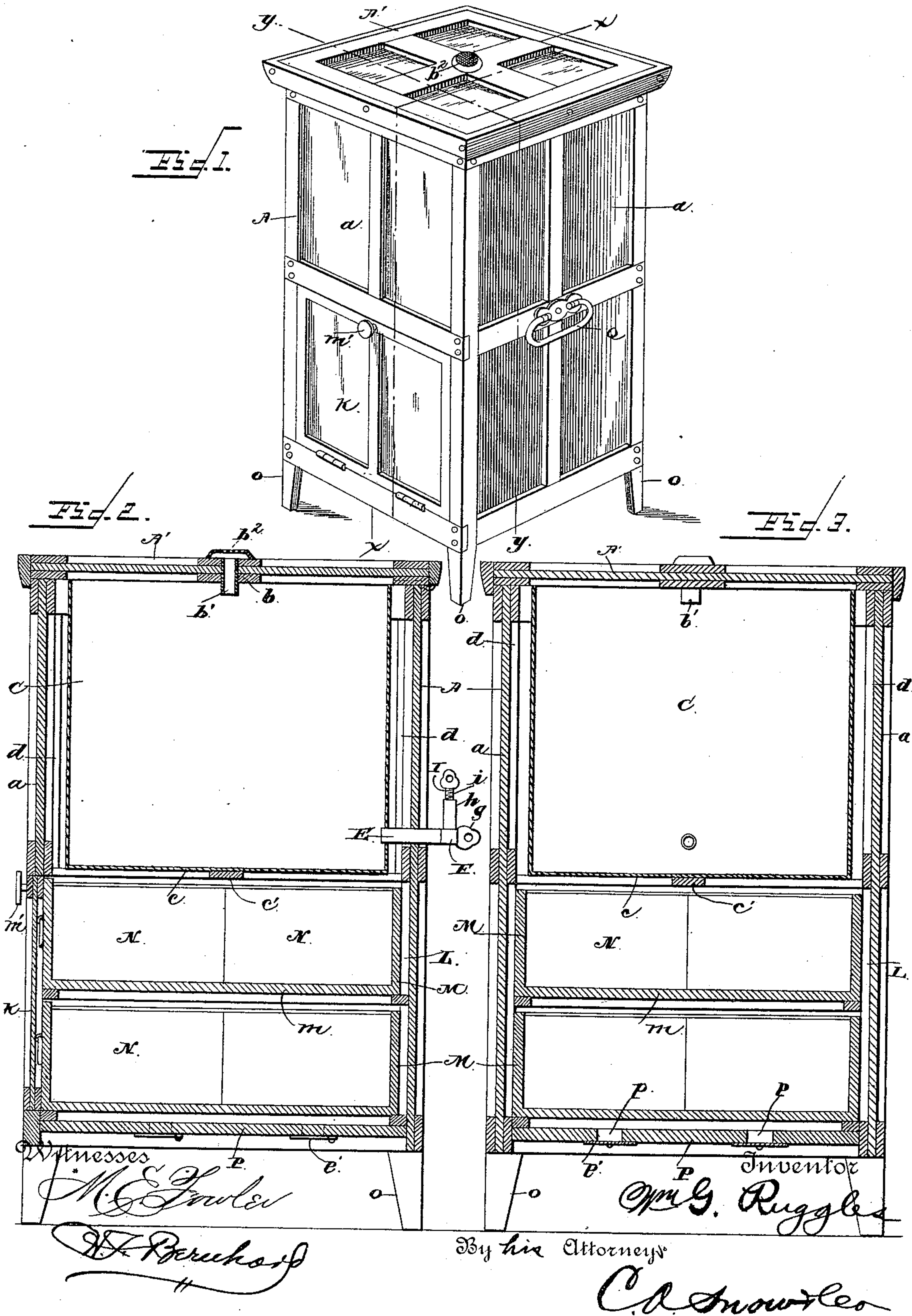
2 Sheets—Sheet 1.

W. G. RUGGLES.

SHIPPING CASE.

No. 348,171.

Patented Aug. 24, 1886.



(No Model.)

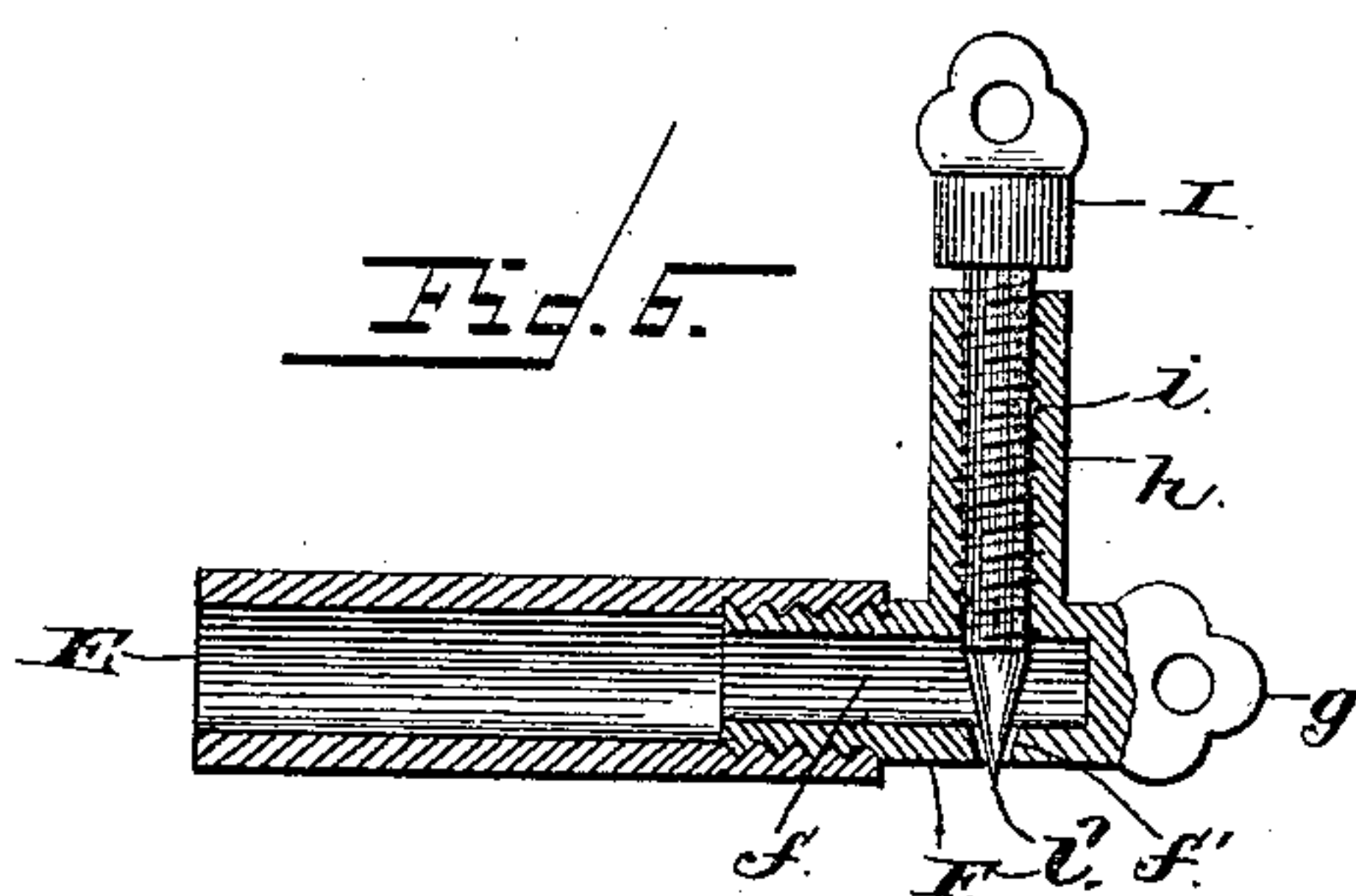
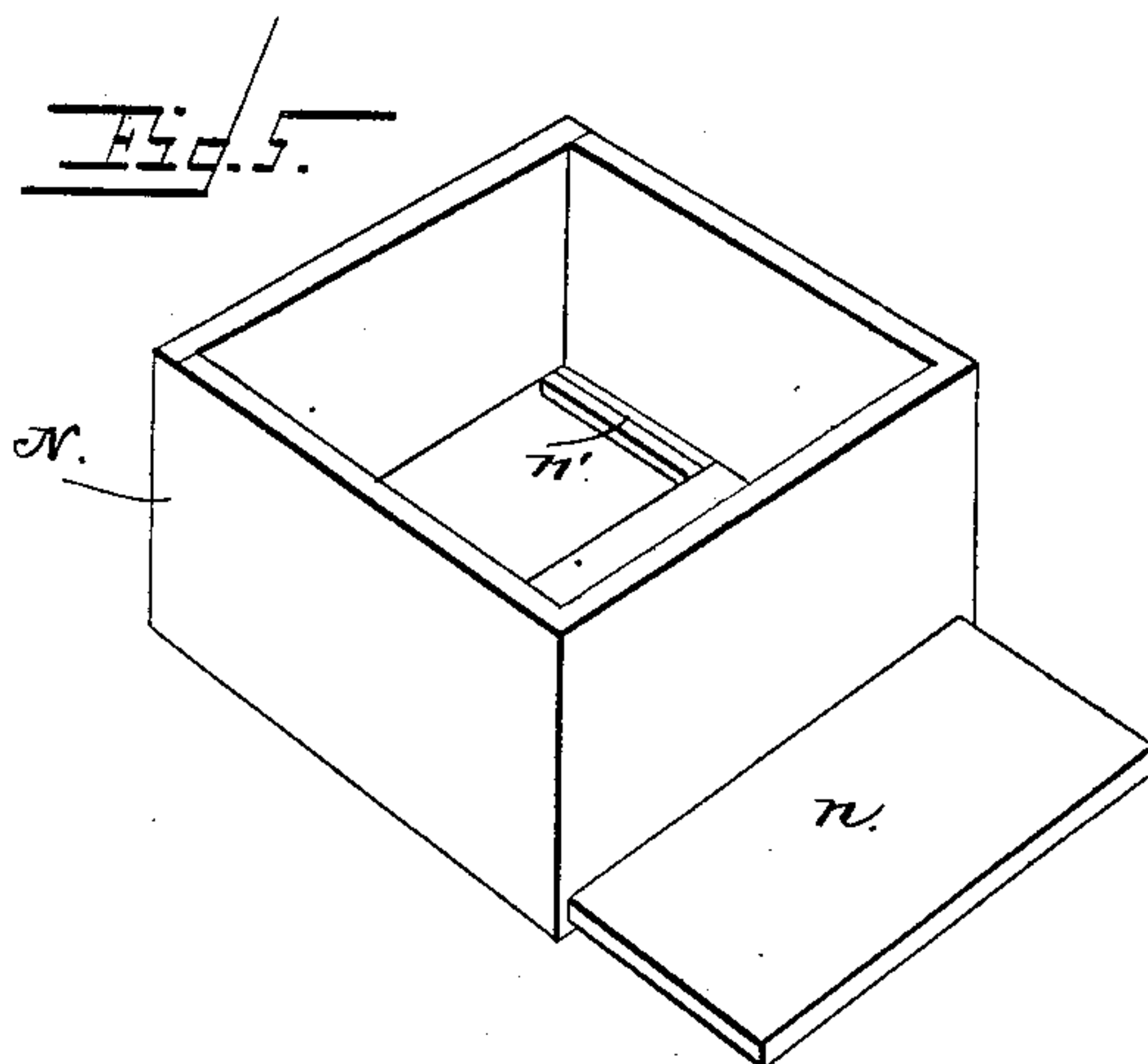
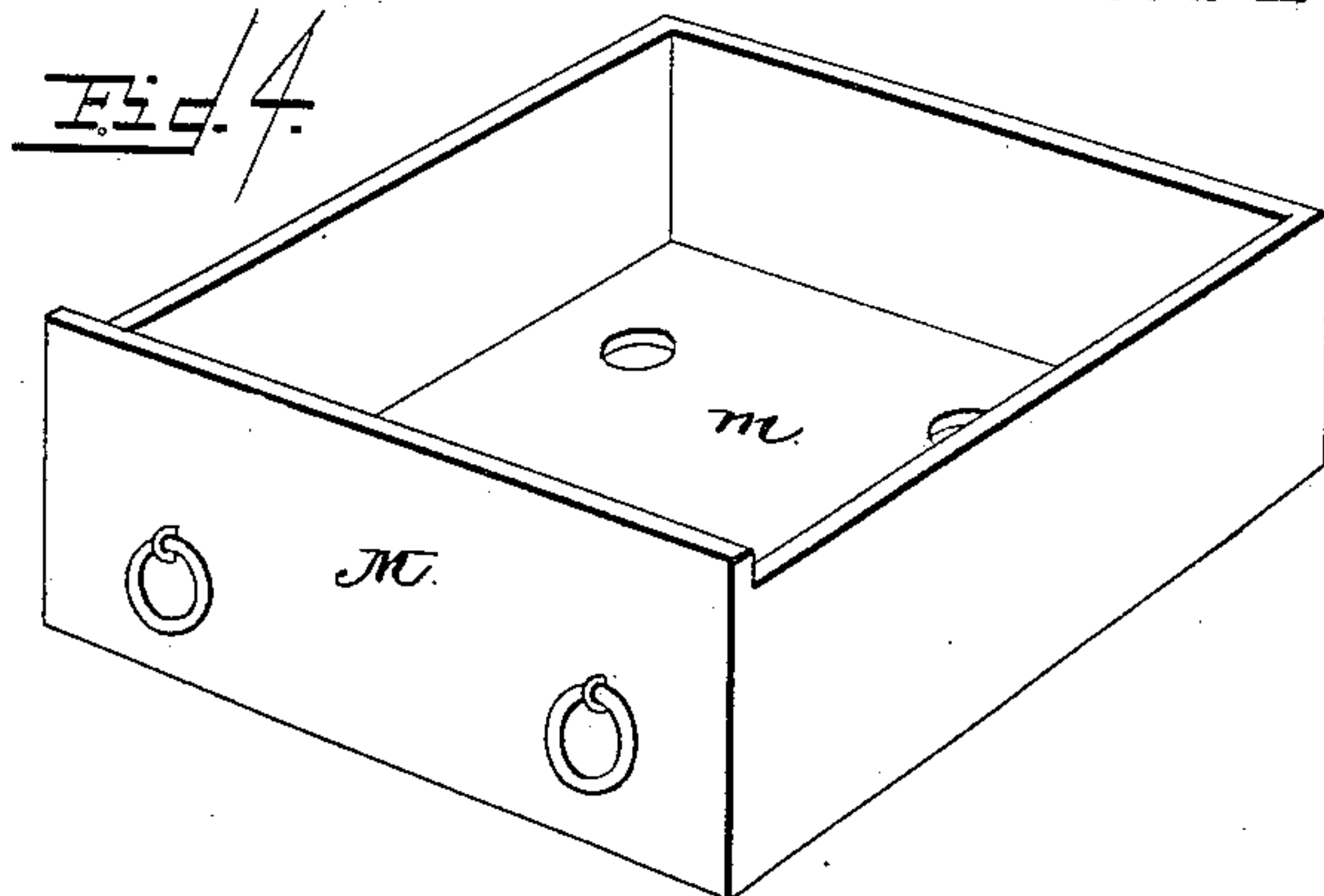
W. G. RUGGLES.

2 Sheets—Sheet 2.

SHIPPING CASE.

No. 348,171.

Patented Aug. 24, 1886.



Witnesses

M. S. Fowler
H. Berukoff

Inventor

Wm. G. Ruggles

By his Attorneys

C. A. Snow

UNITED STATES PATENT OFFICE.

WILLIAM G. RUGGLES, OF HYDE'S MILLS, WISCONSIN.

SHIPPING-CASE.

SPECIFICATION forming part of Letters Patent No. 348,171, dated August 24, 1886.

Application filed June 14, 1886. Serial No. 205,160. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. RUGGLES, a citizen of the United States, residing at Hyde's Mills, in the county of Iowa and State of Wisconsin, have invented a new and useful Improvement in Shipping-Cases, of which the following is a specification.

My invention relates to improvements in portable shipping-cases; and it consists of the peculiar combination and novel construction, arrangement, and adaptation of the various parts for service, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

The object of my invention is to provide an improved portable shipping-case, which is especially adapted for use by farmers and merchants in shipping butter and other like substances, where it is desirable to preserve the contents of the case in a fresh and palatable state while the case is in transit during the warm and hot weather.

A further object of my invention is to provide the shipping-case with removable trays or drawers, which shall contain the butter or other like matter or substance put up in packages ready for delivery by the retail merchant, and which can be easily and readily removed without interfering with or disturbing the remaining contents of the case; to provide means for regulating the admission of air to the condensing-chamber, and for discharging the foul air from the provision-chambers or the trays; to provide means for discharging the water of condensation from the ice-receptacle, and for regulating the discharge of the water, and, finally, to improve the case in minor details, so that it will be simple, strong, and durable in construction, cheap and inexpensive of manufacture, and thoroughly effective in operation.

In the accompanying drawings, which illustrate a portable shipping-case embodying my invention, Figure 1 is a perspective view. Fig. 2 is a vertical central sectional view on the line *xx* of Fig. 1. Fig. 3 is a vertical longitudinal sectional view on the line *yy* of Fig. 2. Fig. 4 is a detail perspective view of one of the removable trays or drawers. Fig. 5 is a like view of one of the auxiliary receptacles in which the butter is to be placed. Fig. 6 is a detail view, in section, of the valve for allow-

ing the escape of the water of condensation of the refrigerant tank.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the inclosing-case or outer shell of my improved shipping-case, which comprises the vertical walls *a*, arranged at substantially right angles to each other, to cause the shell to assume the form of a square rectangle in cross-section; or the shell may be made of any other desired form. The upper end of the shell or case is left open, and it is closed by means of a door or cover, A', which is hinged at one edge to the case, and is adapted to rest on the upper edges of the open end of the case, to effectually conceal and close the open end, as is obvious.

C designates the tank or receptacle, which is arranged at the open upper end of the case, and it has a closed bottom, *c*, which rests on transverse rails or bars *c'*, which are suitably secured to and supported on the shell or case A, and the upper end of the tank is left open and arranged a short distance below the upper edges of the case A, so that when the cover is closed the tank is out of contact with the cover, and leaves an intermediate space in which the condensed and cold air is free to circulate and pass down the spaces or openings *d*, which are formed between the sides of the tank and the shell or case A, the walls of the tank being arranged out of contact or engagement with the wall of the case, so that these spaces *d* are formed for the free passage and circulation of the condensed air from the tank into the provision chambers or trays arranged beneath the tank. Ready access can be had to the tank, to place the refrigerant or ice therein and to cleanse the same, by means of its open upper end and the hinged door or cover, and the cover effectually prevents the escape of the condensed air into the outer surrounding air, while at the same time the condensed air is free to circulate in the space beneath the cover and enter the spaces or passages *d*. The cover A' is provided at or near its middle with a transverse opening or exit, *b*, through which passes a small tube, *b'*, that conducts the fresh air into the condensing-chamber of the tank, and this port *b* is closed or protected by a screen, *b''*, which excludes dirt and other foreign matter

from the said tank and its condensing-chamber.

E designates a horizontal tube or pipe, which extends through one of the vertical walls *a* of the case, and the inner end of this tube passes through one of the vertical walls of the tank, near or at the lower end thereof, and opens into the condensing-chamber, and the opposite end of the tube is extended beyond the wall *a* of the case through which it passes, and is interiorly threaded, as shown. On this extended and threaded end of the pipe or tube E is detachably screwed an exteriorly-threaded plug, F, which is provided with a longitudinal passage, *f*, and a vertical transverse port or opening, *f'*, through which the water of condensation from the tank and the escape pipe or tube E passes and is permitted to escape. The plug F is further provided with a thumb-piece, *g*, at its outer end, by means of which it can be easily and readily turned, so that it can be screwed into or detached from the threaded end of the escape-pipe E, and the plug is further provided with a tube, *h*, that is arranged at right angles thereto and cast or formed integral therewith. The passage or bore of this tube *h* opens into or intersects with the longitudinal passage *f* of the plug F, and this tube *h* is interiorly threaded and receives the threaded shank *i* of a valve, I. This valve has a needle or pin, *i'*, at its inner end, that passes entirely across the longitudinal passage *f* of the plug F and into the transverse opening *f'* therein, and when the valve is turned inwardly by the action of the operator's hand the needle or pin enters and completely fills the vertical or transverse opening *f'*, to prevent the escape of the water from the tank, the escape-pipe, and the plug F. The reverse or retrograde movement of the valve I opens the transverse opening or exit-port *f'* of the plug, and the water of condensation is free to escape there-through, and it will thus be seen that the water of condensation can be permitted to flow freely through the escape-pipe by removing the plug and the needle-valve, or it can only escape slowly through the port or exit *f'*, by reason of the needle or pin of the valve partially closing the said port. The needle-valve is carried by the plug when it is removed from the threaded end of the escape-pipe, and the valve is removable from the plug by simply unscrewing its shank from the tube, the valve being provided with a thumb-piece, *j*, for this purpose.

The case A is provided at one side and at the lower end with a swinging door, K, which is hinged or pivoted thereto so that it can be turned to expose the space or chamber beneath the tank in which the provisions or other contents are stored. This space or chamber, which, for the sake of convenience, I have lettered L, and will hereinafter term it the "provision-chamber," is filled with or contains two or more trays or drawers, M, which rest upon one another, or can be supported on and by cleats, so that

they can be removed independently of each other. The drawers or trays M are each provided with perforated bottoms *m*, through which the air is free to circulate, and thus have access to the lowermost drawer or tray, and the drawers or trays are further provided with handles or knobs for their convenient operation. The trays lie within the provision-chamber wholly, and when the door is closed they are concealed from view entirely, and condensed air is prevented from escaping from the said provision-chamber. The swinging door is further provided with a knob or handle, *m'*, that carries a locking-plate which is adapted to engage with the lower edges of the uppermost rail of the door-opening, to lock the door in place against accidental movement. Each of the trays is adapted to receive a number of auxiliary receptacles, N, which fit snugly within the trays and are removable therefrom. Each of these auxiliary receptacles is adapted to contain a given quantity of butter, or the like, and they are each provided with a removable bottom, *n*, which slides in grooves or ways *n'*, so that the bottom can be readily removed from the receptacle, and the "print" of butter easily taken from the receptacle without danger of breaking or destroying its shape. These bottoms may have the die or stamp formed thereon or secured thereto, so that the butter can be pressed or stamped therein and given the desired fanciful appearance. The case is provided with the usual short legs or standards, O, which elevate the bottom P thereof out of contact with the ground or floor, and the bottom is provided with ports or openings *p*, which are closed by sliding valves or cut-offs P', which are pivoted to the bottom, and can be thrown to one side of the ports to expose the latter and permit of the free escape of air from the provision-chamber, or adjusted to conceal the ports and cut off the escape of air from the said chamber, as is obvious.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the drawings.

My invention is especially adapted to the wants of farmers or dairymen who ship large quantities of butter, ready for the market, to merchants in the city or town, and it can also be used with great advantage by the retail merchant, who can easily and readily transport it around in the delivery-wagon in distributing the butter to his customers, or it can be used in the store.

By the use of my invention the butter is preserved in a fresh, wholesome, and palatable state, and preserves its delicate flavor, as it is not in contact with the ice or other matter, and a fresh supply of pure air can be always maintained in the case by the inlet and egress ports. The drawers or trays permit ready access to the contents of the case, and the contents, being inclosed in the removable auxiliary receptacle, can be readily taken from the case and distributed without disturbing the contents of the remaining trays.

The invention is simple and strong in construction, as well as durable and cheap of manufacture, and it can be easily and readily transported or carried by hand, handles or
5 bails Q being provided for the latter purpose.

Various slight changes in the form and proportion of parts and details of construction herein shown as an embodiment of my invention can be made without departing from the
10 principle thereof.

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

1. The combination of the inclosing case or
15 shell having the bottom thereof provided with the exit-ports, the sliding valves or cut-offs supported on the bottom and arranged to expose and conceal the ports, the cover A', having the air-inlet, the tank inclosed in the case
20 and out of contact therewith to provide the passages *d*, and the trays inclosed in the provision-chamber and beneath the tank, substantially as described, for the purpose set forth.

25 2. The combination, with the case or shell and the tank inclosed therein, of the escape-

pipe passing through one of the walls of the case and tank and entering the latter at or near its lower end, the plug detachably connected with the escape-pipe and having a
30 transverse opening or exit, and a valve for opening and closing the said transverse exit, substantially as described, for the purpose set forth.

3. The combination, with the case and the
35 tank inclosed therein, of an escape-pipe in communication with the tank, a plug detachably fitted on the free end of the said pipe and having the longitudinal and transverse passages or ports in communication with each
40 other, and a needle-valve carried by the plug and having its needle working across the longitudinal passage of the plug and into the transverse passage thereof, substantially as
45 herein described, and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM G. RUGGLES.

Witnesses:

JOSEPH PAULL,
D. T. JARVIS.