K. A. LINGNER.

CLOSING DEVICE FOR VESSELS.

APPLICATION FILED NOV. 11, 1909.

963,909. Patented July 12, 1910.

Fig. 1.

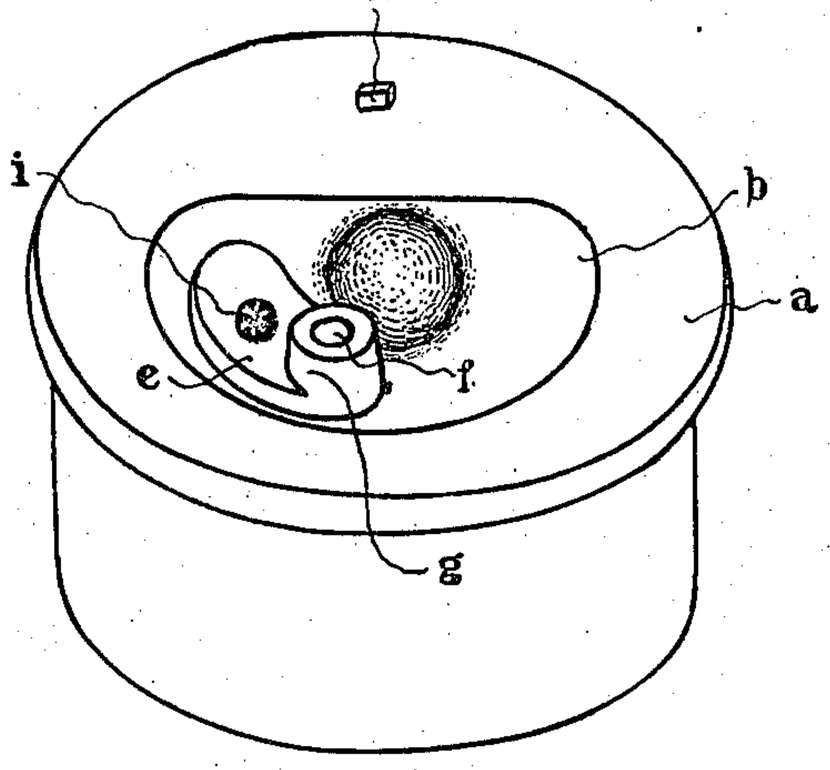


Fig. 2.

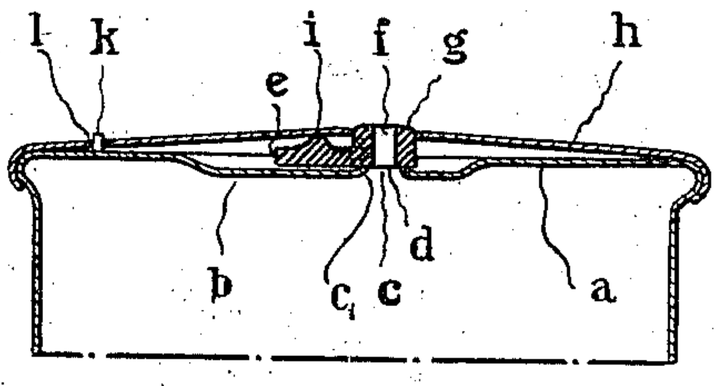
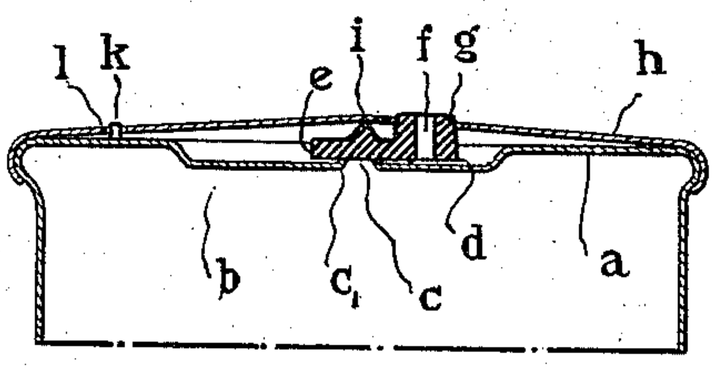


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

KARL AUGUST LINGNER, OF DRESDEN, GERMANY.

CLOSING DEVICE FOR VESSELS.

963,909. Specification of Letters Patent. Patented July 12, 1910.

Application filed November 11, 1909. Serial No. 527,529.

To all whom it may concern:

Be it known that I, KARL AUGUST LINGNER, a subject of the German Emperor, residing at Dresden, in the Kingdom of Saxony, Germany, have invented certain new and useful Improvements in a Closing Device for Vessels, of which the following is a specification.

Closing devices, more particularly for drop bottles with two metal plates adjustable relatively to each other, one of which is secured with a projection to the bottle, and between which is loosely placed a packing body, are well known. The closing device according to this invention differs from the closing devices in question by the new shape and arrangement of the packing body which is provided with a passage or outlet opening and adjustably mounted in a recess of the bottom metal plate. Known constructions have only a very small outlet, as owing to the eccentric position, the remaining thickness of walls would be too small to insure proper tight joint if a large outlet were provided.

As drop bottles with closing devices almost generally have narrow necks and as difficulty is experienced in causing thick or consistent essences to pass through the small outlet of known constructions, according to the present invention the packing body is of a different shape from that hitherto used. The packing body is provided with a projection passing through the upper plate, so that it is possible to limit two packing or joint surfaces hitherto required to only one. This one packing or joint is obtained between the lower surface of the packing body which can be easily ground accurately level and the slightly raised and also ground edge of the outlet opening, constantly sliding on the said lower surface. The new device prevents the liquid from getting into the hollow space between the two plates, and thus the device from getting dirty, so that the new closing device completely fulfils all hygienic requirements.

A construction of the closing device according to this invention is illustrated on an enlarged scale in the accompanying drawing, in which—

Figure 1 is an elevation showing the arrangement of the packing body with the upper covering plate removed, Fig. 2 a section of the closing device through the packing body in the open state, and Fig. 3 a section through the packing body in closed state.

The metal plate *a* which is secured with its projection to the bottle is provided with a guide recess *b* in which is arranged the outlet opening *c*, the edge *c'* of which is slightly raised and ground in order that the ground lower face *d* of the packing body *e* mounted in the guide recess *b*, should form a tight joint. In a thickened portion *g* projecting through the upper covering plate *h*, is arranged the passage or outlet opening *f*. A tight joint is insured by means of the plate *a*, *b*, pressing against the surface *d* and by a projection *i* of the packing body *e*, the ground raised edge *c'* of the outlet opening *c* being pressed against the ground surface *d* of the packing body *e*. As the outlet opening *c* must be always under the ground surface *d* of the packing body *e* in order to shut out air from the bottle a well known projection *k* is provided which is guided in a slot *l* in order to show whether the closing device is open or closed.

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

In a closing device adapted to be applied to drop bottles the combination of a metal covering plate provided with a hole for the removal of the contents of the said vessel, a second covering plate placed upon the first plate pierced with a hole and adapted to be moved into or out of alinement with the hole in the first plate by sliding the second plate, a packing member placed within the said two plates and provided at one end with a boss projecting through the hole in the second plate and pierced with a hole, and a boss upon the other end of the packing member adapted to be pressed by the second plate for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

KARL AUGUST LINGNER.

Witnesses:
J. THRIS,
A. FLACHE.