

No. 711,413.

Patented Oct. 14, 1902.

B. ARKELL.
JAR SEALING APPARATUS.

(Application filed Jan. 5, 1901.)

(No Model.)

Fig. 1

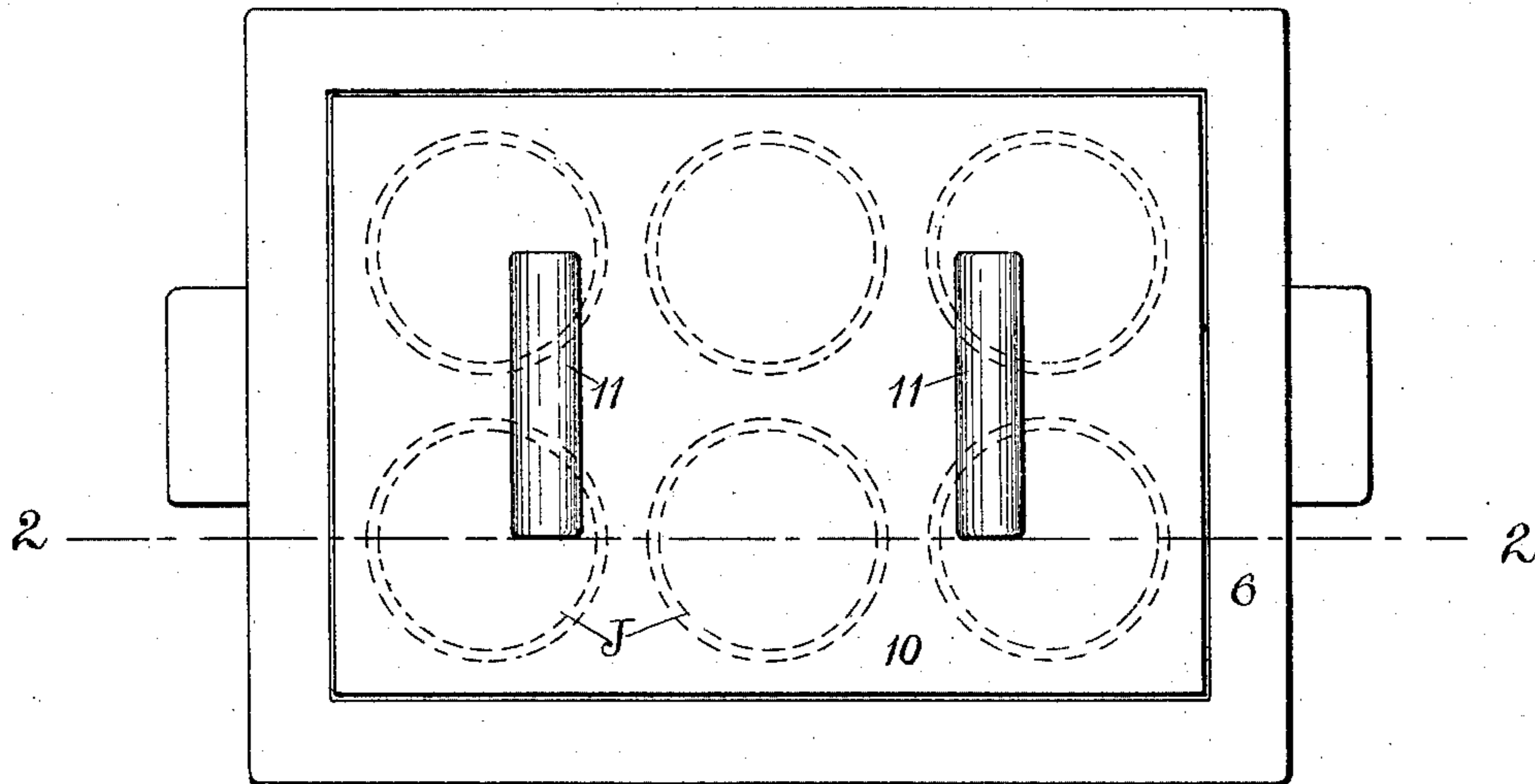
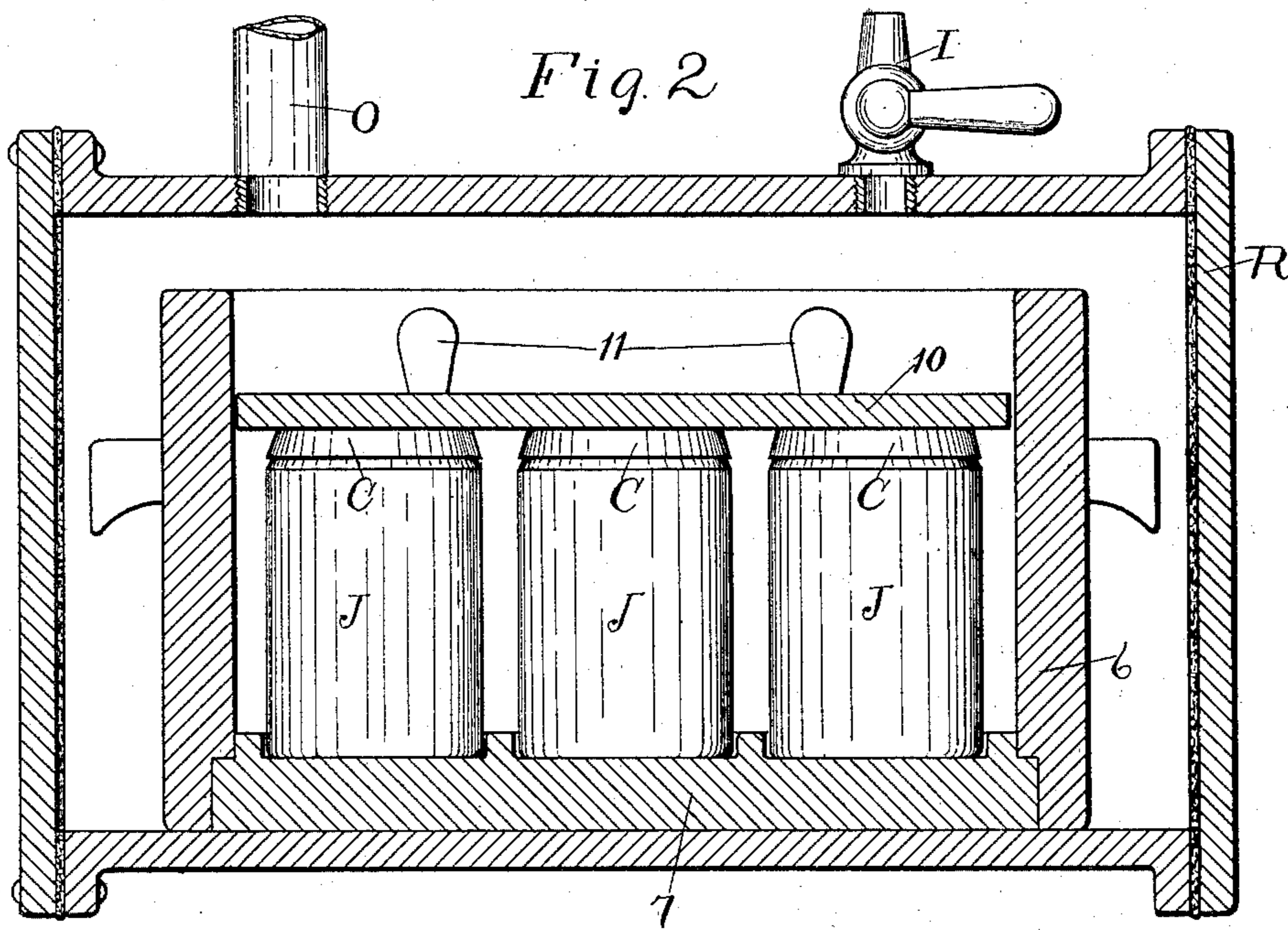


Fig. 2



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UNITED STATES PATENT OFFICE.

BARTLETT ARKELL, OF CANAJOHARIE, NEW YORK, ASSIGNOR TO BEECH-NUT PACKING COMPANY, OF CANAJOHARIE, NEW YORK, A CORPORATION OF NEW YORK, AND WILLIAM A. LORENZ AND WILLIAM H. HONISS, OF HARTFORD, CONNECTICUT.

JAR-SEALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 711,413, dated October 14, 1902.

Application filed January 5, 1901. Serial No. 42,172. (No model.)

To all whom it may concern:

Be it known that I, BARTLETT ARKELL, a citizen of the United States of America, and a resident of Canajoharie, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Jar-Sealing Apparatus, of which the following is a specification.

This invention relates to improvements in apparatus for hermetically sealing jars and cans after exhausting the air therefrom, so as to prevent the readmission of the air, and thus preserve the contents from deterioration or decomposition.

Figure 1 is a plan view of this improved apparatus; and Fig. 2 is a side view projected therefrom in section taken along the line 2 2 of Fig. 1, representing this apparatus within an exhausting apparatus in which it is placed for the exhausting and sealing operation.

Jars of this class are usually closed by means of a cap, the joint between the cap and the jar being made by means of a yielding gasket, of rubber or similar material. After the jars are filled and gaskets are put in position the caps are placed upon the gaskets, and the jars in this condition are subjected to the operation of an exhausting apparatus for the purpose of creating a more or less complete vacuum inside the jars, the air passing out between the gasket and the comparatively loose-fitting cap. On account of irregularities and inequalities in the contour of the jars, the gaskets, and the caps it usually happens that the cap does not fit the gasket entirely around the circle thereof, but rests only on the highest points, leaving passages between those points, which while they allow of the more ready exit of the air during the exhausting operation are also liable to readmit the air at the conclusion of the exhausting operation, when the air is readmitted to the exhausting apparatus. Moreover, the caps when thus loosely and irregularly supported upon the gaskets are liable to become tilted, so that they do not bear uniformly around the gasket even if subsequently forced down by the pressure sufficiently to

seal the jar for the time being and are thus liable sooner or later to become unsealed.

The object of this invention is to provide a simple and inexpensive apparatus which can be quickly and easily manipulated and which allows the caps to rest upon their gaskets and prevents them from becoming tilted during the exhausting operation, the apparatus being so arranged that the air-pressure which is readmitted at the conclusion of the exhausting operation will automatically press the caps down upon their respective gaskets with sufficient force to close all of the aforesaid passages before the air can enter them.

In its preferred embodiment this apparatus consists of an open-sided jar-receptacle 6 for receiving and partly inclosing the jars J, which stand upon a suitable base 7, which may be integral with the receptacle 6 or may be the bottom of the exhausting apparatus in which the receptacle is placed for the exhausting operation. These jars are provided with the usual sealing-gaskets, of rubber or similar material, upon which are placed the caps C. After the jars are filled and the caps placed lightly upon the gaskets a jar-presser 10 is placed over the caps. The presser is a plate of any suitable material, which substantially closes the upper end of the receptacle, the sides of which preferably extend above the presser, as herein shown. The presser is also preferably provided with the handles 11 for convenience in manipulation. The receptacle thus loaded is placed within a hermetically-sealed exhausting-receiver R, having an outlet or exhaust pipe O and an inlet-valve I. As the air is withdrawn from the interior of the receiver R the air in the jars finds a sufficiently free exit between the caps and the gaskets and between the edges of the presser 10 and the sides of the receptacle 6, so that a substantially equal vacuum is produced in the receiver, the receptacle 6, and the jar J. When a suitable vacuum has been obtained, the atmospheric pressure is readmitted through the valve I and being by the construction and arrangement above described directed against the outer side of the

presser 10 forces the latter down, carrying with it the entire series of caps beneath it, thus quickly closing whatever passages may have existed theretofore between the gaskets
5 and the caps while the latter were resting thereon with comparatively little pressure, the passages being thus closed before the air can make its way between the edges of the presser and the sides of the receptacle and
10 reach those passages, the movement of the air being obstructed and delayed by the presser itself.

It is obvious that this apparatus may be employed upon any number and for all forms of
15 jars and caps which are subject to the conditions herein set forth. It will also be obvious to those skilled in the art that the arrangement here shown may be modified in many respects, according to the number and
20 nature of the jars and the nature of their contents. For example, it may in some cases be desirable to invert the jars, and this may

be done, since it is obviously immaterial whether the presser acts against the top or bottom of the jar, so long as it operates to 25 press the cap and the jar together.

I claim as my invention—

In a jar-sealing apparatus the combination of an exhausting-receiver, an open-sided receptacle for jars, a jar-presser substantially 30 closing the open side of the receptacle and extending over the jars, means for exhausting the air from both sides of the presser, means for readmitting the air-pressure and directing it against the outer side of the presser 35 to automatically force the jars and the caps together while obstructing the passage of the air to the inner side of the presser.

Signed at Canajoharie, New York, this 4th day of December, 1900.

BARTLETT ARKELL.

Witnesses:

S. J. BRUMLEY,
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