Jan. 6, 1925. 1,521,725

I. STANLEY

APPARATUS FOR CLOSING AND SEALING RECEPTACLES

Filed Aug. 12, 1922 3 Sheets-Sheet 1

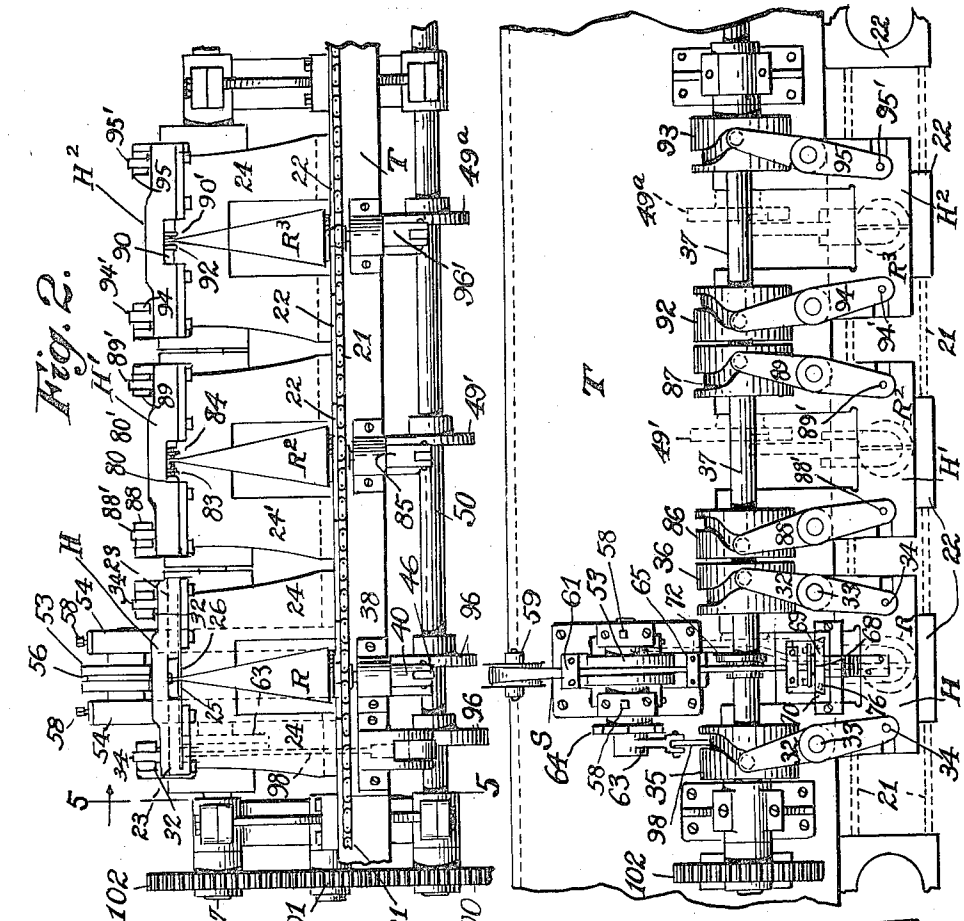


Fig. 2.

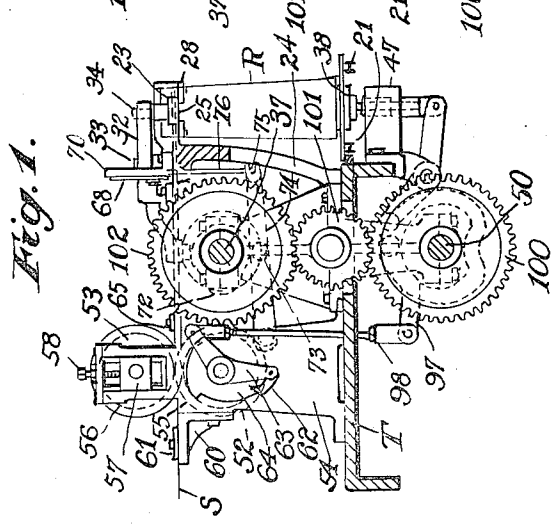


Fig. 1.

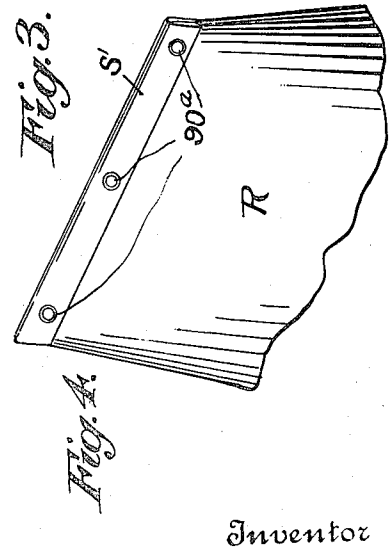


Fig. 3.

Fig. 4.

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Fig. 5.

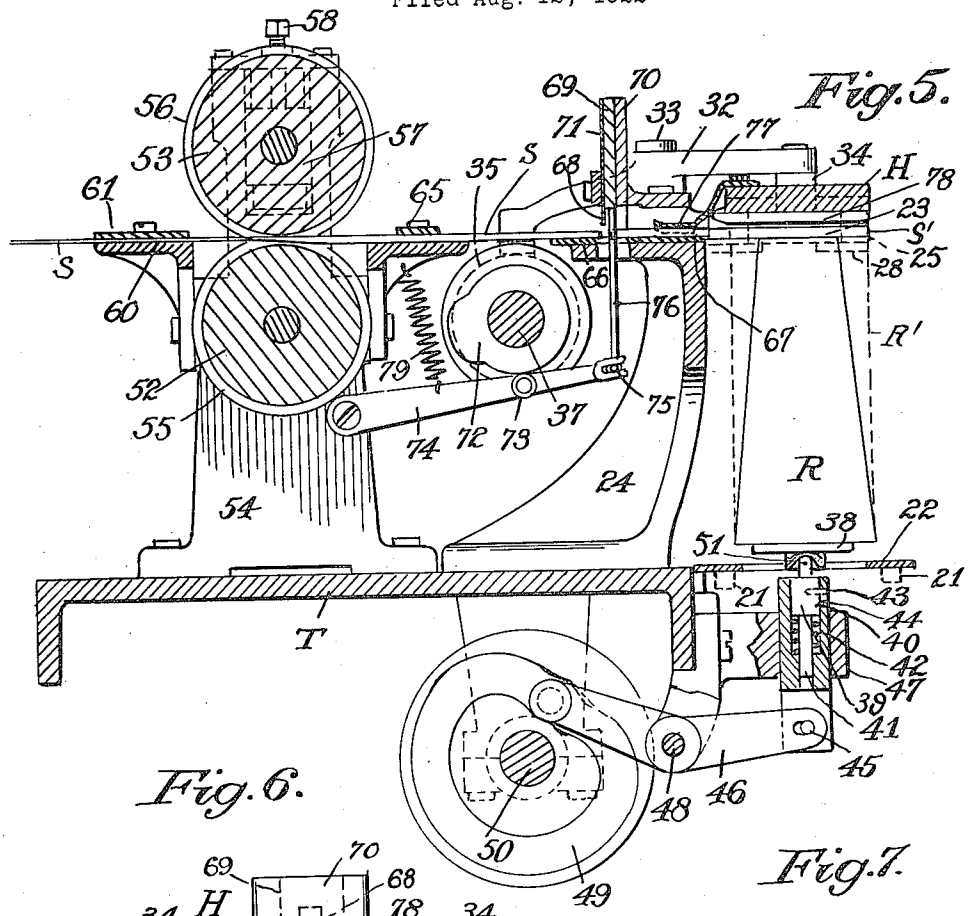


Fig. 6.

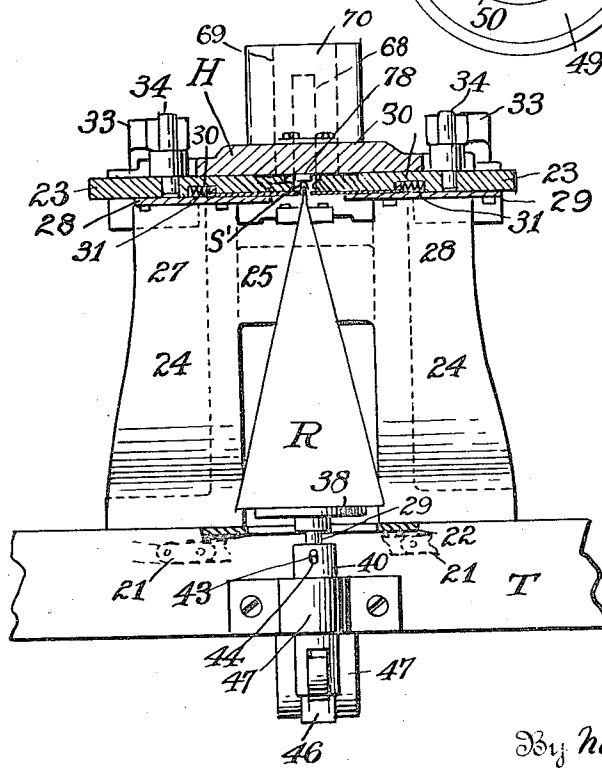
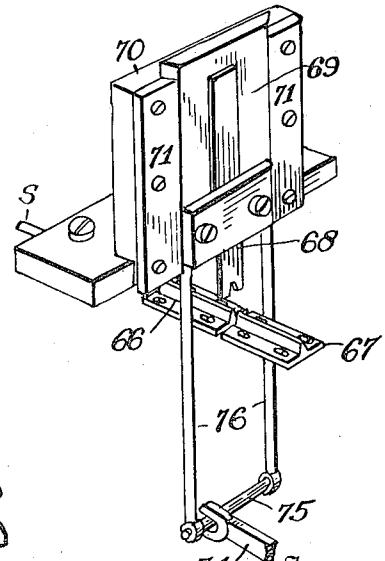


Fig. 7.



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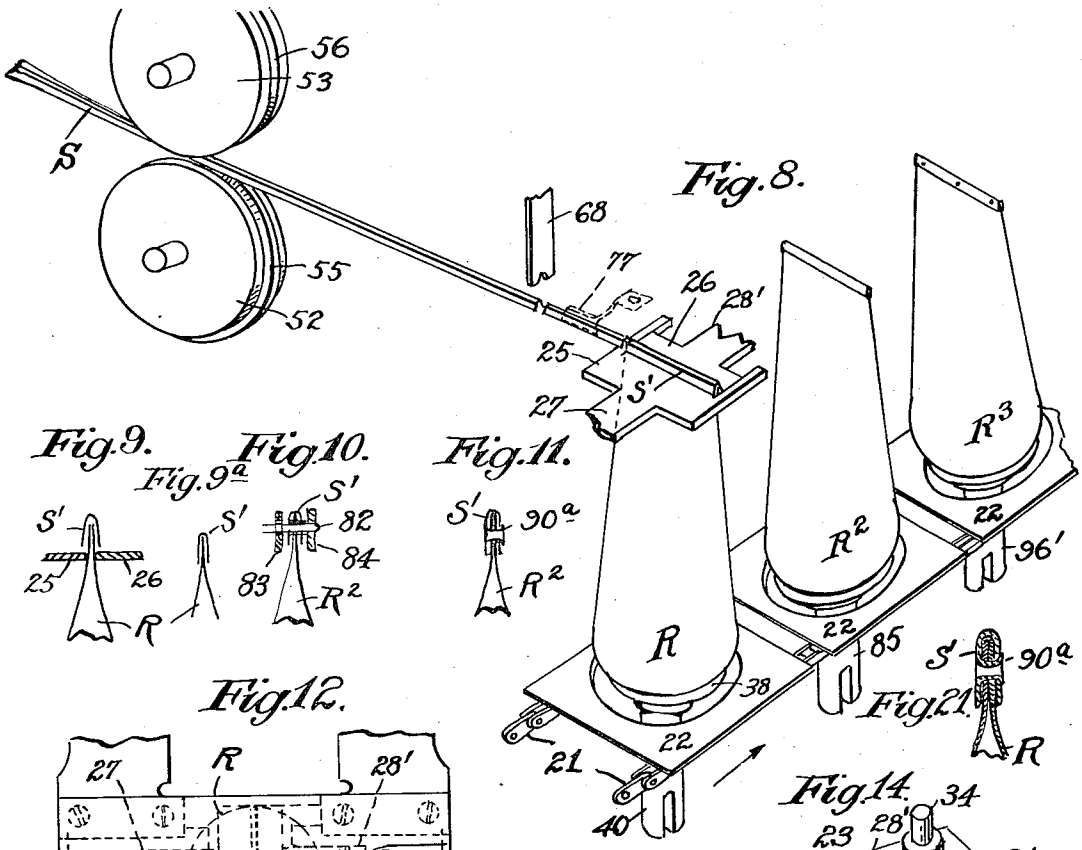


Fig.8.

Fig.9.

Fig.9a

Fig.10.

Fig.11.

Fig.21.

Fig.12.

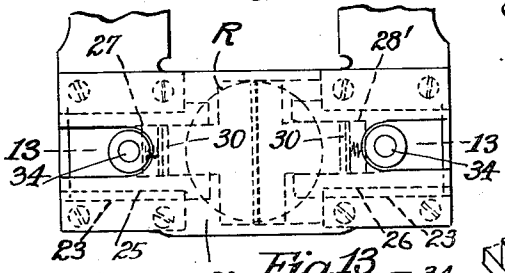


Fig.13.

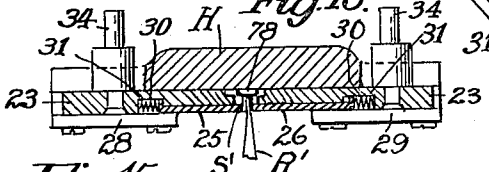


Fig.14.

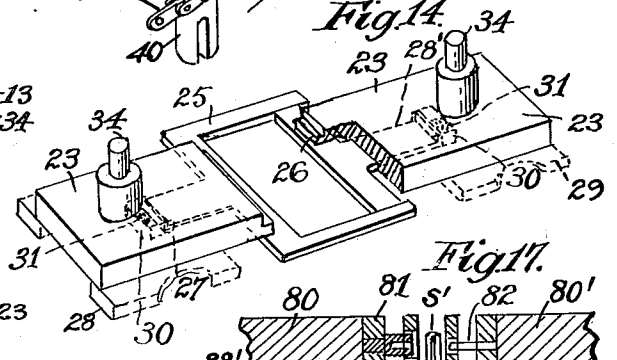
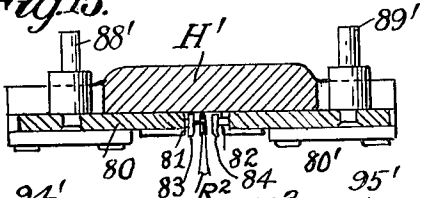


Fig.15.



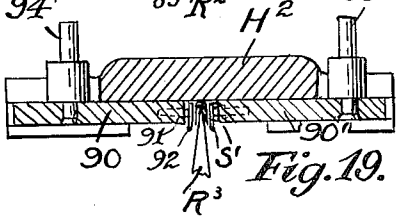


Fig.19.

Fig.16

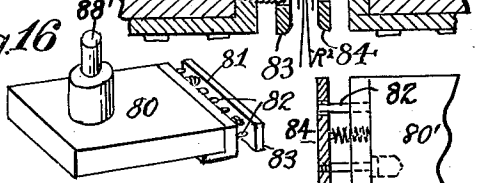
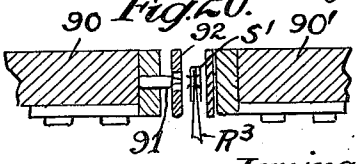


Fig.17.

Fig.18.

Fig.20.



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Patented Jan. 6, 1925. 1,521,725

UNITED STATES PATENT OFFICE.

IRVING STANLEY, OF NEW YORK, N. Y., ASSIGNOR TO ANGEL INTERNATIONAL CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF MAINE.

APPARATUS FOR CLOSING AND SEALING RECEPTACLES.

Application filed August 12, 1922. Serial No. 581,323.

To all whom it may concern:

Be it known that I, IRVING STANLEY, a citizen of the United States, and a resident of the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful Improvements in Apparatus for Closing and Sealing Receptacles, of which the following is a specification.

This invention relates to apparatus for closing and sealing the open end of a receptacle or container made by rolling a sheet into tubular form, preferably of truncated cone shape, and having a closure secured at one end, the container being made of paper paraffined and especially intended for milk or other liquids, although it may be utilized for other purposes, the open end of the receptacle being closed by squeezing or pinching the end together and securing said end in closed condition by a clamping strip, and it is the object of the invention to provide an improved method and means for applying the sealing strip or member to the closed end of the receptacle and an improved manner of sealing said member to the receptacle.

Various methods have been employed for applying the sealing or clamping member or strip to the receptacle as by bending a metallic strip around the closed end of the receptacle and severing the same from the strip, or forming a metallic strip to channel shape, feeding such strip over the closed receptacle end, clamping and sealing the strip to the receptacle and then severing the same from the strip. The sealing member has been heretofore secured to a receptacle either by stamping prongs from the material of the clamping strip and embedding said prongs in the material of the receptacle, or by perforating the clamping strip and providing separate means to engage therein for riveting the sealing member to the receptacle. However, all of these methods have been found deficient in that in severing the clamping member from the strip after it has been applied to the receptacle it has been impossible to sever the clamping member without leaving a rough edge which is liable to scratch or cut the hand when handling the receptacles or in use in tearing the strip from the receptacles to open the same. It is the principal object of the invention to overcome the above disadvantages.

In carrying out the invention the open end of the receptacle is collapsed and closed and held in its closed condition, and while so held a metallic strip is longitudinally bent upon itself to inverted channel shape; a portion of the material is then stamped from the formed strip to provide a sealing member of predetermined length, the stamping of the material therefrom leaving a smooth edge where it has been severed. The severed strip is then delivered over the closed end of the receptacle, guiding and gauging means being provided to position the receptacle and the sealing member relative to the receptacle previous to the clamping of the sealing member to the receptacle. The receptacle in this condition is transported to die mechanism to stamp a portion from the sealing member at one side of the receptacle and force such stamped material through the material of the receptacle and the opposite side of the strip, when the receptacle is transported to die mechanism for upsetting such stamped portions of the strip at the outer side of the portion of the strip opposite to that from which it has been stamped.

In the drawings accompanying and forming a part of this specification, Figure 1 is an end elevation with the supporting frame partly in section of my improved apparatus and looking at the left of Figure 2.

Figure 2 is a front elevation only so much of the framework being shown as is essential to an understanding of the invention.

Figure 3 is a plan view looking at the top of Figure 2.

Figure 4 is a perspective view of the upper portion of a receptacle or container showing the member applied thereto to seal the same.

Figure 5 is an enlarged cross sectional view taken substantially on the line 5—5 of Figure 2 looking in the direction of the arrow to illustrate the clamp feeding and forming means, the means to sever a portion of the formed strip, together with the means to close the open end of a receptacle and apply the sealing member thereto and the means to present a receptacle to said closing and sealing member applying means.

Figure 6 is an enlarged front elevation, partly in section, of the means to close the open end of a receptacle and apply the sealing member to said closed end.

Figure 7 is an enlarged perspective view of the clamping member severing means.

Figure 8 is a diagrammatic view in perspective of the clamping strip applying and forming means and to show the manner of delivering a severed portion of said strip over the closed end of a receptacle.

Figure 9 is a detail view to show the position of the sealing member after it has been formed, severed and delivered over the closed end of a receptacle.

Figure 9ª is a detail view to show a sealing member applied to the closed end of a receptacle preparatory to sealing the same thereto.

Figure 10 is a detail view to show the manner of stamping a portion from the sealing member at one side of the receptacle and forcing the same through the material of the receptacle and a portion of the sealing member at the opposite side of the receptacle.

Figure 11 is a detail view to show the arrangement of the sealing member after a portion has been stamped therefrom to form the sealing means.

Figure 12 is a plan view of the means to close a receptacle and clamp the sealing strip thereto preparatory to sealing the latter to the receptacle.

Figure 13 is a sectional view taken substantially on the line 13—13 of Figure 12.

Figure 14 is a perspective view of the means to close a receptacle and clamp the sealing member thereto preparatory to sealing said member to a receptacle.

Figure 15 is a sectional view to show the mounting of die mechanism to stamp a portion from the sealing member at one side of the receptacle and force the same through the receptacle and the portion of the sealing member at the opposite side of the receptacle.

Figure 16 is a perspective view of one of the die members shown in Figure 15.

Figure 17 is an enlarged sectional view of the die mechanism shown in Figure 15.

Figure 18 is a plan view of the portion of the die mechanism shown at the right of Figure 17.

Figure 19 is a sectional view of the mounting of die mechanism for upsetting the material stamped from the sealing member to seal the latter to the receptacle;

Figure 20 is an enlarged view of the die mechanism shown in Figure 19, and

Figure 21 is a detail view in section to show the manner of securing the sealing member to the closed end of the receptacle.

Similar characters of reference designate like parts throughout the different views of the drawings.

In carrying out the embodiment of my invention shown in the drawings I provide a table T upon which the operative mechanism is mounted, said table being supported by suitable standards, not shown. The receptacles to be operated upon after having been filled are delivered to a conveyer consisting of a pair of chains 21 having successively mounted thereon in predetermined spaced relation perforated plates 22 to constitute supports for the receptacles. These chains pass around sprocket wheels (not shown) at opposite ends of the framework and are intermittently advanced a predetermined distance by suitable means and in a manner, such for instance, as disclosed in my co-pending application Serial No. 483,443 to which reference may be had.

During the periods of rest of the receptacle conveyer a receptacle R will be positioned in alinement with means to collapse and close the open end of the receptacle and to clamp a sealing member thereto preparatory to sealing said member to the receptacle. This means comprises a pair of slides 23 (Figures 12 to 14) slidably mounted in a head H fixed to or integral with a standard 24 fixed upon the table, said head extending from said standard over the conveyer in spaced and alined relation thereto, said slides being adapted to have reciprocatory movement toward and away from each other. The slides 23 carry a pair of auxiliary slides 25, 26 to participate in the movement of the slides 23 and have movement relative thereto. The auxiliary slide 25 is in the form of a yoke having a stem 27 slidably mounted at the bottom of a slide 23 by a cap or plate 28 secured to the bottom of the slide. The other slide 26 is arranged to slidably engage within the legs of the yoke of slide 25 and has a stem 28′ whereby it is slidably mounted at the bottom of the other slide 23 by a plate or cap 29. Each of the slide stems 27, 28′ has the end thereof flanged or bent upwardly to engage in a recess 30 in the bottom of the slides 23 whereby the auxiliary slides are adapted to participate in the movement of the slides 23 and have a limited movement thereof, and are normally urged forwardly of the slides 23 by springs 31.

The slides are actuated by levers 32 pivotally mounted on studs 33 upon the standard 24 to have movement on vertical axes, one arm of each of the levers being pivotally connected to studs 34 fixed to and projecting up from each of the slides 23. The levers are actuated to move the slides toward and away from each other by cams 35, 36 on a shaft 37, the other arms of the levers 32 carrying rollers or cam followers to co-operate with said cams. The cams are so constructed and timed that there will be an initial movement imparted to the slides and during this movement of the slides the auxiliary slides 25, 26 will engage with and collapse or squeeze together the open end of a receptacle and close the same, the receptacle assuming substantially the dotted line position R′ shown in Figure 5, and sub-

sequent to the closing of the receptacle the auxiliary slides and the slides 23 are held stationary, the latter serving as guides for a sealing member S′ as shown in Figure 6, and then later moved toward the receptacle. During the interim of movement or period of rest of the slides 23 after the auxiliary slides have been moved to receptacle closing position the sealing member is delivered over the closed end of the receptacle, and subsequent to the delivery of this member the slides 23 are moved toward the receptacle to clamp said sealing member to the receptacle preparatory to sealing said member to the receptacle, this latter movement of the slides 23 being permissible due to the slidable engagement of the slide flanges in the recess portions 30 of the slides 23 and permitting movement of the slides 25, 26 relative to the slides 23.

To lift a receptacle from a receptacle support of the conveyer and position the same between the slides 23, 25—26 a support in the form of a disk 38 (Figures 5, 6 and 8) is caused to move through the opening of a receptacle support 22 and engage with and lift the receptacle from the conveyer support and support the receptacle during the period of time it is positioned between the slides. The disk 38 is pivotally connected to a stem or plunger 39 engaging in a bore of a carrier 40 therefor, said plunger having a portion 41 of reduced diameter to engage in a portion of reduced diameter in the bore of the carrier, the plunger being normally urged outward from the bore of the carrier by a spring 42 in the carrier bore confined between the shoulders formed by the bore portion of enlarged diameter and the plunger of enlarged diameter, the movement of the plunger being limited by a pin 43 fixed in and extending laterally from the plunger engaging in a slot 44 in the carrier. The carrier 40 is slidably mounted in a bracket 47 fixed to the table and is pivotally carried, as at 45, by an arm of a lever 46 pivotally carried at 48 by the bracket 47 the other arm of the lever carrying a cam following roller to co-operate with a cam 49 fixed to a shaft 50 to actuate the lever and thereby the plunger, carrier and receptacle support carried by the plunger. By the movement of the cam actuated arm 46 the receptacles are positioned with the edge of the opening in spaced relation to a ledge 78 extending transversely of the under surface of the head H and in which position the sealing member S′ is delivered over the top of the collapsed and closed end of the receptacle guided by the ledge 78 and the slides 23 as shown in Figure 6. After the sealing member has been delivered over the receptacle the receptacle lifting means due to the construction and arrangement of the cam 49 is lifted further to cause the closed end of the receptacle with the sealing member thereon to be impinged against the ledge 78 when the slides 23 are actuated to abut the sealing member and clamp the same to the receptacle end, as shown in Figure 9ª. Due to imperfections in the manufacture of receptacles it has been found that the edge of the opening of the receptacles is not always horizontal to the axis of the receptacle, and in order to effect a positive sealing of the receptacle by the sealing member it is essential that the latter embrace the side of the receptacle, for which purpose the receptacle support 38 is pivotally connected to the plunger to have movement on an axis transverse to the axis of the plunger and transversely of the ledge 78, as clearly shown at 51, whereby the edge of the receptacle opening is caused to be gauged against the ledge 78 on the under surface of the head H. By this arrangement the edge of the opening of the receptacle is practically squared with said ledge. The yielding or resilient mounting of the support carrying plunger 39 is in the nature of a compensating device for variations in the length of receptacles.

The sealing member S′ is formed from a metallic strip or web S preferably in rolled condition on a drum rotatably supported, as at 59 in Figure 3, and is intermittently fed by a pair of coacting feed rollers 52, 53, the roller 52 being journaled in fixed position in standards 54 mounted on the table and arranged with a peripheral bead 55 of substantially inverted V-shape in cross section. The roller 53 has a peripheral recess 56 complemental to the bead 55 of roller 52, said roller 53 being mounted on a shaft journaled in blocks 57 slidably mounted in slots in the upper portion of the standards 54 to have adjustment toward and away from the roller 52 and retained in adjusted position by an adjusting screw 58, as clearly shown in Figures 1 and 5, the web being directed between the rollers by a guide in the form of a groove in a bracket 60 and retained in such groove by a cap 61, or the guide groove may be arranged in the cap 61. The rollers 52, 53 are intermittently rotated to feed a predetermined portion of the web and simultaneously bend the same longitudinally to channel shape, in the present instance substantially to inverted V-shape, in cross section by a spring influenced pawl 62 pivotally carried at the end of one arm of a lever 63 hung or pivotally supported on the shaft of the feeding roller 52, said pawl co-operating with a ratchet or toothed wheel 64 rotatable with the wheel 52, the wheel 53 being frictionally driven from the wheel 52. Feeding movement is imparted to the pawl carrying arm 63 by a cam 96 (Figure 2) on shaft 50 through a pivotally supported lever 97 carrying a cam following roller at one end to co-operate with the cam, said lever having

a link connection 98 with the lever 63. As the arm 63 is moved in one direction the pawl 62 will engage with a notch or tooth of the ratchet wheel 64 and advance the same, and during the retrograde movement of the arm the pawl will ride along said wheel.

The formed strip S is delivered from the feeding and forming rollers 52, 53 to a guide 65 and through the latter directed to die mechanism to stamp a portion from the strip and thereby sever a predetermined portion therefrom to serve as the sealing member. This die mechanism comprises a pair of die members 66, 67 fixed in alined and spaced relation upon the standard 24. A movable die member 68 is mounted to have reciprocable movement in the space between the fixed die members and co-operate with the latter to shear a portion from the formed strip at a predetermined point from the end to sever a predetermined portion from the strip to constitute the clamping member and thus assure said severed edge being a smooth and clean-cut edge. The die members 66, 67 are adjustable relative to each other. The die member 68 is carried by a head 69 slidably mounted in a bracket 70 by gibs 71, the bracket being fixed upon the standard 24. The die 68 is reciprocated by a cam 72 on shaft 37 with which a cam following roller 73 carried intermediate the ends of a lever 74 co-operates, the lever being pivotally mounted at one end upon the standard 54 the opposite end being bifurcated and engaging a bar 75 connected at its ends to rods 76 fixed in the die carrying head 69 and engaging at opposite sides of the fixed die members. The lever 74 is yieldingly urged to position with the cam following roller in operative engagement with the cam by a spring 79. The movement of the feeding rollers and die mechanism is so timed that the feeding of the strip will be effected after the open end of a receptacle has been collapsed by the slides 25, 26 and during this movement of said heads the strip clamping and cutting dies are actuated to sever a portion of the strip, which severed strip is supported upon the die member 67 and retained thereon by a guide 77 to be engaged by the strip during the successive movement thereof to deliver the severed strip over the top of the closed end of the receptacle. After the sealing member has been delivered over the closed receptacle end the dies 23 are actuated to clamp said member to the receptacle preparatory to presenting the receptacle to means to fix or seal the member to the receptacle to seal the latter.

After the sealing member has been clamped to the receptacle the means to lift the receptacle from the conveyer to present the same to the closing means is actuated to return the receptacle to its support upon the the conveyer when the conveyer is actuated to advance the receptacle to the position indicated at R^2 (Figures 2 and 8) and position the receptacle relative to mechanism for stamping a portion from the sealing member at one side of the receptacle and forcing such stamped material through the material of the collapsed end of the receptacle and the material of the sealing member at the opposite side of the receptacle, as shown in Figures 10 and 11. This mechanism is arranged on the table in advanced relation to the receptacle closing means and is mounted upon a head H′ carried by a standard 24′ mounted on the table similar to the head H to extend over the conveyer. This die mechanism comprises a pair of slides 80, 80′ the slide 80 carrying a female die, as shown at 81, and the slide 80′ carrying a male die in form of punches, as shown at 82, strippers 83, 84 being carried forwardly of said die members and yieldingly urged outward therefrom, as shown in Figures 15 to 18 to strip the receptacle with the clamping member from the die members. The receptacle is lifted from a conveyer supporting plate 22 to said die mechanism to engagement with the under side of the head H′ by means which is a duplicate of the means for lifting a receptacle from the conveyer to present a receptacle to the closing mechanism and detailed description of the same is not deemed necessary the same being shown in a general way at 85 (Figure 2) and is actuated by a cam 49′ on shaft 50. The die carrying slides 80, 80′ are reciprocated toward and away from each other by cams 86, 87 on shaft 37 through pivoted levers 88, 89 one arm of which levers carry cam following rollers to co-operate with said cams and the other arms being pivotally connected to studs 88′, 89′ projecting up from the slides 80, 80′ and extending through slots in the head H′.

After the sealing member has been acted upon to stamp and force a portion of the material of the sealing member from one side of the receptacle and forcing the same through the closed end of the receptacle and the portion of the sealing member at the opposite side of the sealing receptacle, the receptacle is returned to a receptacle support upon the conveyer when the conveyer is again actuated to advance the receptacle to the position indicated at R^3 (Figures 2, 3 and 8) to present a receptacle to mechanism to upset such material stamped from the one portion of the sealing member to secure or rivet the sealing member to the receptacle and thereby securely sealing the receptacle to prevent tampering with the contents thereof. This mechanism comprises a pair of slides 90, 90′ the slide 90 carrying pins 91 to engage in the perforated punched material to upset such material as shown in Figure 4 at 90^a, the same being in the nature of eyelet upsetting members. A stripping

plate 92 is arranged forwardly of said pins. The slides 90, 90′ are slidably mounted in a head H^2 carried by a standard similar to the standard 24 mounted on the table so that the head will extend over the conveyer, and the slides are reciprocated in a direction toward and away from each other by cams 92, 93 through pivoted levers 94, 95 carrying cam following rollers at one end to co-operate with the cams and the opposite ends pivotally mounted on studs 94′, 95′ projecting up from the slides through slots in the head H^2. After the stamped material has been upset the receptacle is returned to a receptacle support of the conveyer when the conveyer is again advanced and the receptacle is removed from the conveyer, the means to lift a receptacle from the conveyer and present it to said upsetting means and returning the same to the conveyer being the same as that described for lifting a receptacle from the conveyer to present it to the receptacle closing means, the same being shown in a general way at 96′ in Figure 2.

The mechanism for lifting the receptacles from the conveyer is operative to simultaneously lift receptacles from the conveyer and present them to the means to close and clamp the sealing member thereto, the means to stamp a portion from the clamping member, and the means to upset such stamped material whereby such mechanisms are operating upon receptacles simultaneously.

The apparatus is driven from a suitable source of power preferably connected to the shaft 50 the shaft 37 being driven from shaft 50 by a gear 100 on said shaft meshing with a pinion 101 rotatable on a stud shaft fixed in the framework, and which pinion meshes with a gear 102 fixed to the shaft 37.

Variations may be resorted to within the scope of the invention, and portions of the invention may be utilized without others.

Having thus described my invention I claim:

1. Apparatus for closing and sealing receptacles of pliable material, comprising in combination means to close the receptacle, means to clamp a sealing member to said closed end of the receptacle, means to stamp portions from the clamping member at one side of the receptacle and force the stamped portions through the material of the container and the portion of the clamping member at the opposite side of the receptacle, means to upset said stamped portions of the clamping member, and means to progressively advance and present the receptacle to the means to close and clamp the sealing member to the receptacle, stamp portions of the sealing member therefrom, and upset such stamped portions.

2. In apparatus for closing and sealing receptacles of the class specified, means to close the open end of the receptacle; means to intermittently feed and bend a predetermined portion of a clamping strip to inverted channel shape; means to sever a portion of the formed strip during the periods of rest and position such severed strip during the successive movement of the strip over the closed end of the receptacle; and means to clamp the strip to the receptacle.

3. In apparatus for closing and sealing receptacles of the class specified, means to close the open end of the receptacle; means to intermittently feed and bend a predetermined portion of the clamping strip to inverted channel shape; means to sever a portion of the formed strip during the periods of rest; means to position such severed strip during the successive movement of the strip over the closed end of the receptacle; means to clamp the strip to the receptacle; and means to stamp a portion of the material from the clamping strip at one side of the receptacle, forcing the same through the material of the receptacle and the portion of the strip at the opposite side of the receptacle and upsetting the same to seal the receptacle.

4. In apparatus for closing and sealing receptacles of the class specified, a pair of jaws having movement toward and away from each other to collapse and close the open end of the receptacle and between which the receptacle is adapted to be positioned; a second pair of jaws juxtaposed relative to the closing jaws and having movement toward and away from each other; means to feed and bend a strip of material to inverted channel shape and position a severed portion thereof over the closed end of the receptacle between the second pair of jaws, and the latter being operable to clamp the strip to the receptacle.

5. In apparatus for closing and sealing receptacles of the class specified, the combination of an intermittently movable conveyer arranged with receptacle supports, and means independent of the receptacle support on the conveyer to lift a receptacle from a conveyer support and position and aline the same relative to the closing and sealing member applying means, comprising a receptacle supporting disk, a stem pivotally carrying the disk, a slidably supported carrier in which the stem is slidably mounted and arranged with means to yieldingly urge the stem outward to a predetermined extent, and a cam actuated lever pivotally supporting the carrier.

6. In apparatus for closing and sealing receptacles of the class specified, the combination to close the open end of a receptacle; means to intermittently feed a predetermined portion of a metallic strip and form the same into inverted V-shape in cross section during the feeding thereof; means to

sever said formed strip to constitute a clamping member comprising a pair of alined and spaced fixed die members, and a receptacle die member to operate in the space between the fixed die members, and said severed portion adapted to be delivered to position over the closed end of the receptacle during the successive movement of the strip feeding and forming means; and means to clamp the portion of the strip positioned over the receptacle to the receptacle.

7. In apparatus of the class specified, means to close and clamp a sealing member to the closed end of a receptacle, comprising a pair of slides supported to have reciprocatory movement toward any away from each other, and a pair of slides carried by the first slides to participate in the movement thereof and to have movement relative to said first slides; and means to actuate the slides.

8. In apparatus of the class specified, means to close and clamp a sealing member to the closed end of a receptacle, comprising a pair of slides supported to have reciprocatory movement toward and away from each other, and a pair of slides carried by the first slides to participate in the movement thereof and to have movement relative to said first slides; a pair of pivotally supported arms each of which arms is pivotally connected to one of the first slides; and cams with which cam followers carried by the levers co-operate to actuate the slides.

9. In apparatus of the class specified, means to close and clamp a sealing member to the closed end of a receptacle, comprising a pair of slides supported to have reciprocatory movement toward and away from each other, and a second pair of slides carried by the first slides to participate in the movement thereof and have movement relative thereto and between which slides the open end of the receptacle is adapted to be positioned; means to actuate the slides whereby the second slides operate to close the open end of the receptacle and the first slides operate to clamp a sealing member to the closed end of the receptacle.

10. In apparatus of the class specified, means to close and clamp a sealing member to the closed end of a receptacle, comprising a pair of slides supported to have reciprocatory movement toward and away from each other, and a second pair of slides carried by the first slides to participate in the movement thereof and have movement relative thereto and between which slides the open end of the receptacle is adapted to be positioned; means to actuate the slides whereby the second slides operate to close the open end of the receptacle and the first slides operate to clamp a sealing member to the closed end of the receptacle; and means to feed and form a strip of metal into inverted V-shape and operative to deliver a severed portion of such strip over the closed end of the receptacle during the interim of movement of the second slides to receptacle closing position and the seal clamping movement of the first slides.

11. In apparatus of the class specified, a pair of slides to engage at opposite sides of a receptacle and have movement to close the same; means to intermittently feed a predetermined portion of a strip and during such feeding movement form the same into inverted V-shape; means to sever a portion of the formed strip during the intervals of rest of the feeding means including a support for the severed portion of the strip, and said severed portion of the strip adapted to be delivered from said support to position over the closed end of the receptacle during the successive movement of the strip feeding means; and means to clamp the strip delivered over the closed receptacle end to the receptacle.

12. In apparatus for the purpose specified, means to collapse and close the open end of a receptacle; means to intermittently feed a strip and longitudinally bend the same to V-shape in cross section during the feeding thereof; die mechanism to stamp a portion from said strip and sever a predetermined length from the formed strip; a support for the severed strip, and said severed strip adapted to be delivered over the closed end of the receptacle by the strip during the successive movement thereof.

13. In apparatus for the purpose specified, an intermittently movable conveyer arranged with receptacle supports; a fixed head in superposed relation to the conveyer and in line with the receptacle support when the conveyer is at rest; a pair of coacting slides carried by said head; a pair of auxiliary slides carried by the first slides to participate in the movement thereof and have movement relative thereto; means to lift a receptacle from a conveyer support and position the same between the slides with the edge of the opening gauged by the fixed head; means to actuate the slides to cause the auxiliary slides to collapse and close the open end of the receptacle; means to feed the sliding strip over the closed end of the receptacle, said head being constructed and arranged to guide and position said strip relative to the closed end of the receptacle; and said slide actuating means being operative to cause the first slides to clamp the sliding strip to the receptacle.

14. In apparatus for the purpose specified, an intermittently movable conveyer arranged with receptacle supports; a fixed head in superposed relation to the conveyer and in line with the receptacle support when the conveyer is at rest; a pair of coacting slides carried by said head; a pair of aux-

iliary slides carried by the first slides to participate in the movement thereof and have movement relative thereto; means to lift a receptacle from a conveyer support and position the same between the slides with the edges of the opening gauged by the fixed head; means to actuate the slides to cause the auxiliary slides to collapse and close the open end of the receptacle; means to intermittently feed a metallic strip and simultaneously bend the same longitudinally to V-shape in cross section; means to sever a predetermined portion of the formed strip; a support for the severed strip, said severed strip being adapted to be delivered over the closed end of the receptacle during the successive feeding movement of the strip; a guide for the strip arranged in the head to position the delivered strip over the receptacle; a stop to gauge the leading edge of the strip as it is delivered over the receptacle, and said first slides being operable to clamp the strip to the receptacle.

15. In apparatus of the class specified, the combination of an intermittently movable conveyer arranged with receptacle supports; a head in spaced relation to said conveyer with means to lift a receptacle from a conveyer during the period of rest of the conveyer and position the same in predetermined spaced relation to said head; a pair of main slides carried by said head to have reciprocatory movement toward and away from each other; a pair of auxiliary slides carried by the main slides to participate in the movement thereof and have movement relative thereto and adapted to collapse and close the open end of the receptacle as it is positioned relative to the head with the main slides positioned in spaced relation to said closed end of the receptacle; means to feed a sealing member over the closed end of the receptacle and guided to position by the head and main slides; said means to lift the receptacle from the conveyer support being operative to abut the end of the receptacle with the sealing member thereon against the head, and said main slides in this position of the receptacle being operative to clamp the sealing member to the receptacle.

Signed at New York city, in the county of New York and State of New York this 14th day of July, 1922.

IRVING STANLEY.