

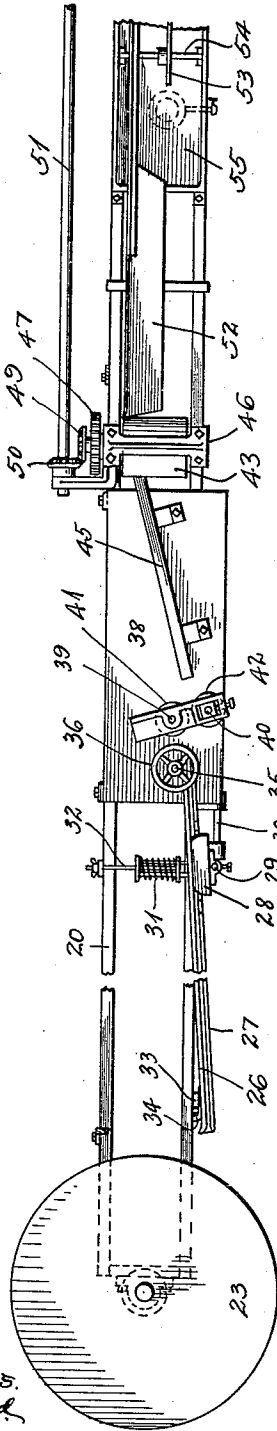
A. J. HODGE.
 RECEPTACLE FORMING MACHINE.
 APPLICATION FILED FEB. 1, 1912.

1,064,327.

Patented June 10, 1913.

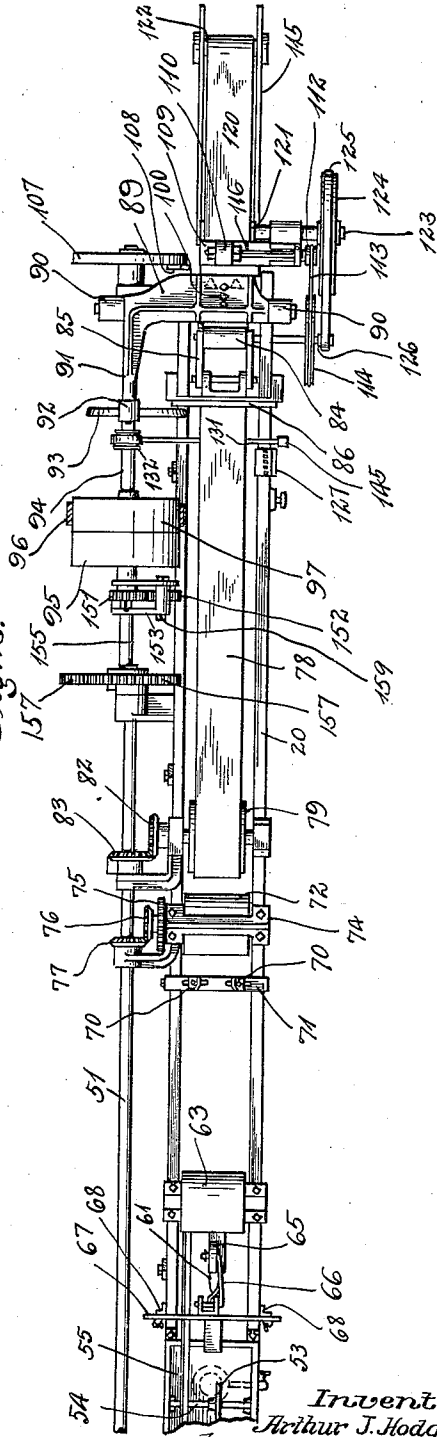
5 SHEETS—SHEET 1.

Fig. 1.



Witnesses.
 R. P. Pelland
 C. Serenace

Fig. 2.



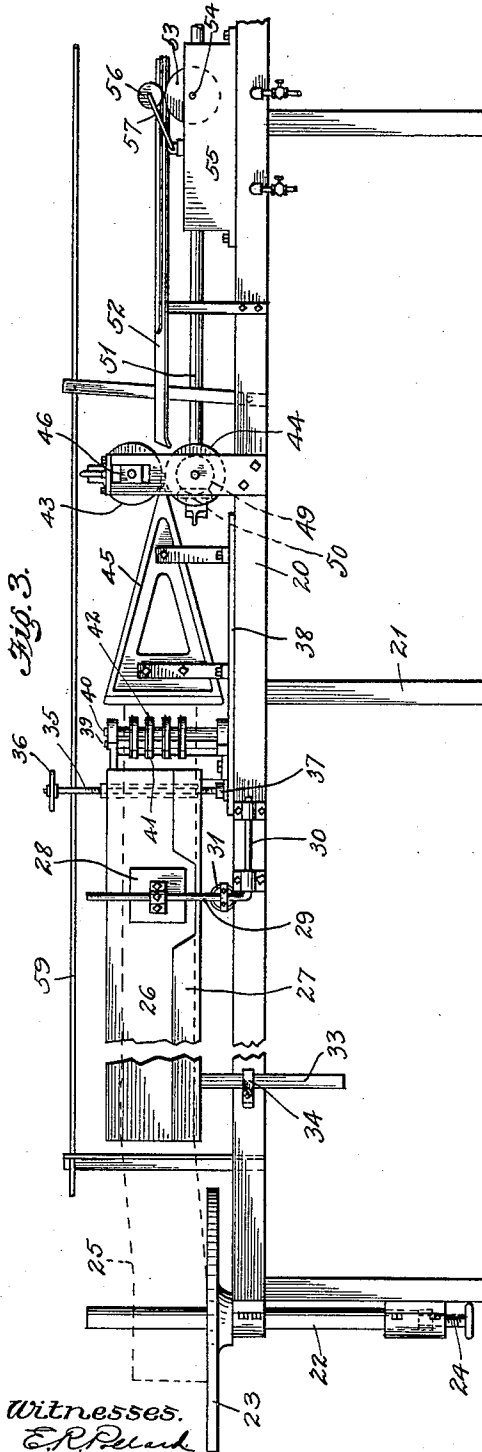
Inventor.
 Arthur J. Hodge.
 by *Harold Shaw* Attys

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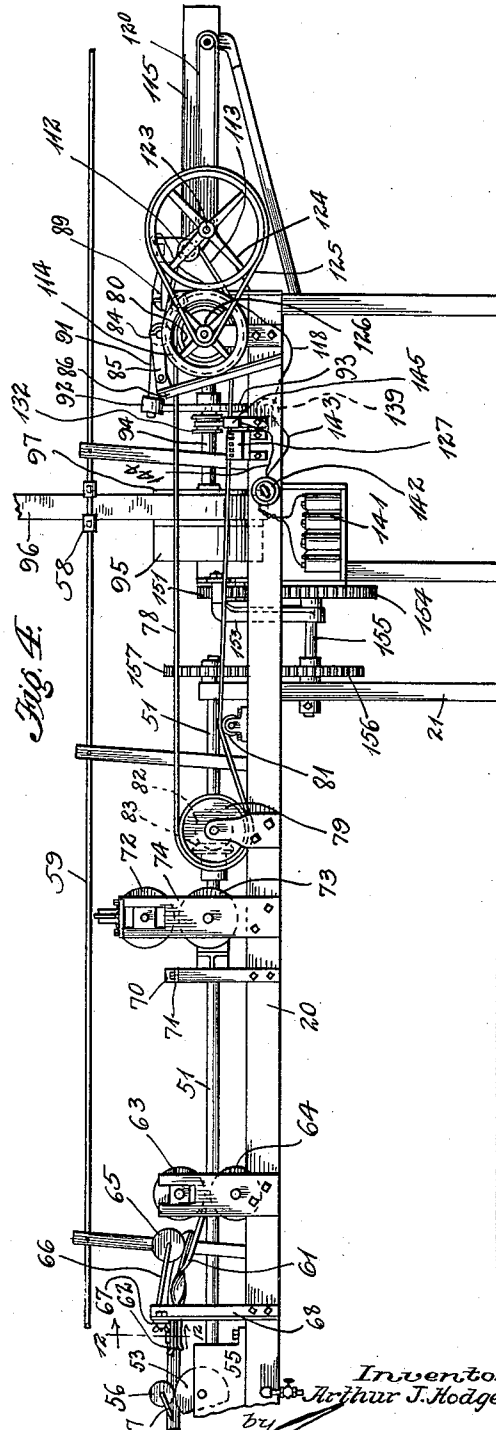
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5 SHEETS—SHEET 2.



Witnesses.
 E. R. Plunk
 C. Severance



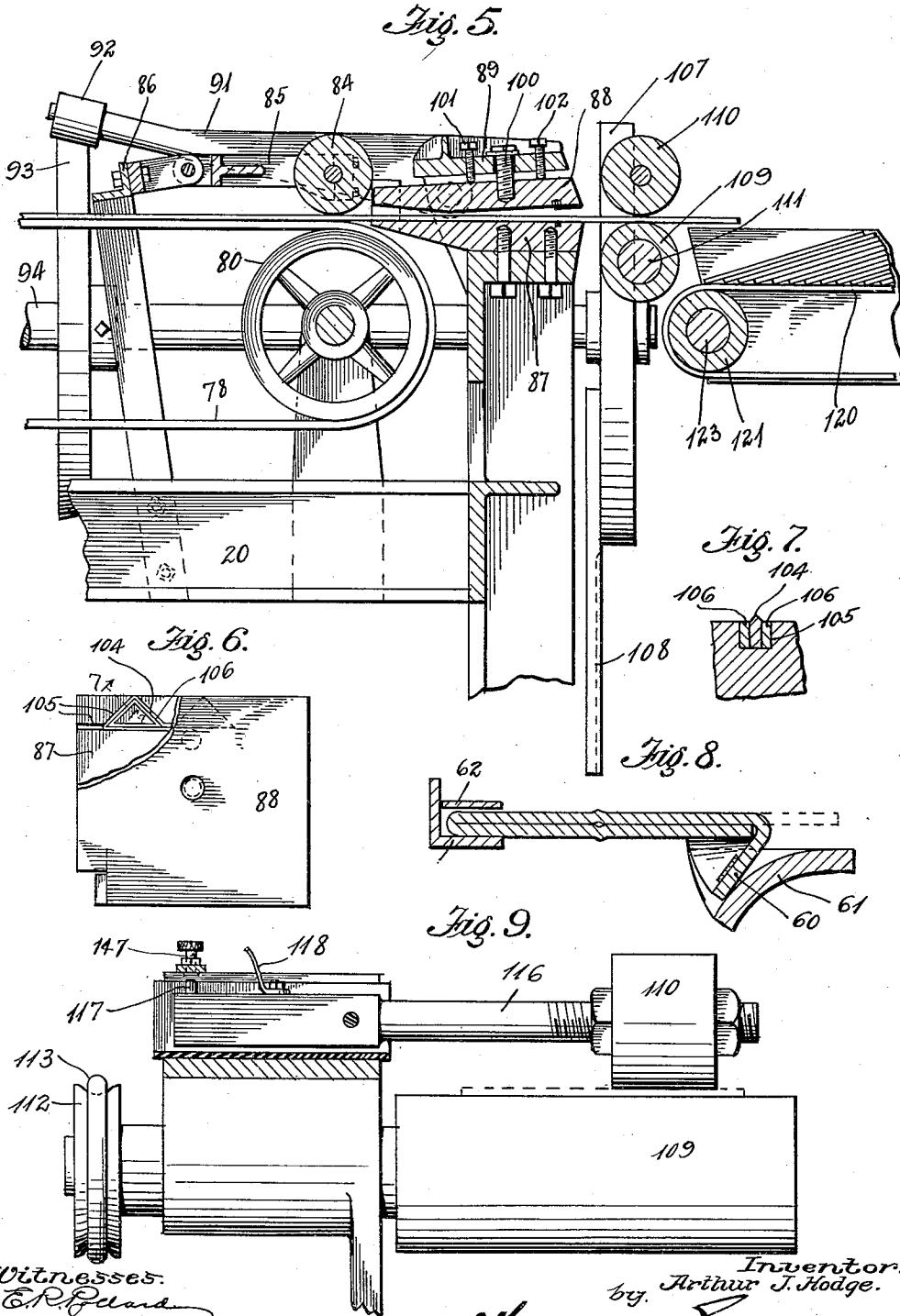
Inventor
 Arthur J. Hodge.
 Harold Thayer, Atty.

A. J. HODGE.
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5 SHEETS—SHEET 3.



Witnesses:
E. R. Peland
C. Deverance

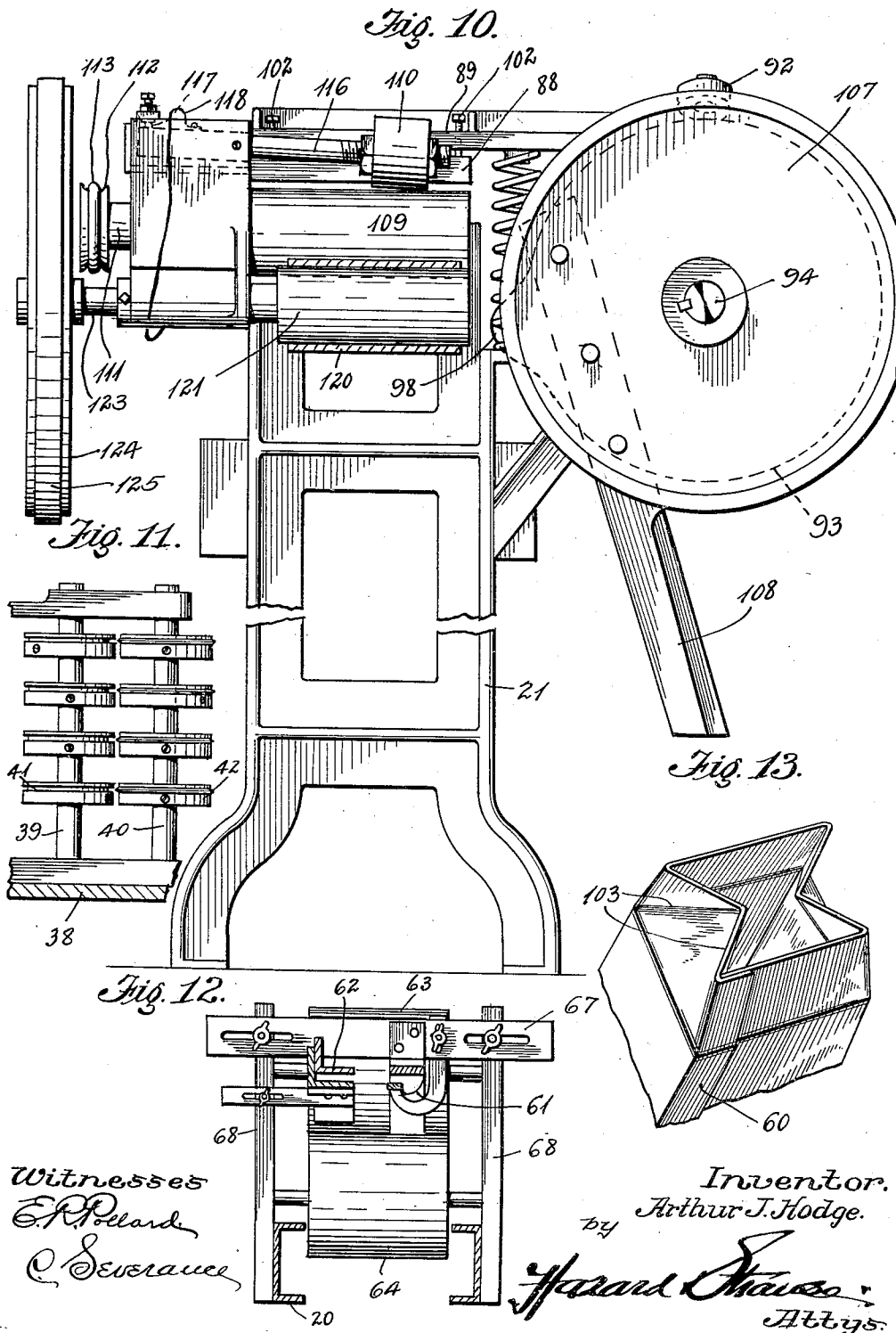
Inventor.
by Arthur J. Hodge.
Howard & Shaw
Attys.

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5 SHEETS—SHEET 4.



Witnesses
 E. P. Polard
 C. Severance

Inventor.
 Arthur J. Hodge.
 by
 Howard Chase
 Attys.

A. J. HODGE.
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1,064,327.

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5 SHEETS—SHEET 5.

Fig. 14.

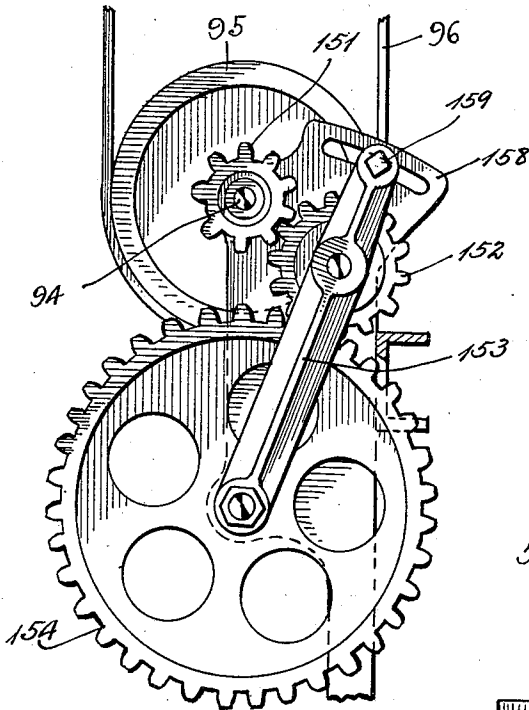


Fig. 15.

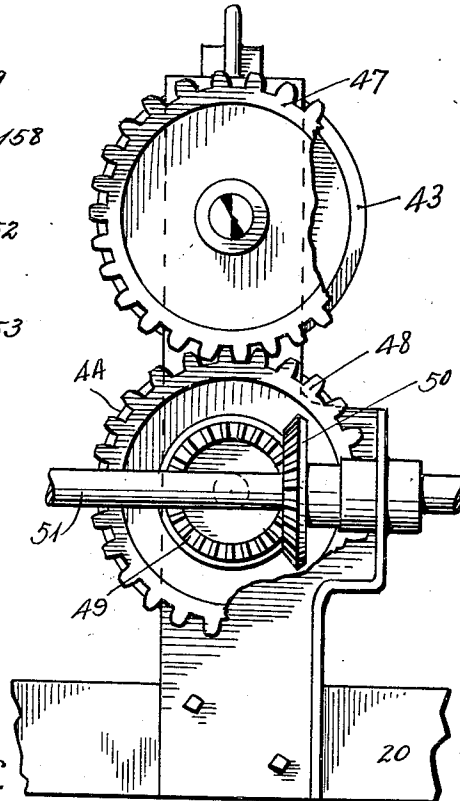
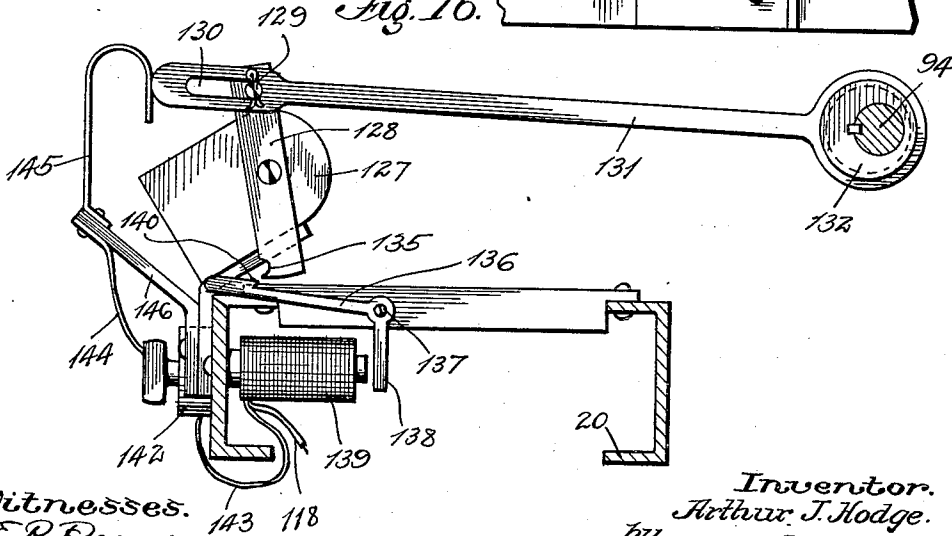


Fig. 16.



Witnesses.
 E. R. Pellard.
 C. Deverance.

Inventor.
 Arthur J. Hodge.
 by

Hazard & Shaw
 Attys.

UNITED STATES PATENT OFFICE.

ARTHUR J. HODGE, OF PASADENA, CALIFORNIA, ASSIGNOR TO OSCAR W. HARRIS, OF REDLANDS, CALIFORNIA.

RECEPTACLE-FORMING MACHINE.

1,064,327.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed February 1, 1912. Serial No. 674,691.

To all whom it may concern:

Be it known that I, ARTHUR J. HODGE, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented new and useful Improvements in Receptacle-Forming Machines, of which the following is a specification.

This invention relates to improvements in machines for folding and producing boxes, flower pots, or the like, and it is a particular object of the invention to provide a machine which is capable of folding a strip of boxing or pot forming material, preferably of paper, and of creasing the same to permit of its being properly folded when set up for use, the machine also being adapted to cut off the pots or boxes in proper lengths.

It is also an object of the invention to provide a folding machine adapted to fold paper, card board or other material to form a complete inclosure, the edges thereof being gummed and applied together, the machine also forming and shaping the end portions, whereby a pot or similar receptacle may be readily formed.

In the accompanying drawing forming a part of this specification, Figure 1 is a top plan view of one end of the folding machine forming the subject matter of the present invention. Fig. 2 is a top plan view of the other end of said machine, the said Fig. 2 practically forming an extension of the mechanism shown in Fig. 1. Fig. 3 is a side elevation of the portion of the machine shown in Fig. 1. Fig. 4 is a side elevation of a portion of the machine shown in Fig. 2. Fig. 5 is an enlarged detail vertical sectional view taken longitudinally through the die mechanism employed in the machine for shaping the end folding portions of the pots or receptacles to be formed, the knife for cutting off the material in suitable lengths being also shown. Fig. 6 is a top plan view of the paper creasing dies, the corner of the upper die being broken away to show the creasing projections upon the lower die. Fig. 7 is an enlarged detail sectional view taken upon the line 7-7 of Fig. 6 and showing one of the creasing edges carried by the die. Fig. 8 is a transverse sectional view through the folded web of paper showing the guides of the machine at the point where the edges of the paper web are creased together after cement has been

placed between them. Fig. 9 is an enlarged transverse sectional view through the machine, taken just to one side of the last set of feed rollers employed in the machine, which feed rollers deliver the cut lengths of paper from the cutting device of the mechanism. Fig. 10 is an enlarged transverse sectional view taken through the belt which receives the cut off pots or receptacles, and looking at the adjacent end of the main portion of the machine. Fig. 11 is an enlarged detail view in side elevation of the creasing dies used in making the longitudinal folding creases of the webbing pass through the machine. Fig. 12 is a detail sectional view through the line 12-12 of Fig. 4. Fig. 13 is a detail perspective view showing the folded end of one of the pots or receptacles shaped and creased by the machine, the end of the receptacle being partially folded. Fig. 14 is an enlarged detail view showing the change gear mechanism employed in the machine in side elevation. Fig. 15 is an enlarged detail view of the gearing employed in driving the feed rollers of the device. Fig. 16 is an enlarged detail sectional view taken through the machine at the point where the mounting mechanism is employed and showing the means for holding the same against operation when no material is being fed through the machine.

The details and features of the invention will now be more particularly described, reference being had to the said drawing in which 20 indicates the frame of the machine supported on suitable standards or legs 21. At one end of the frame a vertical shaft 22 is mounted in bearings secured to the end of the framing, the said shaft carrying a material supporting disk 23 at a point just above the upper surface of the said frame 20. The lower end of the shaft 22 rests upon an adjusting screw 24, so that the shaft with the disk 23 may be movably held at different adjusted heights. The shaft 22 projects sufficiently far above the disk 23 to receive a roll or spool of material such as is indicated in dotted lines at 25, for feeding the machine with the necessary webbing of paper or the like.

Extending from a point near the disk 23 is a guide plate 26 adapted to hold the web of paper in vertical position, said guide plate having a broad high flange upon the inner side and a comparatively narrow low

flange 27 upon the outer side. In order to insure the holding of the web of paper in vertical position upon said guide and also to exert something of a tension upon the same, a friction plate 28 is mounted upon an arm 29 which is carried by a rock shaft 30 journaled upon the side of the frame 20. The friction plate 28 is adjustably clamped by a set screw to the arm 29 and the said arm is drawn toward the guide by means of a coiled spring 31 which is connected by an adjusting rod 32 with opposite side of the frame as clearly shown in Fig. 1. The flange 27 is preferably interrupted opposite the plate 28 so as to permit the plate to rest flatly against the paper strip or web.

The guide 26 is supported at one end by an adjustable standard 33 which is secured to the frame 20 by an adjustable clamp 34. The other end of the guide is carried by a vertically arranged screw rod 35 having a hand wheel 36 at its upper end by which it may be turned. The lower end of said rod is held in position by a bearing 37 upon the frame 20. The said adjusting screw rod 35 is mounted upon one end of a platform 38, carried by the side beams of the frame 20. Adjacent to the end of the guide 26 are vertical shafts 39 and 40 which carry grooved rollers 41 and creasing rollers 42 respectively. The said pulleys are adjustably arranged opposite each other at such points upon the said shafts as to form longitudinal creases upon the strip of paper, passing between the rollers, at the points where the paper is to be folded to form the receptacles or flower pots.

The grooved rollers 41 are arranged so that the narrow creasing projections upon the opposite rolls 42 will crease the paper in the said grooves. The paper passes from the rollers 41 and 42 to folding rollers 43 and 44 mounted upon the frame 20 a short distance beyond the platform 38, the said paper passing over a guide plate 45 which is mounted upon the platform 38 and held in position by suitable brackets. The said guide plate is preferably triangular in shape, its wide end being adjacent to the rollers 41 and 42 while its pointed end extends close to the folding rollers 43 and 44. The said rollers 43 and 44 are journaled in a vertical framing mounted upon the main framing 20 and the upper roller 43 is provided with movable journaled bearings 46, so that the said roller 43 may rest upon the periphery of the roller 44 of its own weight.

The rollers 43 and 44 are preferably positively driven for feeding the paper forward in the machine and for this purpose each of said rollers is provided with intermeshing gears 47 and 48 which are secured to the shafts of the said rollers just outside of the framing in which they are mounted.

One of said rollers is provided with a beveled gear 49, which meshes with a corresponding bevel gear 50 carried by a driving shaft 51. The driving shaft is journaled in bearings mounted upon the frame of the machine and extends longitudinally along the side thereof, receiving its movement from mechanism which will be hereinafter fully described.

The paper creased by the rollers 41 and 42 passes to the rollers 43 and 44 in such a way that it is folded near its central creased line, upon the pointed converging end portion of the guide 45 and will be doubled between the rollers 43 and 44. The creases however are arranged so that one fold or lap of the material is wider than the other, and so that an overhanging edge portion is left upon one side as shown in dotted lines in Fig. 8. This overhanging edge portion is to be folded around the adjacent edge of the other lap of the material and to be cemented or otherwise caused to adhere thereto. For this purpose the folded material is passed along a horizontal guide 52 to a glue or cement applying vat. The guide 52 is formed with a flange upon one side, the material with the attaching edge overhanging the other edge of said guide. The guide 52 leads the material to a glue or cement applying roller 53, which is carried by a shaft 54 journaled near the upper edge of an adhesive holding vat or receptacle 55. The wheel 53 is mounted in such a way that its periphery extends downwardly into the vat and into the adhesive carried thereby and is thus in position to carry the adhesive material upwardly and apply the same to the under side of the securing strip of the paper. A weight roller 56 bears upon the upper side of the material immediately above the wheel 53 and is held in place by a link 57 which is pivoted to the vat as clearly shown in Fig. 3. The weight of the said roller 56 will thus cause the paper to be pressed against the wheel 53, sufficiently to receive a proper coating of the adhesive material.

After the adhesive material has been applied to the securing flap, which flap is indicated at 60 in Figs. 8 and 13 of the drawing, the mechanism is arranged for turning the flap over and pressing it upon the outer surface of the adjacent folded material. For this purpose the said mechanism is provided with a twisted metallic strip 61, which the flap 60 engages as the material is fed forward in the machine. In passing under the said strip 61 the strip of paper will be depressed and the securing strip 60 will be turned and folded so as to press the adhesive applied to the surface of said strip, against the adjacent surface of the folded paper. The folded material or paper will be guided by the strip 61 upon one edge and

a grooved guide 62 upon the other edge toward pressing rollers 63 and 64. To insure the holding of the glued or cemented edges together, a weight roller 65 is arranged above the strip 61 and movably held in place by a pivoted arm 66. The said arm 66 is itself pivotally supported upon a cross bar 67 mounted upon standards 68, secured to the main frame as clearly shown in Fig. 2 of the drawing. The said weight roller 65 bearing upon the glued edges of the paper strip insures the holding of the same together until the parts can be firmly pressed upon each other by passing between the rollers 63 and 64. The upper roller 63 is carried by movable bearings and rests of its own weight upon the lower roller. From the rollers 63 and 64 the folded and edge secured paper passes to and through adjustable guides 70 which are carried by a cross bar 71 mounted upon the said frame 20. These guides may be set by means of their adjusting screws indicated in Fig. 2 at proper distance from each other to accommodate the web of material. From the guides 70 the folded web passes between feed rollers 72 and 73 which are mounted in a suitable framing 74 extending transversely of the frame 20. The upper roller has sliding journal bearings which permit of the said roller resting of its weight upon the lower roller 73.

The two rollers move simultaneously having intermeshing gearings at 75 similar in all respects to the gears 47 and 48 heretofore described and the lower roller is also provided with a beveled gear 76 similar to the bevel gear 49, which engages a driving bevel gear 77 secured to the said shaft 51. The folded web of material thus receives a positive feed from the action of the rollers 72 and 73. The web of material next passes upon an endless belt 78 which is carried by rollers 79 and 80, the under lap of the said belt also passing over an intermediate roller 81 mounted upon the frame 20. The roller 79 is provided with a beveled gear 82 meshing with a corresponding bevel gear 83 secured to the shaft 51, whereby the belt may be caused to move longitudinally of the machine in unison with the operation of the other parts.

The belt 78 is adapted to hold and properly support the web of paper in its folded and cemented condition as it is presented to creasing dies and the cutting mechanism which is employed for cutting it into proper lengths. The web of folded paper passes along the said belt 78 and beneath a weight roller 84 which is carried by a pivoted frame 85 mounted upon an inclined transverse frame 86 which rises from the main frame 20. The weight roller 84 is immediately above the roller 80 so that a firm hold is maintained by the said roller 84 upon the

folded paper. The paper passes from the belt 78 between die plates 87 and 88. The lower die plate 87 is firmly bolted to uprights upon the frame 20 as clearly shown in Fig. 5 while the upper die is adjustably carried by a rocker plate 89. The said rocker frame is made of greater width than the frame of the machine and is journaled in bearings 90, upon the opposite sides of the machine as clearly shown in Fig. 2. The said rocker plate 89 is provided with an arm 91 having an antifriction roller 92 upon the end thereof, which engages the periphery of a cam wheel 93. The cam wheel 93 is secured to a shaft 94 which is driven by means of a pulley 95 adapted to be engaged by a power belt 96, the said belt extending to any suitable source of power. An idler pulley 97 mounted upon the shaft 94 adjacent to the pulley 95 normally receives the belt 96 when the mechanism of the machine is not being driven, any suitable belt shifting means 58 being used having an operating rod 59 extending longitudinally of this machine. The periphery of the cam wheel 93 is preferably inclined so as to bear squarely upon the surface of the friction roller 92 and the said cam wheel is provided at one point in its periphery with an enlargement or projection 98 which upon engaging the friction roller 92 lifts the same so as to rock the plate 89 and force the upper die plate 88 downwardly against the lower die plate 87. The said die plate 87 is provided with a securing screw 100 and two adjusting screws 101 and 102 by which the angle of the die plate may be controlled with respect to the face of the lower die plate.

The die plates are provided with creasing edges adapted to form the angular creases indicated at 103 in Fig. 13 and for this purpose the said creasing edges are made triangular in shape as shown at 104 in Fig. 6. The creasing blades are preferably of the shape indicated in Fig. 7 and are set into grooves 105 formed in the face of the die plates, side packing strips 106 for holding them tightly in position being also inserted in said grooves.

It will be observed by reference to Fig. 6 that the triangular cutting edges of the lower plate 87 is off-set or arranged to one side of the triangular creasing edges carried by the upper die plate 88. The die plates are formed with flat smooth surfaces opposite the creasing edges 104 on the adjacent plate so that when the die plates are brought together, the creasing edges merely indent the fold of paper which is next to them, the creases not extending through to the other fold of the paper. It will be understood that the two folds of the paper are in the position shown in Fig. 8 with the exception that the securing flap 60 has been

5 tightly cemented upon the edge of the shorter fold. When the die plates come together upon the paper a triangular crease will be formed upon one side near one edge of the material and a similar triangular crease upon the other side near the other edge of the material, so that when the blanks have been opened to the position shown in Fig. 13, the diagonal creases will facilitate the inward turning of the opposite intermediate portions at the ends of the blanks.

10 In order to cut the blanks for the flower pots or receptacles at proper lengths, the mechanism is provided with a rotating cutter wheel 107 which is secured upon the outer edge of the shaft 94. The said wheel is of course to one side of the path of the blank forming web and is provided with a tangentially arranged knife 108, which projects a suitable distance beyond the periphery of the said wheel, to engage the web of paper as it leaves the creasing die plates. The relative positions of the die plates and cutter will be understood by reference to Figs. 5 and 10. The blanks pass between the feed rollers 109 and 110.

15 The lower roller 109 is carried by a shaft 111, which projects laterally with respect to the machine and a sufficient distance beyond the sides thereof to carry a grooved pulley 112. A belt 113 connects the grooved pulley with a larger grooved pulley 114 which is secured to the shaft of the roller 80. The said roller 109 thus travels at a considerably greater speed than the belt 78, which moves upon the said roller 80, tending to pull the blanks more rapidly than when they are traveling upon the belt 78. As soon as the blank is severed by the knife 108, the said belt will therefore tend to shoot the said blank forward and throw it into position in a trough 115. The upper pulley 110 is a weight pulley, merely pressing upon the blanks of its own weight, and is carried by the end of a pivoted lever 116 extending transversely of the machine. The said lever is so positioned that it is lifted to a horizontal position when there is a blank beneath it, but will fall to a slightly inclined position as shown in Fig. 10 when no blank is in the machine. The outer end of the lever 116 carries a circuit making contact 117 and is also connected with a conductor 118 whereby a recording device or counter 20 may be controlled in accordance with the action of the parts as will be hereinafter described.

25 The blanks after they are cut are piled successively by the action of the feed rollers 109 and 110, upon a traveling belt 120 which is mounted upon rollers 121 and 122, mounted in the trough 115 and the rapid movement of the blanks after they are cut will cause them to be piled up upon each other very much as indicated in Fig. 5. The

blanks may be delivered in completed form from said belt into any suitable receptacle or may be taken therefrom by hand from time to time in quantities. The belt 120 is driven at a comparatively slow speed, with respect to the movement of the pulley 109 and the motion of said belt is received through the agency of a shaft 123 which carries the roller 121 and which is provided with a larger belt wheel or pulley 124. A belt 125 connects the same with a small belt wheel or pulley 126 carried by the shaft of the pulley 80 as will be clearly understood by reference to Figs. 2 and 4. The shaft of said pulley thus communicates only a slow movement to the belt 120, but a rapid movement to the pulley 129 because of the relative size of the pulleys operating these parts.

30 Coöperating with the action of the rollers 110 and the lever 116 carrying the same, is a counting mechanism which is automatically stopped or started in accordance with the passage of blanks between the rollers 110 and 109. The counting mechanism comprises any suitable counting device as 127 which may be of any ordinary type, having a series of counting disks, fed forward step by step in any usual or well known manner. The mechanism of the counter forms no part of the invention and is not illustrated, the casing only thereof being shown in Fig. 16. The counting device is operated by a rocking lever 128, the upper end of which carries a wrist pin or stud 129, which engages an elongated slot 130 in one end of an abutment 131. The other end of the abutment is formed with a ring bearing, adapted to engage the periphery of an eccentric 132 which is keyed upon the shaft 94. The said shaft 94 revolves in such relation to the parts that each time the blank is severed from the paper web, the abutment 131 will be caused to rock the lever 128 so as to feed the indicating wheels of the counter forwardly one count. The mechanism is also so constructed that the counting device will not be operated when the blanks are not passing through the machine, as for instance when there is a temporary cessation of the feeding of the paper webbing to the mechanism. For this purpose the lever 128 is provided with a hooked end portion 135 at the end thereof opposite to the pin 129. A lock lever 136 pivoted at 137 on the adjacent frame and having an armature 138 projecting therefrom and opposite the poles of a magnet 139, is adapted to engage, by means of a hook 140 formed upon its upper end, the hook 135 of the said lever 128, when the said magnet is actuated or energized.

35 In order to actuate the magnet 139 when there is no blank to be mounted, a battery as 141 or other source of electrical energy is provided and mounted adjacent to the

frame or upon the same, having conductors extending to a switch 142. From the switch one of the conductors 143 passes to the magnet and a conductor extends from the magnet to the end of the lever 116 as heretofore intimated. The other conductor leaving the switch, namely conductor 144, extends to a contact spring 145, which is mounted upon a bracket 146, adjacent to the counting device 127, so that its free spring end will be engaged by the end of the pitman 131. When blanks are continuously passing between the rollers 109 and 110, no current will pass through the battery and the connection necessary for completing said circuit will be broken at the contact 117. As soon as the blanks fail to pass beneath the roller 110, the said roller will drop into the position shown in Fig. 10 and the contact 117 will engage an adjustable contact 147 carried by the frame of the machine. This will cause a circuit to be completed through the battery and magnet and the magnet will thereby be energized, for pulling upon the armature 138 and throwing the hooked end 140 of the lever 137 into engagement with the hook 135 of the lever 128 preventing its oscillation.

The circuit formed passes through conductors 144, the switch 142 and thence to the battery 141 and back through the switch to conductor 143 and thence to the windings of the magnet and over conductor 118 to the lever 116. From the lever the circuit will pass through the contacts 117 and 147, to the framing of the machine and thence to the casing of the counter 127 and through the lever 128, the pitman 131 to the spring contact 145 and back to the conductor 144 again. This circuit cannot be completed when blanks are between the rollers 109 and 110 for the said circuit will be broken at the contact 117. The said lever 116 is mounted in an insulating casing 150 so that the circuit will not be completed except through the said contact 117. The oscillating lever 128 will ordinarily be rocked back and forth by the weight of the lever 131, but when it is locked by the lever 136 engaging the hook 135, it will be held against movement, at which time the slot 130 will permit of the movement of the pitman without injury to the parts.

The operation of the mechanism will be readily understood by reference to the above description and need only be outlined in connection therewith. The blank strip of paper coiled in any desired quantity is mounted upon the platform 23 and is led in vertical edgewise position, through the guide plate 26 and behind the tension plate 28 to the longitudinal creasing rollers 41 and 42. These rollers may be adjusted by the set screws which hold them upon the shafts 39 and 40, so as to form the said creases at

the desired distances from each other, to facilitate a proper folding of the flower pots or receptacles. The strip of paper then passes over the folding guides 45, between the feed rollers 43 and 44 in doubled position, with the securing flap or edge 60 projecting beyond the doubled portion. The said web of paper will then pass along the guide 52 and over the cementing roller 53 receiving a coat of glue, cement or other adhesive from said roller upon the inner surface of the flap 60. As the material continues to advance in the machine the flap 60 will be folded by the twisted bar 61 and the gummed or cemented flap be pressed tightly against the adjacent folded portion of the paper by the rollers 63 and 64. From this point the folded and cemented paper in doubled condition will pass onwardly through the guides 70 and 71 to feed rollers 72 and 73 from which the folded strip passes to the belt 78. The pot or receptacle forming strip thus produced, continues along the belt 78 and passes between the die plates 87 and 88, having its end edge crimped or creased upon opposite sides by the action of said dies, to facilitate the inward folding of the ends of each receptacle blank as indicated in Fig. 13. Immediately after the crimping operation the knife 108 strikes the paper web and cuts a blank of suitable length therefrom, the said severed blank being shot forward by the rapidly moving roller 109 into the trough 115. After a suitable quantity of blanks have collected in said trough they may be removed therefrom in any desired manner. The counting mechanism has already been described and needs no further statement in this connection. The shafts 51 and 94 are preferably driven at different rates of speed, the rate of speed of the said shaft 94 with respect to the shaft 51 controlling the length of the blanks cut from the continuous web of material. The shaft 94 which is driven by the belt wheel or pulley 95 carries a gear 151 which meshes with an intermediate gear 152, carried by an adjustable arm 153, the said gear 153 meshing with a gear 154 which is secured to a counter shaft 155 mounted below the shaft 94 upon the framing of the machine. The said shaft 155 also carries a gear 156 which meshes with a gear 157 secured to the end of the shaft 51. Through this turning of the gearing movement is imparted from one shaft to the other. The mounting of the gear 152 is such that it may be adjusted with respect to the shaft 94, so that a larger or smaller gear may be substituted for the gear or pinion 151, to vary the relative speeds of the two shafts. The arm 153 is pivoted upon the shaft 155 for this purpose and its outer end is adjustably connected with a slotted plate 158 by means of an adjusting screw 159. The

gearing 152 will always be in engagement with the gear 154, but by adjusting the arm with respect to the slotted plate, it will be observed that the said gear 152, may be made to mesh with gears of various sizes substituted for the said gear 151. The operation of this mechanism is obvious from the description and needs no further explanation.

10 What I claim is:

1. A paper receptacle forming machine, comprising mechanism for creasing a web of paper longitudinally, a guide for facilitating the doubling of the paper longitudinally, rollers for pressing the paper in doubled form, one edge of the paper being permitted to project beyond the other, an adhesive supplying mechanism adapted to place the adhesive upon the projecting edge portion, means for turning the edge portion over upon the doubled material, and mechanism for creasing the end portions of the folded blank thus formed, to facilitate the shaping and folding of the same into a receptacle.

2. A paper receptacle forming mechanism comprising means for holding and supplying a paper strip to the mechanism, a guide for directing the same to creasing and folding devices, a friction means adapted to engage the strip of material to keep the same in taut condition, rollers for forming longitudinal creases in the strip, a triangular shaping plate for guiding the strip into doubled position, folding rollers for pressing the strip in doubled form, one edge of the strip being allowed to project beyond the other, an adhesive applying roller adapted to spread an adhesive upon said edge, rollers for pressing the edge with its adhesive material, upon the adjacent edge of the folded material, means for crimping the end of the folded strip, and a knife operable transversely of the machine for cutting the strip in desired lengths.

3. A paper flower pot forming mechanism, comprising means for longitudinally creasing and folding a strip of paper, means for placing an adhesive between the edges thereof to form an elongated inclosure, dies having creasing edges projecting therefrom adapted to make triangular creases at the ends of the folded paper, a revoluble knife adapted to cut off the folded paper in proper lengths for forming the flower pots, means for delivering the cut portions of the paper, with a quick movement from the machine, said means being also adapted to control the operation of a counting device, and a counting device associated with said mechanism.

4. A paper flower pot forming machine

comprising means for folding and securing at the edges, a longitudinal strip of paper, means for creasing the ends to facilitate the folding of the bottom of a flower pot comprising a fixed die and a movable die mounted above the same, a rocker plate for moving the movable die, a cam for actuating the same, and means for cutting the material into flower pot lengths after the end portions have been crimped by said dies.

5. A flower pot forming mechanism, comprising means for longitudinally creasing and folding a strip of material, means for securing the edges of said material together, a counting device mounted upon the machine, a pitman for operating the same, a shaft for operating the said pitman, means for driving said shaft at the proper speed to secure the desired lengths of flower pots, a knife operated by said shaft to cut the pots off at the right length, and electrical means for preventing the operation of the counting devices when flower pots are not being fed through the mechanism.

6. A machine for making paper flower pots, comprising a longitudinal frame, an adjustable paper roll carrier mounted thereon, a vertical guideway conveying the paper, a plurality of creasing rolls vertically mounted on said frame, a folding form mounted adjacent said creasing roll, rollers to fold the material creased and feed the material through the machine, a paste roll for applying an adhesive to secure the overlapping of the adjacent edges of the folded material to form a hollow structure, an edge folder adjacent said paste roll, pressing rolls to press the folded edge in position, a creasing mechanism to form creases transversely disposed on the material passed through the mechanism, a cutting wheel mounted adjacent said creasing mechanism, for cutting the material the proper length, a driving shaft supporting said cutting knife, a main shaft for driving said feeding and folding rolls, gear wheels mounted on said main and said driving shafts, a lever provided on said main shaft, a segment to adjust said lever in relation to said gears, and a removable pinion mounted on said lever and engaging said gears whereby other pinions may be inserted to change the speed of the shafts to regulate the length of the material cut by said cutting wheel.

In witness that I claim the foregoing I have hereunto subscribed my name this 18th day of January, 1912.

ARTHUR J. HODGE.

Witnesses:

EDMUND A. STRAUSE,
EARLE R. POLLARD.