April 27, 1937. C. L. RAGOT 2,078,774

APPARATUS FOR SETTLING AND SEALING MATERIAL IN PACKAGES

Filed Dec. 30, 1933 5 Sheets-Sheet 1

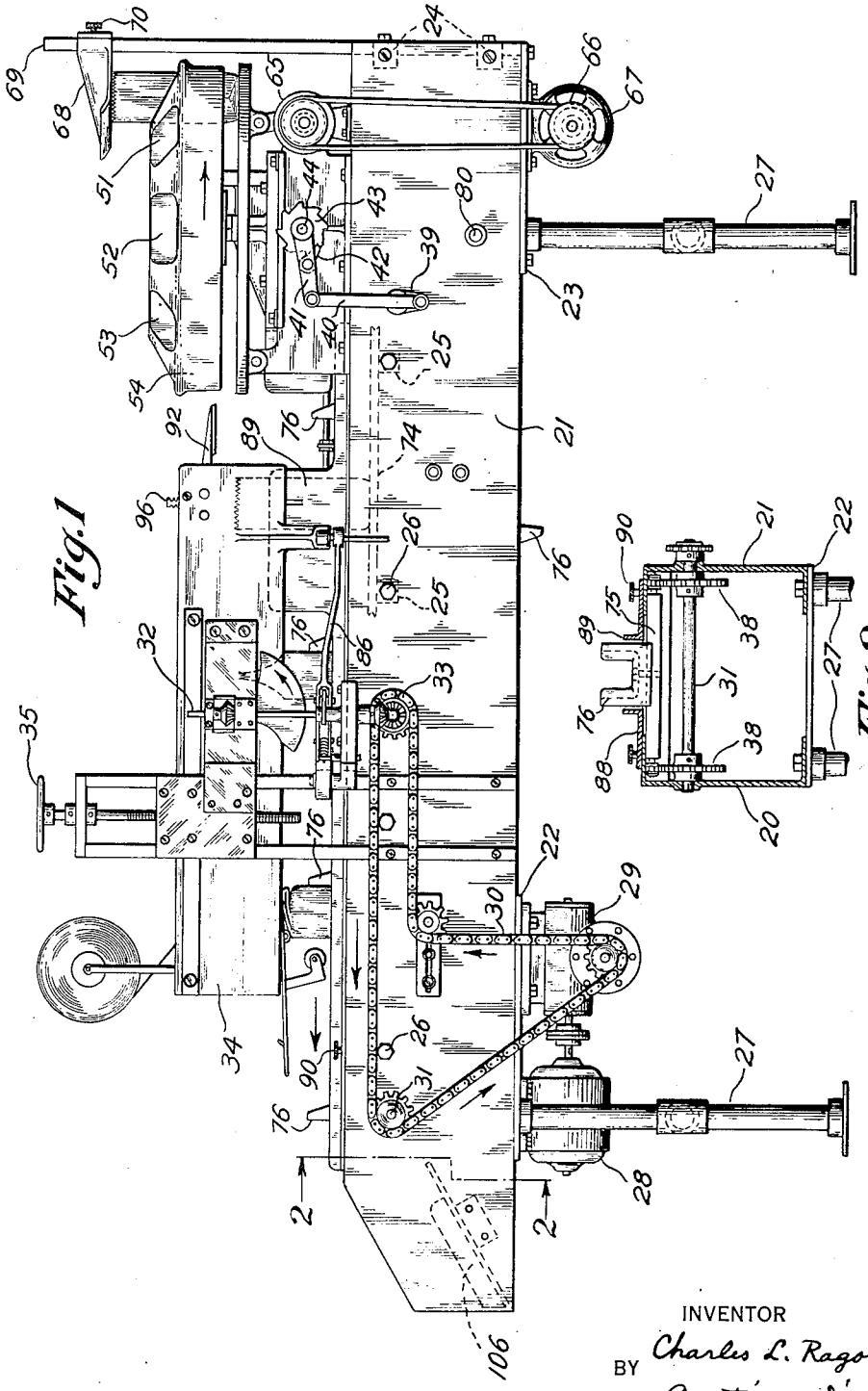

Fig. 1

Fig. 2

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Fig. 3

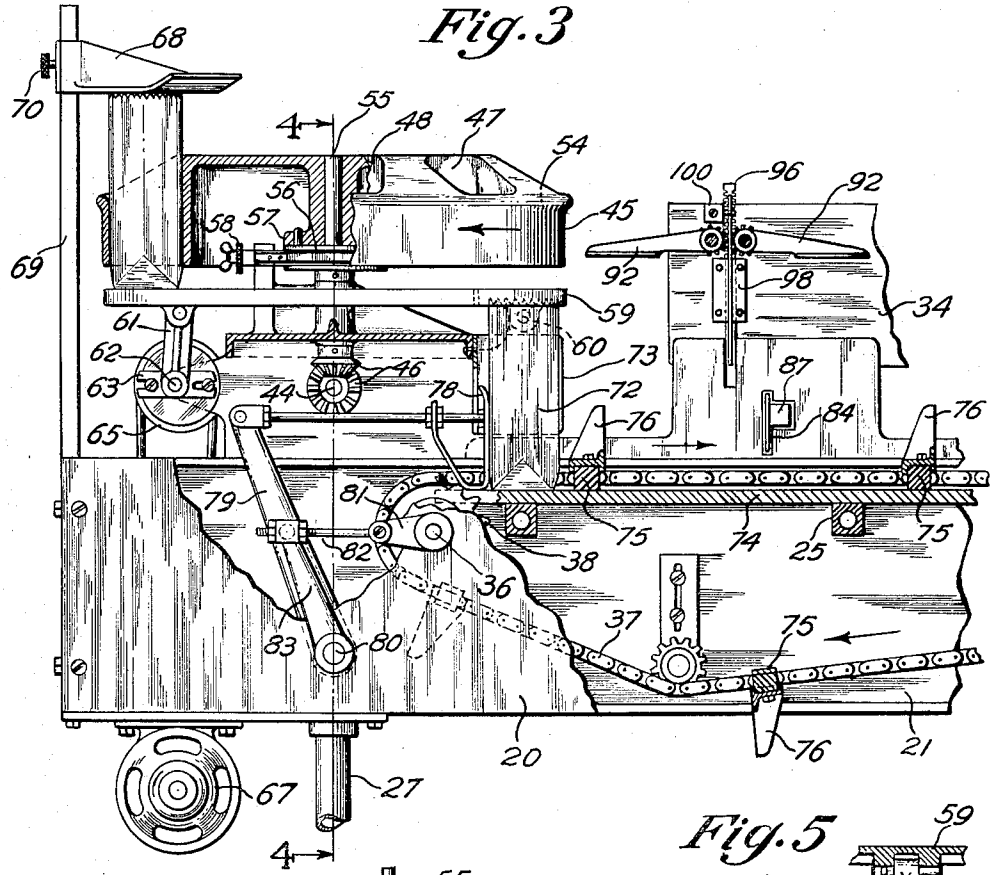


Fig. 5

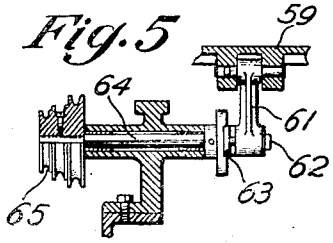
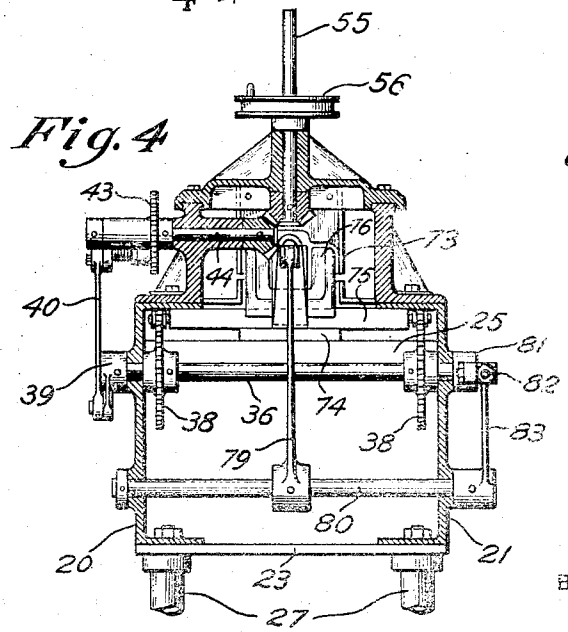


Fig. 4



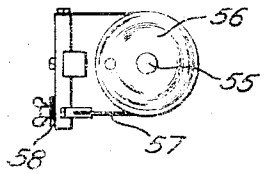


Fig. 6

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APPARATUS FOR SETTLING AND SEALING MATERIAL IN PACKAGES

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Fig. 7

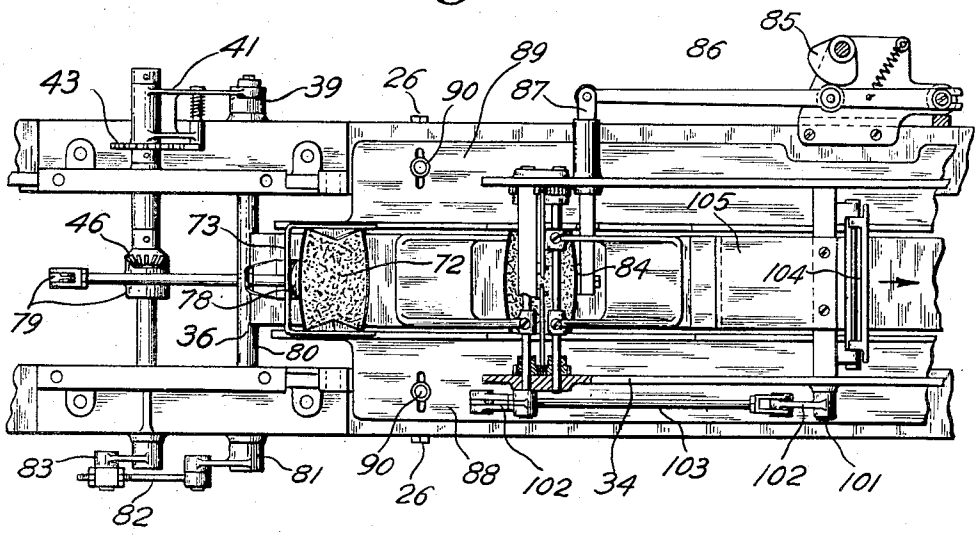
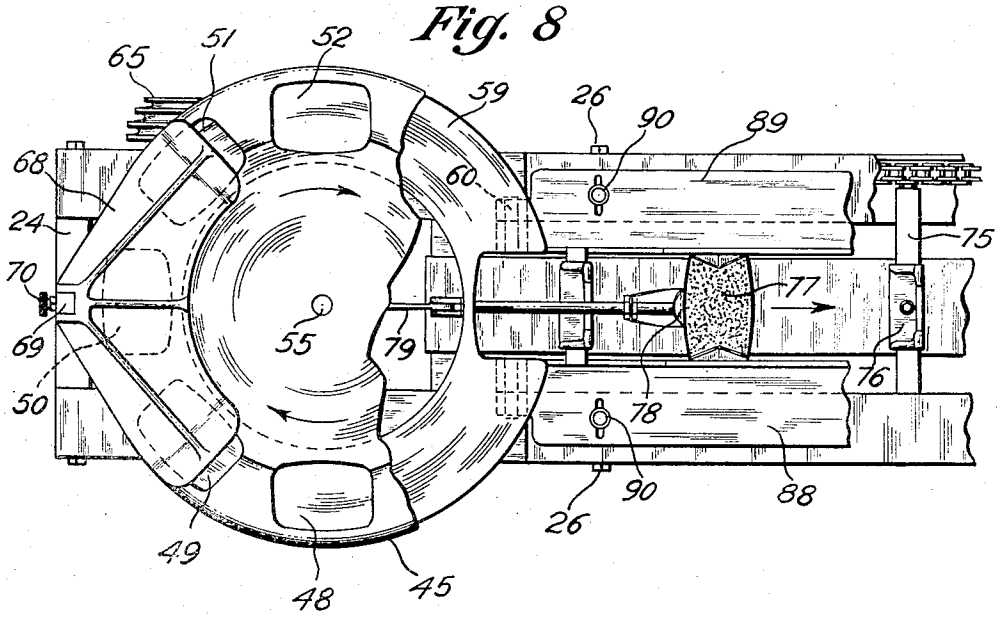


Fig. 8



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APPARATUS FOR SETTLING AND SEALING MATERIAL IN PACKAGES

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Fig. 9

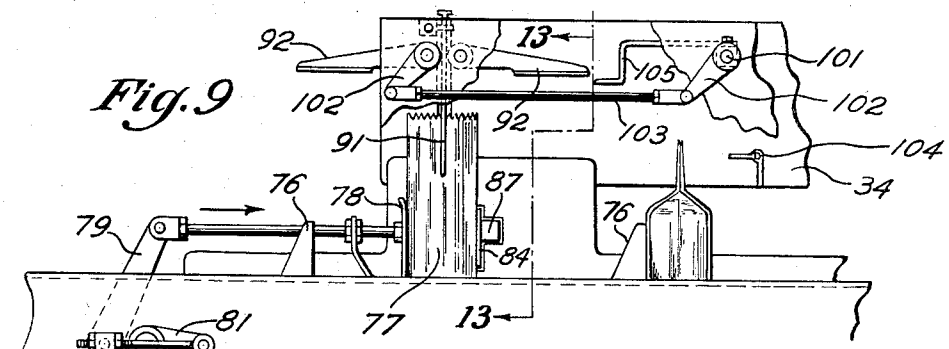


Fig. 10

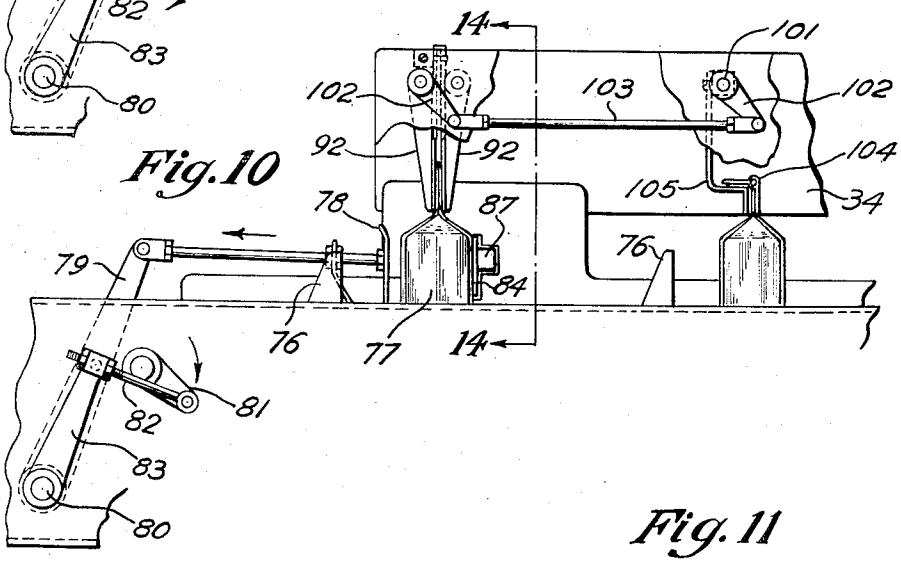


Fig. 11

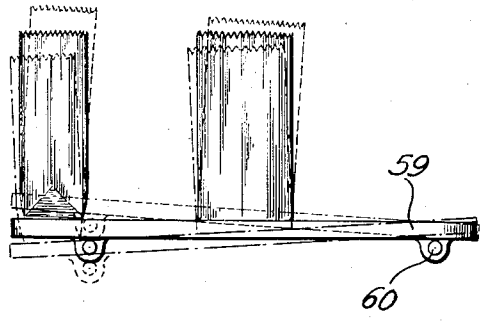
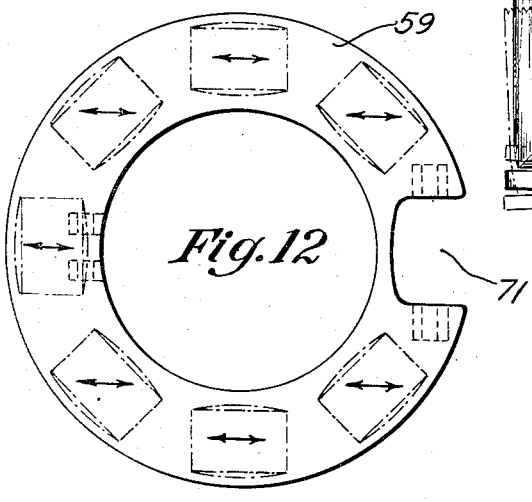


Fig. 12



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APPARATUS FOR SETTLING AND SEALING MATERIAL IN PACKAGES

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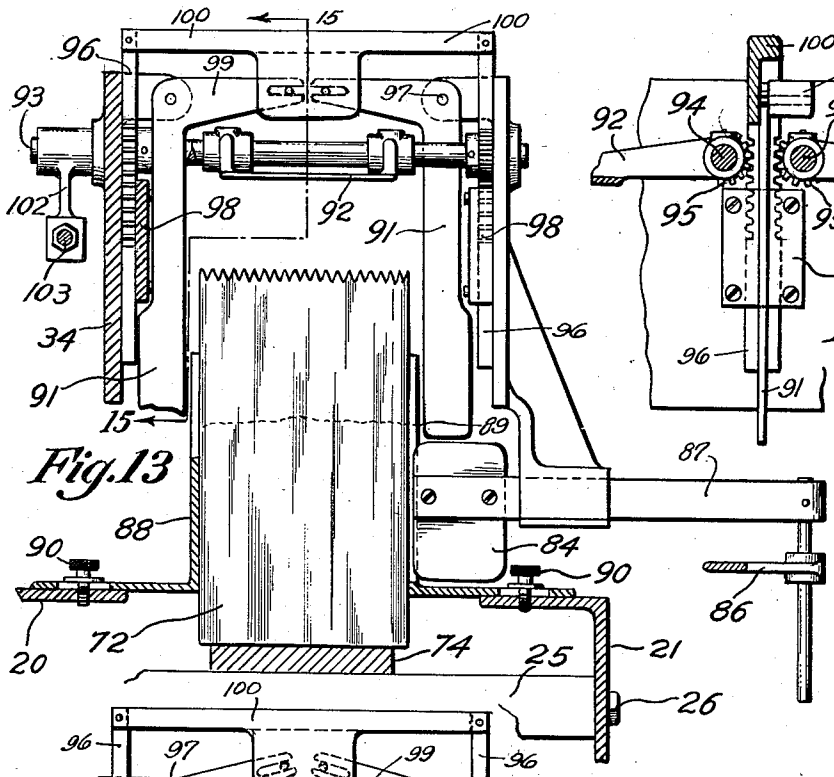

Fig. 13

Fig. 15

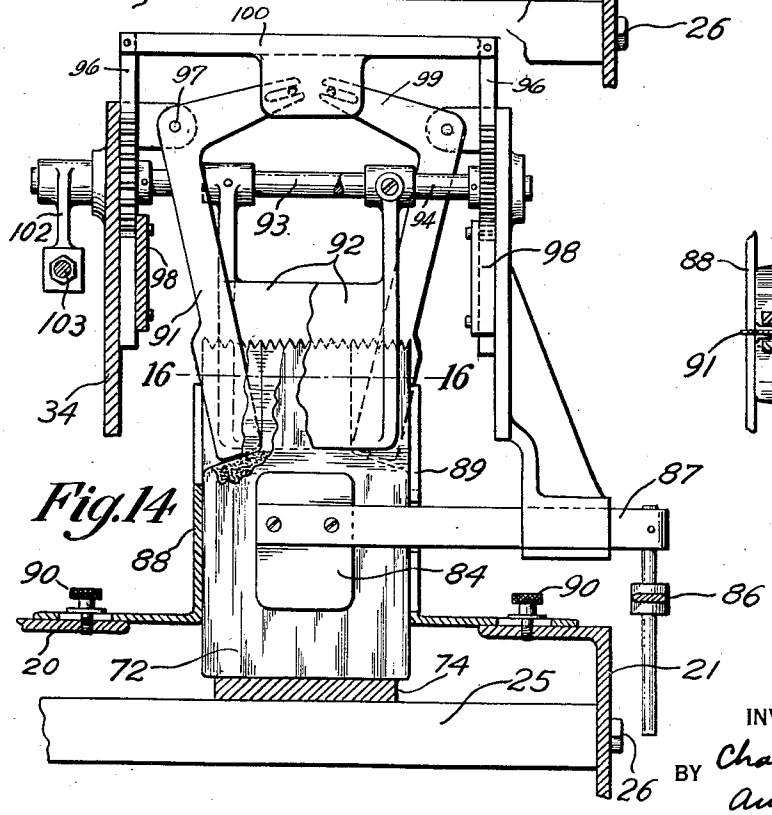

Fig. 14

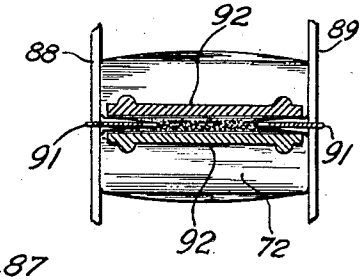

Fig. 16

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UNITED STATES PATENT OFFICE

2,078,774

APPARATUS FOR SETTLING AND SEALING MATERIAL IN PACKAGES

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Application December 30, 1933, Serial No. 704,733

19 Claims. (Cl. 93—6)

This invention relates to a method of processing filled bags, and includes an improved mechanism to carry out the purpose of the invention in a practical and economical manner.

The purpose of this invention is to subject filled bags, made of paper or the like, to a process whereby the contents within will be efficiently compacted to the required degree, and the bags themselves will be so moulded and shaped, both below and above the contents line, that they may be folded readily, closed and sealed in a uniform manner, all in the same machine, and without rehandling whatsoever on the part of the operator.

It has been found in practice that to insure a uniformly neat package, and to maintain the same in that condition, the product within the bag must first be compacted properly, and the bag preferably should be so prepared before the tucks and folds are creased, that they will conform to their natural or intended shape before the surplus bag material is folded over and sealed.

One of the principal features of this invention is the provision of an improved vibrating device constructed and disposed in a novel manner, so as to operate to give a constant result, yet permitting adjustments, whereby the best results may be obtained. By the use of this vibrator, in conjunction with the bag shaping mechanism, a uniform size and shape of package is made possible.

Another feature of this invention is the provision of an improved apparatus for settling the material in the bags, and then to properly fold the same, and then to seal the thus folded bags. The broad combination of the settling, shaping, folding and sealing forms a part of this invention and its method of operation.

The vibratory action is accomplished in such a manner as to produce a jogging movement which is graduated from a minimum to a maximum intensity, and preferably back to zero. It has been found that this preferred series of changes in intensity of the vibrations causes the particles of the material to assemble and nest together compactly within a short lapse of time and within a small space.

In order to produce the desired vibratory action to a series of bags in a continuous stream, the vibrator is constructed so that different portions of same will have different intensity of vibration, and then causing each bag of a series to travel over the desired vibrator area in proper sequence with reference to the said vibration intensity variations.

The travel of the bags is preferably accomplished by the use of a rotating turret device having a series of pockets so shaped and disposed as to conform to the normal desired shape for the compacted contents. These pockets preferably have no bottoms so that bags rest on the upper surface of the vibrating element over which they are caused to slide.

This turret acts as a receiver in the pockets of which the filled bags are inserted by the operator. It is desired, for convenience in loading and ejecting the bags, that the turret be driven intermittently so that each pocket stops at definite stations along its path in this instance the path being a circle. Thus, as there are several bags being passed over the vibrator in sequence at any given moment, the time available per bag for its vibration is correspondingly increased.

To accommodate bags having different basal area or aspect ratio, different turrets may be interchanged on the machine, each turret to suit one particular proportion or size of bag cross-section, or, a turret may be fashioned with pockets made adjustable to suit a wide range of different sizes of bags.

In order to properly compact different kinds or grades of products or materials, the frequency of the vibratory action is adjustable preferably by varying its speed, and altho the vibrator produces a variable intensity of motion at different points along its surface as heretofore explained, a further adjustment may be provided in order that the maximum intensity may be varied also to suit the nature of the contents to be compacted within the bag. This is accomplished usually by varying the stroke of the vibratory action.

From this turret and vibrator combination, the bags are discharged in sequence, properly orientated in the path of a series of constantly moving conveyors which move them thru the several stations where the machine performs the remaining operations of folding and sealing.

It is preferred, in machines of this character, to have the bags follow thru the machine by means of a conveyor, either of the continuously moving type, or of the intermittent type. It has been found, however, that certain of the operations to carry thru the process to completion require a continuously moving conveyor, and others require that the bags, in sequence, shall remain stationary during a portion of time. To impart this variable or spasmodic movement to the bags, as they pass thru the machine, a suitable device is provided to cause each bag to be moved for-

ward or ahead of the engaging portion of the conveyor, and to leave it there to await the arrival of its respective engaging portion of said conveyor which then carries it thru continuously.

In order to accomplish the above, the bag engaging members are so spaced that the time interval between them will be sufficient to allow the desired standing or stationary time for the bags. Thus, it is made possible to momentarily halt a bag although the conveyor is constantly moving.

Having given an outline of the purpose of my invention, a further and detailed understanding may be had by referring to the several drawings and explanatory text which follows, in which like reference numbers correspond in both.

Fig. 1 is a side elevation of a machine embodying a practical application of the invention herein described.

Fig. 2 is a sectional view on line 2—2 of Fig. 1 showing an end view of the frame and conveyor.

Fig. 3 is a side elevation of the opposite side to that of Fig. 1 showing the entering end of the machine, partly broken away to expose more of the mechanism.

Fig. 4 is a sectional view along line 4—4 of Fig. 3.

Fig. 5 is a sectional view of the vibrator mechanism and related parts.

Fig. 6 is a top view of a part of the mechanism in Fig. 4 showing only the braking arrangement.

Fig. 7 is a plan view of Fig. 3 with some of the upper parts removed.

Fig. 8 is a plan view of the entering end of the machine similar to Fig. 7, but with the turret and vibrator in place.

Fig. 9 is a side view of two bags in their respective positions in relation to the tucking, pressing, and folding mechanisms, just before these become operative.

Fig. 10 is the same as Fig. 9, at the moment of operation.

Fig. 11 shows the vibrator table with a bag in each of the positions corresponding to opposite orientation along the bag travel, also showing in exaggerated manner, the vibratory action produced.

Fig. 12 is a plan view of the vibrator table showing the position of a bag at each station along its travel.

Fig. 13 is an enlarged view of a bag and the tucking and pressing mechanism on line 13—13 of Fig. 9.

Fig. 14 is the same view as Fig. 13, but taken on line 14—14 of Fig. 10.

Fig. 15 is a sectional view thru line 15—15 of Fig. 13, and

Fig. 16 is a sectional view on line 16—16 of Fig. 14.

Referring more specifically to Figs. 1 and 2, the machine consists of a pair of side frames 20 and 21, connected rigidly at the bottom by plates 22 and 23, and further braced by cross pieces 24 at the right hand end, and cross members 25 held in place by bolts 26. The whole machine is preferably supported by legs 27.

Power for the mechanism is supplied by motor 28 driving the machine at reduced speed by means of worm reduction gear 29. Drive chain 30 provides the means for driving conveyor shaft 31, and vertical shaft 32 by means of bevel gears 33.

In the preferred construction herein, shaft 31 drives the conveyor system, while vertical shaft 32 drives the tucking, creasing, folding, closing and sealing head 34. This head is adjustable vertically at 35.

Referring to Figs. 3 and 4, shaft 36, which is rotated by the action of the conveyor chains 37 riding on sprockets 38, is equipped with a crank 39, Figs. 1 and 7, causing link 40 to reciprocate, thereby oscillating rocker arm 41. This arm carries a pawl 42, Fig. 1, which engages ratchet 43 mounted on turret drive shaft 44, Figs. 1, 3 and 4.

Referring to Figs. 3 and 4, it will be seen how shaft 44 drives turret 45 thru miter gears 46. The turret has pockets, in this case eight in number, shown in sequence at 47, 48, 49, 50, 51, 52, 53 and 54. The positions of the pockets correspond to the location of the bag stations as shown in Fig. 12. Altho eight pockets are shown, any convenient number may be used.

As the number of teeth in ratchet 43, Fig. 1, is equal to the number of pockets in the turret, each revolution of shaft 36 causes the turret to revolve one-eighth of a revolution. Thus, it is clear that each pocket stops in sequence at eight stations along a circular path. Also, the circumference of the conveyor sprockets 38 is equal to the distance from any one bag engaging portion to the next, therefore, at each revolution of shaft 36, the timing of both elements, turret and conveyor will be synchronous.

By referring to Fig. 11, it will be noted that as the bags move up and down, there is also a definite angular motion which is beneficial in obtaining thoro compacting of their contents. Complete advantage is taken of this angular motion as will be understood from Fig. 12 in which the arrows indicate the direction of the resultant swinging action imparted to the bags. As the bags change their orientation with respect to the direction of this swinging movement their contents undergo a thoro shaking, not merely up and down, but also laterally in all directions, thus insuring that the particles get the maximum persuasion possible to nest along with their neighbors in all directions.

Turret spindle 55, Figs. 3, 4 and 8, locates the turret and carries brake drum 56. Brake band 57, Figs. 3 and 6, adjustable at 58, is used to snub the action of the turret in order that the driving impulse will not carry it beyond the prescribed station.

Referring to Fig. 3, the vibrating table 59 is pivoted at 60 and actuated by means of a connecting link 61 mounted on an eccentric pin 62 carried by an adjustable slide 63 secured to vibrator shaft 64 Fig. 5. Grooved pulleys 65 and 66 provide a variable range of speeds between motor 67 and said vibrator shaft. The eccentricity which provides the stroke producing the vibrations is adjustable by changing the position of slide 63 with relation to the center of shaft 64.

To assist in compacting the contents within the bags, a reaction plate 68 is slidably mounted on column 69, and adjustably fastened at 70. The function of this plate is to prevent the bags from bouncing away from the vibrator table. This would allow the bags to lose a good portion of the available vibratory action. The reaction plate is adjusted to allow the bags to just come in contact with its under surface at the uppermost point of their vibratory stroke. As will be seen in Fig. 8, this plate covers a span of approximately three stations of the turret in that portion of the bag travel where the intensity of vibration is greatest.

When operating the machine, filled bags are placed on the vibrator at a point represented by turret pocket 48, Figs. 3 and 8. As the turret revolves intermittently, in the direction of the arrows, each pocket passes the same given point

in sequence to receive a bag. The turret carries the bags around and over the surface of the vibrator where they are subjected to a graduated vibratory action as heretofore explained. When a bag arrives at point **54**, Figs. 1 and 3, it drops thru gap **71**, Fig. 8, and comes to rest as shown at **72**, Fig. 3.

Thus, each of the pockets, in sequence, comes to a stop in juxtaposition with gap **71**, thru which each bag drops, and chute **73** keeps the bags in upright position until it reaches conveyor floor **74** where it comes to rest.

As will be noted, particularly in Fig. 3, the conveyor preferably consists of a plurality of cross bars **75** carried between chains **37**. On these cross bars are mounted forked members **76**, better shown in Fig. 2, which actually contact with the bags and push them along on conveyor rail **74**.

In order to move the bags to the tucking and creasing position, as indicated at **77**, Figs. 9 and 10, a thrust arrangement is provided which consists of a thrust plate **78**, mounted so as to be reciprocated by arm **79** which is carried by shaft **80**.

This shaft is driven by crank **81** by means of adjustable connecting rod **82** and arm **83**. This thrust arrangement is so timed, with relation to the conveyor and turret, that when a bag drops from the vibrator table, it locates itself as at **72**, Figs. 3 and 7, behind forked member **76**, and at once thrust plate **78** engages it as shown and moves it along, following the forked member ahead of it, until the tucking position is reached as at **77**, Figs. 9 and 10, where it comes to rest for a portion of time. During the remainder of the cycle, the thrust plate and its driving parts recover to the other extreme position as in Fig. 3, behind the next bag to be dropped. Thus, when a bag is in position as at **77**, Figs. 9 and 10, it remains there during the interval of time required for the forked member to catch up to it.

In order to form the bags below the contents line, the turret pockets are so proportioned that they prevent the bags from bulging out of normal and to further maintain this shape at the tucking and creasing station, arresting plate **84**, Figs. 13 and 14, is interposed in the path of the bag as indicated in Figs. 7 and 14. This is driven in and out of the way laterally by cam **85** which moves arm **86** and plunger **87**, as shown in Fig. 7. This arresting plate moves inwardly between the bag and the forked member immediately ahead of it, just before the bag comes to rest. Then the thrust plate **78** squeezes the bag and its contents to a predetermined thickness between itself and the arresting plate as in Fig. 9. At this point, side guides **88** and **89**, Figs. 13 and 14, adjustably mounted as at **90**, provide lateral forming walls, thus completing a four sided mold. These are better illustrated in Fig. 8. The arresting plate is retrieved again as in Fig. 13, just before the forked member engages the bag, as in Fig. 10, at which time thrust plate **78** is also returning to normal. The shape of this plate permits it to hurdle over the central portion of the forked member **76** when they pass each other on the return stroke as shown in Fig. 10.

Now that the bag is in position as shown at **77**, Fig. 9, tucking blades **91**, Figs. 13 and 14, are caused to converge, and creasing blades **92** are folded together downwardly as in Figs. 10 and 14. These two sets of blades operate either in unison as shown, or separate driving and timing means may be provided. In the method illustrated, shafts **93** and **94**, Figs. 13, 14 and 15 are connected by gears **95**, as shown with rack **96** interposed between them. These gears and racks are in duplicate sets at each end of shafts **93** and **94**. Racks **96** are mounted to slide vertically in blocks **98** and are rigidly fastened together by cross yoke **100**, Figs. 13, 14, and 15. The tucking motion is obtained by the upward movement of racks **96** thru yoke **100** which raises the forked arms **99** of tucking blades **91** which are pivoted at **97**. The converging action of blades **91**, therefore, occurs simultaneously with the downward swing of creasing blades **92**, co-acting with each other to form the tucks above the contents line preparatory to folding the tops of the bags to close and seal the same.

The tucking and creasing unit is shown driven from shaft **101**, Figs. 9 and 10, by means of lever arms **102** and adjustable connecting rod **103**. The head proper, as shown in Fig. 1 at **34**, besides carrying and driving the tucking and creasing unit, houses the folding, closing and sealing mechanism. The folding hinge is shown at **104**, Figs. 7, 9 and 10, and tripper blade **105** which throws the bag into the hinge is shown before and after its operation in Figs. 9 and 10 respectively. The details and function of the folding hinge, tripper blade and other mechanisms for closing and sealing the bags are shown in Figs. 1, 9 and 10.

This invention is adapted to operate in conjunction with any desired sealing means or other similar devices or mechanisms, or to close and seal bags by other means or methods. When the bags have been completely processed they pass on to drop chute **106**, Fig. 1, where they may slide by gravity onto a conveyor or other device for carrying them away. Any one of numerous mechanical means for carrying the bags away may be incorporated into and driven by the machine itself or by separate means.

After the folded bag has passed from under the mechanism for folding the top, it passes to a portion of the machine for applying a strip of prepared adhesive tape of some nature for the purpose of sealing the folded part of the bag in position. If desired, a mechanism using a metal fastener instead of applying an adhesive tape may receive the bags after the tops have been folded. In the structure herein presented, it is preferred to employ the taping mechanism even though it is possible to employ glue, any types of clips, metal strips sometimes known as tin ties, or any other type of means which are used mostly in the packaging industry. While no definite and detailed parts of the tape applying mechanism are shown it is to be understood that the combination herein presented has to do with the settling of the material in the bags, then folding the tops of the bags, and then to seal the tops of the bags so folded. This sealing, as heretofore noted, is accomplished by a desired type of tape which is applied in a satisfactory manner. While in this apparatus the tape-applying mechanism is shown in general, it is to be understood that any type of the closure mechanisms noted above may be substituted therefor and properly assembled in place on the machine, it being understood that the machine herein taken as a unit, includes some one of the bag sealing devices. It will also be noted that the bag, in passing under the folding and sealing portions of the machine, is being moved continuously, and is not held in a definite position for a definite time, as has been necessary heretofore.

It will be noted from the invention as hereinabove described, that bags of different sizes containing different materials and of different weight, if desired, may readily be subjected to a motion which settles the materials within the bag, to a desired extent, and that this motion is subject to being of greater intensity or lesser intensity. Also, the apparatus may be modified or adjusted so that different sizes of bags may be readily accommodated.

In addition there is provided a mechanism for readily and quickly folding the tops of the bags so that they may be readily sealed without leaving an excess amount of space between the material and the folds, thus preventing the material from jarring around in the bag after the bag has been sealed or fastened. It will further be noted that there is provided an auxiliary means for moving a bag as soon as it has dropped from the settling apparatus to a position under the tucking apparatus and allowing it to be maintained in that position for a short period of time before the conveyor, in its normal movement, engages the bag to carry it forward thru the folding station and the sealing station, and from there out of the machine.

It will also be noted that the mechanism herein presented is of a minimum number of parts most of which are adjustable to allow the use of the machine in any size bags, and to permit the manufacture of the machine without too many precision requirements.

It is to be understood by those versed in the art that many departures can be made from the specific form in which this invention is disclosed in the accompanying drawings, without in any way impairing the function, scope and usefulness of this machine. Having thus described my invention, what I claim as new is—

1. In a bag packaging machine which settles the material in the bags, and tucks and folds and seals the bags, a vibrating table, means for moving bags thereover, and means for squaring and shaping said bags during the settling of the material in said bags and during the movement of the bags over said table and preparatory to closing and sealing same.

2. In a bag packaging machine which settles the material in the bags, and tucks and folds and seals the bags, a bag receiving receptacle, a vibrating table forming the floor of same, means for moving said receptacle in relation to said table, and means for squaring and shaping said bag preparatory to closing and sealing same.

3. In a bag packaging machine which settles the material in the bags, and tucks and folds and seals the bags, a horizontally disposed vibrating table pivoted at one point and adapted to give varying vibrations to the material in said bags as said bags progress over said table, a series of receiving pockets arranged to move bags along said table, means for discharging said bags from said pockets onto a conveyor leading to the closing and sealing mechanism.

4. In a bag packaging machine which settles the material in the bags, and tucks and folds and seals the bags, a vibrator being pivoted at one point and vibrated from a point removed from the pivoted point, a pocketed receptacle for positioning bags thereon and moving same across said vibrator thereby subjecting the bags to varying degrees of vibration, and means for discharging said bags from said pockets in the path of a conveyor.

5. A bag packaging device comprising a vibrating table, moving pockets for positioning bags thereon, said table having a graduated vibratory action varying along the path of said bags, and means for discharging said bags from said moving pockets in the path of a conveyor.

6. In combination a substantially circular oscillating table pivoted at one edge, adjustable oscillating means at the juxtaposed edge, said oscillations being in a vertical direction, a series of pockets adapted to receive filled bags and move same along in a circular path along said table, and means for discharging said bags from said pockets in the path of a conveyor.

7. In combination, a substantially circular table, a pocketed receptacle, said table being pivoted to oscillate in a plane at right angle to its own, oscillating means, said pivot and said oscillating means being diametrically juxtaposed, said receptacle being adapted to receive filled bags, and position same onto said table, and move same around said circular table, and means for discharging said bags in the path of a conveyor.

8. In a packaging machine, a constantly moving conveyor, having a plurality of engaging members spaced along its length, means for placing packages, in sequence, in the path of said engaging members, means for advancing each package ahead of the said engaging member for that package, and means for holding said packages stationary while certain processing operations are performed, said package being duly released as the said engaging member approaches the package to carry it away.

9. In a packaging machine, a frame, a vibrating table, and an adjustable head, said frame carrying a conveyor consisting of a plurality of engaging members, said vibrating table having a package holding and spacing device to carry said packages along over the vibrating surface, means for discharging said packages into the path of said engaging members, means for projecting said packages ahead of said engaging members to a point under said adjustable head, means for holding said packages, in sequence, while certain processing operations are being performed by mechanisms in said adjustable head, and means for releasing said packages, in sequence, as said engaging members arrive to carry said packages thru subsequent processing operations, said head adjustment being to accommodate packages of different heights.

10. In combination, a substantially circular table pivoted at one end, adjustable oscillating means located at the opposite end, a receptacle having a series of pockets arranged in a circle to coincide with the upper surface of said table, said receptacle being driven intermittently to stations equal in number to the pockets therein, said pockets being adapted to receive and position filled bags in sequence upon the upper surface of said table, the bags to be vibrated by said table, said pockets restricting the lateral bulge on said bags, means for discharging said bags from said pockets in sequence after same have passed around said table and placing the bags on to a continuously moving conveyor, means for advancing said bags in sequence on said conveyor and holding same stationary for an interval of time, means for causing the tucks of said bags to converge above the contents line, means for pressing the opposed flat faces of said bags together above the contents line, said tucking and pressing operations occurring while said bags are

held stationary, means for releasing said bags in sequence after said tucking and pressing operations and allowing same to be engaged by means on said continuously moving conveyor and moved to folding, closing and sealing mechanisms.

11. A bag packaging machine comprising vibrating means for receiving a series of bags, said vibrator adapted to compact or settle the material within said bags, a holder for maintaining each bag as it moves over the vibrator, a continuously moving conveyor for receiving said bags as they leave said vibrator, means for positioning each bag as it is received by the conveyor in a position to be temporarily maintained stationary until a portion of the conveyor engages the bag and moves it forward, means for tucking the top of each bag while the bag is in stationary position, means for folding the tucked top of the bag, and means for sealing together the folded portion of each bag.

12. A bag packaging machine comprising vibrating means for receiving a series of bags, said vibrator adapted to compact or settle the material within said bags, a holder for maintaining each bag as it moves over the vibrator, a continuously moving conveyor for receiving said bags as they leave said vibrator, means for positioning each bag as it is received by the conveyor in a position to be temporarily maintained stationary until a portion of the conveyor engages the bag and moves it forward, means for tucking the top of each bag while the bag is in stationary position, and means for applying adhesive tape over the folded portion of said bag to maintain the bag closed.

13. In combination an agitator adapted to compact materials in bags, a continuously moving conveyor to carry bags away from said agitator, means for discharging bags onto said conveyor, and means for holding bags stationary for a portion of time while on said continuously moving conveyor.

14. A bag processing machine comprising elements for receiving, agitating, conveying, tucking, folding, and sealing bags without rehandling, said receiving element comprising a series of pockets, said receiving elements adapted to be moved intermittently, said agitating element having various intensities of motion in several portions thereof, said conveying element having a plurality of rigid carrying members spaced thereon and moving continuously, said tucking element including means for advancing bags in the path of said carrying members and holding said bags stationary for a portion of time, and said folding element and said sealing element performing their respective operations in sequence while bags are in continuous motion.

15. In a bag processing machine an agitator with different zones thereof having different intensities of agitation, an intermittently moving means for carrying bags across said different intensity zones, continuously moving means for carrying bags away from said agitator, means for advancing and holding bags ahead of said continuously moving means for a portion of time, means for tucking and creasing the tops of the bags during said holding portion of time, and means for folding and sealing bags in sequence while said bags are carried by said continuously moving means.

16. In a bag packaging device a frame having a series of pockets therein adapted to receive and shape filled bags, a vibrating table mounted underneath said frame and forming the bottom closure thereof for said pockets, means for moving said bags over said table to compact the contents therein by moving said frame, a conveyor passing underneath one portion of said table, means for discharging said bags from said pockets on to said conveyor, means for temporarily advancing said bags along the path of said conveyor and temporarily holding the bags stationary, means for tucking the bags above the contents line thereof while thus held, means for releasing said bags, engaging elements mounted on said conveyor at intervals for engaging and moving said bags through folding, closing and sealing mechanisms.

17. In a bag processing machine, a continuously moving conveyor, engaging elements mounted on said conveyor for engaging bags, means in said machine for engaging and advancing bags ahead of the said engaging means mounted on said conveyor to allow said bags to be held stationary for a predetermined interval of time, means for tucking the tops of said bags during this interval of time and for releasing the bags to be engaged and moved by the engaging elements on said conveyor to carry the bags through closing and sealing mechanisms of said machine.

18. In a bag processing machine, a continuously moving conveyor, a series of bag engaging elements mounted on said conveyor, means for tucking the tops of the bags, means for folding the tops of said bags after they have been tucked, and means for sealing the top of said bags in position after the bag has been folded, means in said machine for advancing bags forward along the path of said conveyor and ahead of said engaging elements to allow the bags to be temporarily held stationary for an interval of time to allow tucking, said bag engaging elements moving to engaged position with said bags after tucking to continuously carry the bags through the folding and sealing means.

19. In a bag processing machine an agitating element, members for tucking the tops of said bags above the lines of contents, members for folding down the tucked portions of the bag, and members for sealing the tops of the bags so folded, said agitating member being moved so that it agitates the bags and the contents therein with various intensities in different zones of said member, a frame or carrier moved intermittently to carry the bags over said agitating member, a continuously moving conveyor for carrying bags after they have been discharged from said agitator, elements on said conveyor for engaging said bags to move them forward through a definite travel, means in said machine for temporarily moving said bags ahead of said engaging elements to allow said bags to remain still for a short interval of time to allow tucking of the part of the bag above the contents, said bag engaging elements catching up to and engaging said bags and continuously moving them thereafter through the folding and sealing mechanism.

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