Sept. 2, 1952 F. G. PASOTTI 2,608,949

GLUE-SPOTTING APPARATUS

Filed Nov. 28, 1947 4 Sheets-Sheet 1

Fig. 1

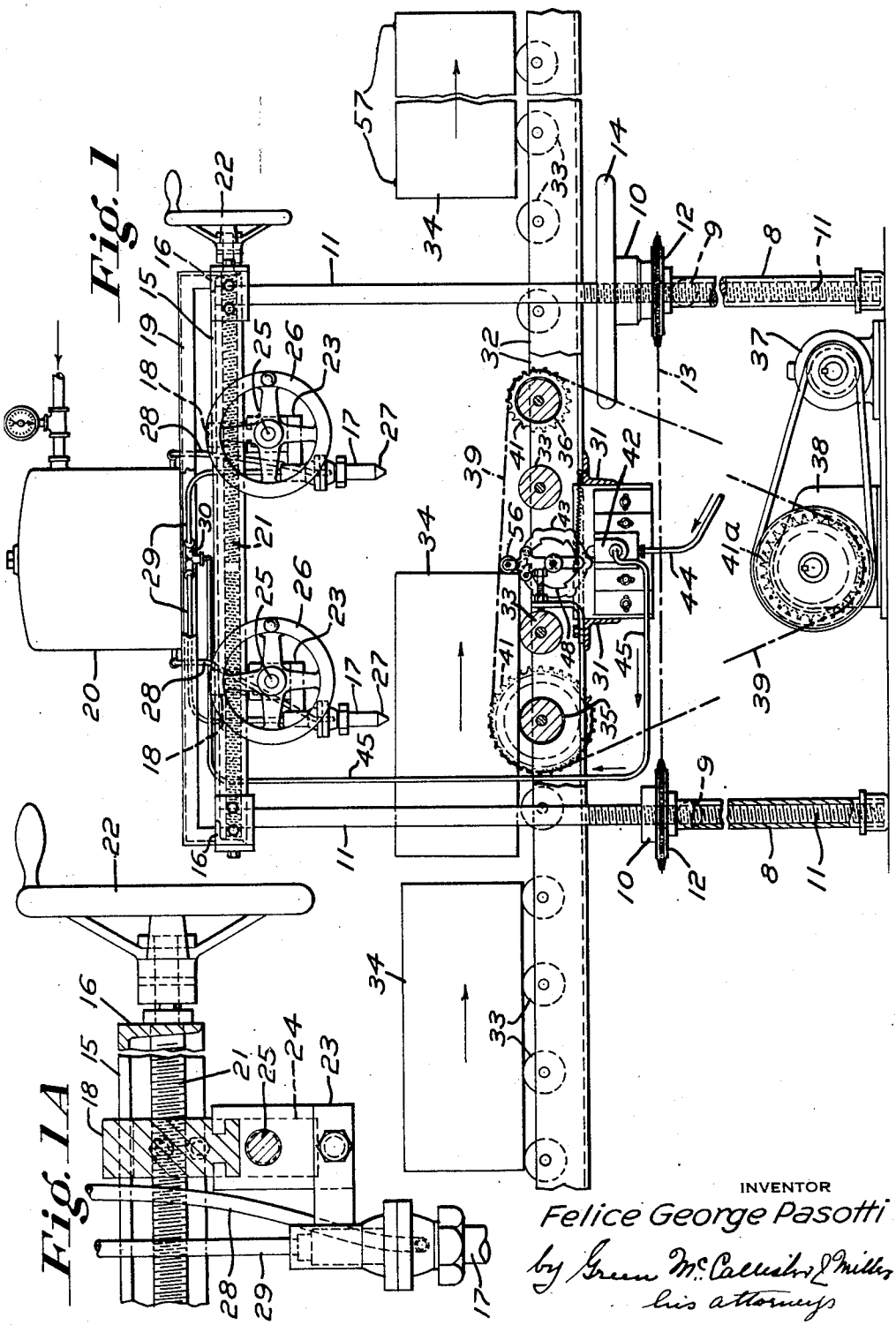


Fig. 1A

INVENTOR

Felice George Pasotti

by Green McCallister & Miller

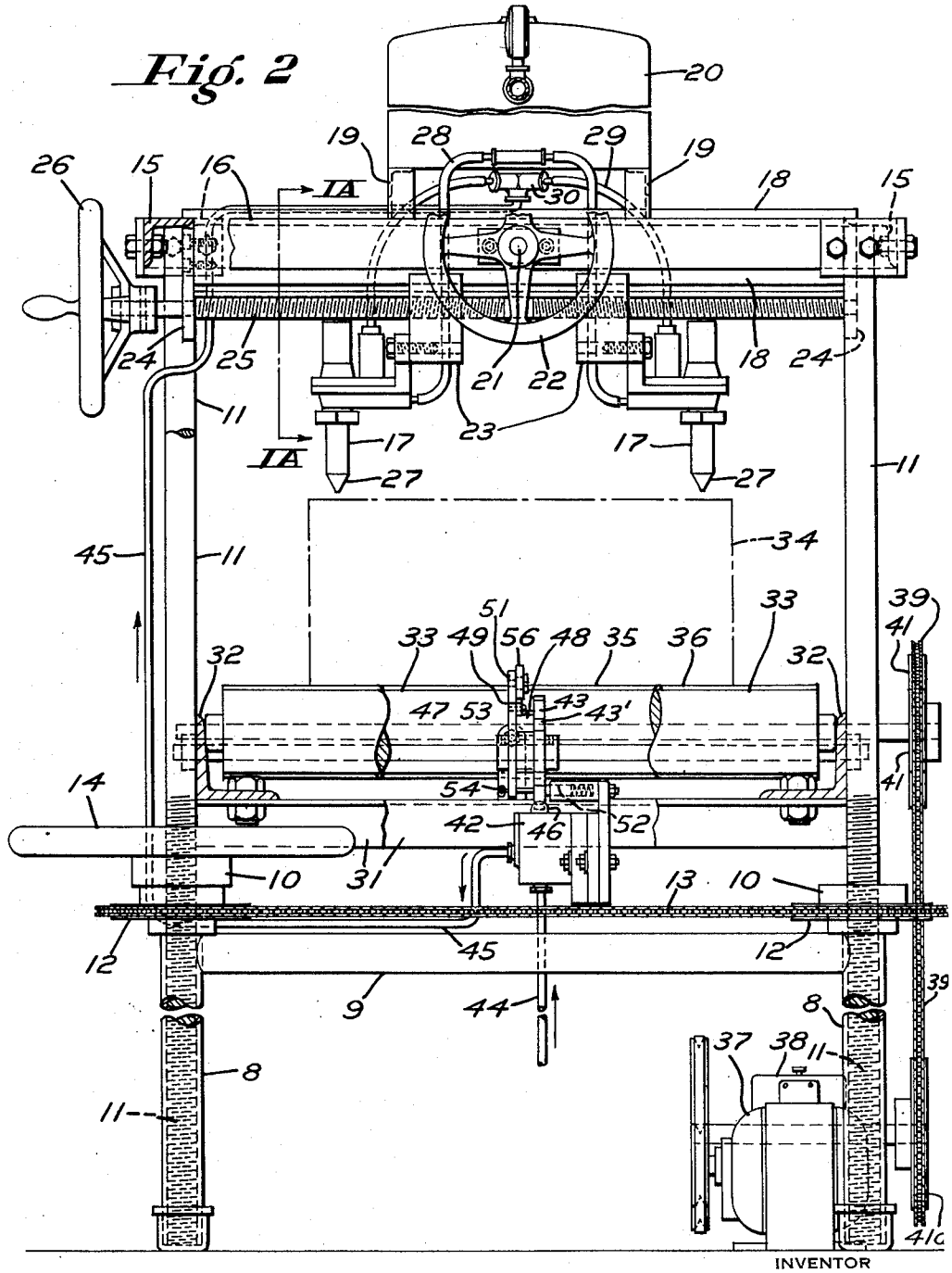
his attorneys

Sept. 2, 1952 F. G. PASOTTI 2,608,949

GLUE-SPOTTING APPARATUS

Filed Nov. 28, 1947 4 Sheets-Sheet 2

Fig. 2



INVENTOR

Felice George Pasotti

by Green McCallister & Miller,

his Attorneys.

Sept. 2, 1952 F. G. PASOTTI 2,608,949

GLUE-SPOTTING APPARATUS

Filed Nov. 28, 1947 4 Sheets-Sheet 3

Fig. 3

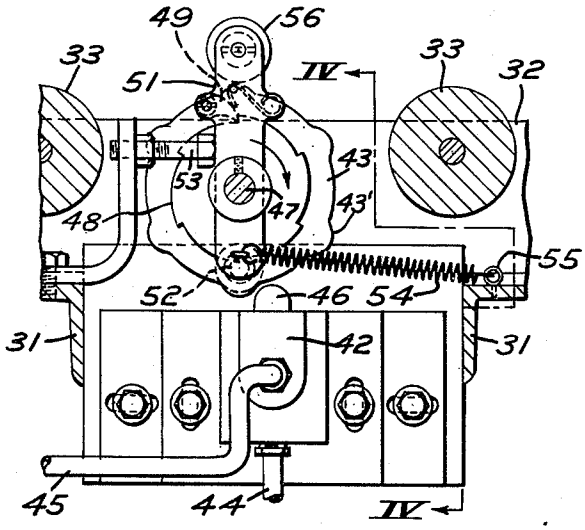


Fig. 4

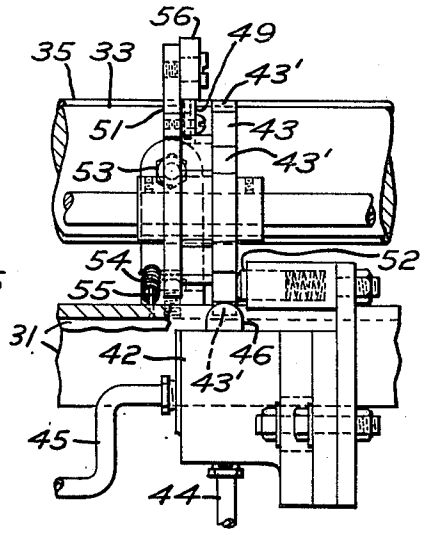
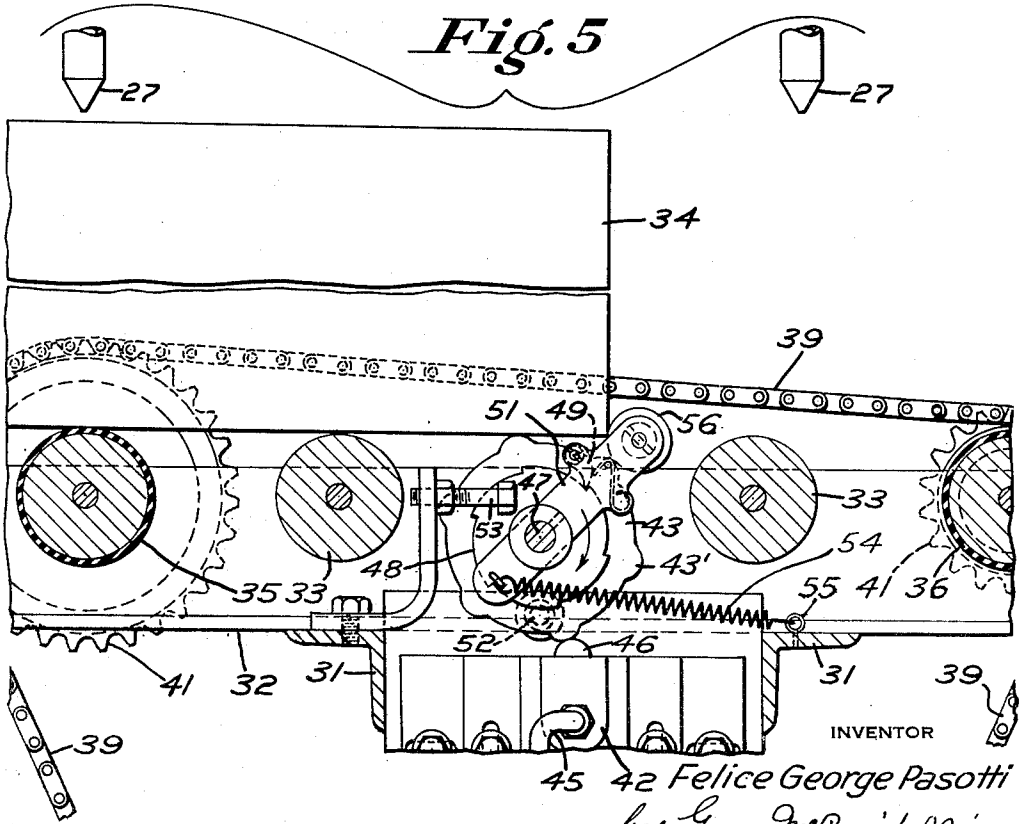


Fig. 5



INVENTOR

Felice George Pasotti

by Green McCallister & Miller,

his Attorneys.

Sept. 2, 1952 F. G. PASOTTI 2,608,949

GLUE-SPOTTING APPARATUS

Filed Nov. 28, 1947 4 Sheets-Sheet 4

Fig. 6

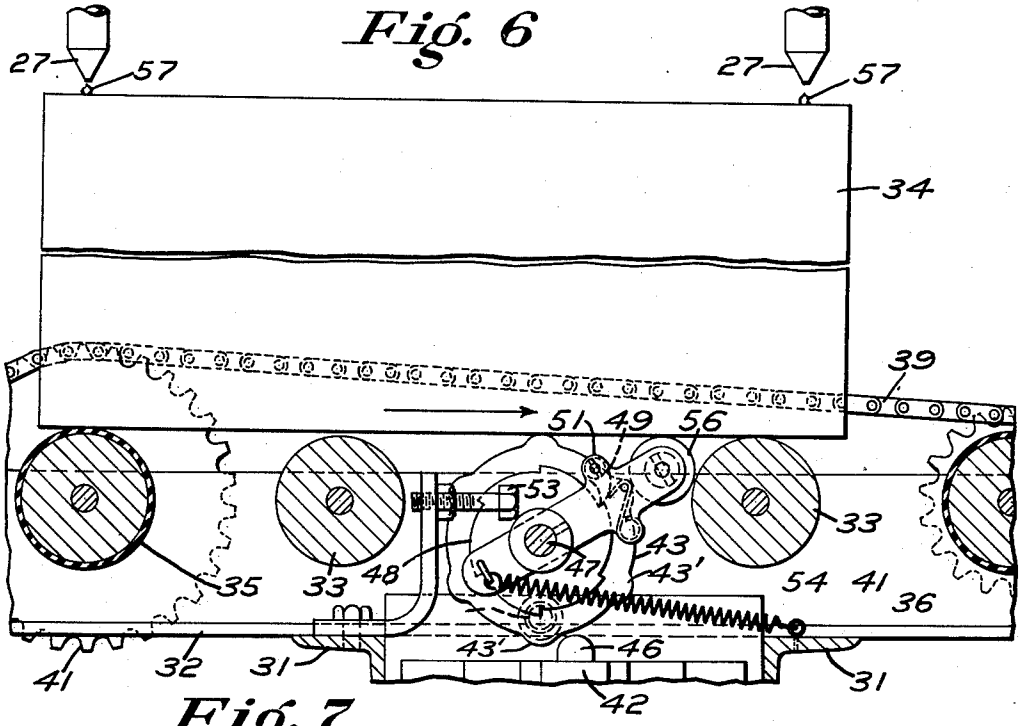


Fig. 7

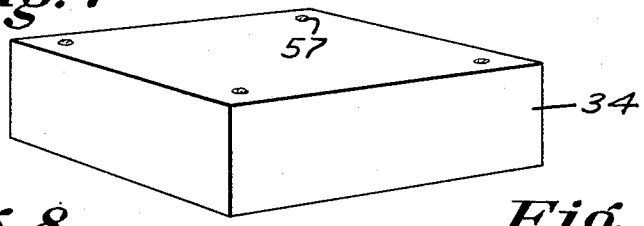


Fig. 8

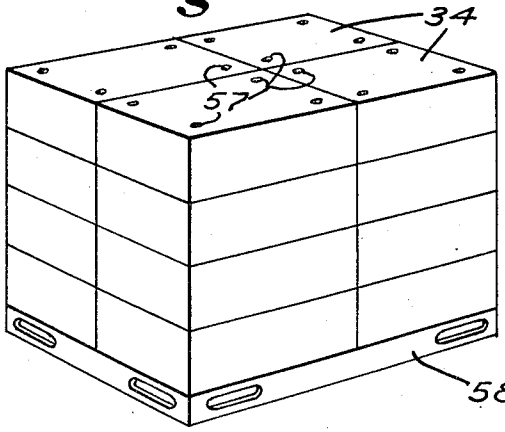
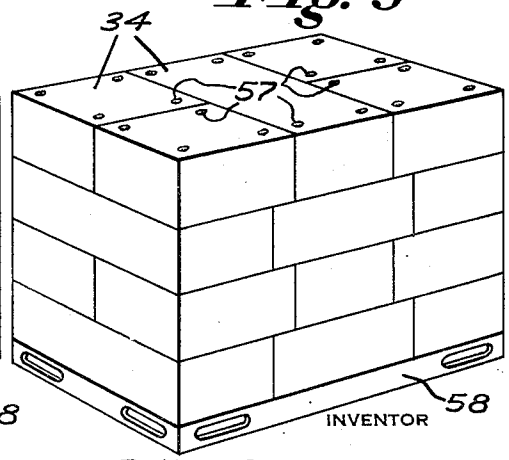


Fig. 9



INVENTOR

Felice George Pasotti

by Green McCallister & Miller,

his attorneys.

Patented Sept. 2, 1952

2,608,949

UNITED STATES PATENT OFFICE

2,608,949

GLUE-SPOTTING APPARATUS

Felice George Pasotti, Muncie, Ind., assignor to Ball Brothers Company, a corporation of Indiana

Application November 28, 1947, Serial No. 788,720

8 Claims. (Cl. 118—8)

1

This invention relates to glue-spotting apparatus and has for an object to produce a simple and effective apparatus which may be readily and quickly adjusted for use in applying glue to cartons of different shapes and sizes as a preliminary to arranging the cartons into a shipping assembly.

Glue-spotting machines are more or less generally used for the purpose of facilitating the handling and shipment of goods enclosed within cartons or similar containers. Such machines are adapted to place glue on a surface of each carton as a preliminary to assembling several such cartons for shipment and such handling as is incident thereto. After a number of cartons have been processed by the glue-spotting machine they are piled one on the other in such relationship that the glue previously applied is effective in holding the cartons together in what may be termed a shipping assembly.

A further object is to produce glue-spotting apparatus such that the glue-spotting operation is accomplished while the article acted upon is moving through the apparatus.

A further object is to produce a glue-spotting apparatus such that the article to be spotted is moved at a predetermined rate up to glue-spotting position and is then moved away from the glue-spotting position at an increased rate of travel.

A further object of my invention is to produce glue-spotting apparatus capable of so applying glue to cartons of a shipping assembly that the cartons when assembled will be effectively held together during shipment and such handling as is incident thereto, but may be readily separated one from the other without destroying the effectiveness of the cartons as containers for the goods enclosed therein.

A further object is to produce glue-spotting apparatus which is wholly automatic in the application of glue to the cartons delivered to it and which so applies the glue to each carton that the cartons when arranged in a shipping assembly are effectively held in that relationship but may be readily separated one from the other without marring the entire extent, or a substantial part of the adhering surfaces of the cartons.

Where cardboard or similar cartons are employed as receptacles for commercial articles it is usual to employ the surfaces of such cartons as a medium for carrying advertising matter or printed instructions, and it is therefore desirable to separate the individual cartons from the shipping assembly without unduly damaging the surfaces thereof. Glue-spotting apparatus as heretofore employed have been such that the effectiveness of the glue-spotted surfaces for advertising or similar purposes is almost wholly destroyed in the operation of separating the cartons after they have been collected in a shipping assembly. One of the specific objects of the invention is, therefore, to produce a glue-spotting machine which is so constructed and arranged as to apply a minimum quantity of glue to each glue-spotted surface but to so distribute the glue with relation to such surface that it is effectively employed in holding the cartons in assembled relationship but at the same time contributes to an easy separation of the individual cartons from a shipping assembly without entirely destroying the effectiveness of the glue-spotted surfaces for advertising or similar purposes.

2

These and other objects are accomplished by means of apparatus such as illustrated in the drawings accompanying and forming a part hereof.

In the drawings Figure 1 is a side elevation of glue-spotting apparatus embodying my invention, portions thereof being shown in section and portions being shown as broken away, for convenience of illustration.

Figure 1A is a fragmental view taken along the line 1A—1A of Figure 2.

Figure 2 is an end view of the apparatus shown in Figure 1 with parts thereof shown in section and other parts shown as if broken away for illustration purposes. The scale of Figure 2 is greater than that of Figure 1.

Figure 3 is a detailed view, on an enlarged scale, of a fragmentary part of the apparatus shown in both Figures 1 and 2.

Figure 4 is a sectional view along the line IV—IV of Figure 3.

Figure 5 is a fragmentary front elevation of the apparatus shown in Figures 3 and 4 and illustrates a relationship of the parts when the glue-spotting control valve is fully open.

Figure 6 is a view similar to Figure 5 but showing a carton in glue-spotting position and operating parts of the apparatus advanced beyond the position shown in Figure 5.

Figure 7 is a perspective view of one form of carton or container after it has been glue-spotted by apparatus embodying my invention.

Figure 8 is a perspective view of a plurality of cartons arranged in a shipping assembly and located on a freight handling palette.

Figure 9 is a perspective view showing a shipping assembly made up of cartons of different

shape and size and also located on a freight handling palette.

In one of its broader aspects my invention consists of apparatus so constructed and arranged that a plurality of spots of glue are deposited in predetermined positions upon the surface of a carton or container as the same moves from one place to another through such apparatus. The invention also involves apparatus in which means are employed for moving containers to be glue-spotted at one rate of speed as they approach the glue-spotting position and then moving them from this position at a higher rate of speed. The invention also involves the production of glue-spotting apparatus having the characteristics noted, which may be quickly and readily adjusted for the purpose of glue-spotting containers of materially different sizes and shapes.

The apparatus illustrated as an embodiment of my invention includes a frame on which glue-spotting mechanisms are adjustably mounted. It also includes a conveyor for cartons or other containers which are to be processed, i. e. subjected to a glue-spotting operation. The conveyor is so equipped as to move each container at a predetermined rate of travel up to the point at which the glue-spotting operation is performed and to then continue the movement of such container but at a substantially accelerated rate of travel.

Referring more specifically to the drawings, the frame of the apparatus illustrated includes four support standards **8** which may be secured together by any suitable means such as struts **9**. As illustrated each such standard is, in effect, the stationary element of a screw jack and as such, constitutes a thrust bearing for an internally threaded sleeve **10** which is mounted on the upper end thereof. Each such sleeve receives and supports a threaded rod **11** which extends into and is guided by the associated standard, and constitutes a support for the upper frame portion of the apparatus. Each sleeve **10** is operatively coupled to the other sleeves **10** of the apparatus, by means of a chain and sprocket mechanism. A separate sprocket **12** is therefore rigidly secured to each such sleeve and the four sprockets involved, are operatively coupled together by means of a sprocket chain **13**. As shown a hand wheel **14** is rigidly secured to one of the sleeves **10** and is employed for turning all the sleeves **10** and thus simultaneously adjusting the position of all of the rods **11**, in the operation of raising and lowering the upper frame portions of the apparatus.

The upper frame portion may be made up of various types of members but as illustrated includes two side girders **15** each of which is rigidly secured by welding or otherwise to the upper ends of two of the rods **11**. The girders **15** are secured together by end girders **16** which, with the girders **15**, form a rectangular structure. The glue-spotting mechanisms are mounted on this rectangular frame structure and each such mechanism is so mounted that its position may be adjusted both laterally and longitudinally of the structure.

Four glue-spotting mechanisms **17** are included as a part of the illustrated embodiment of my invention. They are arranged in pairs and the mechanisms of each pair are movably mounted on a separate rail **18**, which in turn is movably mounted on the end girders **16** and so arranged that it is capable of being moved to different positions along the rail, i. e., laterally of the apparatus. The side girders **15** are shown as rigidly secured together by cross struts **19** each of which is shown in the form of an inverted U which, in effect, spans the rails **18**. The cross struts also support a tank **20** which constitutes a storage reservoir for glue.

Each of the rails **18** is shown in the form of a grooved bar and is operatively coupled to a positioning screw **21**, the opposite ends of which are journalled on the end girders **16**. The screw **21** is provided at one end with right hand threads, which engage co-operating threads of one rail **18**, and is provided at the other end with left hand threads which engage co-operating threads of the other rail **18**. A hand wheel **22** is secured to one end of the screw **21**. With this arrangement the rails **18** are moved apart by turning the hand wheel **22** in one direction and are moved toward each other by turning the wheel in the opposite direction.

As noted, each rail **18** constitutes a support for two glue-spotting mechanisms **17**. For this purpose each rail carries two support blocks **23** slidingly mounted thereon. Each block constitutes a support for one of the mechanisms **17**. Each rail **18** is so longitudinally grooved that its lower portion is in the form of a dove-tail as is shown in Figure 1A. Each block **23** is provided in its upper portion with a dove-tailed groove, which is engaged by the dove-tail portion of the supporting rail. The dove-tail portion of each rail engages two support blocks **23** and forms a guide way along which each such block is movable.

A separate end plate **24** is secured to each end of each rail **18**. The two plates of each rail constitute a support for a double ended screw **25**. Each such screw (two being shown, one for each rail) is provided with a hand wheel **26**, and is also provided with right hand screw threads at one end and left hand screw threads at the other end. The right hand screw threads engage co-operating screw threads of a tapped aperture formed in one block **23** carried by the associated rail **18** and the left hand screw threads engage similar co-operating threads of the other support block **23** carried by the rail. Thus the support block **23** carried by one rail **18** and operatively coupled to one screw **25** are moved toward each other when the corresponding hand wheel is turned in one direction and are moved away from each other when the wheel is turned in the other direction. By this arrangement each mechanism **17** may be adjusted to different positions along its supporting rail and lengthwise of the glue-spotting apparatus.

Each of the glue-spotting mechanisms **17** may be of a form such as is in general use and each includes a delivery nozzle **27** to which glue is delivered through suitable piping. In the drawings each nozzle **27** is shown operatively connected to glue delivery piping **28** which communicates with the tank **20**. Each mechanism **17** is of the type such that a puff of air under pressure occasions the delivery of a measured quantity of glue from the nozzle. For this reason each mechanism **17** is shown as connected to an air delivery pipe **29** and, in the illustrated embodiment, all of the pipes **29** communicate with a five-way connection **30**. The internal structure of each mechanism **17** is well known, forms no part of the present invention, and is therefore, neither illustrated nor described, except to note that the arrangement is such that the quantity of glue delivered in response

to each puff of air may be more or less accurately controlled.

The mechanisms for delivering puffs of compressed air to the connection 30, and consequently to each of the mechanisms 17, however, does constitute an important part of my invention and is illustrated in association with a conveyor for containers which are to be processed by the glue-spotting apparatus here under consideration.

The conveyor is diagrammatically illustrated as extending through the glue-spotting apparatus and as so located with relation thereto that containers moving along it pass beneath the glue-spotting mechanisms 17. The structural details of the conveyor are generally well known, and consequently I have more or less diagrammatically shown it as consisting of side rails 32 arranged in parallel spaced relationship and forming a support for idler rollers 33. As is usual the rollers 33 support the containers moving along the conveyor and in the drawings, I have designated such containers by the reference numeral 34. In the illustrated embodiment of my invention two of the idler rollers 33 are replaced by driven rollers 35 and 36. Both of these rollers are provided with a rubber or similar coating for the purpose of insuring a frictional engagement between the roller and the container engaged by it. As shown, the rollers 35 and 36 are driven by an electric motor 37 through the agency of a belt driven speed change device 38 and a sprocket chain 39. For this reason the speed change device and each of the rollers 35 and 36 is operatively secured to a separate sprocket wheel 41. The sprocket wheels 41 are of different sizes and are such that the roller 35 normally operates at 125 R. P. M., whereas the roller 36 normally operates at 250 R. P. M. The rollers 35 and 36 are so positioned along the conveyor and are so spaced with relation to each other that the roller 35 is effective in moving each container up to the glue-spotting position beneath the mechanisms 17, whereas the roller 36 receives each container as it moves away from the glue-spotting position or after the mechanisms 17 have operated to deposit spots of glue on the upper surface thereof, and thus increases its rate of travel along the conveyor. This insures the proper positioning of each container at the instant the glue-spotting mechanisms 17 are rendered operative.

A feature of my invention is that the valve which controls the delivery of air to the five-way connection 30 and consequently to each of the mechanisms 17 is, in effect, actuated by containers or cartons moving along the conveyor. For this purpose the apparatus of my invention is shown as including an air control valve 42 which is actuated by a cam plate 43 which, in turn, is actuated by each carton moving along the conveyor in response to the impelling force of the driven roller 35.

The valve 42 is shown as carried by the side rails 32 of the conveyor. It is located below the idler rollers 33 and about midway between the driven rollers 35 and 36. Air from a source of compressed air is delivered to the inlet port of the valve 42 through piping 44 and the delivery port of the valve is connected to the five-way connection 30 by piping 45. A control plunger 46 for the valve projects upwardly above the valve casing and in the line of travel of cam lobes 43' which are formed on and are equally spaced around the cam plate 43. As shown in Figures 3, 5, and 6, the cam plate 43 is generally circular in form and is mounted on a shaft 47 which passes centrally there through and which, as shown, may extend through each of the side rails 32 and be secured to them.

The cam plate 43 forms a part of an assembly which is rotatably mounted on the shaft 47 and which also includes a ratchet plate 48 and a pawl carrying arm 51. This assembly is prevented from moving longitudinally of the shaft 47 by means of collars 50 secured to the shaft on opposite sides of the assembly, as shown in Figure 4. The ratchet plate 48 is substantially circular and is concentric with the cam plate 43. These two plates are rigidly secured together and the shaft 47 passes centrally through them.

As shown, the plate 48 is so formed as to provide six equally spaced ratchet teeth around its periphery. A pawl or ratchet 49 is carried by the arm 51 and is spring pressed against the periphery of the plate 48 so that during one movement of the arm around the shaft 47, the ratchet engages one or another of the ratchet teeth and thereby causes the plates 43 and 48 to move with the arm as indicated by the arrow in Figure 5. During the reverse movement of the arm 51 the pawl 49 over rides the teeth of the plate and consequently does not impart movement to the plates 43 and 48. In order to hold these plates in the position to which they are moved by the arm 51 I have provided a spring pressed pin 52 which is shown as located in a housing secured to the support for the valve 42 and as including a coil spring which normally presses the end of the pin against the plate 43. The arm 51 is normally held in an upright position against an adjustable stop 53 by means of a coil spring 54 one end of which is secured to an eye carried by the arm 51 adjacent the lower end thereof, and the other end of which is secured to an eye 55 shown as carried by a structural member which forms a part of the support structure for the valve 42.

The arm 51 projects into the line of travel of containers moving along the conveyor. It is shown as located between two of the idler rollers 33 and about midway between the two driven rollers 35 and 36. The upper end of the arm 51 is provided with a roller 56 which is adapted to be engaged by on-coming containers 34. With such an arrangement, each container 34 moving along the conveyor toward the driven roller 36, engages the roller 56 and thereby depresses the arm 51 to the position shown in Figure 6. In so moving, the pawl carrying arm advances the ratchet plate 48 and the cam plate 43 by reason of the engagement of the pawl 49 with one of the teeth of the plate 48.

In the illustrated embodiment of my invention, the arrangement is such that each full movement of the arm 51, in the direction of travel of the containers 34 along the conveyor, will turn the plates 43 and 48 through an arc of 60°, i. e. through an arc equal to ⅙ of the circumference of a circle. The amount of angle movement thus imparted to the plates is of course a matter of design. It depends on the position of the shaft 47 with relation to the bottoms of the containers moving along and supported by the rollers 33 and the length of the arm 51.

During the angular movement of the plates 43 and 48 one of the cam lobes 43 engages and fully depresses the plunger 46, thus opening the valve 42. It then moves out of contact with the plunger, thus releasing it and permitting it to move upwardly to close the valve 42. The

resulting momentary opening of the valve **42** delivers a puff of air to the five-way connection **30** and consequently to each of the mechanisms **17**. Figure 5 shows the arm **51** in the position in which the valve plunger **46** is substantially fully depressed by one of the lobes of the cam **43**. As shown in Figure 6 the arrangement is such that as the arm **51** moves to the fully depressed position, the valve plunger **46** is disengaged by the cam plate **43** and moving in response to spring or air pressure closes the delivery port of the valve **42** thus cutting off the flow of compressed air through the piping **45** to the glue-spotting mechanisms. As the container, in engagement with the roller **56**, advances beyond the position shown in Figure 6 it rides onto the high speed driven roller **36** and is thereby propelled along the conveyor at an increased speed. As soon as the roller **56** is released by a container propelled by the driven roller **36**, the arm **51** is immediately elevated by the spring **54** so that it is in an upright position in the line of travel of an on-coming container. Thus during the movement of containers along the conveyor the arm **51** moves with each such container and during such movement occasions an operation of the valve **42** such as to deliver a puff of actuating air to all four of the mechanisms **17**.

By providing the spaced rolls **35** and **36** with surfaces which insure a frictional engagement with the bottom of each container moving along the conveyor, and by driving the second such roll—i. e. the roll **36**—at a higher speed than the first such roll is driven, I insure a movement of containers along the conveyor such that the arm **51** moves to an upright position against the stop **53** after having been depressed by each container moving along the conveyor and before engaged by an on-coming container. This also insures that the glue-spotting mechanisms **17** are motivated to deliver glue to each container moving along the conveyor. In the illustrated apparatus the timing is such that each nozzle **27** delivers a spot of glue to the upper surface of a container as the container moves in response to the impelling force of the driven roller **35**. As indicated by Figures 5 and 6, the normal lag of the mechanisms **17** in responding to the opening of the air delivered valve **42**, results in a positioning of each container **34** at the instant of glue delivery, such that the arm **51** is fully depressed and the plunger **46** is no longer engaged by the cam plate **43**. Figure 6 discloses a container **34** in the glue-spotting position. It also indicates that each of the glue delivering nozzles **27** there illustrated has delivered a spot of glue **57** to the top surface of the container and also discloses the position of the pawl carrying arm **51** and the plates **42** and **48** at the instant of glue delivery. Thus, in the apparatus illustrated, the cam lobe **43'**—which initiated the delivery of the glue spots **57**—has moved out of contact with the plunger **46**, permitting that plunger to move to its upper-most or valve closing position.

The position occupied by each container at the instant that glue is delivered to it by the mechanism **17** depends upon the speed of rotation of the rubber covered roller **35**, the particular characteristics of the valve operating mechanism which includes the arm **51**, and the normal lag of the mechanisms **17** in responding to a puff of air delivered by the valve **42**. It will, therefore, be apparent that the glue-spotting position along the conveyor may be varied by changing any one of the above noted conditions, and that the position of each container traversing the conveyor—at the time of the glue-spotting mechanisms operate—can be predetermined with a considerable degree of accuracy. It, therefore, follows that the position of each glue spot delivered to each container can also be predetermined, with the result that each carton or container may be glue-spotted in such a way as to minimize the marring of the surfaces of the cartons as they are separated after being included in a shipping assembly.

As previously described each of the mechanisms **17** is adjustably mounted on the frame of the apparatus and can be adjusted both longitudinally and laterally of the frame. As a result the four mechanisms illustrated may be readily adjusted for each different size of container traversing the conveyor and as indicated in Figures 6, 7, 8, and 9 each separate spot of glue **57** may be so deposited that it is located in a selected position on the upper surface of the container, as for example, adjacent to one corner of the container.

In Figures 8 and 9 I have shown two assemblies of glue-spotted cartons located on shipping palettes **58**. In Figure 8 the cartons are of the same size and, as there shown, such cartons may be so located on the palette as to form four separate piles of cartons. Each carton of each pile will adhere to the adjacent carton because of the glue spots previously delivered to at least one such carton. In Figure 9 I have shown an assembly of cartons on a palette **58** which may be employed where cartons of different sizes are included in the assembly. Under such conditions each of the cartons of the assembly adheres to one or more adjacent cartons under conditions such that the cartons of the entire assembly are in effect secured together and consequently may be handled as a single shipping unit.

Figure 7 may be considered as illustrating a single carton of a size sufficient to completely cover the bottom of the palette **58**. When so considered it indicates the flexibility of the apparatus illustrated in the glue-spotting of different sizes of cartons.

While I have illustrated and described but one embodiment of my invention, it will be apparent to those skilled in the art that various changes, additions, omissions, and substitutions may be made in the apparatus illustrated and in the procedure disclosed without departing from the spirit and scope of my invention as defined by the appended claims.

What I claim is:

1. A glue-spotting apparatus for containers including an air-actuated glue delivery nozzle and a valve for delivering puffs of actuating air under pressure to said nozzle, in combination with a conveyor along which containers are movable to and beyond a glue-spotting position with relation to said nozzle, and an actuating device for said valve extending into the path of travel of containers traversing said conveyor and engaged and moved to a valve actuating position by each successive container traversing said conveyor and impelling means for engaging each container in contact with said device and moving such container at an increased rate out of contact with said device.

2. A glue-spotting apparatus for containers, comprising a plurality of air actuated glue delivery nozzles; means for adjusting the positions of said nozzles; a valve for delivering actuating

air under pressure to each such nozzle; a conveyor along which containers to be glue-spotted are moved toward and from a glue-spotting position with relation to said nozzles; impelling means for engaging and moving each successive container traversing said conveyor at a fixed rate of speed toward the glue-spotting position; an actuating device for said valve engaged and operated by each successive container traversing said conveyor after the same has been engaged by said impelling means and a second impelling means for engaging each container traversing said conveyor and for impelling it at an accelerated speed along the conveyor after it has engaged said device.

3. A glue-spotting apparatus for containers comprising an air-actuated glue-delivery nozzle; a valve for delivering actuating air under pressure to said nozzle; a conveyor along which containers to be glue-spotted are moved toward and beyond a glue-spotting position with relation to said nozzle; impelling means for engaging each container traversing said conveyor and moving it at a fixed rate of speed along the conveyor to the glue-spotting position; a pawl and ratchet assembly for actuating said valve to deliver operating air to said nozzle; a device engaged and operated by each successive container traversing said conveyor after the same is engaged by said impelling means, for actuating said assembly to actuate said valve to deliver actuating air to said nozzle and a second impelling means for engaging each container traversing the conveyor and for moving such container out of contact with said device at an accelerated speed after it has engaged said device.

4. In combination with a glue-spotting apparatus for glue-spotting containers, a conveyor mechanism extending below said apparatus and including impelling means for moving each successive container toward a glue-spotting position along said mechanism, glue-delivery means for motivating said apparatus to deliver glue to each container moving along said mechanism, and including a device engaged and actuated by each successive container moving along said mechanism for actuating said glue-delivery means and a second impelling means engaging each container while the same is moving along said mechanism in contact with said device and increasing the rate of movement of such container while moving it out of contact with said device.

5. In combination with glue-spotting apparatus for delivering spots of glue to containers; a glue-delivery nozzle; a conveyor mechanism extending below said apparatus and including an impelling means for separately moving successive containers along said mechanism toward a glue-spotting position with relation to said nozzle; control means for motivating said nozzle to deliver glue to each container moving along said mechanism, including a part engaged and actuated by each successive container moving along said conveyor mechanism as such conveyor is engaged by said impelling means and is moving along said conveyor mechanism in response thereto; and a second impelling means for engaging and moving each successive container at an increased rate of speed along said conveyor mechanism and beyond such glue-spotting position as each such container is moving in contact with said container-engaging part.

6. A glue-spotting apparatus for containers, comprising a glue-delivery nozzle; glue-delivery means for said nozzle; a conveyor along which containers to be glue-spotted are moved toward and beyond a glue-spotting position with relation to said nozzle; container-impelling means for separately engaging each container traversing said conveyor and moving the same toward such glue-spotting position at a predetermined speed; control means for said glue-delivery means, actuated by each container traversing said conveyor as the same is impelled by said impelling means; and a second impelling means for engaging each container traversing said conveyor as the same engages said control means and moving such container at an increased rate of speed along said conveyor and out of contact with said control means.

7. In a glue-spotting machine, a frame portion; a plurality of glue-delivery nozzles carried by said frame portion; adjusting means for raising and lowering said frame portion; adjusting means for adjusting the position of each such nozzle both longtudinally and latterly relatively to said frame portion; a conveyor extending beneath said frame portion and said nozzles; impelling means for moving successive containers along said conveyor at a predetermined rate of speed toward a glue-spotting position with relation to said nozzles; actuating means for controlling the delivery of glue from said nozzles to each successive container as it moves along said conveyor; said means actuating including a movable container-engaging part extending into the path of travel of each container engaged by said impelling means and moving toward such glue-spotting position and actuated by each such container to render said actuating means effective in controlling the delivery of glue from said nozzles; and a second impelling means for engaging each container traversing said conveyor as the same engages said container-engaging part and is moving in response to force applied by said first mentioned impelling means, said second impelling means continuing the movement of such container at an increased rate and so moving it out of contact with said part and beyond said glue-spotting position.

8. A glue spotting apparatus for containers, comprising a glue delivery nozzle; actuating means for said nozzle; a conveyor along which a succession of containers to be spotted are moved toward and beyond a glue spotting position with relation to said nozzle; container impelling means for separately engaging each successive container traversing said conveyor and moving it at a predetermined speed toward the glue spotting position; a control device for said actuating means, engaged and operated by each successive container as the same is impelled by said impelling means, and a second impelling means for engaging each container traversing said conveyor after the same has engaged said control device, and for impelling such container along said conveyor at an accelerated speed away from said control device.

FELICE GEORGE PASOTTI.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,081,758	Milmoe	May 25, 1937
2,110,052	Paasche	Mar. 1, 1938
2,130,786	Bergstein	Sept. 20, 1938
2,192,833	Johnson	Mar. 5, 1940
2,268,876	Kagley	July 6, 1942