June 22, 1965 F. A. CRAIG ETAL 3,190,259

ADHESIVE APPLICATOR FOR CARTON SEALING MACHINES

Filed Dec. 21, 1962 4 Sheets-Sheet 1

Fig. 1

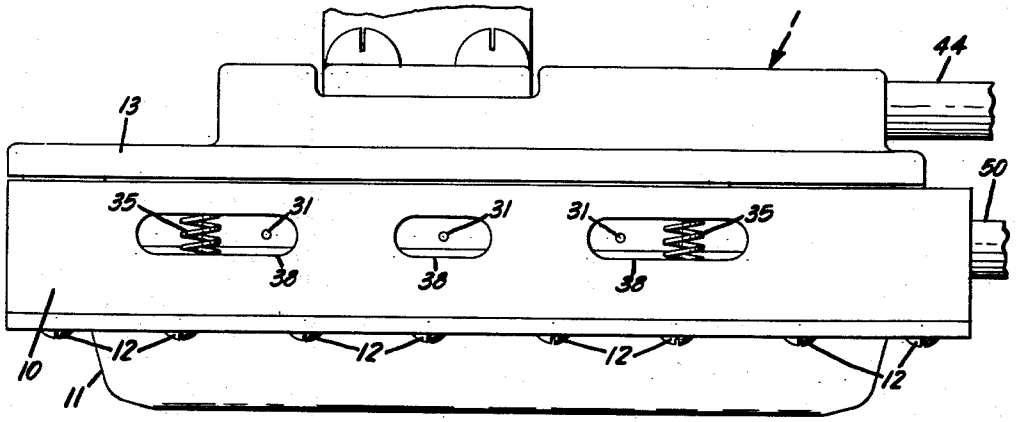

Fig. 2

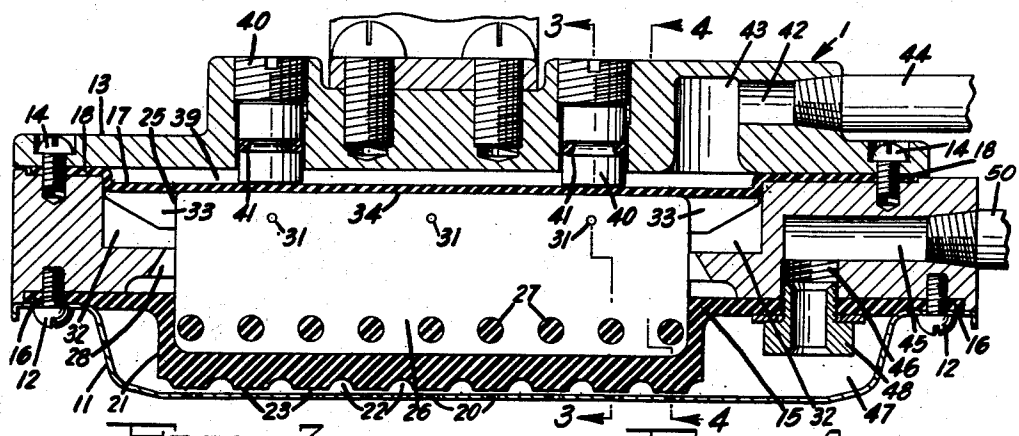

Fig. 3

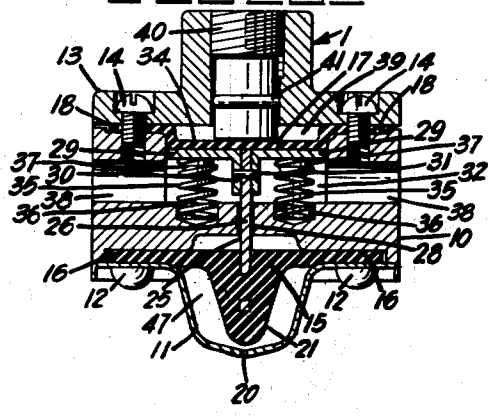

Fig. 4

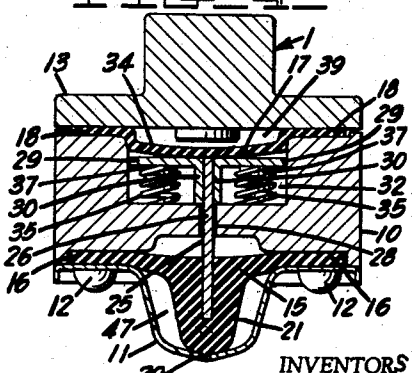

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Fig. 5

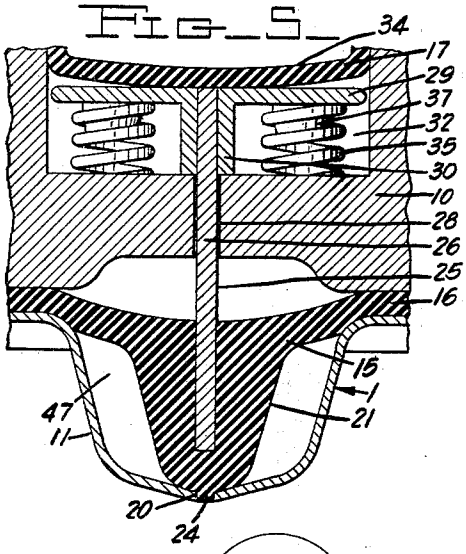


Fig. 6

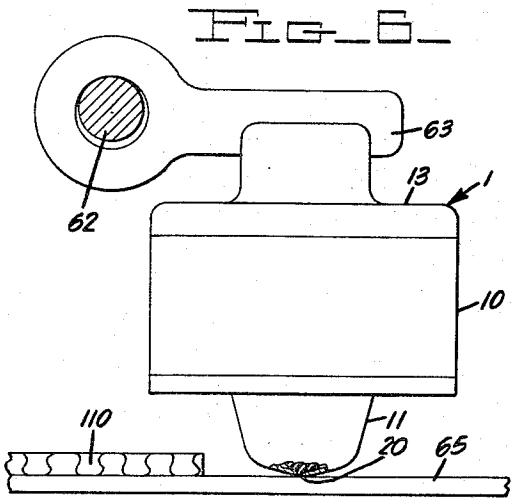


Fig. 7

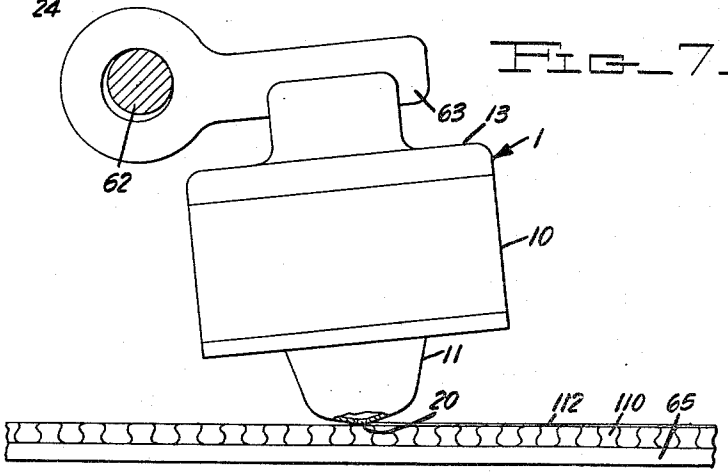
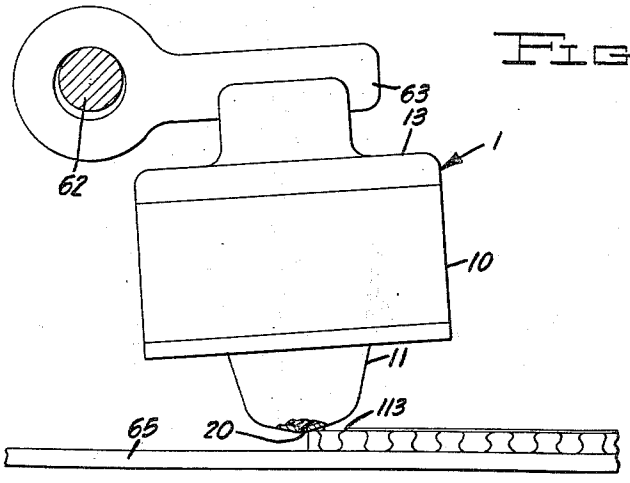


Fig. 8



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ADHESIVE APPLICATOR FOR CARTON SEALING MACHINES

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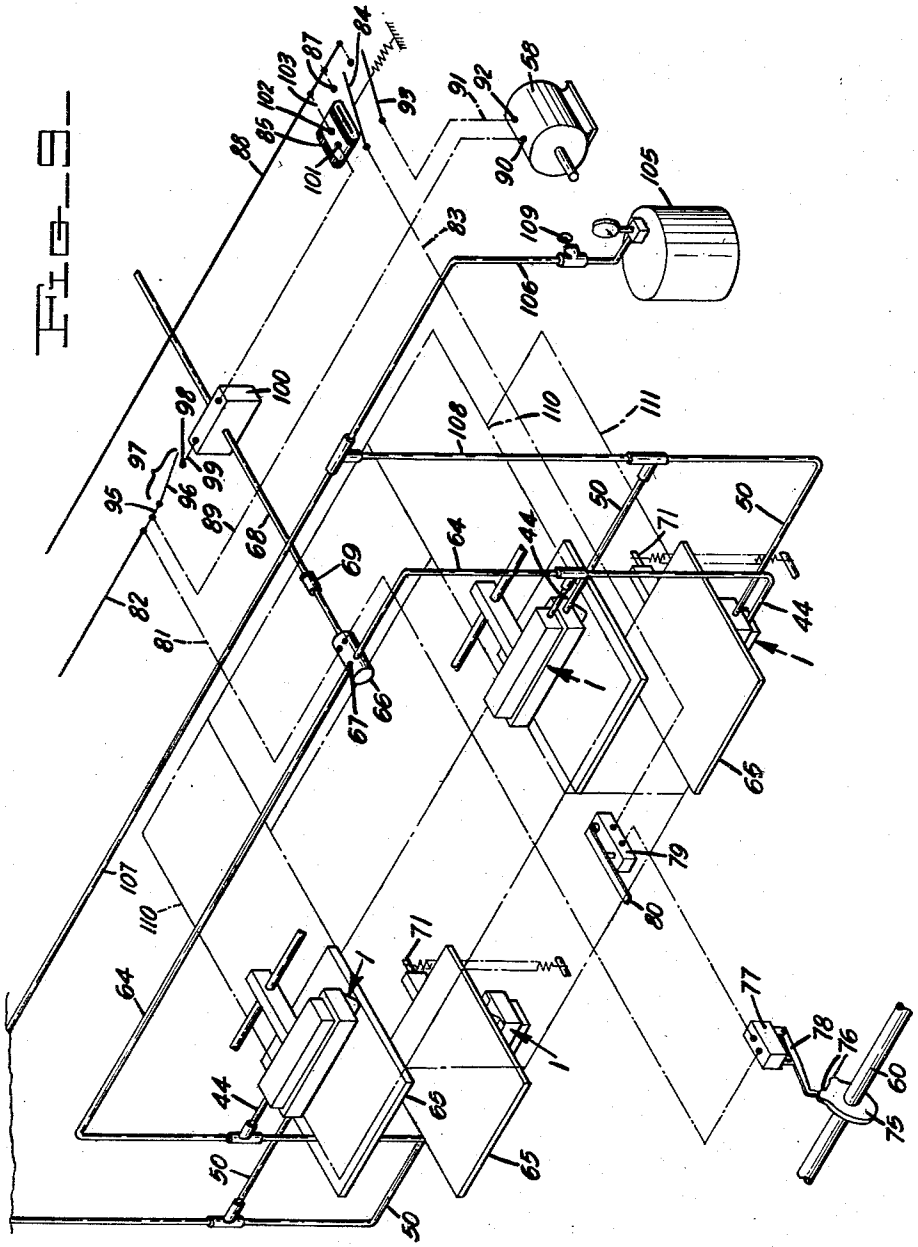
FIG. 3



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ADHESIVE APPLICATOR FOR CARTON SEALING MACHINES

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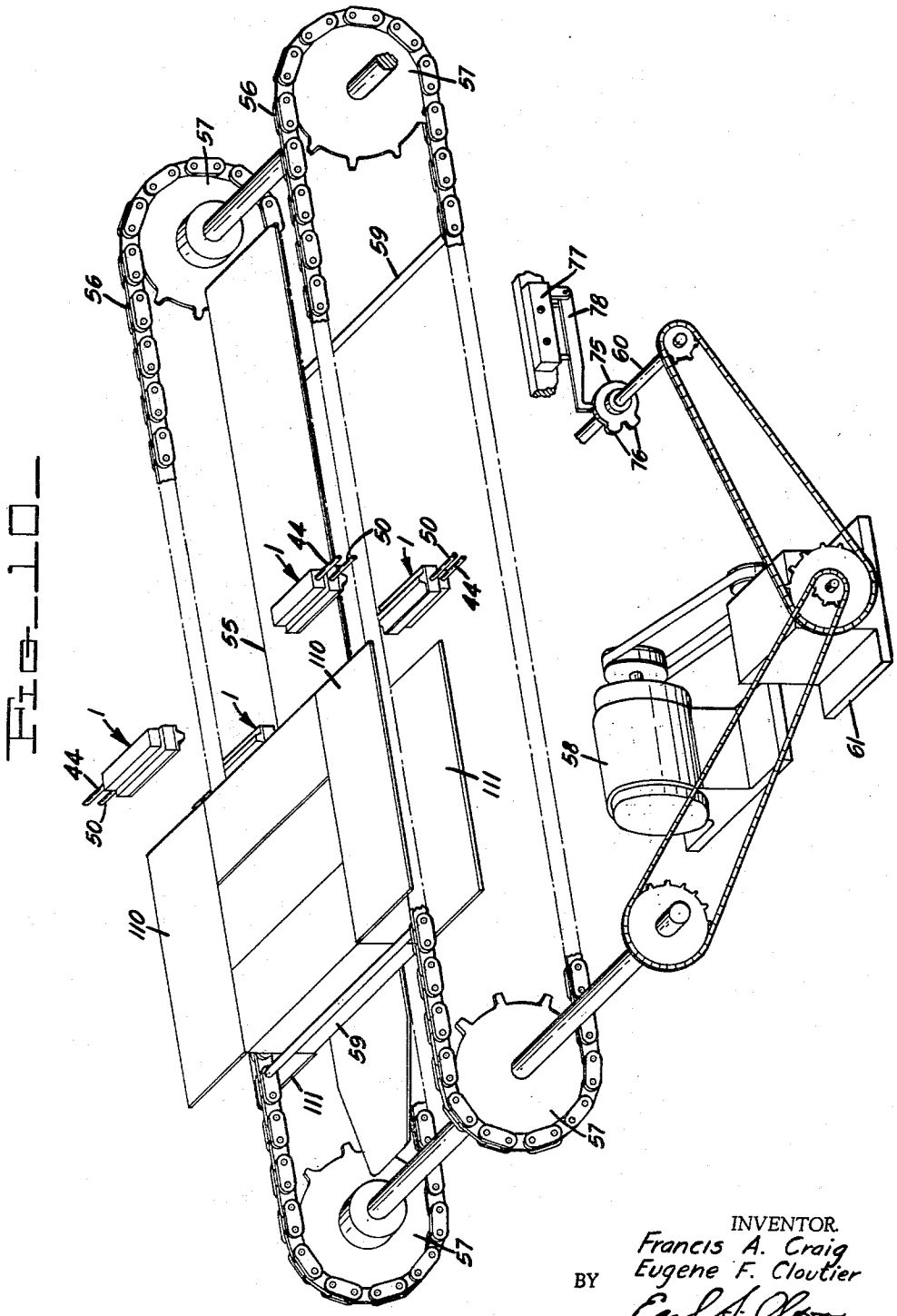
Fig. 10



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United States Patent Office 3,190,259 Patented June 22, 1965

3,190,259

ADHESIVE APPLICATOR FOR CARTON SEALING MACHINES

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Filed Dec. 21, 1962, Ser. No. 246,590
8 Claims. (Cl. 118—2)

The instant invention relates to an applicator, often termed a glue head and so referred to herein, for applying adhesives to surfaces and to means and controls for the operation of the same. The glue head of the invention is particularly adapted for the application of adhesives to the flaps of cases, cartons and the like but as will be understood its use is not so limited.

The unit to be hereinafter described is an improvement on that shown in the co-pending application of Joseph H. Walter, Serial No. 199,464, filed June 1, 1962, and assignee of the instant application. Said prior application discloses a glue head, particularly adapted for employment in case sealing machines, in which the adhesive is supplied under pressure and caused to exude through a line of orifices onto underlying or overlying case flaps. The unit comprises a casing defining a hollow chamber having an elongated wall thereof, namely the wall to lie adjacent the case flap, provided with the line of orifices previously referred to. A flexible diaphragm within the chamber defines, with said forward wall, an adhesive receiving pocket. The diaphragm includes projecting portions adapted in the relaxed condition of the diaphragm to overlie said orifices in spaced relationship thereto whereby adhesive may flow through said orifices to the case flaps or other objects to which said adhesive is to be applied. The device further includes means for supplying fluid under pressure, preferably compressed air, behind said diaphragm to cause the flexing thereof and the closing of the orifices by said projecting portions to prevent flow of adhesive except when such flow is desired.

A principal object of the instant invention is the provision of an improved glue head incorporating the basic features of that disclosed in said prior application Serial No. 199,464 but providing a more precise and positive control of the flow of adhesive from the unit to the object to which the adhesive is applied. Another object of the invention is the provision of a glue head in which a diaphragm or flexible member, carrying orifice closing projecting portions of the type previously mentioned, is controlled in its movements toward and away from said orifices by a second diaphragm.

Another object of the invention is the provision of a glue head as defined in the foregoing objects in which said second diaphragm and said first flexible member or diaphragm are connected for conjoint movement, said second diaphragm being adapted to be flexed in a direction to cause the closing of said orifices by the application of fluid under pressure, suitably compressed air, to the rear side thereof. A further object is the provision of such unit in which the return flexing movement of the diaphragm after the release of the fluid pressure thereon is influenced by resilient means acting upon the forward face of the diaphragm.

A still further object of the invention is the provision of means in a glue head as defined above for adjusting the rest position of said second diaphragm to in turn adjust the spacing of said projecting portions from said orifices whereby the rate of flow of the adhesive through said orifices may be controlled.

Briefly described a glue head attaining the foregoing objects comprises a frame or body member having secured to one face thereof a troughlike member the forward wall

of which is provided with one or more glue exuding orifices. A flexible member or diaphragm suitably having marginal portions thereof confined between marginal portions of said troughlike member and said body, includes a body section extending longitudinally of said troughlike member the body section having spaced portions projecting toward said forward wall and the orifices therein. A second diaphragm has its flanges confined between said body member and a rear cover plate said second diaphragm and the first diaphragm being connected for conjoint movement. The second diaphragm defines a chamber with said cover plate for the reception of a fluid under pressure, such as compressed air, whereby said diaphragm may be flexed to cause similar flexing of said flexible member and movement of said projecting portions into contact with the troughlike member around the orifices therein to close the same against the further exudation of adhesive therethrough. Resilient means, such as springs, are interposed between the body member and the forward side of the second mentioned diaphragm to cause return flexing of the diaphragm upon release of the fluid pressure thereon. Adjusting screws secured in the cover plate rearwardly of the second diaphragm and having their forward ends bearing against the second diaphragm are employed to limit the rearward movement of the diaphragm under the pressure of said springs and hence the spacing of the projecting portions from the orifices.

A still further object of the invention is the provision of an adhesive applying unit, suitably employing glue heads of the type defined above, said unit including control means whereby the flow of adhesive from one or several glue heads is prevented except when a case or other object to which adhesive is to be applied is in position for such application. Another object of the invention is the provision in such unit of means to prevent the operation thereof upon the failure of the supply of fluid pressure for the glue heads.

Another object of the invention is the provision of an adhesive applying unit, employing one or more of the glue heads of the type referred to above, the unit including means for mounting the glue head or heads for automatic adjustment to effect efficient adhesive application upon contact of the heads by the case flaps or other members to which the adhesive is to be applied. The construction further serves to effect the wiping of the heads adjacent the orifices by the flaps upon the completion of their passage past the glue heads.

The invention will be more fully understood and further objects and advantages thereof will become apparent when reference is made to the more detailed description to follow and to the accompanying drawings in which:

FIG. 1 is a side elevational view of a glue head in accordance with the instant invention;

FIG. 2 is a sectional view taken longitudinally through the device of FIG. 1 and substantially on the center line thereof;

FIG. 3 is a sectional view taken on a line 3—3 of FIG. 2 looking in the direction indicated by the arrows and illustrating the glue head in an operative or adhesive applying condition;

FIG. 4 is a cross-sectional view taken on the line 4—4 of FIG. 2 looking in the direction indicated by the arrows and illustrating the glue head in an inoperative or closed condition;

FIG. 5 is a cross-sectional view, similar to FIG. 4 but on an enlarged scale, illustrating certain features of the glue head when in an inoperative condition;

FIG. 6, 7 and 8 are end views of the glue head and the mounting means therefor illustrating different positions of the head relatively to a case flap passing therebeneath;

FIG. 9 is a schematic view illustrating a control system for a plurality of glue heads employed in a case flap gluing operation; and

FIG. 10 is a perspective view schematically illustrating features of a case sealing unit employing the glue heads of the instant invention.

Referring now to the drawings and first particularly to FIGS. 1 to 4 inclusive the glue head **1** of the instant invention comprises a housing including a body member **10** to a forward face of which a relatively thin-walled troughlike member **11** is secured as by screws **12**. A cover plate **13** is secured as by screws **14** at the rear side of the body member. A flexible member or diaphragm **15** includes marginal portions **16** confined between side and end flanges of the troughlike member and the periphery of the body member to define a fluid-tight, except for glue feeding orifices hereafter referred to, adhesive receiving pocket. A second diaphragm **17** has its peripheral edges **18** confined between rim portions of the cover plate **13** and the periphery of the body member to define a fluid-tight chamber to the rear of the body member.

Troughlike member **11** is provided with one or more but preferably a line of orifices **20** in its forward wall (the lower wall as illustrated in FIGS. 1 to 4). The orifices are relatively elongated and may be suitably spaced as required to provide the desired pattern of adhesive stripes or areas on the case flap or other surface to which the adhesive is to be applied. The elongated shape of the surfaces has been found to be of importance in obtaining efficient flow of the adhesive therethrough. As will be noted the forward wall of the troughlike member is constituted of converging wall sections and the orifices are located on the line of convergence thereof.

Flexible member **15** which is formed of a suitably distortable material such as rubber includes a body section **21** extending longitudinally of the troughlike member **11** the forward end of the body section being divided by a series of transverse recesses **22** into spaced forwardly projecting portions **23** each projecting portion overlying one of the orifices **20** but terminating, when member **15** is in the rest position illustrated in FIGS. 2 and 3, in spaced relationship thereto. As will be noted the forward ends of the projections **23** are of a size and shape to contact the wall of the troughlike member around the orifices upon forward flexing movement of the flexible member.

A rigid member **25** T-shaped in cross section includes a flange or stem **26** imbedded in the body portion **21** of flexible member **15**, the imbedding suitably being carried out during the molding of member **15**. As illustrated the imbedded portion of the stem is provided with a series of perforations **27** filled by the rubber or other compound of which the flexible member is composed whereby members **25** and **15** are securely joined. Stem or flange **26** extends rearwardly through a slot **28** formed in the body member **10** the stem being freely slidable in the slot. The head of member **25** comprises angle bars **29** having flanges **30** secured to stem **26** as by rivets **31** (FIGS. 2 and 3), the rear edge of the stem and the rear surface of the angle bars lying in a common plane. The angle bars extend substantially the full length of an internal recess **32** within body member **10** and hence project beyond the ends of stem **26**. Suitably the spaces between the opposed flanges **30** at such projecting ends are filled by fillets **33** which are brazed or otherwise secured to the flanges. Body member **10** is ported as illustrated at **38** to vent internal recess **32**. Diaphragm **17** which similarly as flexible member **15** is formed of rubber or other suitable distortable flexible material is shaped to have a central section **34** interfitting in the recess **32** and resting on the head of the T member **25**, said central section being spaced from cover plate **13** to define a chamber **39**. Compression springs **35** are positioned between the head of the T member **25** and portions of the body member **10** defining the forward wall of recess **32** the springs being maintained in position by their forward ends being received in bores **36** in the body member and their rear ends being engaged by bosses **37** carried by the head of the T member.

Means are provided for adjustably determining the maximum rearward movement of diaphragm **34** under the influence of springs **35** and hence of the spacing of projections **23** from orifices **20**, such means comprising set screws **40** threadably mounted in cover plate **13** and having forward ends adapted to contact the diaphragm. As will be noted the shanks of the set screws are peripherally grooved to receive packings such as O rings **41** to maintain the fluid-tight integrity of the space or chamber **39** between diaphragm **34** and cover plate **13**. As will be understood the extent of projection of the set screws may be readily adjusted by rotation thereof with a screw driver or other suitable tool.

Cover plate **13** is provided with a bore **42** opening into a passageway **43** communicating with the chamber **39** between diaphragm **17** and the cover plate. A conduit **44**, in communication with a source of fluid pressure at certain times as will hereinafter be described, is threaded or otherwise connected into bore **42**. Body member **10** also is provided with a bore **45** in communication with a passageway **46** leading into an adhesive receiving pocket **47** defined by troughlike member **11** and flexible member **15**. Bore **45** is in communication with a source of adhesive under pressure through the medium of a conduit **50** threadably or otherwise connected into the bore. Passageway **46** is threaded and a thimble **48** is secured therein, the head of the thimble, with suitably an interposed washer, confining the marginal portions of flexible member **15** surrounding passageway **46** and providing additional support for the flexible member.

As will be understood from the foregoing, in the operation of the glue head and adhesive under pressure supplied through conduit **50** flows through passageway **46** into pocket **47**. When flexible member **15** is in the condition illustrated in FIGS. 2 and 3 the adhesive exudes through orifices **20** onto the surface to which the adhesive is to be applied. Upon communication of conduit **44** with a source of fluid, such as compressed air, under sufficient pressure to overcome the pressure of the adhesive and to compress springs **31**, diaphragm **17** is flexed in a forward direction causing conjoint forward flexing or member **15** and forward movement of projections **21** to bring them into sealing contact with the inner surface of troughlike member **11** surrounding orifices **20** whereby said orifices are closed against further passage of adhesive therethrough. Upon release of the fluid pressure behind diaphragm **17** springs **35** cause the retraction of both diaphragms and hence of the projections to the extent permitted by adjusting screws **40**, to again free the orifices for the flow of adhesive therethrough.

In the pressure of the compressed air or other fluid employed to flex the diaphragm and flexible member to close to the orifices **20** will vary with the viscosity of the adhesive and the pressure under which the adhesive is supplied to the heads, but is normally within the range of five to twenty p.s.i. In any event an air pressure is employed which is sufficient to cause the projections **21** to contact the forward wall of the troughlike member with enough force to somewhat compress the material of which the projections are formed. It has been found that the application of such force causes, after the projections have been in initial contact with the forward wall of the troughlike member for a relatively short period of time, the intrusion of the rubber or other material of the projections into the orifices to fill or substantially fill the same as illustrated at **24** in FIG. 5. Upon release of the fluid pressure and the rearward

movement of the flexible member such portions 24, which are thereby withdrawn from the orifices into spaced relationship thereto, tend to retain their protruded shapes whereby, upon each orifice closing movement of the flexible member, the orifices are filled by the protrusions and the clogging of the orifices by adhesive, which otherwise could become hardened therein during inactive periods of the heads, is prevented.

It is important however that the force with which the projections press against the forward wall be positively limited in order to avoid excessive protrusion of the portions 24 and possible distortion of the relatively thin metal of the troughlike member. For this purpose, as illustrated particularly in FIGS. 4 and 5, the flanges 30 of angle bars 29 are made of a width to contact body member 10 and hence serve as stops against further forward movement of the projections when the desired degree of compression thereof has been reached.

Referring now to FIGS. 9 and 10 the glue heads 1 are illustrated as components of a case sealing machine. Such machines, as is conventional, comprise a case conveying means including a longitudinally extending plate 55 on which the cases are adapted to slide, and a pair of sprocket chains 56 supported on sprockets 57 and driven through a speed reduction unit 61 by motor 58, the sprocket chains supporting one or more flight bars 59. Motor 58 also drives a camshaft 60 adapted to make one revolution during one cycle of operation, i.e., a movement of a flight bar and hence of a case through the glue heads of the machine, for a purpose hereinafter mentioned.

The glue heads 1 are mounted by suitable means in positions above the paths of the upper opened side flaps 110 and below the paths of the opened lower side flaps 111 to apply adhesive to the flaps as the cases are conveyed through the machine. Backup plates 65 are positioned opposite the glue heads to support the flaps during the adhesive applying operation.

The mounting means for the glue heads (see particularly FIGS. 6 to 9) comprise rods 62 supported from the machine frame by any suitable means (not shown). Rockably mounted on the rods but adjustably held against longitudinal movement thereon by collars or other means (not shown) are arms 63, each arm being rigidly connected to one of the heads. As will be observed the rod-receiving bores of the arms are of larger diameter than the rods whereby each head may accommodate itself to any somewhat out of level position which the case flap or other member passing therebeneath, or thereabove as the case may be, may assume. This insures line contact between the flap and the head for the full length of the latter. In the operative positions of the glue heads (FIG. 6) the heads are in substantially vertical positions and, in the case of the heads mounted for application of adhesive to the upper case flaps 110, with their weight being carried by the backup plates (FIG. 8). The heads mounted in an inverted position to apply the adhesive to the lower flaps are pressed against the backup plates by suitable means such as springs (FIG. 9) each having one end connected to a frame element and the other to a lever arm 71 projecting from the hub of an arm 63 oppositely to the arm. Alternatively a counterweight may be carried by lever arm 71.

Conduits 44, which supply the fluid under pressure to the chamber between the diaphragm 16 and the cover plate of each of the several glue heads, are connected into branch conduits 64. The branch conduits are in turn connected to the discharge side of a normally open solenoid operated valve 66. The intake side of the solenoid valve is connected to a main 68 leading to a source (not shown) of fluid under pressure such as compressed air. Valve 66 is provided with an exhaust port 67 adapted, when the valve is closed to the passage of fluid from the main 68, to open the branch lines to the atmosphere. It will be understood that while for convenience of illustration only one valve 66 has been shown directly with the main, in lieu thereof an individual solenoid operated valve for each glue head may be employed in the conduits 44 leading thereto, the individual valves being of the same type and under the same control as valve 66. Main 68 includes a one-way or check valve 69 adapted to automatically close upon loss of pressure from the source for the purpose of maintaining pressure, assuming valve 66 is open, in the glue heads.

Camshaft 60, which as previously mentioned makes one revolution during the passage of a case through the case sealing machine has a cam 75 keyed thereto for rotation therewith. Cam 75 is provided with one or more lobes 76 adapted to close a normally open microswitch 77 when the cam is rotated to bring a lobe into position to elevate a contact arm 78 of the switch. Switch 77 is connected into an electrical circuit, herein referred to as the "first electrical circuit," in series with a second normally open microswitch 79 (see FIG. 9) positioned to be closed by the depression of a switch arm 80 thereof upon contact of the arm by the leading edge of a case bottom as the case is conveyed into the sealing machine to a position suitably just in advance of that in which the leading edges of the side flaps thereof lie opposite the glue heads. The solenoid of normally open valve 66, or the solenoids of the valves individual to each head if such are employed in place of the single valve, is also connected into the circuit in series with switches 77 and 79. The circuit has one lead 81 connected to a main power lead 82. The other lead 83 of the circuit is connected to a spring loaded swingable arm or contact 84 of a relay 85. Upon energization of the coil of relay 85 switch arm 84 is swung in a counterclockwise direction as viewed in FIG. 9 to make contact with a fixed contact 87 connected to a second main power lead 88.

A second electrical circuit includes a lead 89 extending from main power lead 82 to one terminal 90 of motor 58. The other lead 91 of the second electrical circuit connects the second terminal 92 of motor 58 with a second spring loaded movable switch arm or contact 93 of relay 85. Arm 93 is adapted to close the second electrical circuit to the main power lead 88 upon energization of the coil of the relay.

A third electrical circuit comprises a lead 95 connecting main lead 82 and a movable contact 96 of a manually operated switch 97. The other or fixed contact 98 of the manually operated switch is connected by a lead 99 to one terminal of a pressure switch 100 in the fluid pressure main 68. The pressure switch is of a conventional type adapted to close and to be held closed by a predetermined pressure in main 68 and to be opened to deenergize the circuit upon loss of such pressure. The other terminal of switch 100 is connected to one terminal 101 of the operating coil of relay 85. The other terminal 102 of the coil of the relay is connected by a lead 103 to main lead 88 to complete the circuit.

It will be understood that the several components of the circuits described above including the relay and switches are standard commercial items, as is the solenoid operated valve 66, hence no specific description thereof is given.

The adhesive to be distributed to the several glue heads for exudation through the orifices 20 thereof is supplied from a pressure tank 105 through feed lines 106, 107 and 108, lines 107 and 108 having connections to the conduits 50 individual to each glue head. A manually operated shutoff valve 109 is included in feed line 106.

In preparation for operation of the machine compressed air or other fluid under the required pressure is supplied to main 68 from an air pump or other suitable source. Inasmuch as at this time the solenoid of valve 66 is deenergized the valve is in its normally open condition and the compressed air flows through the branch lines 64 and conduits 44 to the several glue heads 1 to cause flexing of the diaphragms and the closing of the orifices 20. The supply of compressed air to main 68 also closes pressure operated switch 100 readying the third electrical

circuit for energization upon closing of the switch **97**. As a further preparatory step valve **109** is opened to cause flow of the adhesive through the feed lines **106**, **107** and **108** and conduits **50** to the several glue heads.

Upon closing of manually operated switch **97** the third electrical circuit is closed to energize the coil of relay **85**. This in turn causes switch arms **84** and **93** to close the circuits of which they are a part to main lead **88**. This closes the second electrical circuit to start motor **90**, the first electrical circuit however remaining open by reason of normally open microswitches **77** and **79**. Operation of the motor starts the movement of a flight bar, and hence of a case positioned on plate **55**, through the machine. As the case is so conveyed the side flaps **110** and **111** to which the adhesive is to be applied are opened into positions to receive the adhesive, horizontal positions in the device illustrated, and the upper inner flaps are infolded to overlie the contents of the case, the lower inner flaps having been previously so folded. The means for performing the flap positioning and folding functions (not shown) are well known and those employed in connection with the mechanism of the invention may be of any suitable type.

At the same time that the flight bar begins its case conveying movement camshaft **60** starts its rotation. As rotation of the camshaft continues the leading lobe **76** of cam **75** rotates into position to close switch **77**, the position of the lobe and the movement of the flight bar being correlated so that this occurs when the case is positioned with the leading edges of the side flaps **110** and **111** substantially opposite the glue heads. Suitably shortly in advance of the closing of switch **77** by the leading lobe **76** of cam **75** the leading edge of the case bottom has engaged arm **80** to close normally open switch **79** whereby upon the closing of switch **77** the first electrical circuit is closed energizing the solenoid of normally open valve **66** to close the valve against the further supply of fluid under pressure, e.g. compressed air, to the glue heads. Upon closing of valve **66** exhaust port **67** is opened venting the conduits leading to the glue heads thereby releasing the pressure behind the diaphragms and permitting the diaphragms to retract under the influence of springs **31** and free the orifices **20** for the flow of adhesive therethrough. Such flow will continue as long as switch **77** is held closed by the cam lobe whereby lanes or lines of adhesive are applied to the surfaces of side flaps **110** as the case continues to move through the sealing unit. In order to obtain what is known as "skip gluing," that is omission of glue lines opposite the gap between the infolded end flaps, the cam is preferably double lobed as shown, the orifices of the glue heads remaining open for a sufficient time to provide glue lines of a length substantially equal to the width of the infolded inner end flap at the leading end of the case, then being closed for an interval equal to the distance between the infolded end flaps, and again being opened to apply the adhesive for a length equal to the width of the trailing infolded end flap. Just before the trailing end of the case moves beyond the glue heads, the glue heads are again closed against extudation of adhesive therethrough by the opening of valve **66** to again supply compressed air behind the diaphragms of the glue heads as the solenoid of the avlve is deenergized due to the opening of switch **77**. Switch **79** continues in its closed position for a short interval thereafter due to the length of the switch arm which remains in contact with the case bottom and then opens as the case completely clears the switch. While a double lobed cam **75** is shown and described it will be recognized that each lobe may be split into additional lobes if desired to provide other adhesive patterns.

Referring now particularly to FIGS. 6 to 8 inclusive a description will be given of the manner in which the glue heads automatically rotate to adhesive applying position and thereafter are wiped clear of exuded adhesive upon completion of the adhesive applying operation. In FIG. 6 one of the heads **1**, a head overlying an upper flap being illustrated, is shown in its inoperative or rest position with the orifices **20** substantially directly opposite the backup plate. As the case flap **110** is brought into contact with the head and continues to advance the head is rotated by the flap to assume the somewhat elevated and angular position illustrated in FIG. 7 in which the adhesive may exude from the orifices **20** to form the lines or lanes of adhesive **112**. As the flap moves past the glue head the diaphragm and flexible member are operated as previously described to close the orifices against the further flow of the adhesive therethrough, this suitably occurring just prior to the time that the flap passes beyond the glue head whereby the adhesive lanes terminate adjacent the trailing edge of the flap as shown at **113** in FIG. 8. As the trailing edge of the flap passes out from under the glue head the latter rotates to its original position, the mouths of the orifices and the adjacent outer surfaces of the troughlike member being wiped clean by the corner of the flap as this occurs. Hence the accumulation of adhesive on the backup plates or on the outer surfaces of the glue heads is substantially eliminated. It will be recognized while the above description has been directed to the overlying glue heads, it is equally applicable to the underlying inverted heads which are spring pressed or otherwise urged toward the flaps passing thereabove.

Following the application of the adhesive the case is conveyed by the flight bar to bring its side flaps into contact with suitable plows (not shown) which may be of any desired or conventional type, the plows serving to rotate the side flaps into or substantially into their final positions. After completion of the above operations the case is delivered by the conveyor to a compression unit (not shown) and which may be of any conventional type where the outer flaps are held against the inner flaps until the adhesive is set.

As will be recognized a sealing machine as described above insures against the feeding of adhesive from the glue heads except when a case is positioned to receive the adhesive on the flaps thereof, i.e. when it is in position to close switch **79**. Also the feeding of the adhesive will continue only under the control of the lobes of cam **75** Furthermore unless the machine is in condition for operation, i.e. fluid under pressure is supplied to main **68**, the machine cannot be operated, pressure switch **100** remaining open and all of the circuits de-energized.

The construction of the glue heads and their manner of mounting insures that the orifices will not become clogged with hardened adhesive, nor will any substantial quantities of adhesive be deposited on the outside of the glue heads or backup plates, to interfere with successful continued operation. The elongated shapes of the orifices and the positioning of the orifices at the apex of the forward walls of the troughlike members and the tilting of the heads when in adhesive applying position have been found to promote the continuous and even flow or exudation of the adhesive.

Having thus described the invention in rather complete detail it will be understood that these details need not be strictly adhered to and that various changes and modifications may be made, all falling within the scope of the invention as defined by the following claims.

What is claimed is:

1. In an apparatus for applying adhesive to the surface of a panel having substantial thickness and movable relative thereto, a glue head comprising a troughlike member defining an adhesive receiving pocket and having a forward wall comprising convering surfaces defining a line of convergence, orifices in said wall located substantially on said line of convergence, means cooperating with said forward wall for closing said orifices at times, and means for supplying adhesive under pressure to said pocket; a backup member, means mounting said glue head for rocking movement toward and away from said backup member, means yieldably urging said glue head into engage-

ment with said backup member with said forward wall at said line of convergence in contact therewith and said orifices substantially closed thereby, means for relatively moving said panel between said glue head and said backup member to cause a first rocking movement of said glue head to free said orifices by the contact of a converging surface of said troughlike member with the leading edge of said panel, and a return rocking movement of said glue head upon passage of a trailing edge of said panel beyond said glue head, whereby said orifices and portions of said glue head adjacent thereto are wiped by said trailing edge during said return rocking movement.

2. In an apparatus as defined by claim 1 wherein said means for closing said orifices comprises a flexible member having projections thereon overlying said orifices, and means to cause said flexible member to move said projections into orifice closing positions.

3. In an apparatus for sealing cover flaps of cases said apparatus comprising means for advancing a case with certain of its cover flaps open, glueheads in the path of said advancing open cover flaps for applying adhesive thereto, said glueheads having adhesive exuding orifices therein, means for closing said orifices upon the application of fluid pressure to said heads and for opening said orifices upon relief of said fluid pressure, means for supplying fluid pressure to said heads, valve means for controlling the operation of said fluid pressure supplying means, and means actuated by the advancing movement of said case for actuating said valve means to cut off said supply and to relieve the fluid pressure on said heads upon the advancement of said flaps to adhesive receiving positions.

4. In an apparatus as defined in claim 3 wherein said means for actuating said valve means comprises an electrical circuit including a normally open switch in the path of said advancing case and adapted to be closed thereby.

5. In an apparatus as defined in claim 4 wherein said electrical circuit includes a second normally open switch and there is cam means for closing and opening said second switch.

6. In an apparatus for sealing cover flaps of cases, said apparatus comprising means for advancing a case with certain of its cover flaps open, means for driving said case advancing means, glue heads in the path of said advancing open cover flaps for applying adhesive thereto, said glue heads having adhesive exuding orifices therein, means for closing said orifices upon the application of fluid pressure to said heads and for opening said orifices upon release of said fluid pressure, means for supplying fluid pressure to said heads, valve means in said supply means for controlling the operation of said means for closing said orifices, and electrical circuitry for the operation of said drive means and said valve means, said electrical circuitry including a switch adapted to open and de-energize said circuity upon loss of fluid pressure from and said supply means.

7. In an apparatus as defined in claim 6 wherein said means for supplying fluid pressure includes a supply line and there is a check valve therein permitting flow of fluid through said supply line only toward said glue heads.

8. In an apparatus for sealing cover flaps of cases said apparatus comprising means for advancing a case with certain of its cover flaps open, glueheads in the path of said advancing open cover flaps of applying adhesive thereto, said glueheads having adhesive exuding orifices therein, means for closing said orifices upon the application of fluid pressure to said heads and for opening said orifices upon relief of said fluid pressure, means for supplying fluid pressure to said heads, valve means for controlling the operation of said fluid pressure supplying means, and means including means actuated by the advancing movement of said case and means under cam control, for actuating said valve means to cut off said supply and to relieve the fluid pressure on said heads upon the advancement of said flaps to adhesive receiving positions.

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