Feb. 8, 1949. D. E. WOBBE ET AL 2,460,866

CAN BODY SOLDER FLUXING MECHANISM

Filed Nov. 6, 1944 4 Sheets-Sheet 1

Fig. 1

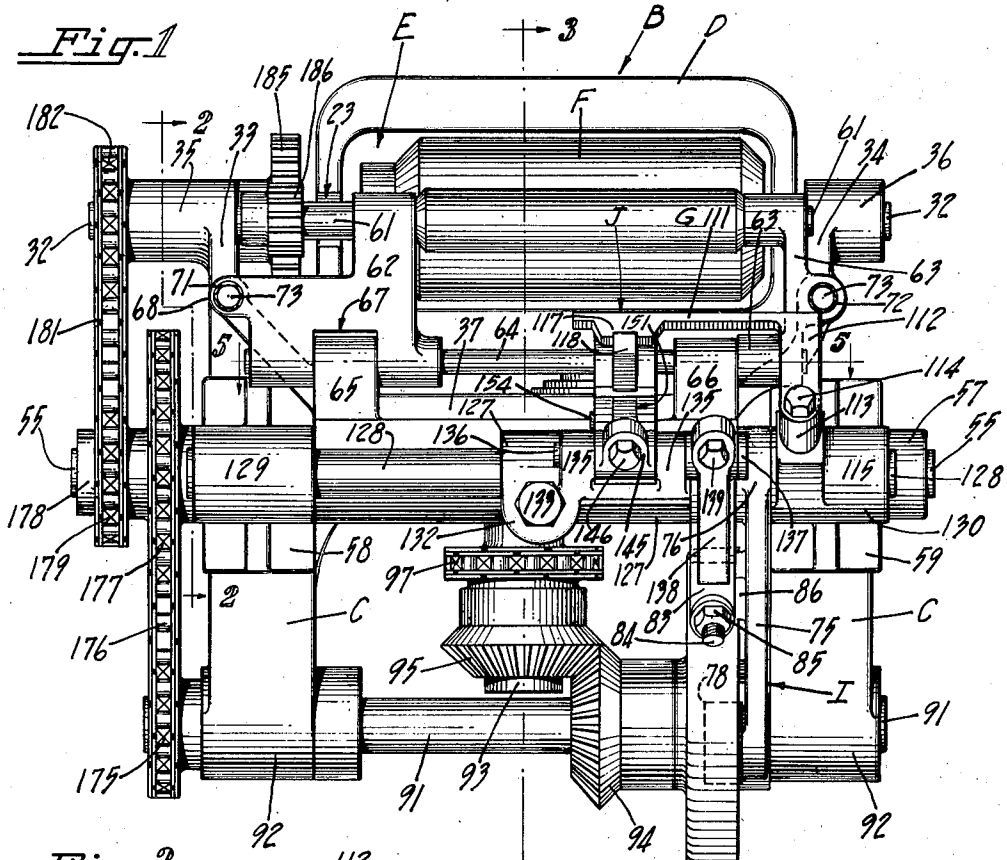
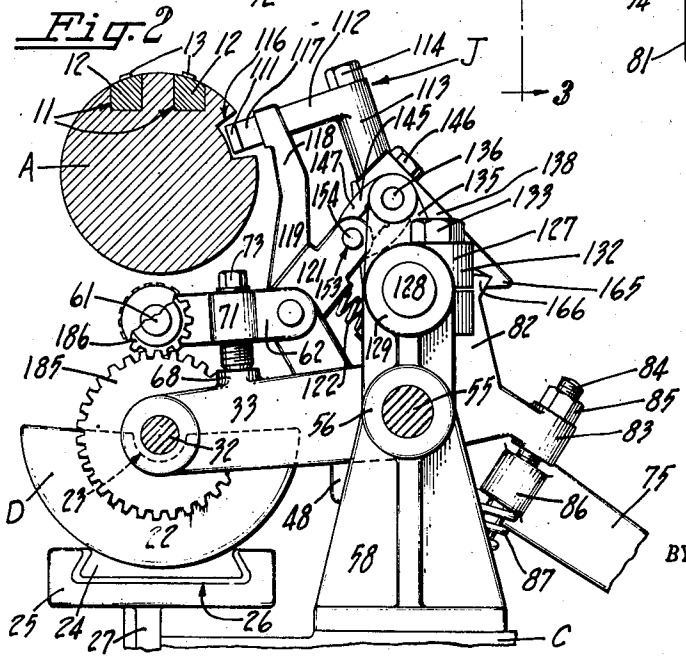


Fig. 2



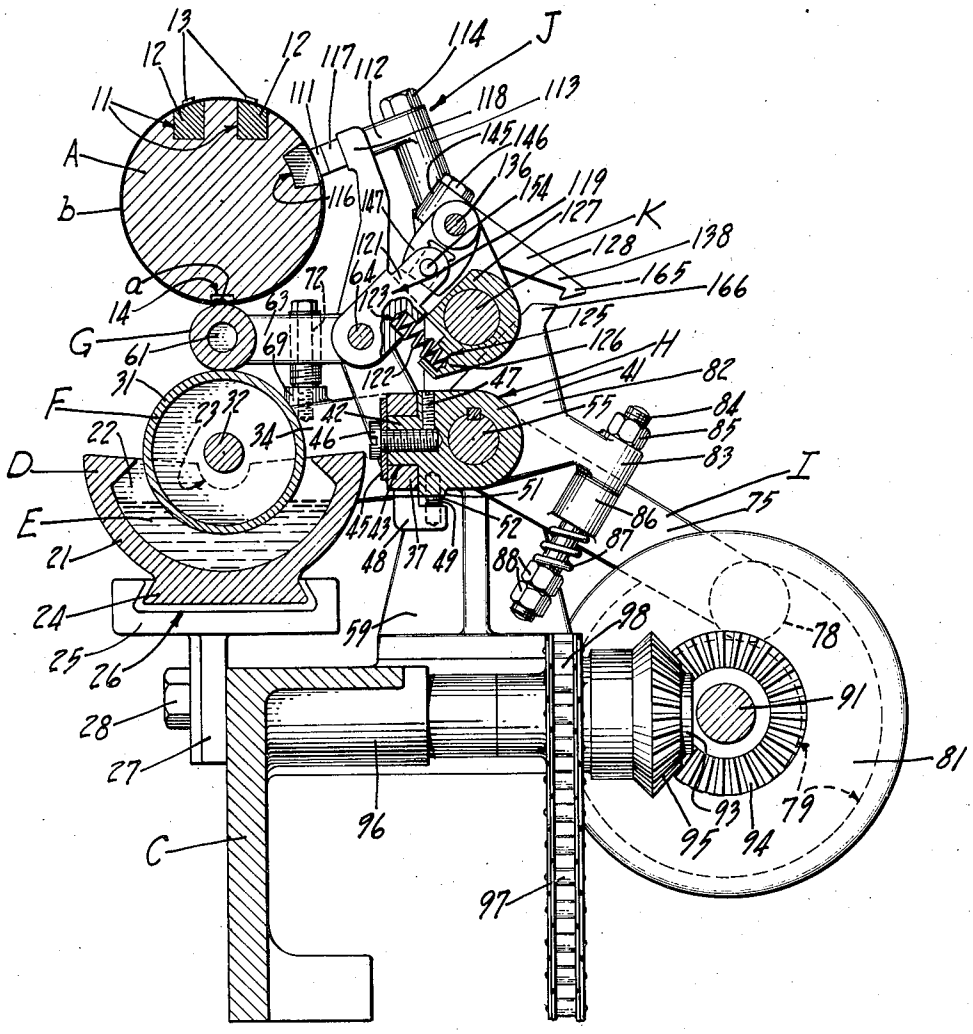
INVENTORS
Delbert E. Wobbe
Walter F. Pellmick
Ivan D. Thornburgh
Charles H. Erne
BY
ATTORNEYS

Feb. 8, 1949. D. E. WOBBE ET AL 2,460,866

CAN BODY SOLDER FLUXING MECHANISM

Filed Nov. 6, 1944 4 Sheets-Sheet 2

Fig. 3



INVENTORS
Delbert E. Wobbe
Walter F. Pillsnik
Ivan D. Thornburgh
Charles H. Grene
BY
ATTORNEYS

Feb. 8, 1949. D. E. WOBBE ET AL. 2,460,866

CAN BODY SOLDER FLUXING MECHANISM

Filed Nov. 6, 1944 4 Sheets-Sheet 3

Fig. 5

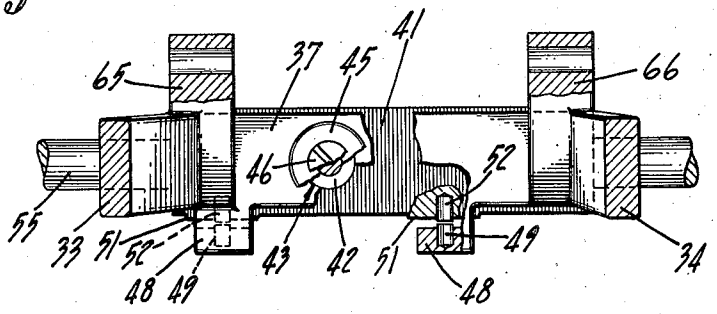
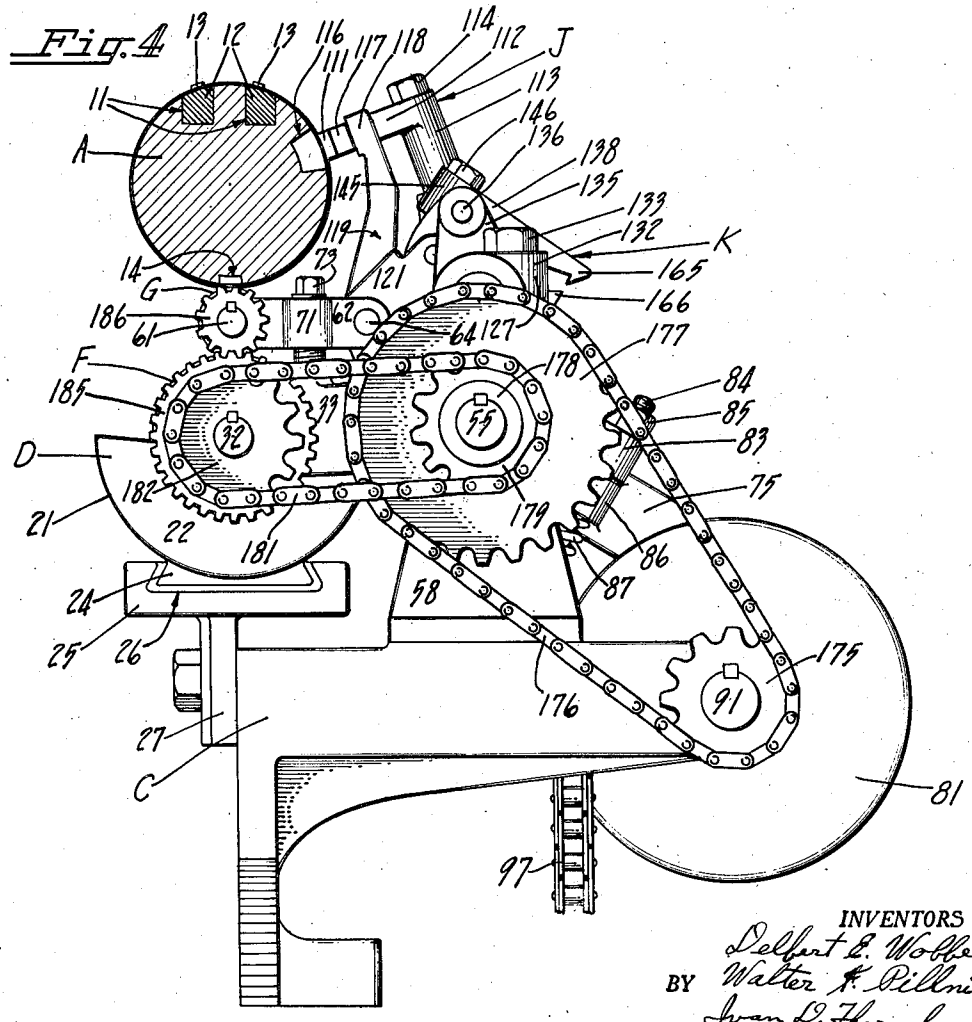


Fig. 4



INVENTORS
Delbert E. Wobbe
Walter K. Pillnik
Ivan D. Hornburgh
Charles H. Erne.
BY ATTORNEYS

Feb. 8, 1949. D. E. WOBBE ET AL 2,460,866

CAN BODY SOLDER FLUXING MECHANISM

Filed Nov. 6, 1944 4 Sheets-Sheet 4

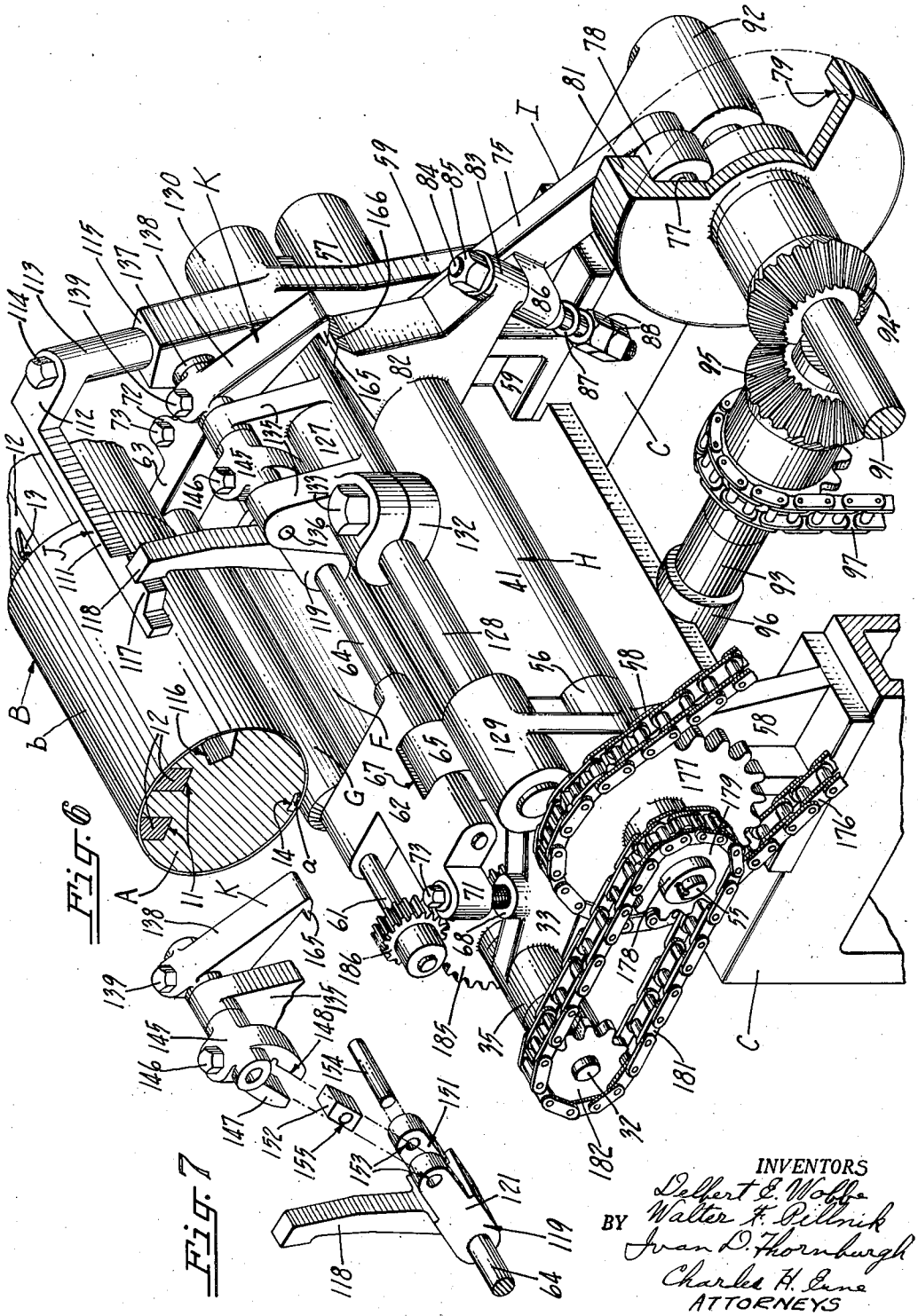


Fig. 6

Fig. 7

INVENTORS
Delbert E. Wobbe
Walter F. Pillnik
Ivan D. Thornburgh
Charles H. Luna
ATTORNEYS
BY

Patented Feb. 8, 1949 2,460,866

UNITED STATES PATENT OFFICE

2,460,866

CAN BODY SOLDER FLUXING MECHANISM

Delbert E. Wobbe, Maywood, and Walter F. Pillnik, Harvey, Ill., assignors to American Can Company, New York, N. Y., a corporation of New Jersey

Application November 6, 1944, Serial No. 562,154

9 Claims. (Cl. 113—95)

1

The present invention relates to a solder fluxing mechanism for can body making machines and has particular reference to an improved dual roller fluxing mechanism for applying flux to a side seam of a can body by a unit lifting action of the rollers while maintaining the roller engagement.

An object of the invention is the provision of a fluxing mechanism utilizing a pair of rollers having a common pivotal mounting, one roller applying flux to the side seam of a can body and the other roller constantly supplying flux to the flux applying roller.

Another object of the invention is the provision of a fluxing device of the character described wherein the rollers are carried in a floating part of the pivotal mounting which has self-adjusting movement on a bracket connecting with a swing shaft.

Another object is the provision of a fluxing device of the character described wherein the engaged rollers are rotated at the same peripheral speed and wherein adjustment may be had between the rollers to compensate for the amount of engagement incident to providing the desired thickness of flux applied to the side seam of the can body.

Yet another object is the provision of a fluxing device for use in fluxing the entire side seam of a can body while at rest upon the horn of a body making machine.

Still another object is the provision of a fluxing device utilizing a flux applying roller which is brought into engagement with the side seam of a can body to perform the fluxing operation, such movement taking place simultaneously with the movement of a flux supply roller under a unit actuation so that full roller engagement is maintained throughout the operations of the machine.

A further object of the invention is the provision of a fluxing device for applying flux to the side seam of a can body, provision being made for detecting the presence of a can body in correct position for fluxing and for interrupting the fluxing action and nullifying the normal movement of the flux applying roller in the absence of such a can body.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

2

Figure 1 is a top plan view of a solder fluxing mechanism embodying the instant invention;

Fig. 2 is a combination end elevation and vertical section of the mechanism as viewed along the broken section line 2—2 in Fig. 1 with parts broken away;

Fig. 3 is a transverse vertical sectional view taken substantially along the line 3—3 in Fig. 1 and showing the fluxing mechanism in position relative to a can body making horn;

Fig. 4 is an end elevation of the mechanism illustrated in Fig. 1 as viewed from the left side and showing in addition a body maker horn in section;

Fig. 5 is a sectional detail taken substantially along the line 5—5 in Fig. 1, with parts broken away;

Fig. 6 is a perspective view of the fluxing mechanism illustrating a tubular can body in fluxing position on a can body maker horn; and

Fig. 7 is an exploded view in perspective illustrating parts of the flux interrupting device used in the fluxing mechanism.

The drawings disclose a preferred embodiment of the invention which relates to a fluxing mechanism adapted for use in applying flux to the side seam *a* of a can body *b* when in position on a can body maker horn A (Figs. 3, 4 and 6). The can body may be advanced along the horn in the conventional manner and is brought into a fluxing station B at which the flux is applied.

The fluxing mechanism may be mounted in a frame or frame bracket C secured to the can body maker in proper position relative to the fluxing station B. The frame C carries a flux pot D which contains a bath of liquid flux E. A flux supply roller F is mounted for rotation in the flux pot preferably beneath the body maker horn A and on an axis parallel to the axis of the body maker horn. A flux applying roller G is preferably mounted above the flux supply roller F and these two rollers are adapted for dual swinging movement on a common pivotal mounting H.

A roller shifting or actuating device I is used to move the rollers F and G into fluxing or non-fluxing positions.

Provision is made for ascertaining if a can body *b* is in proper position at the fluxing station B and for this purpose a container body detector device J (Figs. 2, 3 and 4) is preferably employed. This detector device is provided with a latch element K which operates in conjunction with the pivotal mounting H for the rollers so that in the event there is no can body *b* in proper position for fluxing, the detector device will lock

the latch element K thus preventing the normal movement of the rollers on their pivotal mounting under the action of the roller shifting device I.

The body maker horn A for the can body *v* may be of the usual body maker type and is best shown in Figs. 3 and 6. For a cylindrical can body *b* the horn is of cylindrical shape and the usual provision of advancing the bodies intermittently along the horn may be used. For this purpose there is shown a pair of longitudinally extending grooves 11 which provide slideways for reciprocating feed bars 12, these being arranged adjacent the top of the horn, in the usual manner. Feed dogs 13 of the usual type are carried in the feed bars and in this manner a can body *b* is advanced into the fluxing station B. In the embodiment of the present invention, the side seam *a* of the can body is disposed below the horn and for this purpose a clearance groove 14 is cut in the horn to permit the unobstructed advancement of the can body.

The fluxing mechanism of the present invention is in the nature of an attachment and the frame C carrying the mechanism is secured to the frame of the body maker as required. The exact style of frame and its manner of attachment will depend upon the type of body maker being used.

The flux pot D best illustrated in Figs. 1, 3 and 4 preferably is shaped as a trough 21 and may be substantially semi-circular in cross section. Such a trough is formed with end members 22 and thus provides a reservoir for the liquid flux material E. The flux supply roller F is not attached to the flux pot but has free vertical movement. The end members 22 may be notched out in clearance openings 23 for the roller shaft or other associated parts of the flux supply roller.

Trough 21 is formed with a dove-tail base 24 which is adapted to be carried on a fluxing bracket 25 having a dovetail groove or slot 26 formed in its upper portion. This construction allows for sliding removal of the flux pot for cleaning purposes. The bracket 25 is formed with a depending projecting part 27 for mounting on the frame C of the fluxing mechanism. A cap screw 28 may be used for securing the parts together.

The flux supply roller F is preferably of hollow construction to provide a light weight roller 31. This hollow cylinder is mounted on a horizontally disposed shaft 32 which is carried in arms 33, 34 spaced on opposite ends of the roller. The arms 33, 34 are formed with bearing bosses 35, 36 in which the roller shaft 32 is journaled. These arms are integral parts of a floating bracket or yoke member 37.

The pivotal mounting H referred to comprises a sleeve 41 which in length is substantially equal to the width of the yoke 37. This sleeve provides for a movable connection with the yoke which affords the floating feature referred to. For this purpose the sleeve 41 is formed with a trunnion boss 42 which is preferably slightly off center, as best illustrated in Fig. 5. The yoke member or bracket 37 is formed with an opening 43 into which the trunnion boss extends when the parts are assembled. The yoke loosely fits on the trunnion boss. A washer 45 and a trunnion screw 46, the latter being threaded into the boss, retain the yoke 37 in its floating position relative to the sleeve 41. A setscrew 47 (Fig. 3) threaded into the sleeve presses against the trunnion screw 46 and holds it in locked position.

The flux supply roller F and also the flux applying roller G, are self-adjusting as to the fluxing operation. This is the direct result of the floating connection just described. The amount of floating movement is maintained within limits, the yoke 37 being formed with spaced projections 48 (Fig. 5) along its bottom edge. These are disposed on opposite sides of the trunnion connection 42, 43 and each projection carries an upright limit pin 49. The sleeve 41 is formed with spaced bosses 51 along its lower edge, each boss aligning with a corresponding projection 48 on the yoke. Depending from a seat in each boss is a pin 52 so arranged as to be in vertical axial alignment with a limit pin. The pair of pins 49, 52 on each side permits slight rocking movement of the yoke and parts carried thereby but limits such movement when a limit pin contacts its stop pin.

The sleeve 41 is keyed to a horizontally disposed rock shaft 55 which constitutes an essential part of the pivotal mounting H previously referred to. This shaft is held in fixed position in bearings 56, 57 (Fig. 6). The bearing 56 is formed in the upper part of a bracket 58 which is mounted on the frame C. In like manner the bearing 57 is formed on the upper part of a bracket 59 also mounted on the frame.

The flux applying roller G as shown in the drawings is mounted directly above the flux supply roller F and is smaller in diameter. This roller G is secured to a horizontal shaft 61 both shaft and roller being parallel to the body maker horn A and the flux supply roller F and its shaft 32. The shaft 61 extends outwardly at both ends of the roller G and is journaled in bearings formed at the forward ends of spaced links 62, 63. The links 62, 63 are carried on a horizontally disposed rod 64 which in turn is carried in spaced lugs 65, 66 which constitute an integral part of the yoke 37.

As best illustrated in Fig. 1, the link 62 extends on opposite sides of the lug 65 and for this purpose is notched as at 67 to allow for slight movement between the yoke 37 and the flux supplying roller supporting parts. This construction also prevents longitudinal shifting of one part relative to the other. Thus it will be understood that the rod 64 provides a connecting part between the supporting structures of the flux supply roller F and the flux applying roller G. The rollers F and G as a result move together as a unit during the operation of the machine.

Adjustment is provided between these structures by utilizing a slight rocking movement between the parts on the rod 64 as an axis. By means of this adjustment the amount of contact or engagement or even a slight spacing between the rollers F and G may be obtained. While it is herein described that the two rollers are in constant peripheral engagement, it will be understood that this may include slight separation. In other words, by increasing the spacing between the rollers F and G a thicker film of flux will be transferred to the flux applying roller G and therefrom to the side seam of the can.

Such adjustment of engagement is made for a given viscosity of flux and thereupon a uniform thickness of flux will be applied to the can bodies. The arms 33, 34 of the yoke 37 are provided respectively with top projection pads 68 (Fig. 2) and 69 (Fig. 3). The respective links 62, 63 of the flux applying roller G carry projecting bosses

71, 72 (see also Figs. 1 and 6). The bosses 71, 72 are disposed directly above the supply roller pads 68, 69 and each boss threadedly supports an adjusting screw 73. By positioning the screw in its associated boss the weight of the flux applying roller G and its associated parts is supported on the arms 33, 34 of the yoke and the desired spacing between the rollers F and G as determined by this threaded adjustment gives the desired film thickness.

In the foregoing description reference has been made to the unitary lifting of the rollers for applying the liquid flux to the side seam *a* of the can body *b* after it comes to rest at the fluxing station and to lowering of the rollers to permit an unrestricted advancement of the fluxed can body along the horn A and out of the fluxing station. During both raising and lowering of the rollers the flux supply roller F remains in the liquid flux E of the flux pot D. Both rollers are constantly rotated as will be described later and a proper supply of flux is assured at all times.

Raising and lowering of the rollers F and G is brought about by oscillation of the shaft 55 (Figs. 3 and 6) by means of a cam action of the actuating device I. At one end of the sleeve 41 a lever 75 (Figs. 1, 3 and 6) is formed with a bearing boss 76 which loosely surrounds the shaft 55. At the opposite end the lever 75 carries a pin 77 on which is mounted a cam roller 78. This cam roller is adapted to operate in a cam groove or track 79 formed in a face cam 81.

The actuation of the cam is timed for synchronized action with the advancement of can bodies *b* along the horn A and with the positioning of the bodies at the fluxing station for a fluxing operation. Normally movement of the lever 75 is transmitted to the shaft 55 to lift the flux supply roller F and the flux applying roller G. A yieldable transmission connection, however, from the lever 75 to the shaft 55 provides for the nullifying of shaft movement in the absence of a can body in proper position for fluxing, as will be hereinafter more fully described in connection with the detector device J.

Adjacent the lever boss 76 the sleeve 41 is formed with an integral block extension 82 which during normal operation of the machine moves in unison with the lever. The block 82 constitutes a part of the yieldable connection referred to and is formed with a lug 83 providing a seat for a bolt 84 having a retaining nut 85 threadedly mounted above the lug. The lever 75 is formed with a boss or ear 86 constituting a part of the connection and this ear is aligned with the lug 83. Ear 86 is apertured to receive the bolt 84. The lug 83 and the ear 86 normally are in the closed contacting position illustrated in Fig. 3. Bolt 84 extends below the ear and is surrounded by a spring 87. At the bottom the bolt 84 threadedly carries lock nuts 88 by means of which the spring is properly tensioned. This provides a yielding connection for the lever 75 and the block 82 of the sleeve 41. As long as the machine is operating normally, that is with can bodies in proper position at the fluxing station, the fluxing operation continues and the cam 81 rocking the lever 75 also oscillates the shaft 55 and the parts carried thereby.

The cam 81 is mounted on a horizontally disposed driven shaft 91 (Figs. 1, 3 and 6) which is journaled in spaced bearings 92 formed in the frame C. Shaft 91 is constantly rotated from a drive shaft 93. For this purpose a bevel gear 94 mounted on the shaft 91 meshes with a bevel gear 95 mounted on the drive shaft 93. The drive shaft 93 may be journaled in suitable bearings 93 formed in the frame C of the machine. The drive shaft 93 receives its rotation in any suitable manner by means of which the proper actuation of the parts of the fluxing mechanism is obtained. Since such actuation is in time with the can body maker of which the horn A is an essential feature, the fluxing mechanism will be driven from the body maker. A proper driving connection from the body maker may be afforded by means of a chain drive 97 which operates over a sprocket 98 mounted on the drive shaft 93.

The can body detector device J, which it will be recalled, cooperates with the latch element K and the shifting device I for moving the rollers on their pivotal mountings H, is best illustrated in Figs. 2, 3 and 6. This detector device comprises a longitudinal shoe 111 which extends alongside of the horn A. Normally the forward end of the shoe 111 is urged inwardly to rest within a longitudinal recess 113 cut in the side of the horn A (Fig. 2). The shoe 111 is connected by a short arm 112 to a downwardly extending boss 113 which provides for the pivotal mounting of the shoe.

Boss 113 is loosely mounted on a vertically extending bolt 114 threaded into the upper part of a bracket lug 115 which forms an integral part of the bracket 59. When a can body *b* advances along the horn A into the fluxing station B the forward end of the body engages the shoe 111 and rocks it on its pivotal connection 114 outwardly into sliding engagement with the can body moving into the fluxing station.

The forward end of the shoe 111 is formed with a projecting part 117 which extends along the back or away from the body maker horn. This projection at all times engages the upper end of a finger 118 (see also Figs. 3 and 7) which is urged toward the body maker horn under spring tension. The finger 118 is an integral part of a bell crank 119 which is mounted on the rod 64. An arm 121 of the bell crank 119 is at all times engaged by a spring 122 the upper end of which is seated in a counterbore 123, formed in the rear face of the bell crank arm.

The opposite end of the spring 122 is seated in a counterbore 125 formed in a projecting shelf or lug 126 of a hub 127. The hub 127 is secured to a stationary shaft 128. Shaft 128 is held in a bearing 129 formed on the bracket 58 and in a bearing 130 formed in the bracket 59 just beneath the bracket lug 115. The hub 127 is extended into a split clamping projection 132 (Fig. 6) and a cap screw 133 is used to clamp the parts together so that the hub 127 at all times remains stationary with the stationary shaft 128. By reason of this construction the finger 118 provides a constant yielding pressure against the free end of the shoe 111.

A toggle link connection is provided between the bell crank 119 and the latch element K. The hub 127 carries two upwardly extending lugs 135 which are formed integral with the hub and which provide a bearing for a horizontally disposed rock pin 136. A head 137 of the pin 136 is outwardly spaced from one of the lugs 135 sufficiently to form a mounting for a pawl member 138 which constitutes the principal part of the latch element K. This pawl is clamped on to the rock pin 136 as at 139.

A split toggle sleeve or boss 145 is mounted on the rock pin 136 in between the bearings provided by the lugs 135 and is clamped onto the pin

by a cap screw 146. By reason of this construction the pawl 138 moves in unison with the toggle boss 145 and with the rock pin 136 which forms the connecting part for this cooperative movement.

The toggle boss 145 is formed with a depending part 147 which is slotted at 148 to provide a loose toggle connection with the bell crank 119. The arm 121 of the bell crank is slotted at right angles to the slot 148 as at 151 to provide a seat for a toggle block 152. This toggle block loosely and slidably fits within the slot 148 of the toggle boss part 147. The slotted arm 121 of the bell crank is formed with aligned transverse bores 153 and after the block 152 is positioned within the slot 151 of the bell crank a connecting locking pin 154 is passed through the openings 153 in the bell crank and through an opening 155 in the block. Fig. 7 illustrates these parts in separated position prior to assembly.

It will be observed by reference to Fig. 3 that the can body *b* at the fluxing station B on the horn A has pushed back the shoe 111 and with it the finger 118. This action rocks the rod 64 so that the bell crank 119 is moved in a clockwise direction against the resistance of the spring 122. By reason of the toggle link connection between the bell crank 119 and the toggle boss 145 just described, the rock pin 136 is moved in a counterclockwise direction and the pawl 138 is lifted. This is the normal operating position, see also Fig. 6, and proper fluxing will take place.

In the absence of a can body at the fluxing station, the end of the shoe 111 remains in the horn groove 116. The spring 122, which it will be recalled is constantly pressing against the bell crank 119, yieldingly holds the shoe in this position through the action of the finger 118. Fig. 2 illustrates this abnormal position of the parts. It is at this time that the latch element K becomes effective, as will now be described.

The pawl 138 is formed with a hooked end 165 which, in the absence of a can body on the body maker horn, engages over a locking lug 166 formed on the block 82. This locks the block 82 against movement and holds the shaft 55, constituting the pivotal mounting H of the rollers F and G, against oscillation. This prevents movement of the rollers into fluxing position throughout all cycles of operation until a can body *b* has been brought into proper fluxing position. The roller shifting device I is actuated by the cam 81 and this cam movement takes place irrespective of the presence or absence of a can body in fluxing position at the fluxing station B. When the block 82 is prevented from moving, the spring 87 yields to permit the normal movement of the lever 75. At such time the ear 86 separates from the lug 83, as shown in Fig. 2. The flux applying roller G therefore does not move up into position adjacent the horn A and accordingly flux is not uselessly applied to the horn in the absence of the can body.

Reference has been made to the fact that the rollers F and G are constantly rotating and at a uniformly peripheral speed. This rotation is effected from the driven shaft 91, as illustrated in Figs. 1, 4 and 6. The shaft 91 carries a sprocket 175 over which operates a chain 176, this chain passing over a double sprocket 177 loosely mounted on the shaft 55. A collar 178 secured to the end of the shaft 55 retains the double sprocket 177 in operating position. An outer sprocket section 179 preferably is an integral part of the double sprocket 177 and a chain

181 operates over this sprocket section or member. Chain 181 also takes over a sprocket 182 keyed to the flux supply roller shaft 32. This insures a constant rotation of the shaft 32 and with it the flux supply roller irrespective of the position of the parts incident to the can body detection just described.

The unit rotation of the two rollers F and G is effected by a drive gear 185 secured to the supply roller shaft 32 and a mating gear 186 mounted on the flux applying roller shaft 61. The pitch diameter of these gears 185, 186 is such as to insure a uniform peripheral speed of rotation of the rollers F and G.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

We claim:

1. In a solder fluxing mechanism for applying fluxing material to the side seam of a container body, the combination of a machine frame, a horn carried on said frame for supporting container bodies passing therealong into fluxing position, a flux applying roller located adjacent said supporting horn for engaging can bodies and for applying fluxing material to the side seams of the bodies, a flux pot mounted on said frame for holding a supply of liquid fluxing material, a flux supply roller rotatable in said liquid flux and disposed in engagement with said flux applying roller for transferring flux from said flux pot to said flux applying roller, a common pivotal mounting in said frame for both of said rollers, and floating means operable at right angles to the said common pivotal mounting for uniformly engaging said flux applying roller along the entire length of the container body being fluxed.

2. In a mechanism for applying a liquid flux to the side seam of a container body, the combination of a horn for supporting the container body, feeding means for advancing container bodies intermittently along said horn into fluxing position, a flux pot located below said horn for retaining a bath of liquid flux, a flux supply roller rotatable in said bath for picking up said flux, a flux applying roller disposed in rotatable engagement with the outer surface of said flux supply roller for receiving the liquid flux therefrom and for applying liquid flux to the side seam of the container when at rest on said horn, and cam actuated means movable in synchronism with the advancement of the bodies for shifting said applying roller into engagement with a positioned body for depositing a quantity of the flux onto the side seam thereof.

3. In a mechanism for applying liquid flux to the side seam of a container body, the combination of a horn for supporting the container body for a fluxing operation, a flux pot adjacent said horn for retaining a bath of the liquid flux, a flux supply roller rotatable in said bath for picking up said flux, a flux applying roller engaging the outer surface of said flux supply roller for receiving the flux therefrom, a bracket for pivotally mounting said rollers, means for normally moving said rollers on their pivotal mounting to bring said flux applying roller into engagement with a container body on said horn for depositing

a quantity of flux onto the side seam of the body, a body detector located at one side of said horn and having a detector shoe and a latch member, said shoe having movement toward said horn in a detecting action and passing into an opening in said horn in the absence of a container body to be fluxed for latching said bracket against pivotal movement, and means for allowing movement of said roller moving means relative to said rollers when said bracket and the rollers are held against movement, to insure deposit of flux only on the side seam of a positioned container body.

4. In a solder fluxing mechanism for applying fluxing material to the side seam of a container body, the combination of a body horn along which container bodies are passed and supported while in a fluxing position, a flux applying roller located adjacent said supporting horn for engaging can bodies and for applying fluxing material to the side seams of the bodies, a flux pot mounted adjacent said horn for holding a supply of fluxing material, a flux supply roller rotatable in said flux pot and disposed in engagement with said flux applying roller for transferring flux to said flux applying roller, means for moving said flux applying roller into engagement with a container body on said horn, and means adjacent said horn including a detector member engageable by a container body moving into fluxing position on said horn for preventing bodily movement of said applying roller into fluxing position in the absence of a container body in fluxing position on said horn.

5. In a mechanism for applying a fluxing material to the side seam of a container body, the combination of means for supporting said body, a flux pot adjacent said supporting means for retaining a bath of liquid fluxing material, a flux supply roller rotatable in said bath for picking up said liquid fluxing material, a flux applying roller disposed in engagement with the outer surface of said flux supply roller for receiving the fluxing liquid therefrom, the axes of said flux applying roller and said supply roller being disposed substantially parallel to and longitudinally of a container body on said supporting means in fluxing position, a common support for said rollers, means for shifting said roller support and said flux applying roller into engagement with a container body while maintaining its engagement with said supply roller for depositing a quantity of liquid flux onto the side seam of the body, and means for mounting said roller support for floating movement in the plane of the roller axes to insure complete simultaneous engagement of said applying roller with the entire side seam of a container body being fluxed.

6. In a mechanism for applying fluxing material to the side seam of a container body, the combination of means for supporting said body, means for advancing a container body along said support into fluxing position, a flux pot adjacent said supporting means for retaining a bath of fluxing material, a flux supply roller rotatable in said bath for picking up said fluxing material, a flux applying roller disposed in engagement with the outer surface of said flux supply roller for receiving fluxing material therefrom, means for positively rotating said rollers at a uniform peripheral speed with their axes disposed substantially parallel to and longitudinally of a supported container body, a common support for said rollers, means for bodily moving said flux applying roller into engagement with a container body on said supporting means in fluxing position for depositing a quantity of the fluxing material onto the side seam of the body, and means for mounting said roller support for floating movement in the plane of the roller axes to insure complete simultaneous engagement of said applying roller with the entire side seam of a container body being fluxed.

7. In a mechanism for applying fluxing material to the side seam of a tubular container body, the combination of a horn along which a container body is moved and supported during fluxing, a flux pot adjacent said horn for retaining a bath of fluxing material, a flux supply roller rotatable in said bath for picking up said fluxing material, a flux applying roller disposed in engagement with the outer surface of said flux supply roller for receiving the fluxing material therefrom, pivotally mounted bracket means for supporting said rollers with their axes disposed substantially parallel to and longitudinally of said horn, means for bodily moving said flux applying roller relative to the flux supply roller for varying the thickness of the applied fluxing material, means for pivotally moving said bracket means to bring said flux applying roller into engagement with the container body on said horn for depositing the required thickness of the fluxing material onto the side seam of the body, and means for mounting said bracket means for oscillatory movement in the plane of the roller axes to insure complete simultaneous engagement of said applying roller with the entire side seam of a container body being fluxed.

8. In a mechanism for applying liquid flux to the side seam of a tubular container body, the combination of a horn for supporting the container body in position for a fluxing operation, a flux pot adjacent said horn for retaining a bath of liquid flux, a flux supply roller rotatable in said bath for picking up said flux, a flux applying roller engaging the outer surface of said flux supply roller for receiving the flux therefrom, a pivotal mounting for said rollers, means for shifting said rollers on their pivotal mounting and for normally bringing said flux applying roller into engagement with a container body on said horn for depositing a quantity of flux onto the side seam of the body, and means located at one side of said horn including a detector member engageable by a container body moving into fluxing position for preventing pivotal movement of said rollers by said roller shifting means in the absence of a container body in fluxing position on said horn to insure deposit of flux only on the side seam of a positioned container body.

9. In a mechanism for applying fluxing material to the side seam of a tubular container body, the combination of a horn along which a container body is moved and supported during fluxing, a flux pot adjacent said horn for retaining a bath of fluxing material, a flux supply roller rotatable in said bath for picking up said fluxing material, a flux applying roller disposed in engagement with the outer surface of said flux supply roller for receiving the fluxing material therefrom, pivotally mounted bracket means for supporting said rollers with their axes disposed substantially parallel to and longitudinally of said horn, means for pivotally moving said bracket means to bring said flux applying roller into engagement with the container body on said horn for depositing the required thickness of the fluxing material onto the side seam of the body, and means for mounting said bracket means for oscillatory movement in the plane of the roller

axes to insure complete simultaneous engagement of said applying roller with the entire side seam of a container body being fluxed.

DELBERT E. WOBBE.
WALTER F. PILLNIK.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
665,477	Sleeper	Jan. 8, 1901
754,702	Rehfus	Mar. 15, 1904
867,030	Gardner	Sept. 24, 1907
1,180,661	Kruse	Apr. 25, 1916
2,059,061	Titus	Oct. 27, 1936
2,237,641	Von Hofe	Apr. 8, 1941

FOREIGN PATENTS

Number	Country	Date
500,867	Germany	June 26, 1930