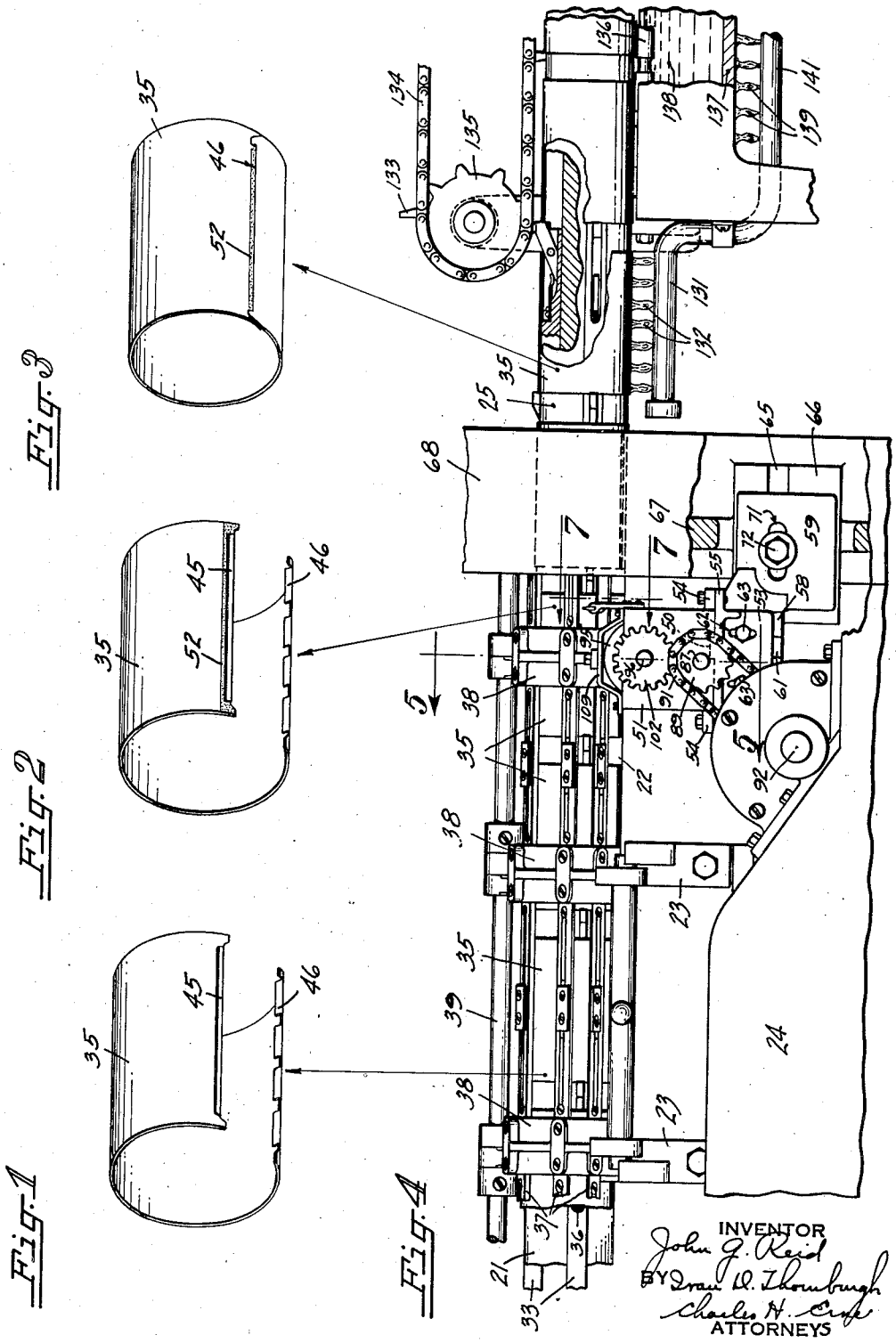
Nov. 8, 1938. J. G. REID 2,135,532

FLUXING DEVICE

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FLUXING DEVICE

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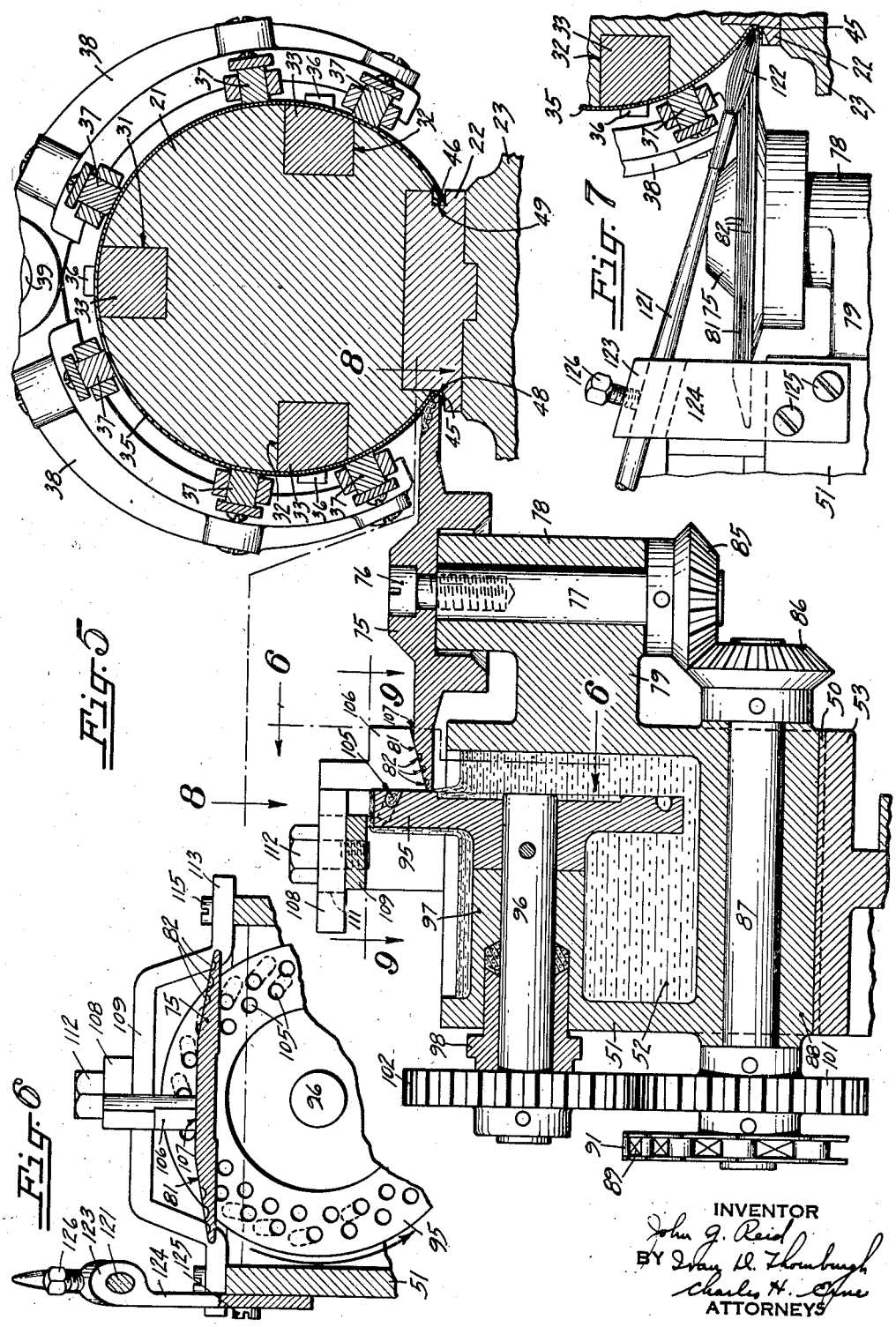


Fig. 5

Fig. 6

Fig. 7

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Fig. 10

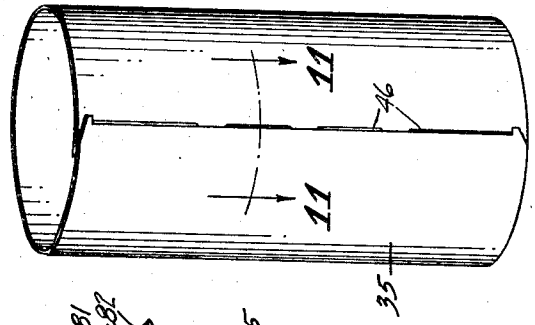


Fig. 11

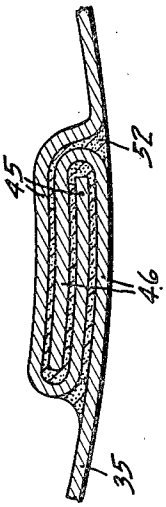


Fig. 9

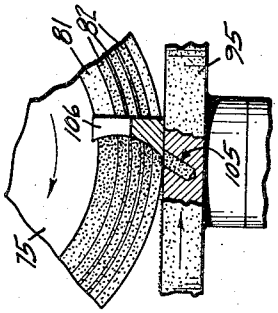
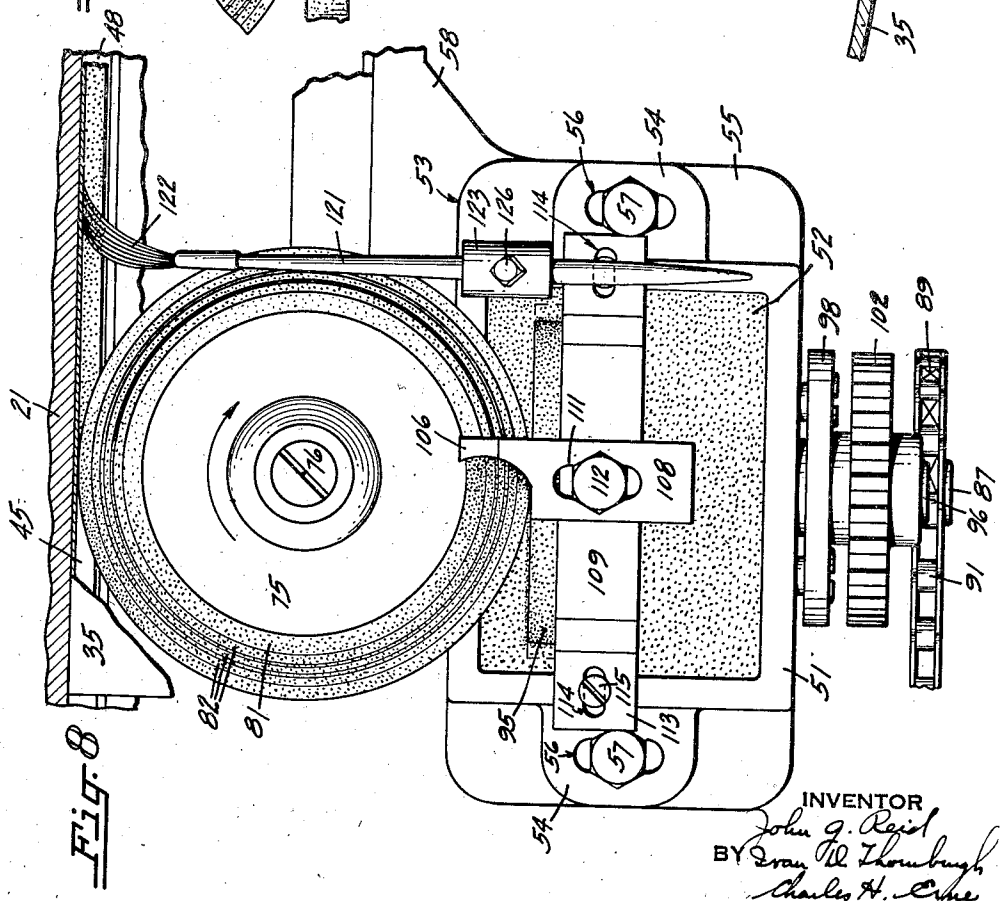


Fig. 8



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2,135,532

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2,135,532

FLUXING DEVICE

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Application December 17, 1935, Serial No. 54,904

20 Claims. (Cl. 113—95)

The present invention relates to can body making machines or the like and has particular reference to flux applying mechanism for the same which will deliver a regulated amount of liquid flux to a side seam hook of a can body as when the latter is passing through the can body making machine.

An object of the present invention is the provision of a flux applying mechanism suitable as an attachment for a can body maker which will deliver and properly distribute liquid flux into the side seam hook of a passing can body so that the desired amount of flux will be applied at the desired place in the can body side seam.

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:

Figure 1 is a perspective view of an open or incomplete can body with its side seam hooks disengaged, this being the condition of the body before and during the fluxing operation;

Fig. 2 is a similar view illustrating the can body after one side seam hook has been properly fluxed in a manner contemplated by the present invention;

Fig. 3 is a similar view illustrating the can body after its hooked edges have been engaged and bumped, this representing the condition of the fluxed body ready for soldering;

Fig. 4 is a side elevation of the principal parts of a can body making machine illustrating can bodies in different stages of development and in different positions on the can body forming mandrel or horn, several such stages or operations being indicated, the first illustrating the can body prior to fluxing it then being in the condition as illustrated in Fig. 1, the second operation being indicated as that of fluxing, the fluxed can body then appearing as shown in Fig. 2 and the third operation including preheating of the can body prior to soldering, the can body then having engaged side seam hooks fully bumped as illustrated in Fig. 3, arrows leading from the bodies at the different operating stations illustrated in Fig. 4 pointing respectively to the results of the operations as illustrated in Figs. 1, 2 and 3;

Fig. 5 is a transverse sectional view taken through a can body maker horn and through the flux applying mechanism, this view being substantially a section taken along the line 5—5 in Fig. 4 and shown on an enlarged scale, certain of the parts being illustrated in elevation;

Fig. 6 is a sectional detail of a part of the flux applying mechanism as viewed substantially along the broken line 6—6 in Fig. 5;

Fig. 7 is an enlarged side view and sectional detail of a portion of the flux applying mechanism illustrating the supporting horn and a part of a can body as viewed substantially along the section line 7—7 in Fig. 4;

Fig. 8 is a combination plan and sectional view of the flux applying mechanism as viewed substantially along the broken line 8—8 in Fig. 5;

Fig. 9 is a fragmentary detail in plan and in section as viewed substantially along the line 9—9 in Fig. 5 and illustrating the application of liquid flux to parts of the flux applying mechanism;

Fig. 10 is a perspective view of the completely formed and fully soldered can body showing the results of operations performed during passage of the can body through the mechanism indicated in Fig. 4; and

Fig. 11 is an enlarged sectional detail taken through the side seam of the can body of Fig. 10 as viewed substantially along the section line 11—11.

To more clearly present a preferred embodiment of the invention and to show the effects of operation of an improved flux applying mechanism on can bodies, the drawings disclose a portion of a can body making machine the principal working parts of various operating stations being indicated in Fig. 4, other figures showing in more detail the parts of the flux applying mechanism.

The numeral 21 indicates generally a can body forming and guiding mandrel or horn along which the can bodies are conveyed while being subjected to various operations including that of receiving a proper amount of flux in one hook of its open side seam after which the disengaged side seam hooks are brought together, are bumped, are preheated and thence soldered, these latter operations constituting the usual procedure in the manufacture of can bodies. The horn 21 may be mounted suitably on a block 22 (Figs. 4 and 5) which in turn may be supported on brackets 23 carried by a frame 24 of the body making machine. The forward end of the horn 21 is unsupported forming a horn extension 25 of less diameter than the rear part of the horn where it is supported by the block 22.

The horn may be formed with longitudinal top and side grooves 31 and 32 in the usual manner and feed bars 33 operating in these grooves propel can bodies 35 along the horn and through the various operating stations. These feed bars 33 are provided with the usual spring dogs 36 which

engage behind the edge of a can body 35 and move it forward each time the bars move forward on a reciprocating travel, this also being the usual construction for can body makers. During this passage of the can bodies 35 along the horn 21 they are held in place by guide rails 37 carried in side wings 38 conveniently mounted on a support bar 39 suitably confined in the usual manner.

When the can body 35 passes into the left hand section of the apparatus (Fig. 4) it is cylindrical in general form but the side seam hooks formed in its opposite edges are separated or disengaged. These side seam hooks may vary in style, size, etc., according to the kind of can being produced, one favorite style of side seam consisting of a hook section 45 (Fig. 1) which is turned out and a series of hook sections 46 formed on the opposite edge which are turned in.

The can body 35 is engaged progressively by each set of spring dogs 36 on the feed bars 33 and is advanced in a step by step movement toward the right as illustrated in Fig. 4. The guide block 22 on one side is preferably formed with a curved shoulder part 48 (Fig. 5) which is adapted to guide the rounded hook 45 of the side seam. A groove 49 is preferably formed in the opposite side of the guide bar 22 for the reception of the inwardly extending hook sections 46 of the can body. These parts 48, 49 retain the hooked edges of the can body in proper position during the fluxing operation.

The flux applying mechanism is illustrated in detail in Figs. 5 to 9, inclusive, and comprises a flux receptacle 51 adapted to contain a liquid flux 52, this receptacle being located at one side of the horn 21. Receptacle 51 is carried upon an intermediate support bracket 53 (Figs. 4, 5 and 8).

The flux receptacle is provided with extending lugs 54 which rest upon lugs 55 formed in the bracket 53. Each lug 54 is formed with an elongated slot 56 and the flux receptacle is held in adjusted position by bolts 57 which extend through the slots 56 and threadedly engage in the lugs 55. This slot construction permits shifting of the receptacle toward or away from the horn 21 by lateral movement relative to the bracket 53. A tongue and groove connection 50 (Figs. 4 and 5) between the parts 51 and 53 maintains proper alignment during such adjustment. After an adjusted position has been obtained the bolts 57 are tightened and the parts 51, 53 are locked together as a unit.

The bracket 53 is mounted on a pad 58 which is an integral part of a bracket 59. The bracket 53 has vertical adjustment relative to the pad 58. A tongue and groove section 61 maintains the proper alignment of the bracket while permitting its vertical movement. The bracket 53 is slotted at 62 and bolts 63 pass through the slots and are threadedly connected to the pad 58. These bolts when clamped tight hold the bracket 53 as well as the flux receptacle in adjusted vertical position.

The bracket 59 is united in a tongue and groove section 65 to a stationary pad 66 carried on a web 67 of an arch frame 68 which is properly associated with the main frame 24 of the apparatus. The bracket 59 is slotted at 71 and a bolt 72 passes through this slot and is threadedly engaged in the pad 66 of the web 67. This construction permits longitudinal movement of the bracket 59 relative to the stationary frame and horn 21 of the machine and with it longitudinal adjustment of the fluxing mechanism carried thereby.

A flux applying roller 75 (Figs. 5, 7 and 8) is secured as by a screw 76 to the upper end of a vertical shaft 77 which is mounted in a bearing 78 integrally connected as at 79 to the wall of the flux receptacle 51. Roller 75 is tapered adjacent its periphery, the upper face of the roller being inclined at 81. This surface is preferably provided with one or more flux retaining grooves 82 which are concentric to the center of the roller.

During passage of the can body 35 through the fluxing station and along the horn 21 its side seam hook 45 is moved past the peripheral edge of the roller 75 as best illustrated in Figs. 5 and 8. Inasmuch as the roller 75 is rotating, a different section of the grooved part of the roller passes into a different part of the side seam hook and a definite amount of flux is applied to the seam as will be further explained. The rate of rotation of this roller is preferably such as to cause it to move at the same lineal travel as the travel of the passing can body.

The roller 75 is rotated by suitable connection with a uniformly rotating part of the can body making machine. For this purpose mitre gears 85, 86 are used, the former being pinned to the lower end of the vertical shaft 77. Gear 86 is mounted on one end of a horizontal drive shaft 87 which is journaled in a bearing 88 formed in the lower part of the flux receptacle 51, this being beneath the liquid bath of the flux 52 contained within the receptacle.

Shaft 87 (see also Fig. 4) carries a sprocket 89 over which operates a drive chain 91. This chain also passes over and is driven by a suitable sprocket carried on a drive shaft 92 which provides the required moving part of the can body making machine. By means of this gear, shaft, sprocket and chain connection the flux applying roller 75 is rotated.

Flux is transferred to the flux applying roller 75 through the medium of a flux supply roller 95 (Figs. 5, 6, 8 and 9) which rotates within the liquid flux in the receptacle. The roller 95 is mounted for rotation in a vertical plane upon a horizontal shaft 96 which is parallel to the shaft 87 and in vertical alignment therewith, the roller being pinned or otherwise secured to the shaft.

Shaft 96 is journaled in a bearing 97 formed as a part of the wall of the flux receptacle 51. This shaft extends through the wall of the receptacle and through a stuffing box 98. This prevents leakage of the liquid flux around the shaft.

Shafts 87, 96 are rotated in unison and for this purpose the former carries a gear 101 which meshes with a gear 102 pinned to the end of the shaft 96. The forward face of the roller 95 moves tangentially to the flux applying roller 75 and preferably at the same lineal rate of travel.

To increase the flux carrying capacity of the roller 95, it may be provided with flux retaining pockets 105 which are preferably formed as inclined bores extending into the body of the roller from its forward face. These pockets are inclined so that as they dip below the surface of the liquid flux and then move up the flux is retained within the pocket. The filled pocket carries up and over as it passes adjacent to the periphery of the flux applying roller 75. The flux carried in a filled pocket is discharged onto a scraper device which in turn transfers it to the

inclined peripheral section of the flux applying roller 75.

The scraper unit comprises a scraper blade 106 which is formed with an inclined lower face 107 that is in close proximity to a passing section of the inclined face 81 of the flux applying roller. This scraper performs two functions. The first relates to receiving the liquid flux from the filled pocket 105 of the flux supply roller 95 while scraping it off that roller and the second to distributing this flux to the flux applying roller. As a filled pocket of flux is carried up by the rotating supply roller and as it approaches the top of its travel (see the upper part of Fig. 6) the pocket tilts to such an angle relative to the horizontal that flux begins flowing out of the face of the supply roller.

It will be understood that the pocket is still some distance away from the flux applying roller (see Fig. 9) and in fact will not come adjacent the periphery of the latter until it reaches its point of tangency. By reason of centrifugal action augmented by the rapid rotation of the supply roller 95 this discharging flux is thrown against the curved face of the scraper 106. Thus it will be understood what is meant by the function of receiving the flux as mentioned in a preceding sentence.

After a pocket of the supply roller has been brought into its position of tangency with the flux applying roller 75 (Fig. 9) the vertical wall of the scraper 109 acts to remove or scrape any flux which has not been already carried onto the scraper from the face of the supply roller. This is the scraping action referred to above.

The scraper also acts to scrape off any flux adhering to the inclined face of the applying roller 75 after a particular section of the face has passed by the hook of the moving can body (Fig. 8) and has been brought around to the scraper 106, this being shown in Fig. 5 where the inclined upper face of the applying roller 75 passes under the inclined lower edge of the scraper. This insures that the surface of the flux applying roller when it receives its fresh charge of flux is free of any accumulation or excess of flux, the flux remaining within the grooves of the flux applying roller, providing a constantly moist quantity of the flux. This is the distributing step referred to above. It will be understood that in the event that there is a skip of cans passing along the horn the flux which is not taken off of the flux applying roller will be removed from the roller by the scraper prior to the latter receiving its renewed charge.

The position of the scraper 106 relative to the flux applying roller 75 may be varied and this adjustment as to position will now be considered. The scraper blade 106 (Figs. 5, 6 and 8) is extended as a horizontal bar 108 which is mounted upon a strip support 109 carried on the flux receptacle 51. The bar 108 is slotted at 111 and a bolt 112 extends through the slot and is threaded in the strip 109.

This slotted construction permits adjustment of the blade 106 relative to the face of the flux supply roller 95 and also positions the blade relative to the inclined face 81 of the flux applying roller 75. The strip 109 is formed with feet 113 which are also slotted as at 114. Bolts 115 extending through the slots 114 are threadedly engaged into the wall of the flux receptacle 51. This provides for longitudinal adjustment of the strip 109 and of the scraper 106 relative to the flux receptacle.

Figure 9 illustrates the scraping of the liquid flux from the roller 95 and the depositing of it first on the scraper 106 and thence onto the flux applying roller 75. The repeated pockets of flux completely fill and overflow the grooves 82 of the flux applying roller and the excess flux which will not stay on the grooved surface is returned to the flux receptacle as best illustrated in Fig. 5. An adequate supply of flux as carried on the flux applying roller 75 is thus brought into the side seam hook 45 of the can body 35 as the latter passes along the horn 21 and a definite predetermined amount of liquid flux is deposited at such time into the hook. Since the movement of the can bodies along the horn is constant and the rotation of the flux supply roller 95 and flux applying roller 75 are all uniform it follows that a definite amount of flux is always available and is presented to the can body hook. This flux by capillary attraction is drawn into the hook substantially clearing the inclined upper surface of the roller while still leaving the grooves filled with liquid. This provision insures that the flux on the flux applying roller will not readily dry out or get hard should the machine be stopped for a short period of time.

This depositing of liquid flux into the side seam hook is comparatively uniform but to insure a more complete distribution of the flux, the freshly fluxed hook is caused to pass over a distributing brush unit 121 (Figs. 7 and 8). The bristles 122 of this distributing brush unit insure that both inside walls of the side seam hook 45 are completely and uniformly fluxed.

The brush unit 121 is held in an apertured boss 123 of a bracket 124, the latter being secured to one side of the flux receptacle 51 in a suitable manner as by screws 125. The handle of the brush unit is loosely seated in the aperture of the boss 123 and a setscrew 126 threaded in the boss is screwed down against the handle of the brush unit. This results in a rigid support for the brush in any desired position at the same time permitting easy removal of the brush or adjustment of its bristles 122 relative to the can body side seam hook.

As the can body passes from the fluxing station and advances along the horn of the body maker it passes through the usual can making operations which are so well known that very little further detailed description is thought necessary. It may be said, however, that the separated hooks 45, 46 of the can body, the former now being fluxed, are first engaged, the can body is brought to size and seam forming is completed by the bumping of the hooks, the can body now being in the condition illustrated in Fig. 3.

From the bumping station the bodies then pass over a preheating unit suggested at the right of Fig. 4. This heating unit is shown by way of illustration only as including a gas supply pipe 131, flames 132 providing for a wall of fire over which the can body seam is moved by the feed bars 33 as the can body is conveyed along the horn extension 25, this being a usual construction in machines of this character.

After leaving the preheating station the can bodies are engaged by flights 133 carried on an overhead chain 134 which pick off a can body from the feed bars 33 and thence carry it continuously through the soldering operation. This chain 134 at the machine end passes over an idler sprocket 135 which is mounted in the usual manner. While the can bodies are being conveyed by the chain 134 they pass over a solder applying

roller 136 which operates in a bath 137 of molten solder 138 this also being a usual construction. The solder bath is heated in any suitable manner as by flames 139 supplied by gas from a supply pipe 141. This pipe may be an integral part of the supply pipe 131 which furnishes the preheating station as illustrated in Fig. 4.

Since all of the adjacent walls of the side seam of the can body are completely filled with flux at the time the heated side seam passes over the solder applying roller 136, solder is caused to flow in between these walls and this insures a complete solder bond between the interengaged hooks 45, 56 of the can body. This solder bond is illustrated graphically in Fig. 11, Figure 10 illustrating the completed can body.

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.

I claim:

1. In a can body maker, the combination with a horn for supporting and guiding moving can bodies having side seam hooks, of a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller mounted on a substantially vertical axis for rotation at one side of said horn, said roller having a flux retaining groove disposed adjacent its periphery for holding a charge of flux, the periphery of said roller being adapted to enter into the said side seam hook of a passing can body and to deposit flux from said groove onto the walls of said seam hook, means for rotating said roller, and means for transferring flux from said receptacle to said flux applying roller.

2. In a can body maker, the combination with a horn for supporting and guiding moving can bodies having side seam hooks, of a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller mounted on a substantially vertical axis for rotation at one side of said horn, said roller having concentric flux retaining grooves formed in its upper face and adjacent its periphery for holding a quantity of flux, successive sections of the flux charged grooves passing into successive sections of the side seam hook of a can as the latter moves along said horn and depositing the flux into the seam hook, means for rotating said roller, and means operating in said flux receptacle for continually supplying said roller grooves with flux as flux is removed by the passing can body.

3. In a can body maker, the combination with a horn for supporting and guiding moving can bodies having side seam hooks, flux applying mechanism comprising a flux receptacle located at one side of said horn for containing a liquid flux, a grooved flux applying roller mounted on a substantially vertical axis for rotation adjacent said receptacle, means for transferring flux from the said flux receptacle to the grooves of said roller the latter being adapted to enter into the said side seam hook of a passing can body and to deposit flux from its grooves onto the walls of said hook, and means for rotating said flux applying roller with a peripheral speed which bears a definite ratio to the lineal speed of said passing can bodies in their travel along said horn.

4. In a can body maker, the combination with a horn for supporting and guiding moving can bodies having side seam hooks, flux applying mechanism comprising a flux receptacle located at one side of said horn for containing a liquid flux, a grooved flux applying roller mounted on a substantially vertical axis for rotation on said receptacle, a flux supply roller mounted for rotation in said receptacle for transferring flux to the grooves of said flux applying roller the latter being adapted to enter into the said side seam hooks of passing can bodies and to deposit flux from its grooves onto the walls of said hooks, means for rotating said flux applying roller with a peripheral speed which bears a predetermined ratio to the lineal speed of said passing can bodies in their travel along said horn, and means for rotating said flux supply roller in time with said flux applying roller.

5. In a can body maker, the combination with a horn for supporting and guiding moving can bodies having side seam hooks, of a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller mounted for rotation at one side of said horn, said roller having concentric grooves formed in its upper face adjacent its periphery for holding a quantity of flux, the grooved section of said roller being adapted to enter into the said side seam hook of a passing can body to deposit flux into the hook, a flux supply roller mounted for rotation within said flux receptacle and with a face tangentially disposed to the periphery of said flux applying roller, said flux supply roller having pockets formed in its face for receiving flux when they dip beneath the surface of the liquid within the flux receptacle and for carrying the flux into position for discharge onto the grooves of said flux applying rollers, and means for rotating said rollers.

6. In a can body maker, the combination with a horn for supporting and guiding moving can bodies having side seam hooks, of a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller mounted for rotation in a horizontal plane at one side of said horn, said roller having concentric flux retaining grooves formed in its upper face adjacent its periphery for holding a quantity of flux, the grooved section of said roller being adapted to enter into the said side seam hook of a passing can body to deposit flux into the hook, a flux supply roller mounted for rotation in a vertical plane within said flux receptacle and with a face tangentially disposed to the periphery of said flux applying roller, said flux supply roller having pockets formed in its face for receiving flux when the roller dips beneath the surface of the liquid within the flux receptacle, means for rotating said rollers, and scraper means for receiving flux from said flux supply roller for returning surplus flux back to said flux receptacle and for discharging a predetermined amount of flux onto said flux applying roller.

7. A flux applying mechanism comprising in combination a flux receptacle for containing a liquid flux, a flux applying roller mounted for rotation in a horizontal plane, said roller having concentric flux retaining grooves formed in its upper face adjacent its periphery, a flux supply roller mounted for rotation in a vertical plane within said flux receptacle, a face of said roller being tangentially disposed relative to said flux applying roller, said flux supply roller having pockets formed in its adjacent face which

dip beneath the surface of the liquid within the flux receptacle and which carry the flux received therein onto the grooves of said flux applying roller adjacent their point of tangency, and means for rotating said rollers.

8. A flux applying mechanism comprising in combination a flux receptacle for containing a liquid flux, a rotatable flux applying roller mounted on said flux receptacle and being adapted to engage within and deposit flux into the side seam hook of a can body, a scraper mounted to extend over said flux applying roller and adapted to discharge flux thereon, and a flux supply roller mounted in said flux receptacle and rotating within the flux contained therein and at right angles to the rotation of said flux applying roller to deposit flux onto said scraper, and means for rotating said rollers.

9. A flux applying mechanism comprising in combination a flux receptacle for containing a liquid flux, a flux applying roller mounted for rotation in a horizontal plane and having concentric flux retaining grooves formed in its upper face adjacent its periphery, the grooved section of said roller being adapted to enter within and deposit flux into the side seam hook of a passing can body, a scraper mounted on said flux receptacle and in close proximity to the grooved face of said flux applying roller for distributing flux to said roller grooves, a flux supply roller mounted for rotation in a vertical plane within said flux receptacle, a face of said flux supply roller moving tangentially to said flux applying roller, said flux supply roller having pockets formed in its adjacent face for dipping beneath the surface of the liquid flux within the flux receptacle for receiving a charge of flux and for discharging flux onto said scraper adjacent the point of tangency of said rollers, and means for rotating said rollers.

10. In a can body maker, the combination with a horn for supporting moving can bodies having disengaged side seam hooks, of a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller mounted for rotation relative to said flux receptacle and in substantially horizontal planes and located at one side of said horn, said flux applying roller having a tapered peripheral edge which is adapted to extend inside of a said can body seam hook as the can body passes along said horn to deposit flux in the said seam hook, means for rotating said flux applying roller, means for transferring liquid flux onto the tapered section of said flux applying roller, and means for retaining a quantity of flux on the tapered section of said flux applying roller.

11. In a can body maker, the combination with a horn for supporting and guiding moving can bodies having side seam hooks, of a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a grooved flux applying roller mounted for rotation at one side of said horn, the grooved section of said roller being adapted to enter into the said side seam hook of a passing can body and to deposit flux into the hook, a scraper mounted on said flux receptacle and disposed in close proximity to the said flux applying roller for transferring flux thereto, a flux supply roller mounted for rotation within said flux receptacle and adapted to carry flux from said flux receptacle and to deposit it on said scraper, means for rotating said rollers, and adjusting means for locating said flux applying roller relative to said horn and said scraper relative to said flux applying roller.

12. In a can body maker, the combination of a horn for supporting and guiding moving can bodies having side seam hooks, means for moving can bodies on said horn a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a grooved flux applying roller mounted for rotation in substantially horizontal planes at one side of said horn, the grooved section of said roller being adapted to enter into the said side seam hook of a can body moving along said horn and to deposit flux into the hook, means for rotating said flux applying roller, means for carrying flux from said flux receptacle to the grooved section of said flux applying roller, means for joining the can body hooks into a side seam, and means for soldering said fluxed side seam.

13. In a can body maker, the combination of a horn for supporting can bodies having separated side seam hooks, means for advancing can bodies along said horn while supported thereby with said hooks disposed at the lower side of the horn, a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller mounted and located at one side of said horn, means for rotating said roller, said flux applying roller being arranged for rotation in substantially horizontal planes and adapted to engage within a said can body seam hook to deposit flux therein, and means for transferring flux from said flux receptacle onto said flux applying roller.

14. In a can body maker, the combination of a horn for supporting can bodies having separated side seam hooks, means for advancing can bodies along said horn while supported thereby with said hooks disposed at the lower side of the horn, a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a rotatable flux applying roller mounted on said flux receptacle and located at one side of said horn, said flux applying roller being arranged for rotation in substantially horizontal planes and adapted to engage within a said can body seam hook during movement of a said can body along said horn to deposit flux in said seam hook as said flux applying roller rotates, and roller means operating in the liquid flux of said flux receptacle for transferring flux to said rotating flux applying roller.

15. In a can body maker, the combination of a horn for supporting moving can bodies having disengaged side seam hooks, means for advancing can bodies along said horn while supported thereby with said hooks disposed at the lower side of the horn, a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller mounted for rotation relative to said flux receptacle and in substantially horizontal planes and located at one side of said horn, said flux applying roller having a tapered peripheral edge which is adapted to extend inside of a said can body seam hook as the can body passes along said horn to deposit flux in the said seam hook, means for rotating said roller, and means for transferring some of said liquid flux onto said flux applying roller.

16. In a can body maker, the combination of a horn for supporting can bodies having separated side seam hooks as they are being conveyed along said horn, means for advancing can bodies along said horn while supported thereby with said hooks disposed at the lower side of

the horn, a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a rotatable flux applying roller located at one side of said horn adjacent the path of travel of said body seam hook, said flux applying roller being arranged to rotate in substantially horizontal planes and adapted to extend into the body seam hook during movement of the can body along said horn to deposit flux in the seam hook as the roller rotates, and a flux supply roller mounted in said flux receptacle and in tangential relation to said flux applying roller for supplying flux to the latter.

17. In a can body maker, the combination of a horizontal horn for supporting can bodies having disengaged side seam hooks, each can body being conveyed along said horn with one of its side seam hooks held in horizontal position, means for advancing can bodies along said horn while supported thereby with said hooks disposed at the lower side of the horn, a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller mounted for movement in a horizontal plane on said flux receptacle, the periphery of said flux applying roller extending in a substantially horizontal direction under a part of the horn into the horizontal hook during passage of the can body along said horn to deposit flux in the hook as said flux applying roller rotates, and means in said flux receptacle for transferring flux to said flux applying roller.

18. In a can body maker, the combination of a horizontal horn for supporting can bodies having disengaged side seam hooks, each can body being conveyed along said horn with one of its side seam hooks held in horizontal position, means for advancing can bodies along said horn while supported thereby with said hooks disposed at the lower side of the horn, a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller mounted for movement in a horizontal plane and on a rotatable vertical shaft which is journaled in said flux receptacle and at one side of said horn, the periphery of said flux applying roller extending into the can body horizontal seam hook during passage of the can body along said horn to deposit flux in the hook, a rotatable flux supply roller moving in the liquid flux within said flux receptacle and in close proximity to the peripheral edge of said flux applying roller for depositing flux on the latter, and means for rotating said rollers.

19. In a can body maker, the combination with a horn for supporting can bodies having side seam hooks and for guiding said can bodies during their movement therealong, of a flux applying mechanism comprising a flux receptacle for containing a liquid flux, a flux applying roller rotatably mounted on a substantially vertical axis at one side of said horn, said flux applying roller being adapted to engage within a said can body seam hook during movement of the can body along said horn to deposit flux therein, a flux supply roller rotatably mounted on a substantially horizontal axis and adapted to pass beneath the level of liquid flux contained within said receptacle for transferring flux onto said flux applying roller, means for rotating said rollers, and means for distributing in the seam hook of a passing can body the flux received from said flux applying roller.

20. In a soldering machine for can bodies the combination of a horn, means for conveying can bodies having separated side seam hooks along said horn, a flux applying roller mounted on a substantially vertical axis and adapted to carry flux on its top surface, said roller extending part way under said horn so as to enter the side seam hook of a can body to deposit flux therein, and fixed means projecting into the path of said side seam hook and out of the path of said flux applying roller for distributing said flux in said hook after it has been deposited by said roller.

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