Aug. 8, 1972 P. L. PERSON 3,682,744

APPARATUS FOR STRIPPING AND CLEANING BACKING PLATES OR PRESS SADDLES

Filed June 15, 1970 2 Sheets-Sheet 1

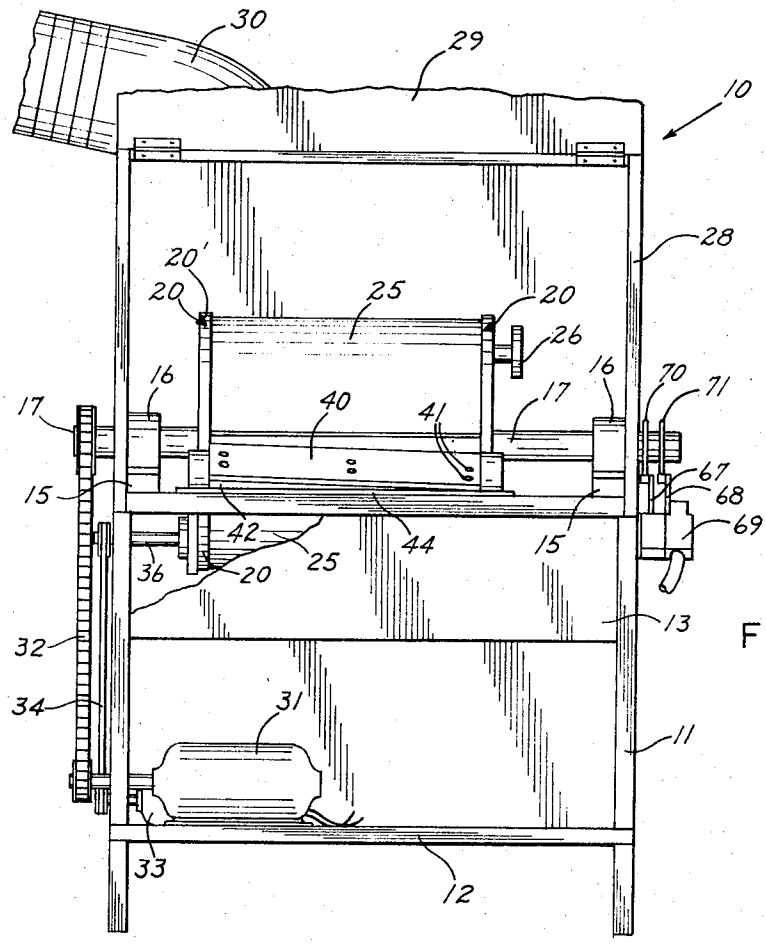


FIG. 1

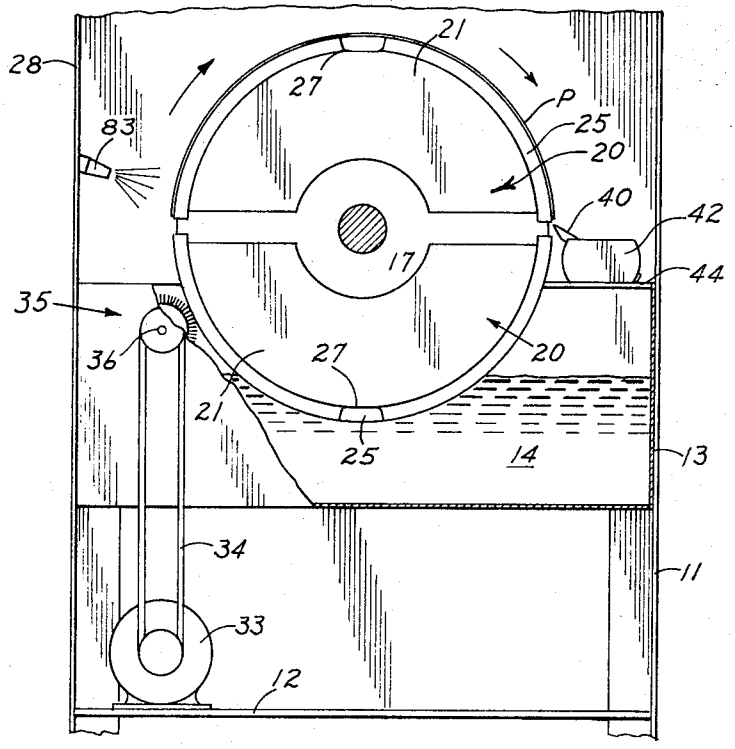


FIG. 2

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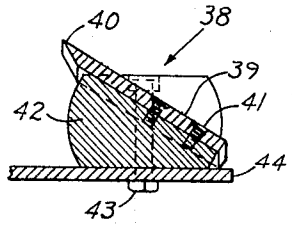


FIG. 5

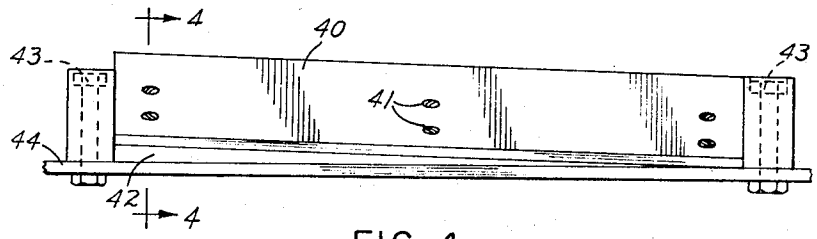


FIG. 4

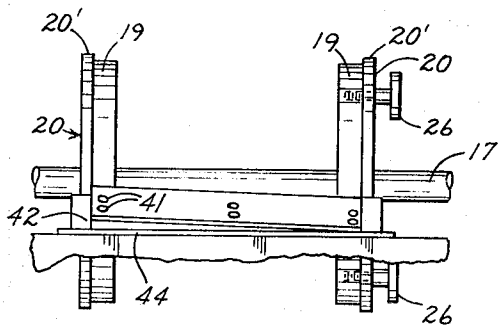


FIG. 3

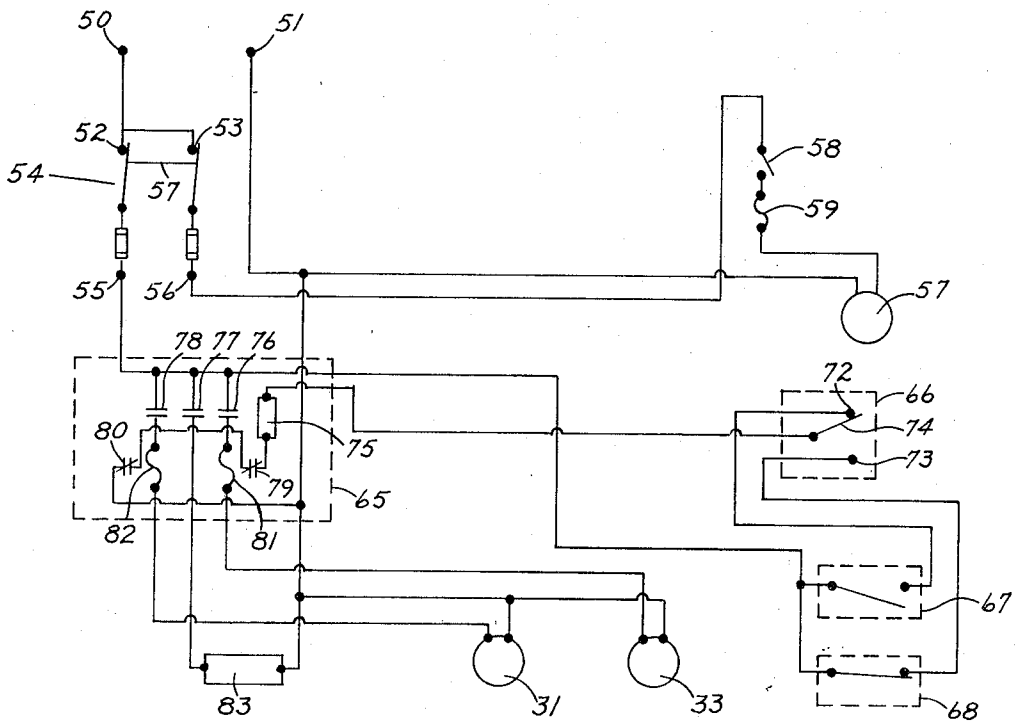


FIG. 6

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3,682,744

APPARATUS FOR STRIPPING AND CLEANING BACKING PLATES OR PRESS SADDLES

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Int. Cl. B32b 31/16; B41f 35/00
U.S. Cl. 156—389 11 Claims

ABSTRACT OF THE DISCLOSURE

Disclosed is apparatus for stripping and cleaning a backing plate, such as, an arcuate press saddle, by the process of rotating the saddle past a blade to strip a printing plate therefrom by advancing from a corner diagonally with respect to movement of the saddle, through a bath of adhesive-removing solvent to wash the stripped saddle surface, into contact with a rotating brush to remove solvent and adhesive from the washed saddle surface, and through an airstream to dry the cleaned saddle surface.

The present invention relates to a novel and improved delamination method and means, and more particularly to an improved apparatus and method for delaminating an adhesively secured plate, such as, a printing plate from its backing plate and preparing the backing plate for reuse.

In conventional direct printing operations, printing plates made of a suitable material are secured to backing plates, so-called press saddles, by applying an adhesive between the printing plates and saddles. Copy is then printed from each plate by placing the press saddle carrying the plate concerned in a printing press and operating the printing press to print out the desired number of copies from that printing plate. Upon completion of the printing operation for each plate, it is then desirable to strip the printing plate from the press saddle and clean the press saddle so that it may be subsequently used to carry other printing plates.

Heretofore, it has been known to use a knife-like blade to delaminate printing plates from the press saddle upon which it is secured. The knife-like blade was commonly incorporated in a tool which was used manually to strip the printing plate from the saddle. Semi-automatic stripping apparatus also have been devised with knife-like blade components incorporated therein. Nevertheless, regardless of whether the stripping of the printing plate was accomplished manually or semi-automatically, the operation of preparing the press saddles or backing plates for reuse has remained relatively tedious and time-consuming. One significant reason for this fact is that the backing plate or press saddle must be thoroughly cleaned in order to be placed in suitable condition for reuse. This requires that the adhesive that had been applied on the outer peripheral surface of the press saddle to bond the printing plate in place must be completely removed.

It is, accordingly, an object of the present invention to provide novel and improved apparatus for delaminating a first adhesively secured plate from its backing plate and preparing the backing plate for reuse which is characterized by being substantially automatic in operation.

It is further an object of the present invention to provide an improved apparatus for delaminating a first adhesively secured plate and its backing plate which includes a novel knife-like blade arrangement for corner-stripping the first plate from its backing plate.

It is additionally an object of the present invention to

provide an improved apparatus for delaminating a first adhesively secured plate and its backing plate and preparing the backing plate for reuse which includes a solvent bath and brushing means for washing the adhesive off the backing plate once the first plate has been stripped therefrom, and drying means may be employed thereafter in drying the cleaned backing plate.

It is another object of the present invention to provide a novel and improved method and apparatus for delaminating an adhesively secured printing plate and the press saddle carrying it and preparing the press saddle for reuse which is characterized by being substantially automatic in operation and having a rotatable saddle supporting means upon which at least one press saddle may be mounted, the apparatus being operable as the saddle supporting means rotates to sequentially strip the printing plate off the press saddle and clean the adhesive from the saddle by washing and brushing its outer peripheral surface.

It is yet another object of the present invention to provide an improved method for preparing for reuse a backing plate carrying a used plate bonded thereto.

It is still another object of the present invention to provide an improved method for preparing for reuse a press saddle carrying a used printing plate adhesively secured thereon which method is characterized by being rapid, substantially continuous, and permits placement of a pair of saddles on a single support for sequential treatment.

In accomplishing these and other objects, there has been provided in accordance with the present invention an apparatus particularly suitable for stripping a printing plate from an arcuate press saddle and then cleaning and drying the press saddle whereby to prepare the saddle for reuse. The apparatus includes a saddle supporting means constructed to hold two press saddles which are each in the shape of half-cylinders and a tank filled with a solvent suitable for removing the adhesive used to secure the printing plates to the press saddles. The saddle supporting means is rotatably mounted in the apparatus with a portion of its outer periphery extending downwardly into the solvent bath so that the press saddles carried by the saddle supporting means are successively rotated through the solvent bath as the saddle supporting means rotates. A knife-like blade means is disposed in the path of movement to corner-strip each printing plate in succession from the press saddle prior to the time the press saddle is rotated into the solvent bath. A counter-rotating brush is provided for cleaning the outer periphery of a press saddle as it rotates out of the solvent bath, and dryer means are provided for drying the cleaned press saddles. Additionally, power means and switching means are provided to rotate the saddle supporting means a predetermined angular distance, such as 180°, on command and permit intermittent interruption for removal of each saddle at the end of the cleaning cycle and replacement with another saddle as the other is being advanced from the stripping to the cleaning stage. Thus, a press saddle is prepared for reuse by the rapid and substantially continuous process of successively stripping a printing plate from the press saddle, bathing the saddle in a solvent bath, brushing the outer periphery of the surface of the saddle to remove adhesive therefrom, and drying the cleaned press saddle.

The above and other advantages and features of the present invention will become more readily understood and appreciated from the following detailed description of a preferred form when taken together with the accompanying drawings, in which:

FIG. 1 is a cut-away partial front elevation view of an apparatus according to the present invention including

rotatable saddle holding means and showing a pair of press saddles secured on the saddle holding means.

FIG. 2 is a cut-away partial side portion elevation view of FIG. 1.

FIG. 3 is a cut-away partial front elevation view of the aapparatus of FIG. 1 showing the saddle holding means without press saddles positioned thereon.

FIG. 4 is a front elevation view of the delaminating means of the apparatus of FIG. 1.

FIG. 5 is a sectional view taken along the lines 5—5 of FIG. 4; and

FIG. 6 is a circuit diagram of the control circuitry incorporated in the apparatus of FIG. 1.

Referring to the drawings in more detail, there is shown in FIGS. 1 and 2 an exemplary apparatus generally indicated by the numeral **10**. The apparatus **10** has a base frame structure including legs **11** and a lower platform portion **12**. The legs **11** support an open tank having opposite side and end walls. The tank **13** shown in FIGS. 1 and 2 is generally rectangular in shape, but open tanks or other suitable shapes may be employed. Support members **15** are mounted at each end of the tank **13** and a pillow block **16** is mounted on each support member **15**. The pillow blocks **16** are preferably positioned midway between the longitudinal extending side walls of the tank **13**.

Mounted for rotation in the pillow blocks **16** is a main shaft **17**. Fixedly mounted on the shaft **17**, as shown in FIG. 3, are saddle supporting means **18** defined by an open drum which is preferably formed by a pair of disc-shaped members at opposite ends of the shaft **17** and keyed for rotation with the shaft. Each disc-shaped member **18** has an inner, relatively thick disc portion **19** and an outer, relatively thin disc portion **20** which serves as a locking plate and has an outer peripheral shoulder portion **20'** extending beyond the peripheral surface of the inner disc member **19**. As shown in FIGS. 1 and 2, arcuate press saddles **25** are each shaped in the form of one-half of an open-ended cylinder and may be placed on the supporting means **18** by fitting the saddles **25** over the inner disc portions **19** and against the shoulders **20'** of the outwardly positioned disc portions **20**. It will be noted that since the press saddles **25** are in the shape of half-cylinders, the supporting means **18** may then accommodate two saddles **25** at one time in opposing relation to one another. The curvature of the inner disc portions **19** is predetermined to be substantially the same as the inner periphery of the saddles **25** so that the saddles **25** may snugly fit thereon. Further, the supporting means **18** are appropriately spaced apart on the shaft so that the saddles **25** will fit between the discs **20** substantially flush with the shoulder portions **20'**.

As shown in FIGS. 1 and 3, the left-side disc **20** is fixedly connected to the inner disc **19**; however, the right-hand disc **20'** is threadedly adjustable in an axial direction toward and away from the inner disc **19** in order to releasably clamp the saddles. As shown, the right-hand disc **20** is made up of a pair of semi-circular locking plates **21**, each threadedly adjustable independently of the other to permit clamping and release of each saddle. Each plate **21** is mounted on the stem of a locking member **26** which extends through the plate **21** and is threaded at its inner end for threaded connection to the disc **19**; and a knurled knob **26** at the other end of each member **26** can be grasped to rotate the member in either direction for tightening or loosening the plate. Recesses **26** are formed in the edges of both discs **20** at the upper and lower points on the discs **20**, as shown in FIG. 2. The recesses **26** allow an operator of the apparatus **10** to grip a saddle **25** when removing a cleaned saddle **25** from the drum **18**, as explained hereinafter.

Referring again to FIG. 1, a hood **28** is mounted over the tank **13** to serve as a partial enclosure for the apparatus. Hinged on the upper front portion of the hood **28** is a door **29** which is shown open in FIG. 1 so that the operator has access to the interior of the apparatus **10**. Mounted for extension through the back wall of the hood **28** is an air dryer means **30** which is positioned to direct air across the outer periphery of each saddle **25** as it is rotated out of the solution **14** in the tank **13**. Also shown in FIG. 1 is a main drive motor **31** positioned on the left-hand end of the platform **12**. The output shaft of the motor **31** is drivingly connected to the shaft **17** by a chain drive **32**. A brush drive motor **33** is positioned on the platform **12**, as shown in FIG. 2, and the output shaft of the motor **33** is connected by a belt drive motor **34** to the input shaft **36** of an elongated circular brush **35**. The shaft **36** of the brush means **35** is rotatably mounted in support structure in the apparatus **10** and has its left-hand end, as shown in FIG. 2, extending through the end of the tank **13** so the drive belt means **34** may be coupled to the shaft **36** to rotate the brush in a direction counter to that of the drum **18**. The brush **35** is positioned in the tank **13** just above the level of the solvent **14** so as to brush the saddle surfaces as they are rotated out of the solvent **14**, thereby removing the solvent **14** along with adhesive matter on the outer periphery of the saddles **25**. The brush **35** is made of an appropriate length so that it extends across and brushes the entire longitudinal dimension of the saddles **25**.

Referring to FIGS. 1–5, an elongated blade member **38** includes a body portion **39** of uniform thickness mounted by means of screws **41** on the inclined upper surface of a solid mounting block **42**, and a forwardly or outwardly tapered knife edge **40** extends along one side of the body portion **39**. The block **42**, in turn, is attached at opposite ends by bolts **43**, to a table portion **44** so as to run longitudinally along the front of the apparatus **10** adjacent to the saddle supporting means **18** and the press saddles **25** locked thereon. The blade **38** is mounted for diagonal extension in a lengthwise direction across or transversely of the path of movement of the saddle, as shown in FIGS. 4 and 5, and also includes upwardly at an acute angle to the horizontal laterally towards the upper press saddle **25** positioned on the holding means **18**. Further, the knife edge is positioned in extremely close proximity to the outer periphery of the saddle **25**, allowing just enough clearance between the knife edge and saddle surface for the knife edge to slice through the adhesive layer between the saddle surface and inner surface of the printing plate. This positioning enables the blade **40** to strip or peel the printing plate off of each saddle **25** as the saddle **25** is rotated clockwise past the blade **40**, as shown in FIG. 2, by starting at the leftmost corner of the printing plate, and the stripping operation progresses with the knife edge **40** advancing in a diagonal direction across the entire width of the plate. This diagonal manner of stripping the printing plate starting from a corner has the advantage that it initially requires less force than to simultaneously engage the entire width of the leading edge of the printing plate and will more easily advance through the adhesive layer.

Referring now to FIG. 6, there is shown therein the electrical means or circuitry of the apparatus **10**. A pair of input power lines or buses **50** and **51** are connected across an appropriate power supply not shown, and the power line **50** is connected to both input terminals **52** and **53** of a safety switch **54**. In turn the safety switch **54** has output terminals **55** and **56** connected by ganged movable contactors **57** to the input terminals **52** and **53**. The safety switch **54** may be a conventional type of circuit breaker which after closing automatically opens whenever excess current flows through the switch **54**.

Connected between the safety switch output terminal **56** and the voltage line **51** is an exhaust blower motor **57** connected in series with a manual on-off switch **58** and a fuse **59**. The exhaust blower motor **57** is part of the air dryer means **30** of the apparatus **10** and is operable to remove fumes from the solvent bath and adhesive in the cleaning and drying operations.

The circuitry shown in FIG. 6 also includes a magnetic switching means 65, a run switch 66 and two cam-operated limit switches 67 and 68. The limit switches 67 and 68 are shown in FIG. 1 and may be mounted on a side support member 69 on the apparatus 10, and the cams 70 and 71 are shown mounted on the main shaft 17 for opening the switches 67 and 68, respectively. The switches 67 and 68 are normally closed, and operate to limit the rotation of the main shaft 17 to 180° of rotation each time the run switch 66 is operated. It is noted that the actuating portions of the cams 70 and 71 are positioned on the shaft 17 180° apart so that the limit switches 67 and 68 are open, respectively, to stop the movement of the shaft 17 at portions 180° apart. These positions are set by appropriately positioning the cams 70 and 71 so that the shaft 17 stops with the edge of one saddle 25 positioned just above the knife edge 40 and the edge of the other saddle 25 positioned just below the blade, as shown in FIG. 2.

The limit switches 67 and 68 each have one terminal commonly connected to the safety switch terminal 55. The other terminals of the limit switches 67 and 68 are connected, respectively, to fixed contacts 72 and 73 of the run switch 66. The run switch 66 in addition to the fixed contacts 72 and 73 has a movable contact 74 which selectively switches to make contact with either of the fixed contacts 72 and 73.

The magnetic switching means 65 includes a solenoid 75 and three normally open switches 76, 77 and 78 which are controlled by the solenoid 75. The solenoid 75 is connected in series with normally closed safety switches 79 and 80 between the movable contact 74 of the switch 66 and the voltage line 51. The safety switches 79 and 80 are positioned in closed physical proximity with fuses 81 and 82, respectively. The fuses 81 and 82 are connected in series with the switches 76 and 78, respectively. The safety switches 79 and 80 are operable to open whenever the fuse 81 or 82 with which each associates with burns out due to a current overload, thereby preventing hangup of the solenoid 75 if one of the drive motors 31 and 33 is not functioning.

The series-connected switch 78 and fuse 82 are connected between the safety switch terminal 56 and one terminal of the drive motor 31. The other terminal of the motor 31 is connected to the voltage line 51. Similarly, the brush drive motor 33 has one terminal connected to the voltage line 51 and its other terminal connected through the series-connected fuse 81 and switch 76 to the safety switch terminal 56.

A solenoid-operated air valve 83 is also shown in FIG. 6 and forms a part of the air dryer means 30 of the apparatus 10. The air valve 83 is positioned in the apparatus 10 so as to direct, upon actuation, a stream of air across the outer periphery of a cleaned saddle 25 after it has rotated past the brush means 35 out of the solvent 14 in the tank 13. The selenoid-operated air valve 83 has one terminal connected through the switch voltage line 51 and its other terminal connected through the switch 77 to the safety switch terminal 55.

In operation, the apparatus 10 strips a printing plate from a press saddle 25 and cleans the press saddle 25 for reuse by rotating the outer peripheral surfaces of the arcuate press saddles 25 in a predetermined circular path of movement in the following described manner: First, a press saddle 25 having a printing plate adhesively secured thereon in positioned and clamped on the saddle support means 18. Access to the saddle supporting means 18 is accomplished by opening the hinged door 29 and positioning the saddle upon the portion of the supporting means 18 which is at its upper half of that instant. The saddle 25 is then locked in position by tightening the locking member 26. The saddle 25 is thus locked on the supporting means 18, resting on the discs 19, with the left side edge of the saddle 25, as shown in FIG. 2, positioned just above the blade 40.

With the saddle 25 in place, the exhaust blower 57 is turned on by closing the switch 58 and the apparatus 10 is started or cycled by operating the run switch 66. It is noted that, as best shown in FIGS. 1 and 6, the apparatus 10 is stopped with the cam 70 opening the limit switch 67 and the run switch movable contact 74 switched to the fixed contact 72. The apparatus 10 is stopped because the limit switch 67 is spaced open so that no current energizes the solenoid 75. With the solenoid 75 deenergized, the switches 76–78 are open and therefore the motors 31 and 33 are energized and the air valve 83 is closed.

To cycle the apparatus 10, the contactor 74 of the run switch 66 is switched to the contact 73. Current then flows through the safety switch 54, the normally closed limit switch 68, and the switch 66 to energize the solenoid 75. Energization of the solenoid 75 closes the switches 76–78, and therefore current flow through the motors 31 and 33 and the solenoid of air valve 83 is energized to open the air valve. Upon energization of the drive motor 31, the shaft 17 is driven in a clockwise direction, as indicated by arrows, in FIG. 2. As the shaft 17 is turned clockwise, the press saddle 25 held by the supporting means 18 rotates past the knife edge 40. The clearance between the saddle 25 and the knife edge 40 is set to extremely close tolerances so that the knife edge will enter beneath the press plate on the saddle 25 at its lefthand corner, as shown in FIG. 1. As the drive motor 31 continues to drive the shaft 17, the knife edge 40 will strip or peel the printing plate from the press saddle by advancing the printing plate across the diagonally disposed blade 38. Once the entire outer periphery of the saddle 25 has been stripped off the press plate, the cam 71 will have been rotated to open the limit switch 68. Upon the opening of the limit switch 68, the solenoid 75 deenergizes. Accordingly, the switches 76–78 are opened and the motors 31, 33 and the air valve 83 are all deenergized. The apparatus 10 is then stopped with the first, stripped saddle 25 positioned in the tank 13 and the edge of that saddle 25 just below the blade 40.

A second saddle 25 may be loaded and locked on the now upper portion of the saddle supporting means 18. The run switch 66 is thereafter actuated by switching contact 74 to contact 72. The solenoid 75 is energized since the limit switch 67 is in its normally closed position. With the energization of the solenoid 75, the switches 76–78 are again closed to actuate the drive motors 31, 33 and the air valve 83. The upper saddle 25 is thus rotated down into the tank 13 past the blade 40, the blade 40 stripping the printing plate from the saddle 25. At the same time, the lower saddle 25 is rotated back into the upper position at which point it may be removed by loosening the associated locking member 26 and gripping the saddle 25 through the recesses 27 formed in the discs 20. It will be noted that the shaft 17 is again stopped after 180° of rotation by the action of the cam 70 opening the limit switch 67, and the solenoid 75 is again deenergized with the resulting shut-down of the motors 31, 33 and the air valve 83. Another saddle 25 to be stripped and cleaned then may be positioned on the upper portion of the holding means 18 and locked thereon, and the apparatus 10 recycled by switching the run switch 66.

The printing plate is stripped from each saddle, leaving a thin layer or coating of adhesive. The adhesive layer is removed by rotating the saddle through the solvent tank 13 to loosen the adhesive and thereafter past the counter-rotating brush 35. The solvent 14 is of a type suitable to remove or loosen the adhesive remaining on the saddle 25 after the printing plate has been stripped therefrom, and as the saddle 25 is rotated out of the solvent 14, its peripheral surface is cleaned by the rotating brush which is positioned just below the top level of the bath and is operable to remove the solvent

14 and remaining adhesive from the saddle 25. As the saddle 25 continues its rotary path of motion, a stream of air 84 is forced out of the air valve 83, as shown in FIG. 2, to thoroughly dry the cleaned saddle 25. As before mentioned, the cleaned saddle 25 is then unlocked from the supporting means 18 and removed therefrom. Another saddle then may be inserted on the support means 18 and the apparatus 10 recycled by operating the run switch 66.

An exemplary apparatus 10 constructed was sized to handle press saddles having printing plates adhesively secured thereon of the following dimensions: 0.041"–0.068", 14"–15" wide and 20"–24" long. The printing plates mounted on the press saddles were made of any conventional material, such as, zinc, magnesium or copper. The press plates were mounted on the saddles by adhesive means, such as, glue tapes or an applied coating of an adhesive substance. In turn, the blade was set at an angle of 30° to horizontal to slope downwardly ¾" over its 15" length. The drive motor 31 used rotated the main shaft 17 and the saddle holding means 18 at a rate of approximately 2 r.p.m.'s. Further, the brush used in the brush means was 6" in diameter by 15" long and made of nylon. The drive motor 33 used rotated the brush at a rate of approximately 100 r.p.m.'s. The apparatus constructed was formed to require little maintenance and to be capable of stripping, cleaning and drying three press saddles every minute.

Thus, there has been provided an improved apparatus for delaminating a first adhesively secured plate, such as a printing plate, and its backing plate, such as a press saddle, and preparing the backing plate for reuse in a substantially continuous process of stripping the printing plate from the press saddle, cleaning the saddle to remove adhesive and the solvent bath therefrom and drying the cleaned press saddle. It is noted that since the disclosed apparatus processes two press saddles in each revolution of the drum 18 that the apparatus is interrupted during the saddle stripping, cleaning and drying process and allows the stripped saddle to stand in the bath for a time interval to assure complete removal of the adhesive. It is however within the scope of the present invention to strip, clean and dry a saddle in an entirely continuous operation. This could be accomplished merely by placing only one saddle on the saddle supporting means with a modified switching circuit which when activated would cycle the saddle supporting means one complete rotation, instead of merely 180°.

Although the present invention has been described with a certain degree of particularity, it is understood that the present disclosure has been made only by way of example and that changes in details of structure and system components may be made without departing from the spirit and scope of the invention.

What is claimed is:

1. In apparatus for stripping an adhesively secured printing plate from the outer peripheral surface of an arcuate press saddle wherein supporting means are provided for detachably supporting the press saddle and drive means are operative to advance said supporting means and press saddle along a predetermined path of movement, the improvement comprising a blade member traversing the path of movement of the saddle for stripping the adhesively secured printing plate from the saddle, the blade member having a blade edge disposed in closely spaced relation to the supporting means and directed at an inclined angle to the path of movement of the saddle to face in a direction opposite to the direction of movement of the saddle, the blade member further being so disposed with respect to the movement of the saddle that the blade edge will enter between the saddle and printing plate starting from one corner of the printing plate to progress angularly thereacross in stripping the plate from the saddle as the saddle is advanced past the blade member.

2. In apparatus according to claim 1 wherein said blade member is of a length to traverse full width of the printing plate as the saddle is advanced past the blade member, the blade member tapering toward the path of movement of the saddle and terminating in a straight, relatively sharp knife edge.

3. In apparatus according to claim 1, the printing plate being in the form of a half cylinder and detachably supported by said supporting means for rotation through a circular path of travel, and said blade member having its blade edge disposed at an angle on the order of 50° to 60° to a radial plane passing through the line of contact of the blade edge with the press saddle and printing plate.

4. In apparatus according to claim 3, further including means for applying a solvent to the press outer peripheral surface of the press saddle for removal of the adhesive after the press saddle has advanced past the blade member and the printing plate stripped therefrom.

5. In apparatus according to claim 4, further including a counter-rotating brush member positioned along the circular path of movement of the press saddle for brushing the outer peripheral surface of the saddle after the adhesive removal solvent has been applied thereto.

6. In apparatus according to claim 4, further including drive means disposed along the circular path of movement of the saddle for drying its outer peripheral surface after application of the adhesive removal solvent thereto.

7. In apparatus according to claim 1, said saddle support means being in the form of an open drum mounted for rotation about a central axis and there being a pair of press saddles in the form of half cylinders detachably supported on said support means for successive rotation past said blade member.

8. In apparatus according to claim 1, said blade member including a holder provided with an inclined, diagonally extending support surface for mounting of said blade member thereon in predetermined relation to the path of movement of the press saddle.

9. Apparatus for stripping an adhesively secured first plate from a backing plate and cleaning the backing plate for reuse, comprising:

means for detachably holding at least one of said backing plates, said holding means being operable to move the peripheral surface of said backing plate to which said first plate is adhesively secured in a predetermined path;

blade means positioned along the path for stripping said first plate from the peripheral surface of the backing plate as the backing plate is selectively moved past said blade means;

applicator means positioned along the path for washing the peripheral surface of said backing plate in an adhesive removing solvent as said backing plate is selectively moved along said path, said applicator means being positioned with respect to said blade means to wash the peripheral surface of said backing plate after said first plate has been stripped therefrom; and

means positioned along said path for cleaning the peripheral surface of said backing plate as said backing plate is selectively moved along said path, said cleaning means being positioned with respect to said bath means to clean the peripheral surface of said backing plate after it has been washed with the adhesive removing solvent whereby to remove solvent and adhesive from the peripheral surface of said backing plate thereby to prepare said backing plate for reuse.

10. The invention recited in claim 9, including dryer means positioned along the path for drying the peripheral surface of said backing plate as said backing plate is selectively moved along said path, said dryer means being positioned with respect to said cleaning means to dry the peripheral surface of said backing plate after the peripheral surface has been cleaned.

11. The invention recited in claim 10, wherein said cleaning means includes a counter-rotating cylindrical brush for cleaning the peripheral surface of said backing plate by brushing solvent and adhesive therefrom.

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R. A. DAWSON, Assistant Examiner

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