

June 27, 1944.

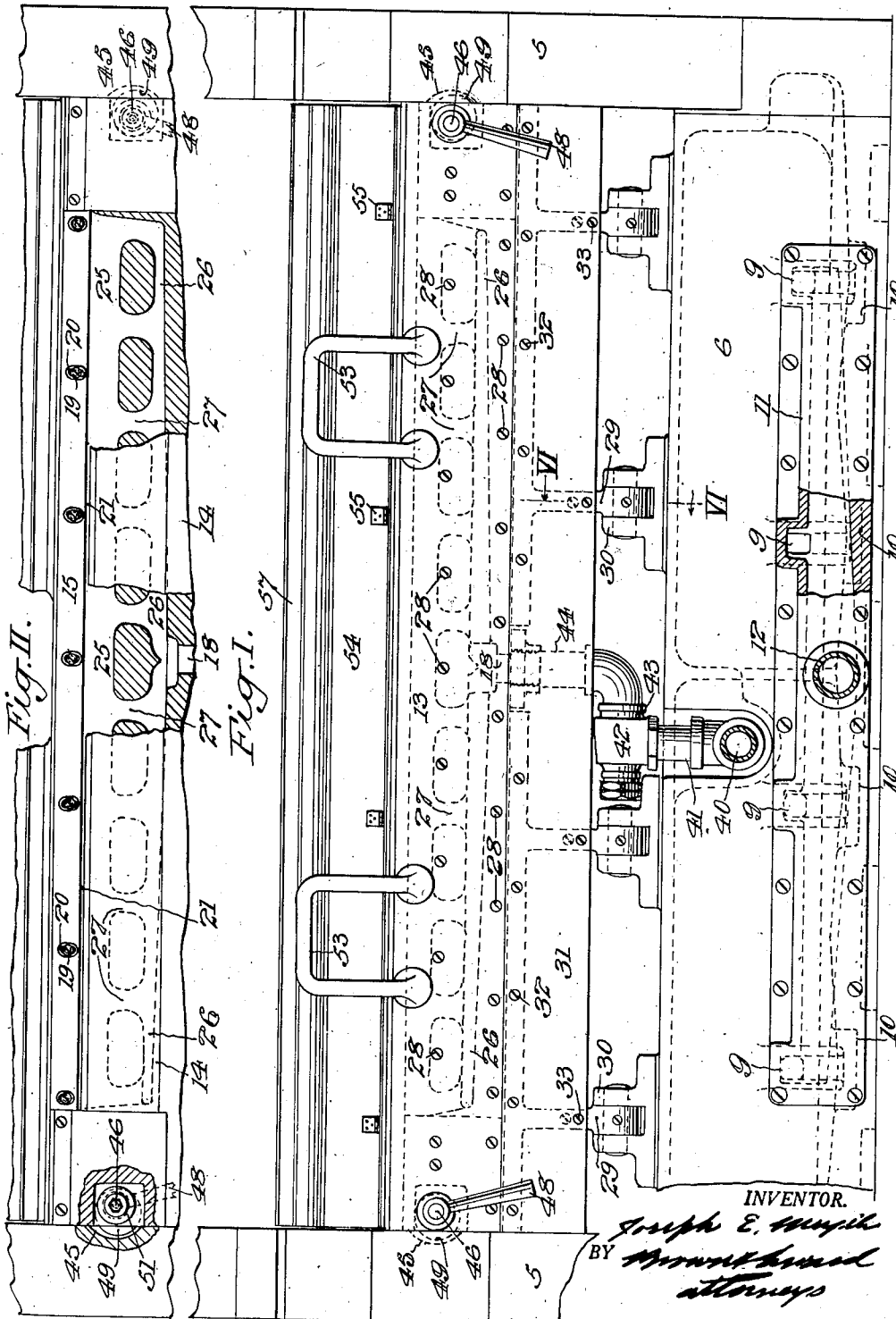
J. E. MEYER

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INK FOUNTAIN FOR ROTARY INTAGLIO PRESSES

Filed Dec. 3, 1941

6 Sheets-Sheet 1



June 27, 1944.

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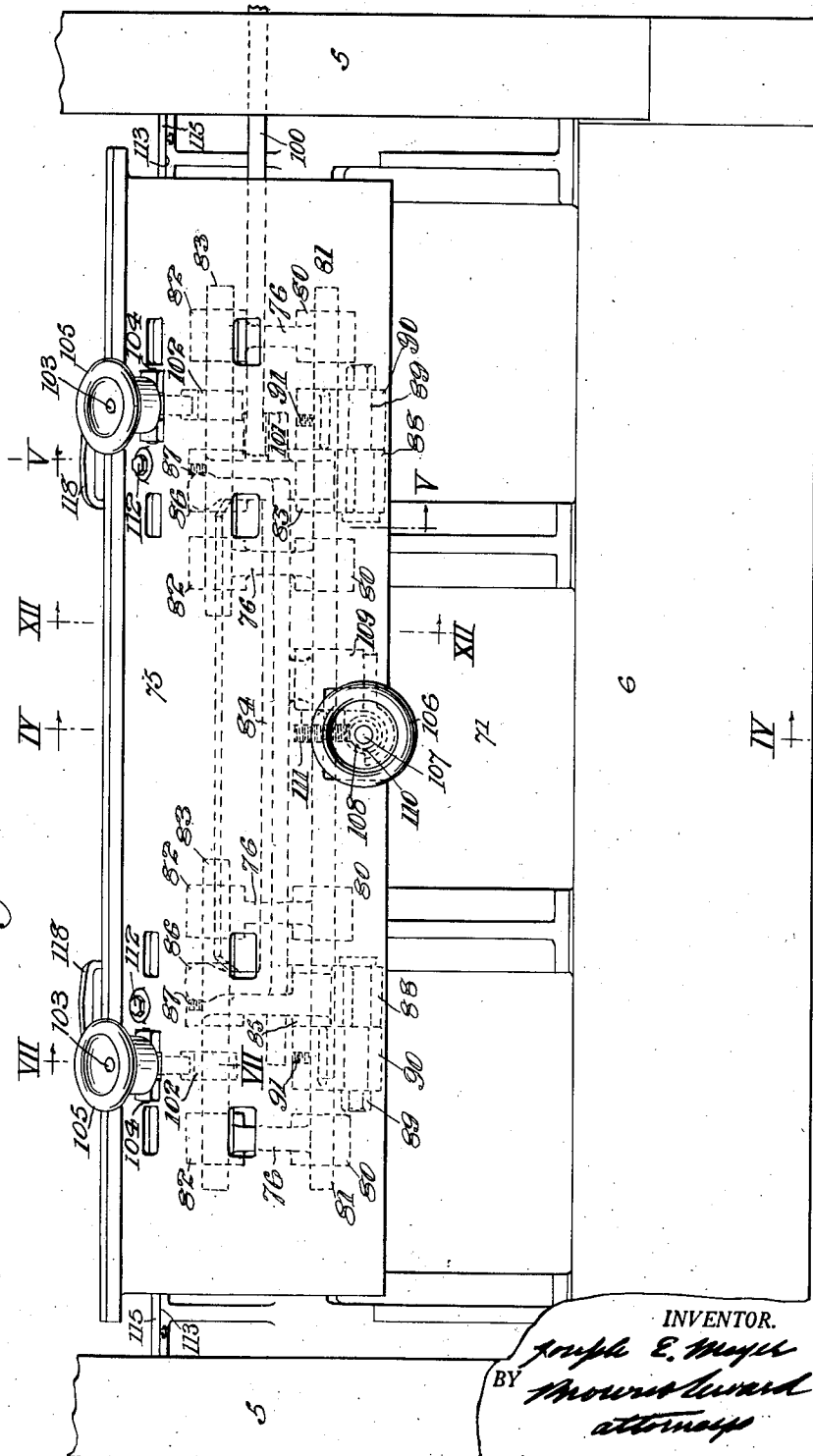
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INK FOUNTAIN FOR ROTARY INTAGLIO PRESSES

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6 Sheets-Sheet 2

Fig. III.



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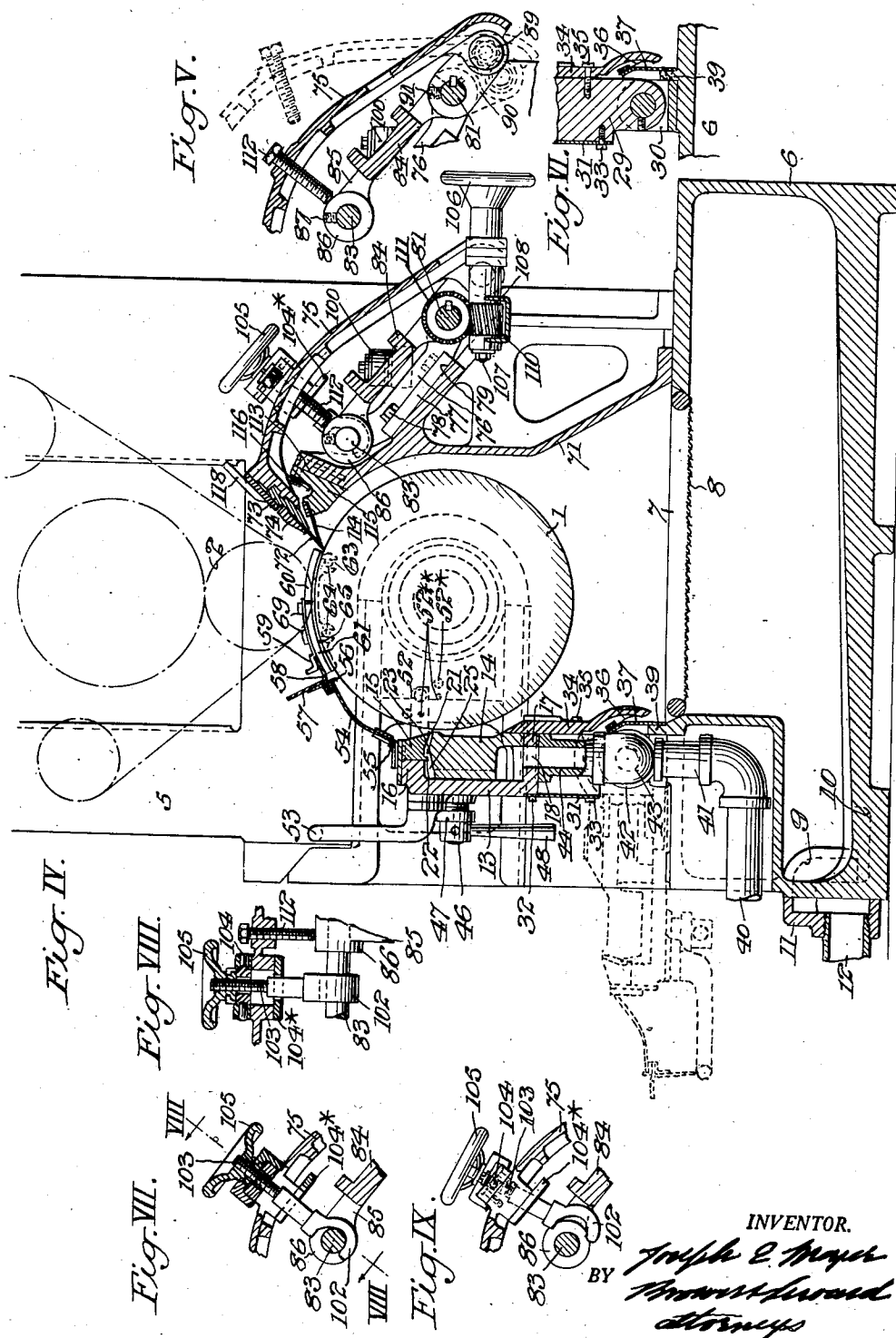
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INK FOUNTAIN FOR ROTARY INTAGLIO PRESSES

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INK FOUNTAIN FOR ROTARY INTAGLIO PRESSES

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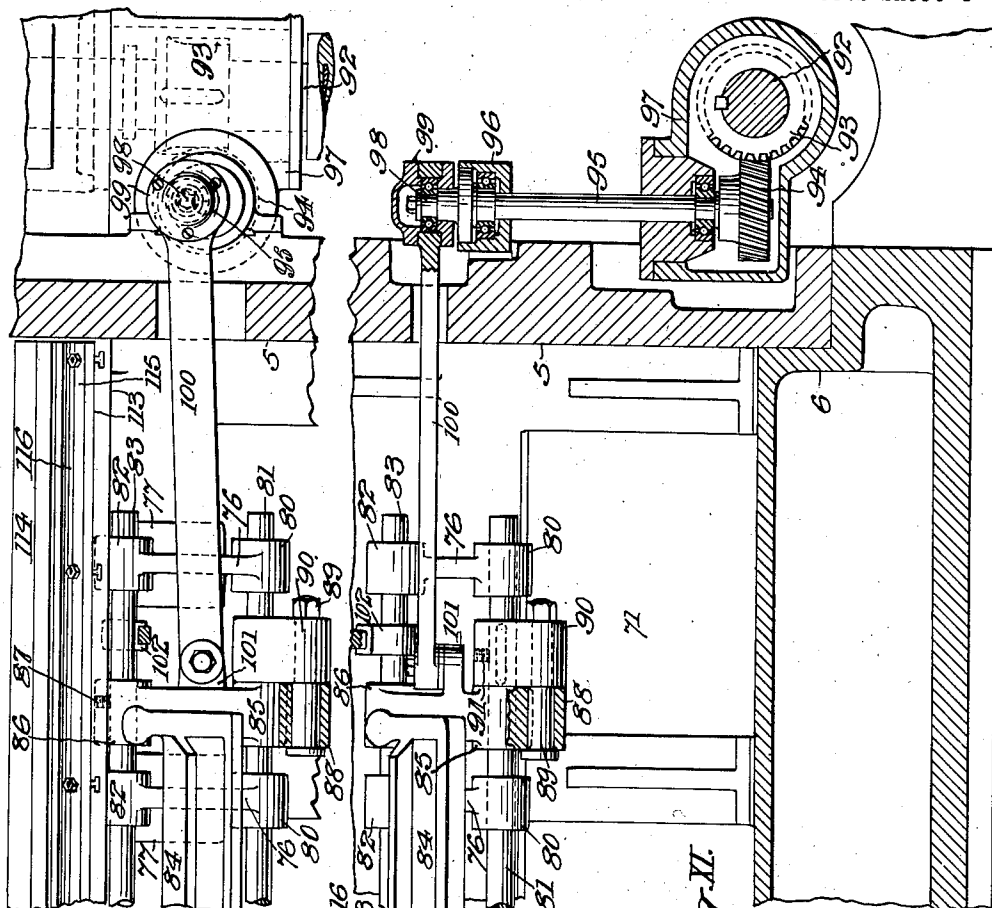


Fig. X.

Fig. XI.

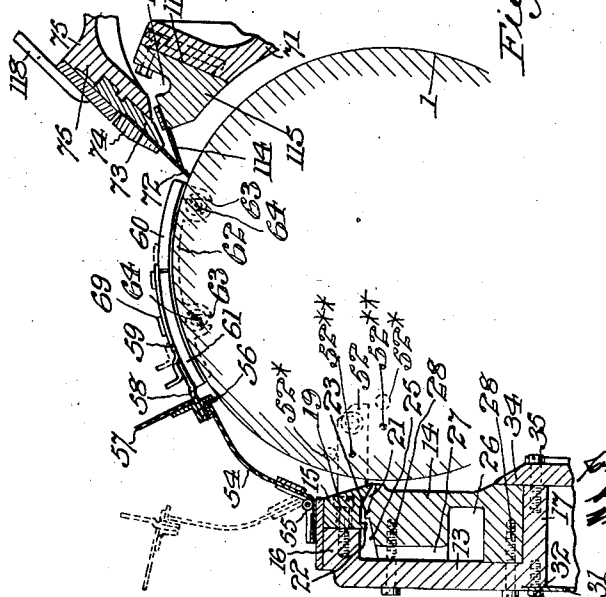


Fig. XII.

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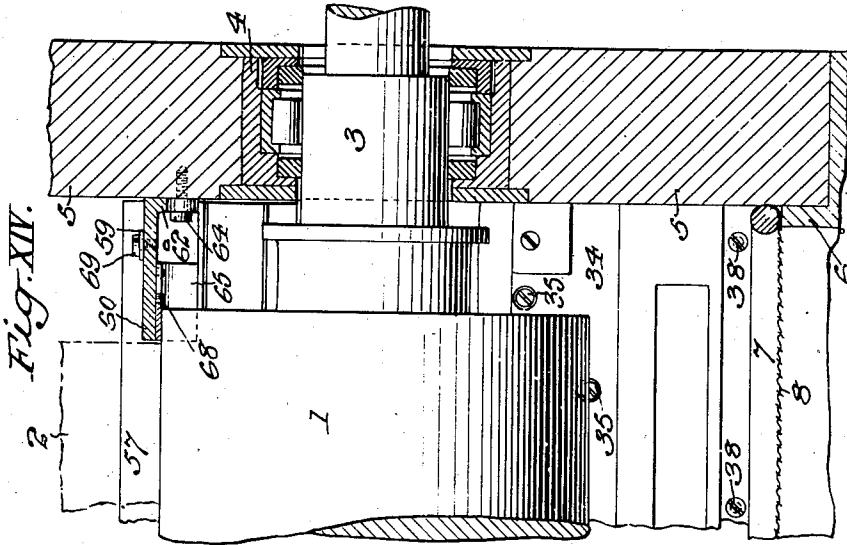
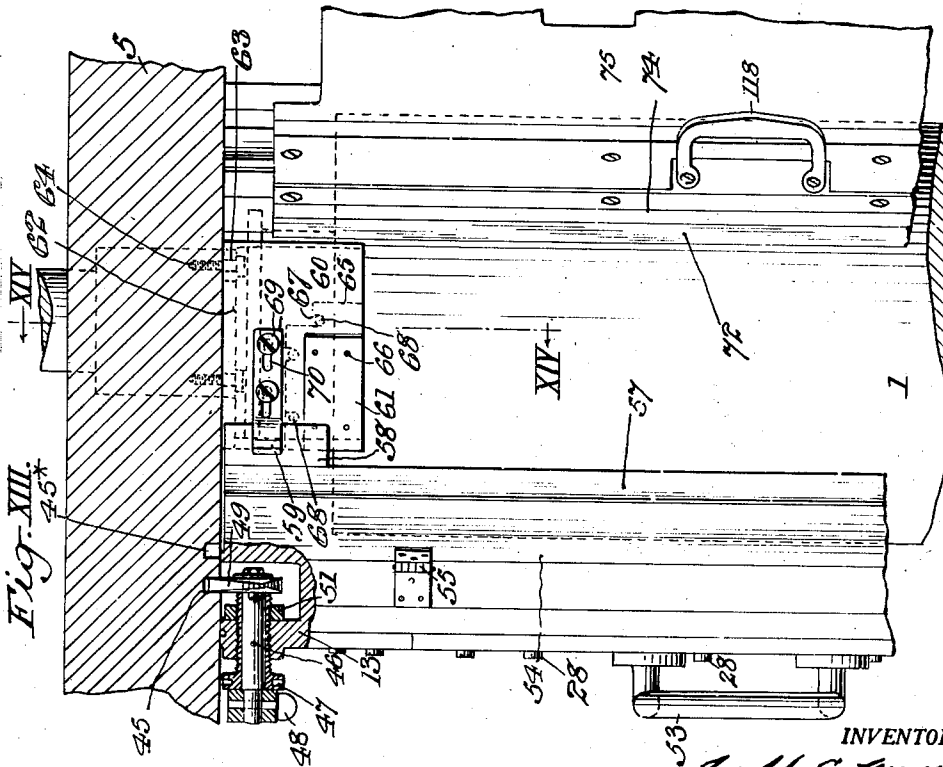
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INK FOUNTAIN FOR ROTARY INTAGLIO PRESSES

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6 Sheets-Sheet 5



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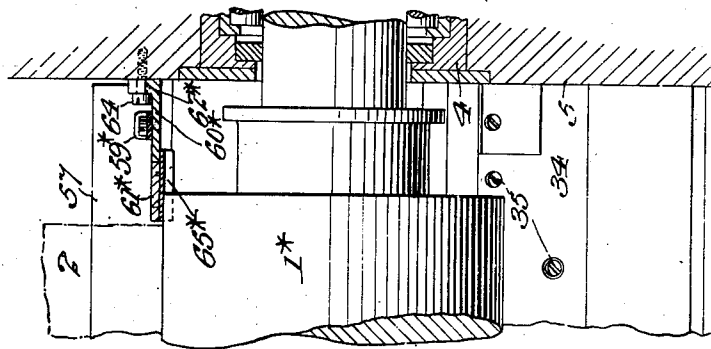
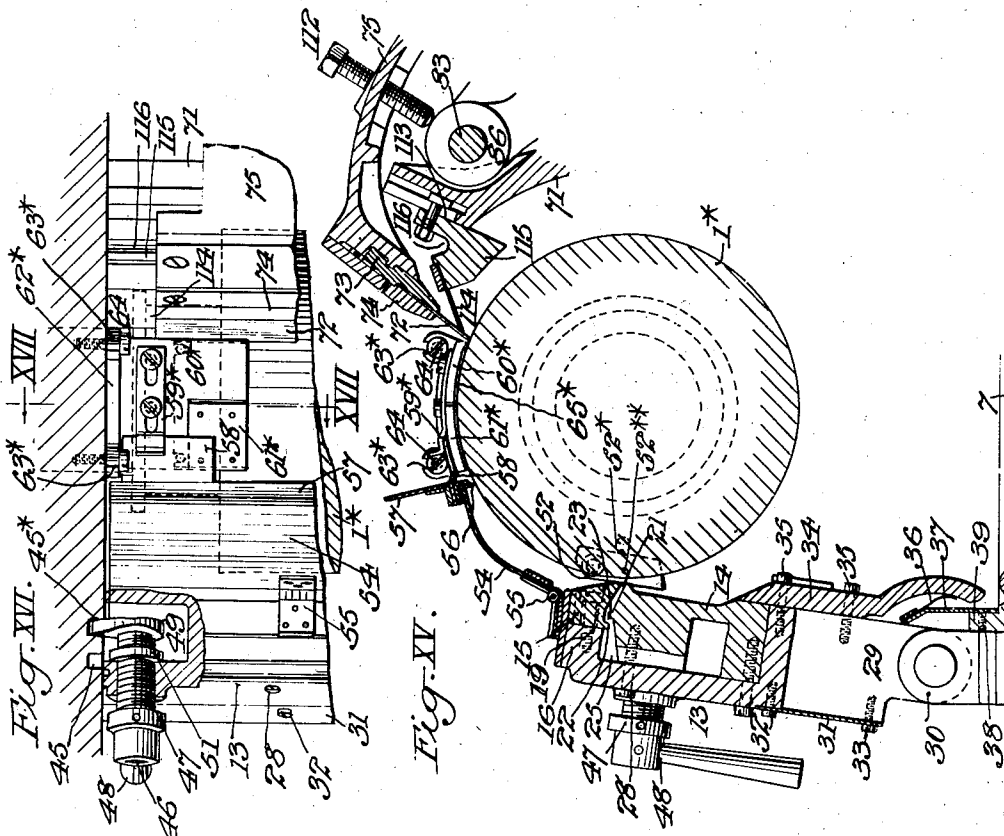
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INK FOUNTAIN FOR ROTARY INTAGLIO PRESSES

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6 Sheets-Sheet 6

Fig. XVII.



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UNITED STATES PATENT OFFICE

2,352,337

INK FOUNTAIN FOR ROTARY INTAGLIO PRESSES

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Application December 3, 1941, Serial No. 421,432

19 Claims. (Cl. 101—157)

The object of my invention is to provide improvements in the construction, form and arrangement of the several elements of an enclosed ink fountain for rotary intaglio printing presses whereby the structure of the fountain may be materially simplified and the operation thereof facilitated.

My invention comprises an inking mechanism of novel construction for use with design cylinders of various sizes, end sealing devices of novel construction being provided for the top of the fountain bowl between the ends of the design cylinder and the side walls of the fountain bowl.

My invention also comprises simple means whereby the inker head and portions of the end sealing devices, if necessary, may be moved out of the way to permit the free lateral removal and insertion of the design cylinder.

My invention also comprises a novel inker head which may be swung into position for use in connection with its design cylinder.

A practical embodiment of my invention is represented in the accompanying drawings, in which

Fig. I represents a detail view, partly in section, of the front or inking mechanism side of the fountain;

Fig. II represents a detail view, partly in section, looking toward the inner wall of the inker head;

Fig. III represents a detail view of the back or wiping mechanism side of the fountain;

Fig. IV represents a detail section taken in the plane of the line IV—IV of Fig. III;

Fig. V represents a detail section taken in the plane of the line V—V of Fig. III;

Fig. VI represents a detail section taken in the plane of the line VI—VI of Fig. I;

Fig. VII represents a detail section taken in the plane of the line VII—VII of Fig. III;

Fig. VIII represents a detail section taken in the plane of the line VIII—VIII of Fig. VII;

Fig. IX represents a detail section similar to Fig. VII, showing the free end of the doctor frame released from the carriage with which the doctor frame reciprocates;

Fig. X represents a detail plan view, partly in section, of the doctor carriage reciprocating mechanism;

Fig. XI represents a detail side elevation, partly in section, of the same;

Fig. XII represents an enlarged detail section taken in the plane of the line XII—XII of Fig. III;

Fig. XIII represents an enlarged detail plan view, partly in section, of the ink fountain;

Fig. XIV represents a detail vertical section taken in the plane of the line XIV—XIV of Fig. XIII;

Fig. XV represents an enlarged detail section like Fig. XII, showing the positions of the parts when a smaller design cylinder is employed;

Fig. XVI represents an enlarged detail plan view, partly in section, of the same; and

Fig. XVII represents an enlarged detail section taken in the plane of the line XVII—XVII of Fig. XVI.

In Figs. I to XIV inclusive the movable parts of the ink fountain are shown adjusted and arranged for use in connection with a larger design cylinder denoted by 1; while in Figs. XV, XVI and XVII the parts are shown as adjusted and arranged for use in connection with a smaller design cylinder denoted by 1*. The impression cylinder, shown in dot and dash outline, is denoted by 2. The design cylinder shaft 3 is rotatably mounted in bearings 4 carried by end frames 5 uprising from a hollow base 6, the inner walls of which end frames form the side walls for the ink fountain bowl. The design cylinder is arranged to be laterally removed through the front of the ink fountain by any well known or approved means, not shown herein.

The interior of the base 6 forms the lower portion of the fountain bowl. The opening 7 in the top of the base 6 is shown as provided with a suitable screen 8. Ink outlet passages 9 lead upwardly and outwardly from sumps 10 in the bottom of the fountain bowl to the interior of a manifold 11 secured to the front wall of the base 6. An outlet pipe 12 leads from the manifold 11 to any desired point.

The mechanism for supplying ink to the design cylinder comprises the following elements:

The hollow inker head includes an outer member 13, an inner member 14, and a nozzle member 15. This inker head slidably contacts the inner walls of the end frames 5 to form an ink seal at these points for the fountain bowl.

The outer member 13 of the inker head is provided with inwardly directed top and bottom flanges 16 and 17. The bottom flange 17 projects under and contacts with the bottom of the inner member 14 of the inker head, said flange having a port 18 therethrough which opens to the space between the outer and inner inker head members and also to the ink supply line, to be hereinafter described.

The nozzle member 15 is secured to the inner

face of the top flange 16 of the outer member for vertical adjustment, as, for instance, by providing bolts 19 which pass through vertically elongated slots 20 in the nozzle member into engagement with the said top flange 16. This adjustment predetermines the width of the discharge slot 21 which is formed between the inwardly and downwardly inclined portion of the bottom wall of the nozzle and the inwardly and downwardly inclined portion of the top wall of the inner member.

The bottom wall of the nozzle member 15 is provided with a depending lip 22 which overlaps and is spaced from an uprising lip 23 on the top wall of the inner member 14 of the ink head, to serve as a baffle for the ink passing through the discharge slot 21 of the nozzle.

Spaced lugs 24 project from the outer wall of the inner member into contact with the inner wall of the outer member, to provide a manifold comprising upper and lower horizontal passages 25 and 26 and their connecting vertical passages 27. The upper passage of the manifold opens to the ink discharge slot 21 and the lower passage 26 opens to the ink supply line through the port 18 in the bottom flange 17 of the outer member 13 of the ink head. Screws 28 serve to secure the inner and outer members of the ink head together.

The ink head is shown as hinged to the base 6 of the fountain to be swung between substantially vertical and horizontal positions, by providing the outer member 13 with lugs 29 pivoted to ears 30 uprising from the top of the base.

The ink head may be provided with a guard plate 31 which is secured to the outer member by the screws 32, 33.

Sealing means are provided for the ink fountain bowl where the ink head is hinged to the base, as follows:

An inner sealing plate 34 is secured to the outer member 13 by the screws 35. The beveled upper portion of this plate snugly overlaps the inner end of the lower flange 17 of the outer member and also the inner wall of the inner member 14 of the ink head. The lower portion of this sealing plate 34 is curved at the hinge connections between the ink head and base. A sealing plate spring 36 carried by a sealing plate 37 is secured by screws 38 to a rib 39 uprising from the top of the base 6. This spring 36 contacts the concave outer wall of the sealing plate 34 when the head is in its closed position.

The ink supply line includes a supply pipe 40 having a vertical extension 41 which carries the fixed outer member 42 of a swing pipe joint, the rotatable inner member 43 of which pipe joint is provided with an extension 44 secured to the bottom flange 17 of the outer member 13 of the ink head with the bore of the extension 44 in alinement with the port 18 through said bottom flange.

The axis of this swing pipe joint is in alinement with the axes of the hinge connections between the lugs 29 of the ink head and the ears 30 of the base, so that the ink head, when unlocked, may be freely swung to its open and closed positions without disturbing the connection between the ink supply pipe 40 and the interior of the ink head.

It will be understood that means, not shown herein, may be provided for receiving the ink from the bottom of the fountain bowl and forcing it into the ink head. Also, suitable means, not shown herein, may be used for cutting off

the ink supply before the ink head is swung to its open position.

Means are provided for locking the ink head in its closed or inking position, which means is shown herein as comprising two similar manually operated locking devices, one at each end of the head.

The inner wall of each of the end frames 5 has a properly positioned recess 45. A stud shaft 46 is rotatably mounted to turn in a sleeve 47 threaded into the outer member 13 of the ink head. The outer end of this stud shaft 46 is provided with a handle 48 for turning it. The inner end of this stud shaft is provided with an eccentric cam disc 49 arranged to be brought into and out of the recess 45 as the stud shaft is turned, to lock and unlock the ink head. This stud shaft 46 may be adjusted endwise for positioning the locking device for design cylinders of different sizes within predetermined limits. This adjustment is accomplished by the screw threaded engagement of the sleeve 47 with the outer member 13 of the ink head. A lock nut 51 on the sleeve 47 serves to lock the shaft 46 in its endwise adjusted position.

Devices, as swinging stops 52, are provided for limiting the inward movement of the ink head. Upper and lower pins 52* are provided for limiting the upward and downward movements of the stops 52; and upper and lower devices, as spring locks 52** are provided for yieldingly holding the stops 52 in their raised or lowered position.

The outer member 13 of the ink head may be provided with handles 53 for swinging the head to its open and closed positions. A cover plate 54 extends from one end frame to the other and this cover plate is hinged at 55 to the top of the ink head. An inwardly directed sealing strip 56 of suitable material is secured to the free end of the cover plate 54 in position to contact the surface of the design cylinder when the cover plate is swung to its closed position. An outwardly directed guard strip 57 is also secured to the free end of the cover plate 54.

This cover plate is provided with locking lugs 58 for engagement with sliding latches 59 on the end sealing devices to be immediately described, for locking the cover plate in its closed or inking position.

It will be seen that the inner walls of the sealing plate 34, the inner member 14, the nozzle member 15, and the cover plate 54 serve, when the ink head is closed, to form the front wall of the ink fountain bowl.

Means are employed for sealing the top of the fountain bowl beyond the ends of the design cylinder between the inking mechanism and the wiping mechanism, said means comprising two removable end sealing devices.

Each end sealing device is shown as comprising fixed and removable complementary plate members 60 and 61, the removable plate member 61 serving to fill in a cut-away portion in the fixed plate member 60. This fixed plate member 60 is shown as provided with a depending flange 62 having open ended slots 63 through which bolts 64 pass to removably secure the fixed plate member to its end frame 5.

These plate members 60 and 61 are curved and overlap the top side of the design cylinder at its end to the end of the impression cylinder 2. A flexible curved contact plate 65 is positioned to contact the top side of the design cylinder at its end and this contact plate is secured, as by

rivets 66, to the under side of the removable curved plate member 61. This flexible contact plate 65 with its imposed plate member 61 is shown as removably secured to the under side of the fixed plate member 60 by providing the contact plate with portions which underlap the fixed plate member and are there provided with open ended slots 67 which embrace pins 68 projecting from the under side of the fixed plate member.

The latches 59 heretofore referred to for engaging the lugs 53 to lock the cover plate 54 to each of the end sealing devices, are slidably mounted on the outer wall of the fixed plate member 60 of the end sealing device, by providing the plate member with screws 69 which pass through elongated slots 70 in the said sliding latches.

It will be understood that to remove the design cylinder through the side of the fountain the ink head is swung down to its horizontal position resting on the base 6 and the plate members 61 and their cylinder contact members 65 of the end sealing devices may also be removed, if necessary.

A back frame 71 is fixedly mounted on the top of the hollow base 6, and the inner wall of the back frame forms the back wall of the enclosed fountain bowl. The ends of this back frame snugly contact the inner walls of the end frames 5 to seal the fountain bowl at these points. This inner wall of the fixedly mounted back frame 71 extends upwardly and inwardly to a point adjacent the top of the design cylinder and from thence extends diagonally upward and downward to the top of the frame. The upper part of this upwardly and inwardly extended portion of the inner wall of the fixed frame is substantially concentric with and spaced a short distance from the design cylinder.

The wiping mechanism for the design cylinder includes the following elements:

A doctor blade 72 is clamped between the members 73, 74 of its holder, which holder is removably secured to the free upper end of a doctor frame 75, the lower end of which doctor frame is hinged to a carriage reciprocable on the back frame. This arrangement permits the doctor blade to be swung into and out of its wiping contact with the design cylinder.

The carriage is mounted to reciprocate on the back frame by the following elements:

A plurality of alined brackets 76 have base flanges 77 secured, as by bolts 78, to an upwardly and inwardly inclined portion 79 of the outer wall of the fixed back frame 71, which upwardly and inwardly inclined portion 79 is located between a vertical lower portion and an upwardly and outwardly inclined upper portion of the back frame. These brackets 76 are provided with downwardly projecting arms having alined bearings 80 for slidably receiving the lower horizontally disposed reciprocating rock shaft 81. These brackets are also provided with upwardly projecting arms having alined bearings 82 for slidably receiving an upper shaft or rod 83, which is, in the present instance, shown as divided into two alined members.

The doctor reciprocating carriage 84 is mounted on and reciprocates with the lower and upper shafts 81 and 83, by providing the carriage with downwardly projecting arms having alined heads 85 embracing the lower reciprocating rock shaft 81 and also with upwardly projecting arms having alined heads 86 which embrace the two

members of the upper reciprocating shaft 83 and are secured thereto by set screws 87.

The doctor frame 75 is hinged to the carriage 84 by providing the frame at its lower end with alined lugs 88 which are fixedly secured by bolts 89 to the free ends of arms 90 fixed to the lower reciprocating rock shaft 81 by set screws 91.

The means for reciprocating the carriage 84, the shafts 81 and 83, and the doctor frame 75 includes the following elements:

A horizontally disposed drive shaft 92 is operatively connected by gears 93, 94 to the lower end of a vertically disposed shaft 95 rotatably mounted in upper and lower housings 96, 97 secured to one of the end frames 5. The upper end of this vertical shaft 95 is provided with an eccentric 98 on which is mounted in a suitable housing 99 one end of a horizontally disposed connecting rod 100, the other end of which rod is pivoted to a lug 101 on the end of the carriage 84.

The means for removably locking the swinging doctor frame 75 in its adjusted position to the reciprocating carriage 84 includes the following elements:

A pair of hooks 102 are mounted to swing into and out of engagement with their respective members of the reciprocating shaft 83, each hook having a screw threaded shank 103 which projects upwardly through a pivoted mounting 104 on the doctor frame 75 into position to be engaged by a manually operated hand wheel 105 threaded on said shank. These hand wheels 105 may be turned in one direction to tighten the hooks on the shafts, to lock the doctor frame in its wiping position. If it be desired to release the free portion of the doctor frame from the carriage 84 the hand wheels 105 are turned in the opposite direction sufficiently to permit the hooks 102 to be swung out of engagement with the shaft 83, and allow the doctor frame to be swung back to an inoperative position. The shanks 103 of the hooks 102 have flattened portions engaged by a slotted plate 104* of the mounting 104 to prevent the hooks from turning when being longitudinally adjusted and swung into and out of their locking positions.

Means are provided for manually swinging the doctor frame 75 when its free portion is released from the reciprocating carriage 84, to serve the double function of adjusting the wiping contact pressure of the doctor blade 72 and also for swinging the doctor frame into and out of its operative position. This means comprises a manually operated hand wheel 106 fixed to a shaft 107 rotatably mounted in suitable bearings 108 in a bracket 109 depending from the reciprocating carriage 84. This shaft 107 is provided with a worm gear connection 110, 111 with the reciprocating rock shaft 81, the gear 111 being fixed to the said shaft.

Adjustable screws 112 are mounted in the doctor frame 75 in position to bear against the heads 86 on the arms of the reciprocating carriage 84 to serve as stops for limiting the inward movement of the doctor frame and thus maintain the adjustment of the doctor blade with respect to the design cylinder.

The fixed back frame 71 of the fountain is provided along its top with an upwardly and outwardly inclined seat 113 on which a sealing blade 114 and its holder 115 are movable toward and away from the design cylinder, to adjust the point where the sealing blade 114 presses against the under side of the doctor blade 72. Bolts 116

serve to lock the sealing blade holder 115 in its adjusted position.

A channel 117 is formed along the top of the sealing blade holder 115 to receive any ink which may possibly pass between the under side of the doctor blade 72 and the edge of its sealing blade 114, and to prevent the ink from passing over the top of the fixed back frame 71 and downwardly along its outer wall.

The doctor blade holder may be provided with suitable handles 118 for handling the holder and its doctor blade when the holder is released from the doctor frame 75.

In Figs. XV, XVI, and XVII the parts of the fountain are shown adjusted for use in connection with a smaller design cylinder 1*. In this arrangement the end sealing devices for the larger design cylinder 1 are replaced by end sealing devices adapted for use with the smaller design cylinder. These devices comprise the fixed curved plate member 60*, the removable curved plate member 61* and the flexible contact plate 65*. This fixed curved plate member 60* is provided with an outwardly projecting flange 62* having open slots 63* for receiving the bolts 64. Also, the eccentric cam discs 49 of the locking devices are caused to engage the curved recesses 45* in the end frames 5 when the inker head is swung inwardly to a new position to bring its discharge slot 21 close to the periphery of the smaller design cylinder. Also, the stops 52 may be swung downwardly against the lower pins 52* and there yieldingly held by the lower spring locks 52**. The locking lugs 58 in this instance are engaged by the latches 59* on the end sealing member 60*.

When this smaller design cylinder is used the doctor frame 75 is swung inwardly to its adjusted position with its doctor blade 72 in wiping contact with the cylinder, the sealing blade holder 115 being first adjusted downwardly and inwardly, to move it out of the way of the doctor frame and to properly position its sealing blade 114 for coaction with the doctor blade 72.

While I have shown only two sizes of design cylinders, it is obvious that the several parts hereinbefore mentioned may be adjusted or replaced for use with design cylinders of varying sizes.

From the above description it will be seen that by hinging the inker head directly to the fountain base it may be swung outwardly to its open position for permitting the lateral removal and insertion of design cylinders of different sizes and also inwardly to different closed positions for coaction with design cylinders of different sizes, and locked in such positions.

It will also be seen that the ink supply line is provided with a hinge joint whose axis is in alinement with the axes of the hinged connections of the inker head with the base, so that the inker head may be swung to its open or closed positions without disturbing the connection between the supply line and the inker head.

It will also be seen that by providing the replaceable end sealing devices with removable cylinder contact members these members may be readily removed to permit the insertion and removal of design cylinders of different sizes.

It will also be seen that the inker head is provided with a swinging cover plate adapted to be locked to the end sealing devices, said cover plate being provided with a sealing strip in contact with the peripheral surface of the design cylinder between the end sealing devices. It will be

noted that this cover plate may be swung outwardly when released from the end sealing devices, without disturbing the inker head.

It will also be seen that the inker head is constructed to permit its lower horizontal passage to be open at all times to the ink supply line and its upper horizontal passage, to be open at all times to the discharge slot.

It will also be seen that the nozzle member of the inker head may be adjusted to vary the width of the discharge slot to meet different requirements.

The wiping mechanism shown and described but not claimed herein forms the subject matter of my copending application filed of even date herewith, its Serial Number being 421,433.

It is evident that various changes may be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention, and hence I do not intend to be limited to the embodiment herein shown and described, but

What I claim is:

1. In an inking mechanism for a rotary intaglio printing press, a hollow inker head having an inlet port, a discharge slot, a lower horizontal passage open to the inlet port, an upper horizontal passage open to the discharge slot, vertical passages connecting the lower and upper horizontal passages, and means for varying the width of the discharge slot.

2. In an inking mechanism for a rotary intaglio printing press, a hollow inker head having an inlet port, a discharge slot, a lower horizontal passage open to the inlet port, an upper horizontal passage open to the discharge slot, vertical passages connecting the lower and upper horizontal passages, and means for adjusting the nozzle member to vary the width of the discharge slot.

3. In an inking mechanism for a rotary intaglio printing press, a hollow inker head including, an outer member having an inlet port, an inner member, and a nozzle member carried by the outer member, said nozzle member being spaced from the inner member to form a discharge slot, the outer wall of the inner member being provided with spaced lugs coacting with the inner wall of the outer member to form upper and lower horizontal passages connected by vertical passages, the lower horizontal passage being open to the inlet port and the upper horizontal passage being open to the discharge slot.

4. In an inking mechanism for a rotary intaglio printing press, a hollow inker head including, an outer member having an inlet port, an inner member, and a nozzle member carried by the outer member, said nozzle member being spaced from the inner member to form a discharge slot, the outer wall of the inner member being provided with spaced lugs coacting with the inner wall of the outer member to form upper and lower horizontal passages connected by vertical passages, the lower horizontal passage being open to the inlet port and the upper horizontal passage being open to the discharge slot, and means for adjusting the nozzle on the outer member to vary the width of the discharge slot.

5. In an inking mechanism for a rotary intaglio printing press, a hollow inker head having therein an inlet port, a discharge slot, and intermediate passages connecting said inlet and discharge ports, said head comprising outer, inner and nozzle members, the outer member having a lower flange in which the inlet port is located and

also having an upper flange, and means for adjustably securing the nozzle member to said upper flange to vary the width of the discharge slot.

6. In an inking mechanism for a rotary intaglio printing press, a hollow inker head having therein an inlet port, a discharge slot, and intermediate passages connecting said inlet and discharge ports, said head comprising outer, inner and nozzle members, the outer member having a lower flange in which the inlet port is located and also having an upper flange, and means for adjustably securing the nozzle member to said upper flange to vary the width of the discharge slot, the bottom and top walls of the nozzle and inner members being directed downwardly and inwardly.

7. In an inking mechanism for a rotary intaglio printing press, a hollow inker head having an inlet port, a discharge slot, and intermediate passages, said head comprising outer, inner and nozzle members, the outer member having a lower flange in which the inlet port is located and also having an upper flange to which the nozzle member is adjustably secured to vary the width of the discharge slot, the bottom and top walls of the nozzle and inner members being provided with spaced oppositely projecting ribs to form a baffle for the ink passing through the discharge slot.

8. An ink fountain forming an enclosed bowl for a design cylinder, said fountain including end frames and end sealing devices forming portions of the walls of the bowl, each sealing device comprising a fixed member secured to the end frame, a removable member, and a flexible cylinder contact plate carried by the removable member and removably secured to the fixed member.

9. An ink fountain forming an enclosed bowl for a design cylinder, said fountain including end frames and end sealing devices forming portions of the walls of the bowl, each sealing device comprising a fixed member secured to the end frame, a removable member, and a flexible cylinder contact plate carried by the removable member and removably secured to the fixed member, said fixed and removable members and the contact plate, all overlapping the top portion of the design cylinder at its end.

10. In an enclosed ink fountain for a design cylinder, end frames having locking recesses in their inner faces, a base, an inker head hinged thereto to swing to its inking position, and means for locking the inker head in its inking position, comprising stud shafts mounted in the ends of the head and having eccentric cam discs at their inner ends for engaging the said recesses in the end frames and also having handles at their outer ends for operating the eccentric cam discs.

11. In an enclosed ink fountain for design cylinders of different sizes, end frames having locking recesses in their inner faces, a base, an inker head hinged thereto to swing to different inking positions, and means for locking the inker head in its inking positions, comprising endwise adjustable stud shafts mounted in the ends of the head and having eccentric cam discs at their inner ends for engaging the said recesses in the end frames and also having handles at their outer ends for operating the eccentric cam discs.

12. In an enclosed ink fountain for a design cylinder, end frames, a base therefor, an inker head hinged to the base to swing into and out

of its design cylinder inking position, and a cover plate for the design cylinder hinged to and forming an extension of the inker head, said inker head and cover plate extending from one end frame to the other.

13. In an enclosed ink fountain for a design cylinder, end frames, a base therefor, an inker head hinged to the base to swing into and out of its design cylinder inking position, a cover plate for the design cylinder hinged to and forming an extension of the inker head, said inker head and cover plate extending from one end frame to the other, and sealing devices carried by the end frames in position to overlap the ends of the design cylinder.

14. In an enclosed ink fountain for a design cylinder, end frames, a base therefor, an inker head hinged to the base to swing into and out of its design cylinder inking position, a cover plate for the design cylinder hinged to and forming an extension of the inker head, said inker head and cover plate extending from one end frame to the other, sealing devices carried by the end frames in position to overlap the ends of the design cylinder, and means removably locking the sealing devices to the cover plate when the inker head is swung to its design cylinder inking position.

15. In an enclosed ink fountain for a design cylinder, end frames, a base therefor, an inker head hinged to the base to swing into and out of its design cylinder inking position, a cover plate for the design cylinder hinged to and forming an extension of the inker head, and an inwardly directed sealing strip for the design cylinder carried by the said cover plate, said inker head, cover plate and sealing strip extending from one end frame to the other.

16. In an enclosed ink fountain for a design cylinder, end frames, a base therefor, an inker head hinged to the base to swing into and out of its design cylinder inking position, a cover plate for the design cylinder hinged to and forming an extension of the inker head, an inwardly directed sealing strip for the design cylinder carried by the said cover plate, said inker head, cover plate and sealing strip extending from one end frame to the other, and sealing devices carried by the end frames in position to overlap the ends of the design cylinder.

17. In an enclosed ink fountain for a design cylinder, end frames, a base therefor, an inker head hinged to the base to swing into and out of its design cylinder inking position, a cover plate for the design cylinder hinged to and forming an extension of the inker head, an inwardly directed sealing strip for the design cylinder carried by the said cover plate, said inker head, cover plate and sealing strip extending from one end frame to the other, sealing devices carried by the end frames in position to overlap the ends of the design cylinder, and means removably locking the sealing devices to the cover plate when the inker head is swung to its design cylinder inking position.

18. In an enclosed ink fountain for a design cylinder, end frames, a fixed back frame, a hollow base for the said end and back frames forming the lower portion of the fountain bowl, an inker head hinged to the hollow base to swing into and out of its design cylinder inking position, a design cylinder sealing plate secured to the inker head, and a cover plate for the design cylinder hinged to the top of the inker head, said fixed back frame, base, inker head, sealing plate

and cover plate all extending from one end frame to the other.

19. In an enclosed ink fountain for a design cylinder, end frames, a fixed back frame, a hollow base for the said end and back frames forming the lower portion of the fountain bowl, an inker head hinged to the hollow base to swing into and out of its design cylinder inking position, a design cylinder sealing plate secured to

the inker head, a cover plate for the design cylinder hinged to the top of the inker head, and sealing devices carried by the end frames in position to overlap the ends of the design cylinder, said fixed back frame, base, inker head, sealing plate and cover plate extending from one end frame to the other.

JOSEPH E. MEYER.

CERTIFICATE OF CORRECTION.

Patent No. 2,352,337.

June 27, 1944.

JOSEPH E. MEYER.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 5, first column, line 19, after the word "having" insert --therein--; line 21, after "passages" and before the comma insert --connecting said inlet and discharge ports--: lines 24 and 25. after "flange" strike out the words "to which the nozzle member is adjustably secured" and insert instead --, and means for adjustably securing the nozzle member to said upper flange--; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 5th day of September, A. D. 1944.

Leslie Frazer

(Seal)

Acting Commissioner of Patents.