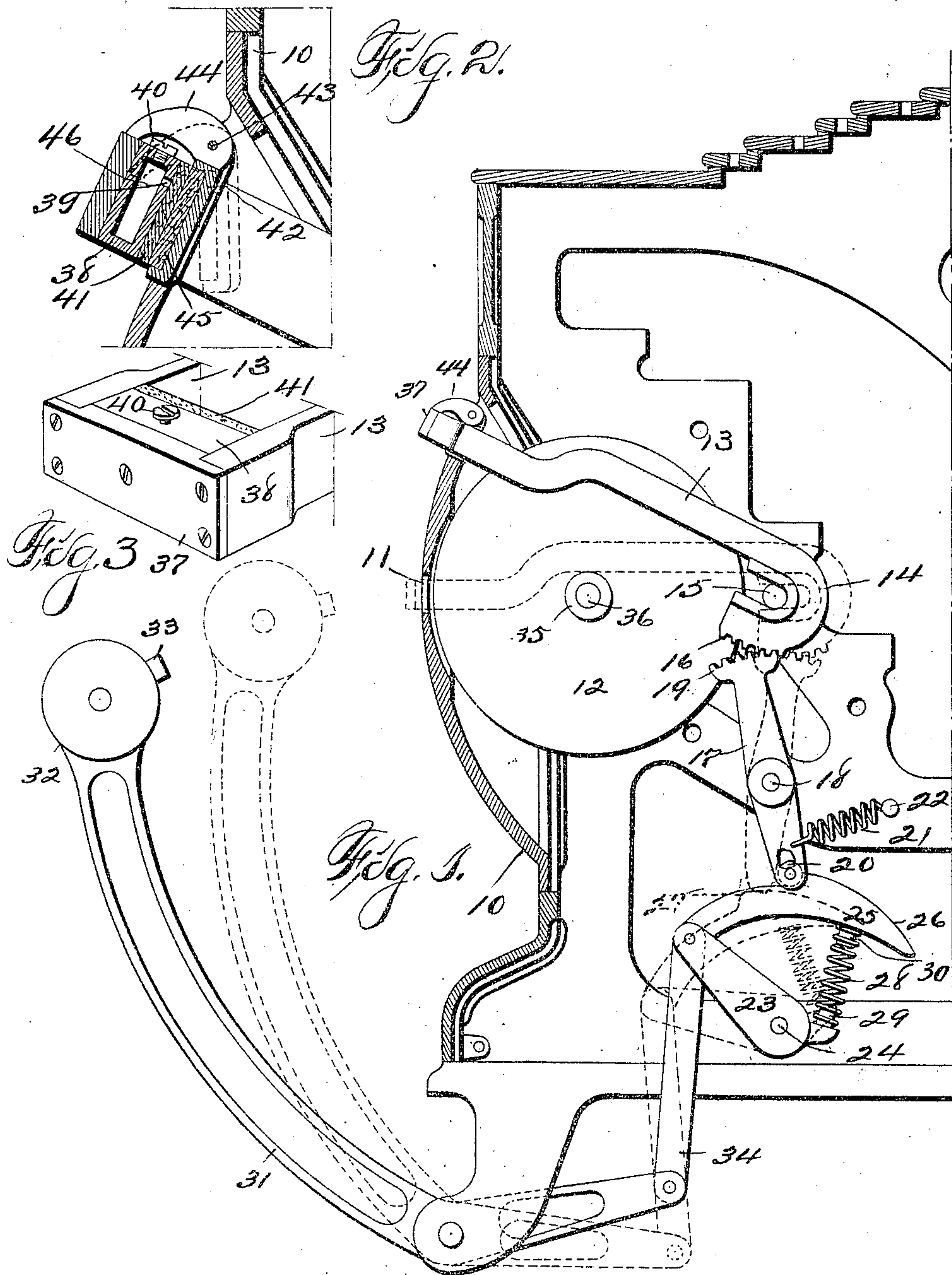


C. W. CANINE.
INKING DEVICE.

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968,537.

Patented Aug. 30, 1910.



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UNITED STATES PATENT OFFICE.

CHESTER W. CANINE, OF CINCINNATI, OHIO.

INKING DEVICE.

968,537.

Specification of Letters Patent. Patented Aug. 30, 1910.

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To all whom it may concern:

Be it known that I, CHESTER W. CANINE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Inking Device, of which the following is a specification.

My invention is especially designed for use with ink of the kind that evaporates rapidly and my object is to provide an inking device of simple, durable and inexpensive construction in which ink is applied to an inking pad only during the time that the inking pad is being used, to thereby avoid waste of ink when the inking pad is at rest, and my object is further to provide means for protecting the inking pad to avoid evaporation of the ink at all times except when the inking pad is in actual use.

A further object is to provide improved means for moving the inking pad to and from its inking position.

My invention consists in the construction, arrangement and combination of the various parts of the inking device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which—

Figure 1 shows a vertical sectional view of a frame containing a type wheel and embodying my improved inking device, the dotted lines show the inking device and connected parts in inking position. Fig. 2 shows an enlarged detail sectional view through the ink well and connected parts with the inking pad in contact with the protecting pad, the dotted lines in said figure showing the position of the protecting pad when the inking pad is out of engagement with it, and Fig. 3 shows a detail perspective view of the ink well and connected parts.

Referring to the accompanying drawings, I have used the reference numeral 10 to indicate the frame provided with an opening 11 through which the inking pad is projected to engage the face of the type wheel 12. The ink well and inking pad are carried upon the outer ends of two parallel arms 13, which arms are provided with curved inner end portions 14 passed around a stationary rod 15 and capable of a rotary movement on said rod and also capable of sliding forwardly and rearwardly a slight

distance on said rod, one of said arms 13 is provided with a toothed portion 16 which toothed portion is in mesh with a lever 17 fulcrumed to a pin 18 below it and formed with teeth 19 in mesh with the teeth 16. The lower end of the lever 17 is provided with a roller 20, for purposes hereinafter made clear, and a contractible coil spring 21 is connected to the lower end of the lever 17 and to a pin 22 on the machine frame to normally hold the lever 17 in the position shown in solid lines shown in Fig. 1. Below the lever 17, I have pivotally supported an arm 23 on the journal 24. Pivoted to the outer end of the arm 23 is a cam 25 formed with a rounded surface 26 and a shoulder 27 designed to engage the roller 20. I have provided for yieldingly holding the cam 25 upwardly by means of an extensible coil spring 28 mounted on a lug 29 on the arm 23 and engaging a lug 30 on the cam 25. Pivoted to the frame is an operating lever 31 formed with a handle 32 on which is a platen 33. A link 34 is pivoted to the lever 31 and to the arm 23. The operation of this portion of my improvement is as follows: Assuming the parts to be in the position shown in solid lines in Fig. 1 and assuming that the operator presses the handle 32 toward the type wheel 12, then the link 34 will draw the arm 23 downwardly, which will move the cam 25 forwardly. The spring 28 will hold the cam in engagement with the roller 20 throughout a part of its movement, but when the roller 20 has moved to the position shown by dotted lines in said figure, it will pass out of the shoulder 27 and its spring 21 will return it quickly to the position shown in solid lines. While the lever 27 is being moved from the position shown in solid lines to the position shown in dotted lines, the arms 13 will be moved downwardly until they strike upon the sleeve 35 on the rod 36 whereupon their downward movement will be limited and a further movement of the lever 17 will move them inwardly, so that the printing block will pass through the opening 11 of the frame and engage the face of the type wheel. As soon, however, as the roller 27 slides out of the shoulder of the cam, then the spring 21 will immediately force the arms 23 outwardly so that the printing block passes out of the opening 11 and then the arms 13

will be rapidly elevated to the position shown in solid lines.

In use the operating lever 31 moves from the position shown in solid lines to the position shown in dotted lines during the time that the arms 13 move downwardly and inwardly and then the arms 13 are thrown upwardly by their operating springs while the lever 32 completes its printing movement.

The ends of the arms 13 are connected by a plate 37. The ink well 38 is supported in the rear of the plate 37 and between the arms 13 and is provided with an over-flow opening 39 in its inner face near its upper end and also with a filling opening in its top, in which the screw 40 is placed to close the opening. Secured to the inner face of the ink well is an inking pad 41 made of absorbent material suitable for inking type. The ink protecting device comprises a pad holder 42 pivoted at 43 and having a forwardly projecting arm 44. A pad 45 of absorbent material is mounted in its forward face. The said device normally hangs on its pivot 43 in position where its arm 41 is extended in front of the frame and in the path of the plate 37 and its parts are so constructed and arranged that when the arms 13 move upwardly, the plate 37 will strike the arm 44 and limit the upward movement of the arms 13 and throw the pad 45 into position in engagement with the pad 41. The springing means that hold the arms 13 upwardly will operate to hold these pads 41 and 45 firmly in engagement. In Fig. 2 of the drawings, the dotted line 46 indicates the level of the ink within the well when at its maximum, that is to say, the level of the ink is always below the opening 39. Hence there is no direct flow from the ink well to the inking pad. However, when the ink well is being moved from its position at rest to printing position and back again, the ink in the well will be agitated to such an extent that a slight quantity of it will pass through the opening 39 to the inking pad. Hence when the inking device is being constantly used, a relatively large quantity of ink will be distributed, but when it is not frequently used, the ink will not be distributed. When the inking device is in its position at rest, the surfaces of the pads 41 and 45 will be in close contact and no air can enter between them. Hence, there will be little or no evaporation of the ink. Furthermore, the pad 45 will absorb any excessive ink upon the pad 41 and, therefore, the pad 41 will at all times be in proper condition as regards the quantity of ink thereon for printing purposes and this is all done automatically without the attention of the operator so long as any ink remains in the well.

Having thus described my invention, what

I claim and desire to secure by Letters Patent of the United States, therefor is—

1. The combination of an ink pad movable from normal to printing position and back, a movable ink retaining pad and means for automatically moving the ink retaining pad to position in engagement with the inking pad, said means being actuated automatically upon a return movement of the inking pad.

2. The combination of an ink pad movable from normal to printing position and back, a movable ink retaining pad, means for automatically moving the ink retaining pad to position in engagement with the inking pad, said means being actuated automatically upon a return movement of the inking pad, and means for automatically supplying ink to the inking pad.

3. The combination of an inking pad movable from normal to printing position and back, a retaining pad positioned to engage the inking pad when in its normal position and an ink well connected with the inking pad and provided with an over-flow opening discharging to the inking pad.

4. The combination of an inking pad movable from normal to inking position and back, and a movable retaining pad operated by a return of the inking pad to its normal position, and arranged to engage the face of the inking pad.

5. The combination of an inking pad movable from normal to inking position and back, a pivoted retaining pad normally in position out of engagement with the inking pad and means connected therewith operated by the inking pad for throwing the retaining pad into position in engagement with the inking pad.

6. The combination of a movable arm, an inking pad carried by the movable arm, a pivoted ink retaining pad holder, an arm thereon in the path of the arm of the inking pad and means for moving the arm of the inking pad into engagement with the arm of the retaining pad holder.

7. The combination of an inking pad capable of movement from normal to printing position and also of returning to normal position, an ink retaining pad automatically actuated by a return movement of the inking pad to position in engagement with the inking pad and a yielding pressure device acting on the inking pad for forcing the retaining pad into firm engagement with the inking pad.

8. The combination of an inking pad capable of movement from normal to printing position and also of returning to normal position, an ink retaining pad automatically actuated by a return movement of the inking pad to position in engagement with the inking pad and a yielding pressure device acting on the inking pad for forcing

the retaining pad into firm engagement with the inking pad, said ink retaining pad being so arranged that it will automatically move away from the inking pad when the inking pad starts on its movement to printing position.

9. The combination of a movable arm, an ink well carried by the arm and formed with an over-flow opening, an inking pad carried by the arm and adjacent to the over-flow opening, a retaining pad holder pivotally mounted, a retaining pad carried thereby and an arm on the retaining pad holder to be engaged by the arm of the inking pad.

10. The combination of a movable arm, an ink well carried by the arm and formed with an over-flow opening, an inking pad carried by the arm and adjacent to the over-flow opening, a retaining pad holder pivotally mounted, a retaining pad carried thereby, an arm on the retaining pad holder to be engaged by the arm of the inking pad, a yielding pressure device normally holding the arm of the inking pad in engagement with the arm of the retaining pad.

11. The combination of a movable arm, an ink well carried by the arm and formed with an over-flow opening, an inking pad carried by the arm and adjacent to the over-flow opening, a retaining pad holder pivotally mounted, a retaining pad carried thereby, an arm on the retaining pad holder to be engaged by the arm of the inking pad, a yielding pressure device normally holding the arm of the inking pad in engagement with the arm of the retaining pad and means for moving the arm of the inking pad away from the retaining pad.

12. The combination of a movable arm, an ink well carried by the movable arm and formed with an over-flow opening and an absorbent pad carried by the arm and in position to receive the over-flow from the ink well and an absorbent ink retaining pad in engagement with the inking pad when the inking pad is at one limit of its movement.

13. The combination of a frame, an inking device, a printing platen movable to and from printing position and means actuated by a movement of the platen from normal toward its printing position, said means moving the inking device to inking position and then releasing it and spring actuated means for returning the inking device to normal position.

14. The combination of a frame, an ink-

ing device capable of pivotal and sliding movement, a platen movable from normal to printing position and means actuated by a movement of the platen from normal toward its printing position said means moving the inking device to inking position on its pivot, and then sliding it, means for releasing the inking device and spring actuated means for returning it.

15. The combination of a frame formed with an opening, an arm pivotally and slidably supported, an inking device carried by the arm, a printing platen, means actuated by a movement of the printing platen toward the said opening, said means operating to move the inking device to position adjacent to said opening, then inwardly through the opening, and spring actuated means for returning the inking device through the opening and for moving it to position away from the opening.

16. The combination of a machine frame formed with an opening, an arm pivotally and slidably supported and formed with cog teeth, an inking device carried by the arm, a spring actuated lever formed with cog teeth in mesh with the cog teeth of said arm, a pivotally mounted arm, a curved cam formed with a shoulder normally engaging the lower end of said lever, a yielding pressure device for holding the cam in engagement with the shoulder during a part of its movement and an operating lever connected with said arm.

17. The combination of a machine frame formed with an opening, an arm pivotally and slidably supported and movable from position above the opening downwardly and into said opening and then outwardly and upwardly to its starting point, teeth formed on said arm, a toothed, spring actuated lever meshed with the teeth on the arm, an arm pivotally supported on the frame, a spring actuated cam pivoted to the arm and formed with a notch to engage the lower end of the spring actuated lever, a lever fulcrumed to the machine frame a printing platen carried thereby movable to and from the opening in the frame and a link connecting said lever and the arm having the cam thereon, for the purposes stated.

Des Moines, Iowa, December 22, 1904.

CHESTER W. CANINE.

Witnesses:

WM. H. SCHMIDT,

JOHN WELD PECK.