

R. P. SAXTON.
PRINTING MACHINE.

APPLICATION FILED JULY 8, 1909.

951,489.

Patented Mar. 8, 1910.

2 SHEETS—SHEET 1.

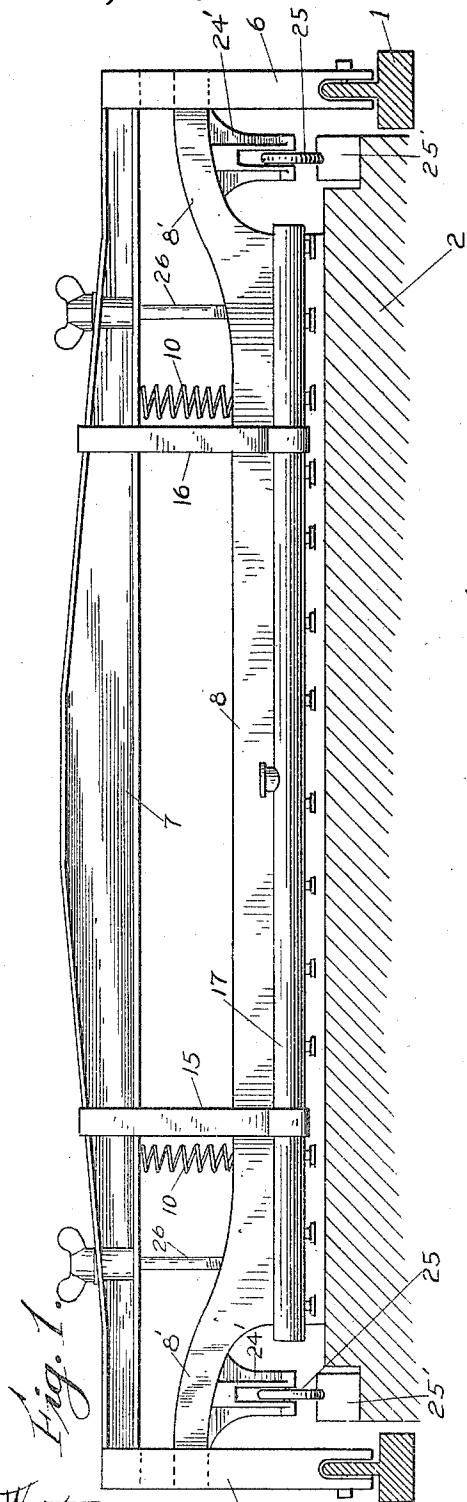


Fig. 2.

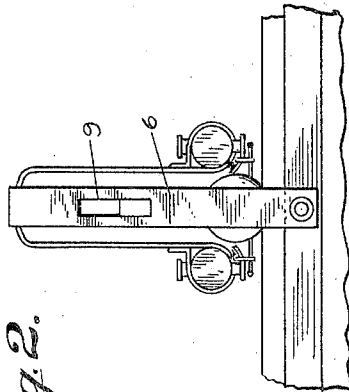
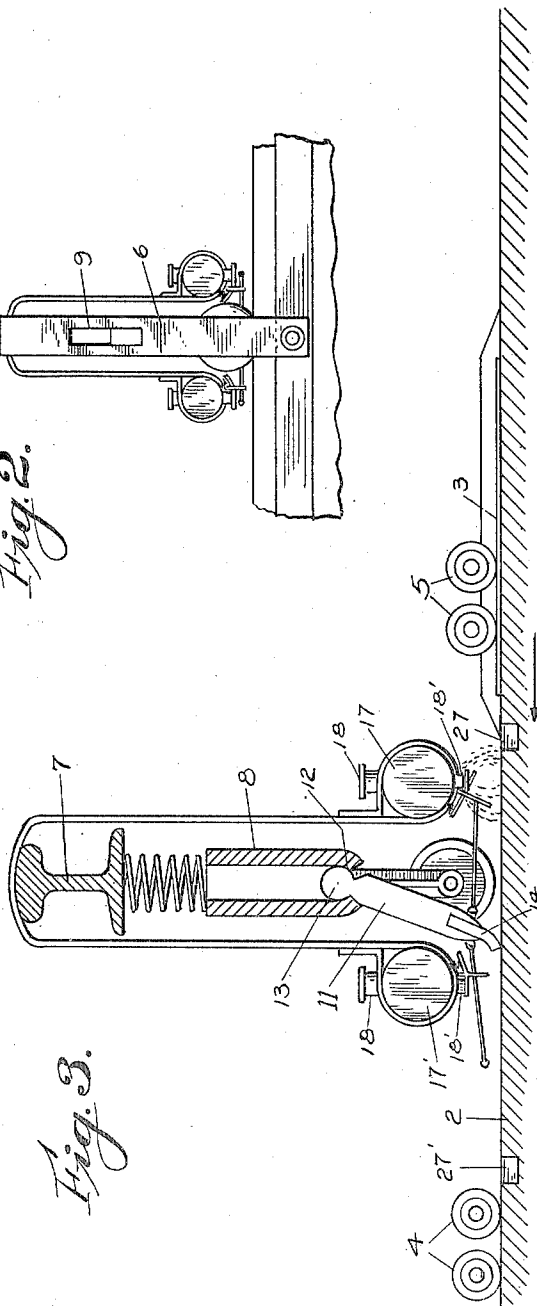


Fig. 3.



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Fig. 4.

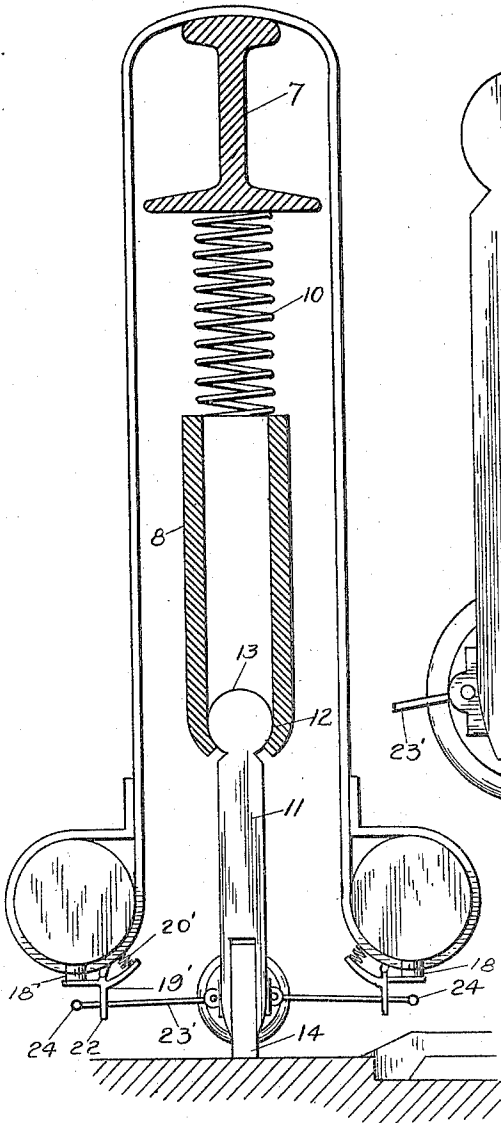
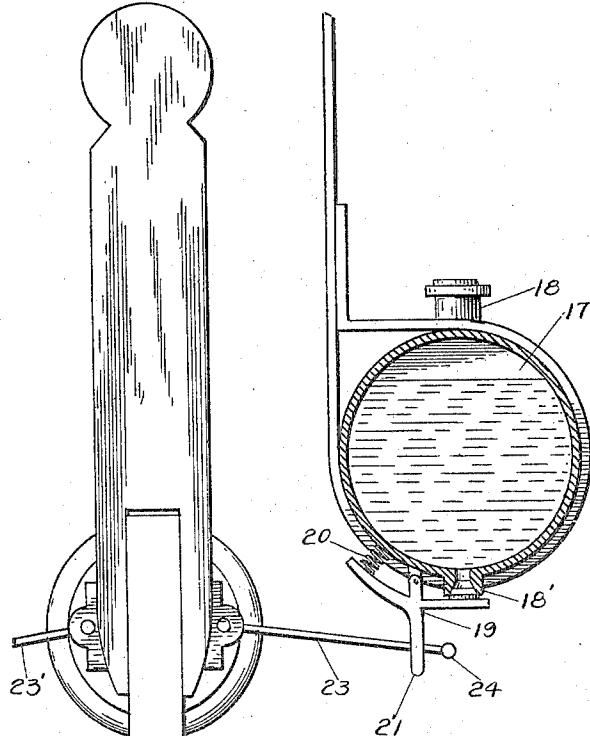


Fig. 5.



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UNITED STATES PATENT OFFICE.

ROBERT P. SAXTON, OF OAKLAND, CALIFORNIA.

PRINTING-MACHINE.

951,489.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed July 6, 1909. Serial No. 505,975.

To all whom it may concern:

Be it known that I, ROBERT P. SAXTON, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Printing-Machines, of which the following is a specification.

The hereinafter described invention relates to means for removing ink from the inking plate and the ink applying rolls of a printing press, the object of the invention being to quickly clean the said parts of the ink thereon after the operation of printing has been completed, and to do so without requiring the inking rolls to be removed for the purpose of wiping the same to remove the ink therefrom.

To comprehend the invention, reference should be had to the accompanying sheets of drawings, wherein:—

Figure 1 is an end elevation disclosing a cross section of the ink plate and frame of a printing press, with the improved wiping means applied thereto. Fig. 2 is a detail broken side view of the frame and reciprocating ink plate, with the ink wiping means secured to the frame. Fig. 3 is a longitudinal sectional view taken on line *x—x* Fig. 1 of the drawings, the said view illustrating the position assumed by the wiping means on the travel of the ink carrying plate in the direction designated by the arrow. Fig. 4 is an enlarged detail sectional view of the spring held holder for the wiper, disclosing the wiper when standing in a neutral position relative to the reciprocating inking plate of the printing press. Fig. 5 is an enlarged detail end view of the wiper, and its connection to one of the valve controller liquid reservoirs, the said reservoir being sectioned.

In the drawings only such portions of a printing press have been illustrated as will suffice for an understanding as to the application of the invention thereto.

The numeral 1 is used to designate any suitable type of a frame, and 2 the reciprocating ink plate supporting the type carrying frame or chase 3. The ink is applied to the ink carrying plate 2 by means of the inking rolls 4, as usual in this type of presses, which ink is transferred from the ink plate and deposited onto the types held within the chase 3, by means of the transfer rolls 5.

These parts being of the usual construction and working in well known manner, require no detail description herein.

To the sides of the frame 1 the lower end of the uprights 6 are secured, which carry and support the transversely disposed bar or frame piece 7, which, together with the uprights 6, form a supporting frame extended above and across the reciprocating ink carrying plate 2. Below the frame piece 7 is arranged the hollow holder 8, the ends 8' of which are upwardly turned and work in the vertical guide slots 9 of the uprights 6 of the supporting frame, the said holder 8 being normally held downwardly pressed by means of the springs 10, which are interposed between the under face of the frame piece 7 and the holder 8.

Within the holder 8 is fitted the wiper plate 11, which extends through the contracted outlet 12 of the holder and is held suspended therein by means of the enlarged spherical head 13, so that while the wiper plate is free to swing back and forth and move vertically, it is held against dropping from within the holder by means of such enlarged head 13. The wiper plate 11 extends the entire width of the ink plate 2, and at its lower end carries the flexible wiping strip 14, preferably composed of rubber.

From the frame piece 7 depends the stirrup brackets 15—16, which support the transversely disposed reservoirs 17—17', located at each side of the wiper plate 11. These reservoirs are filled with gasoline or other suitable fluid through the filling orifice 18, and each reservoir is provided on its under surface with a series of jet outlets 18', which are held closed by means of the valve plates 19—19' hinged to the reservoirs respectively and held in closed position by means of the springs 20—20'.

From the valve plates 19 depend the ears 21, and from the valve plates 19' the ears 22, which are connected respectively to the wiper plate 11 by means of the links 23—23'. These links work through the ears 21—22, and each is provided with an enlarged head 24, so that when the links are drawn inwardly the head 24 will engage the ears through which the same works and exert a pulling strain thereon to throw downwardly the valve thereof in order to open the outlets of the reservoir controlled thereby and per-

mit of gasoline discharging therefrom onto the surface of the reciprocating ink carrying plate.

From the holder 8 depend the bearing brackets 24', within each of which is mounted a roll 25, which rolls during the reciprocating movement of the ink carrying plate ride upon the inclined track-ways 25', located at each side of the chase frame 3 carried by the plate 2, so as to raise the holder 8 and the wiping means supported thereby clear of the surface of the type held within said chase.

When the press is used for printing purposes, the wiping means are held clear of the surface of the ink carrying plate by means of the adjusting screws 26, which work through the frame piece 7 and engage threaded bores in the holder 8. However, when the press has completed the operation of printing, it is required that the ink remaining on the ink carrying plate and inking rollers be removed. This, by the present invention, is accomplished by lowering the holder 8 until the flexible wiping strip 14 rests on the surface of the ink carrying plate 2, Fig. 4 of the drawings. As the ink carrying plate is a reciprocating one, the pressure of the wiping strip 14 thereon will swing the wiper plate 11 on its pivotal joint and into the position disclosed by Fig. 3 of the drawings, the plate 2 traveling in the direction of the arrow. During this swinging movement of the wiper plate 11, the links 23 will be drawn inwardly until the heads 24 thereof exert a pulling strain onto the ears 21 to open the valves 19 to uncover the outlets 18' and permit a small quantity of gasoline to discharge from the reservoir 17 onto the surface of the plate 2 to cut the ink thereon, which ink, during the continued movement of the ink carrying plate, is scraped from the surface thereof into the runway 27. On the return stroke of the ink carrying plate 2, the tension on the links 23 is released, when the pressure of the spring 20 will close the valve 19. On this stroke of the ink carrying plate, the wiper plate 11 will be thrown at an opposite inclination, drawing therewith the links 23' until the head 24' thereof engages the ears 22 of the valves 19' and exerting a pulling strain thereon opens the same to permit gasoline escaping through the outlets 18' of the reservoir 17' in advance of the wiper. The cut ink on the plate 2 is then scraped from the surface into the runway 27'. The surplus ink of the rolls 4—5 being deposited onto the ink carrying plate 2 with each stroke thereof and in turn wiped from off the surface of said plate by the wiping means, all surplus inks is thus quickly removed from the inked parts. When the press is brought to a state of rest, the wiping means will be raised clear of the surface of ink carrying

plate 2 by the adjusting screws 26, and the wiper plate stands in a neutral or perpendicular position so that the valved outlet of the reservoirs 17—17' will be closed.

By the use of the described means, the inked parts of a printing press may be readily cleaned of ink after each operation of printing.

While I have shown and described a simple means of controlling and actuating the valves of the reservoirs containing the ink solvent, it is apparent that any other suitable controlling means may be employed, and I do not therefore wish to be understood as confining myself to the form of means described and illustrated.

Having thus described my invention what is claimed as new and desired to be protected by Letters Patent is:—

1. In combination with a printing press, of means connected therewith for automatically removing the surplus ink from the working parts thereof on the completion of the printing operation, the same comprising a vertically movable spring held wiper arranged above the ink surface to be cleaned, devices for placing the same into and out of contact with the inked surface and means for ejecting an ink solvent onto said surface in advance of the wiper.

2. In combination with a printing press, of means for wiping the surplus ink from the ink carrying plate on the completion of the printing operation, the same comprising a spring held wiper for engaging the surface of the inked plate to wipe the same, devices for adjusting the wiper vertically, valved controlled reservoirs containing an ink solvent, and devices for actuating the valves of said reservoirs on a movement of the wiper.

3. In combination with a printing press, of means for wiping the ink carrying plate of surplus ink on the completion of the operation of printing, the same comprising a spring actuated swinging wiper for engaging the surface of the said plate, valved controlled means for ejecting an ink solvent onto the surface of the ink carrying plate, and connection between said means and the wiper for regulating the discharge of the ink solvent.

4. In combination with a printing press, of a spring held wiper arranged above the ink carrying plate of the press for the described purpose, and means actuated by the wiper for discharging onto the ink carrying plate in advance of the wiper an ink solvent.

5. The combination with an ink carrying plate of a printing press, of a wiper for automatically removing the surplus ink therefrom on the completion of the operation of printing, devices for placing the wiper into and out of engagement with the surface of the ink carrying plate, and means

actuated by the wiper for ejecting an ink solvent onto the said plate in advance of the wiper.

5 6. The combination with a printing press, of a frame mounted above the ink carrying plate thereof, a spring held holder mounted therein, a wiper carried by the holder for engagement with the surface of the ink carrying plate, valved controlled reservoirs
10 carried by the frame, connections between the wiper and the valves of the reservoirs

for opening the same to discharge an ink solvent onto the ink carrying plate in advance of the wiper, and devices for raising the wiper clear of the ink carrying plate. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT P. SAXTON.

Witnesses:

N. A. ACKER,
S. CONSTINE.