

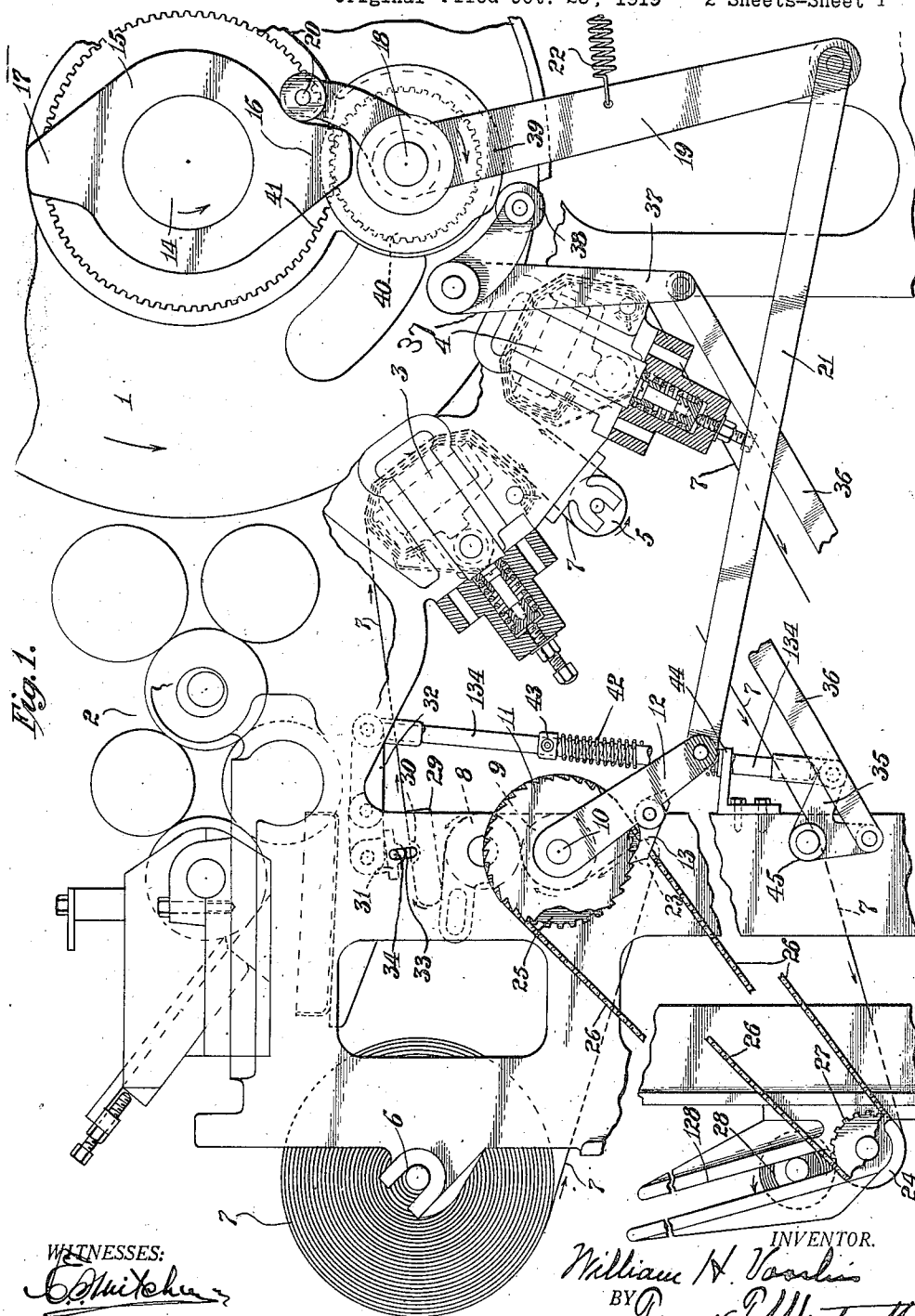
Sept. 18, 1923.

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W. H. VOORHIS

WIPING MECHANISM FOR ROTARY PLATE PRINTING MACHINES

Original Filed Oct. 25, 1919 2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 3.

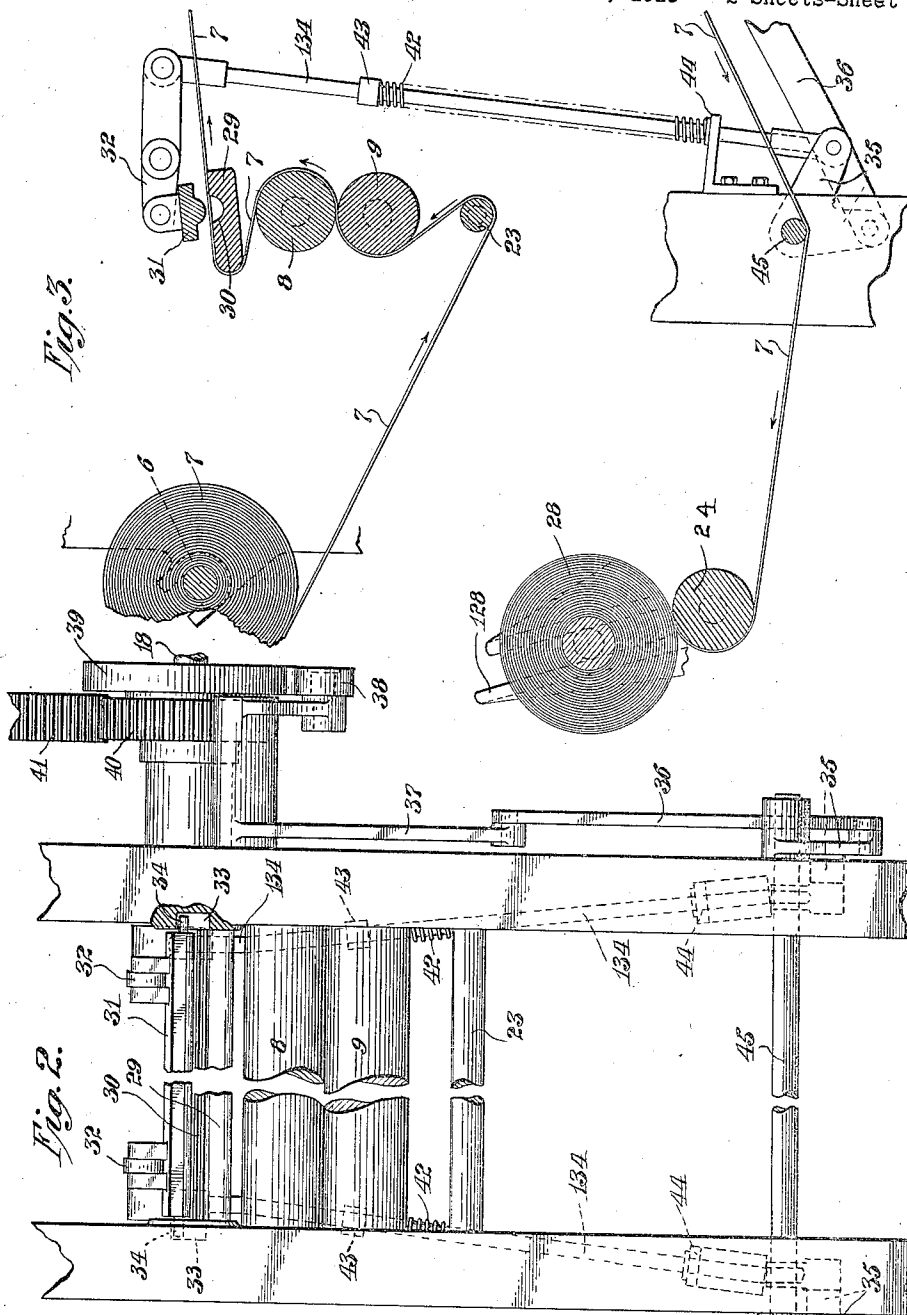


Fig. 2.

Attest:

E. M. Yeh

William H. Voorhis

Inventor:

by Frank P. Wentworth

his Atty.

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UNITED STATES PATENT OFFICE.

WILLIAM H. VOORHIS, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN BANK NOTE COMPANY, A CORPORATION OF NEW YORK.

WIPING MECHANISM FOR ROTARY PLATE-PRINTING MACHINES.

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To all whom it may concern:

Be it known that I, WILLIAM H. VOORHIS, a citizen of the United States, residing at the borough of Bronx, in the city of New York, county of Bronx, and State of New York, have invented certain new and useful Improvements in Wiping Mechanisms for Rotary Plate-Printing Machines, of which the following is a specification, reference being had therein to the accompanying drawings, which form a part thereof.

My invention relates to wiping mechanisms for rotary plate printing machines, and more particularly to such a mechanism employing a continuous wiping cloth or rag intermittently fed during intervals while the cloth or rag is out of engagement with the plate.

Heretofore in this art, it has been a common practice to intermittently feed a strip of wiping cloth or rag by a step by step, or intermittent movement, while the cloth or rag is disengaged from the plate, by a rewind mechanism, and means for imparting a timely actuation thereto. In such a mechanism there is always a tendency, for the frictional engagement of the plate with the cloth or rag, to cause such a lineal movement of the cloth or rag as will create sufficient slack therein to, at times, interfere with the proper cleaning of the plate. Furthermore, unless an intermediate feeding mechanism between the wiper platens and the rewind mechanism is employed, there is also a tendency, with the increase in the diameter of the rewind reel, of a gradually increased feeding movement of the cloth or rag, resulting in a loss of uniformity in the condition of the cloth or rag, and a resultant change in the wiping action thereof during different portions of a run of the machine.

With these conditions in mind, I have provided a wiping mechanism wherein the cloth or rag, while in engagement with the plate, will be positively held against movement therewith, and will be automatically released to permit it to be advanced by a step by step movement, during those intervals when it is not in engagement with the plate.

In order to secure the desired uniformity in succeeding feeding movements of the cloth or rag, I provide means whereby, with each rotation thereof, slack will be created upon one side of the wiper platen or platens, the amount of this slack always being the

same, other means being provided whereby such slack will be automatically taken up, and the cloth or rag thus fed in relation to the platen or platens, prior to the succeeding engagement of the cloth with the plate. In the event, however, of the failure of said take-up mechanism to fully take up such slack, the means for holding the cloth or rag against movement, will, nevertheless, become operative to prevent any excess slack between the wiping platen or platens and the ink fount, being taken up as a result of the movement of the plate in relation to said platens and the cloth. In this manner any extreme nicety in the proportioning and operative effect of the parts entering into the cloth or rag feeding mechanism, is not required, and yet the cloth, in succeeding wiping operations, will always be maintained without such wrinkles therein as might interfere with a uniform wiping action throughout the entire surface of the plate, and the wiping interval will always be substantially the same, since the cloth cannot have any substantial quantity of movement with the plate. This uniformity in the feeding movement, will result in all portions of the cloth or rag being "conditioned" in substantially the same manner, thus resulting in uniformity in the wiping action throughout the entire length of the strip or cloth.

In order to secure the proper co-operation of the different portions of the wiping mechanism, I provide actuating means therefor, so constructed as to synchronize the functionings of the feeding mechanism and the mechanism for holding the cloth against movement, which means will ensure the timely release of the cloth to permit the necessary and timely feeding movement thereof, and a timely application of the desired clamping action upon the cloth after the feeding movement has been completed.

In a wiping mechanism made in accordance with my invention, any tendency of longitudinal wrinkles or creases to develop in the cloth or rag, are reduced to a minimum.

The invention consists in the novel features of construction and combination of parts hereinafter set forth and described, and more particularly pointed out in the claims hereto appended.

Referring to the drawings,

Fig. 1 is a side view, partly in elevation

and partly in section, of a wiping mechanism embodying my invention, and the co-operating portions of the printing machine;

Fig. 2 is an end view from the left of Fig. 1, with the supply roll removed; and

Fig. 3 is a detail sectional view of a portion of the feeding and rewind mechanisms, and of the clamp mechanism.

Like letters refer to like parts throughout the several views.

In the embodiment of my invention shown in the drawings, a portion of the plate cylinder is shown at 1, and the inking mechanism for the plates at 2. This inking mechanism forms no part of my present invention, as any type of inking mechanism may be employed. The plate cylinder 1 is shown as being of a type capable of having two plates mounted thereon, the space between succeeding plates affording an interval during which the wiping cloth is out of engagement with the plates, to permit the feeding of the wiping cloth or rag. Associated with the cylinder 1 is a plurality of wiping platens 3 and 4, which may be of the usual, or any desired, construction, said platens being normally forced toward the cylinder 1 by means of springs, to develop the requisite pressure of the wiping cloth or rag upon the plates. In the form of platen mechanism shown, I employ two platens having arranged between them a guide roller 5, all of which members receive a reciprocatory movement laterally of the machine, in the usual and well known manner.

Removably mounted in suitable bearings 6 in the frame of the machine, is a roll of a continuous strip or web of a suitable wiping cloth or rag 7. This cloth or rag passes over the platens 3 and 4 and about the intermediate roller 5, feeding means therefor being provided intermediate the bearings 6 and the platen 3, and a take-up mechanism being provided beyond the platen 4. By providing a feeding mechanism and a take-up mechanism for the cloth or rag in the relation heretofore referred to, I am enabled not only to ensure the feeding of a definite, uniform quantity of the cloth or rag preparatory to each wiping operation, but am enabled to draw said cloth or rag across the platens under conditions which will ensure its being held perfectly taut, thus avoiding the presence of creases or wrinkles during the advance of said cloth or rag, and prior to the engagement thereof with a plate.

To avoid possibility of movement of the cloth or rag with the plate after such engagement, however, I provide means whereby, immediately after the cloth or rag has received its maximum feeding movement, and as the plate comes into engagement therewith, said cloth or rag will be subjected to a stop or clamp mechanism between the

feeding mechanism and the first wiping platen, which will positively hold said cloth or rag against such movement, and thus preserve the conditions secured by means of such feeding and take-up mechanisms.

The feeding mechanism for the cloth or rag comprises a pair of feed rollers 8 and 9, intermittent movement being imparted to one of said rollers as 9, and therethrough to the other roller 8, by means of a ratchet wheel 11 carried by the shaft 10 of said roller, and rock arm 12 carrying a spring pressed pawl 13, engaging said ratchet wheel. Mounted upon the shaft 14 of the plate cylinder 1, is a cam 15 having a rise or rises thereon corresponding in number with the number of plates carried by said cylinder. In the form of the invention shown, where two plates are mounted upon the cylinder, the cam 15 will have two rises, 16 and 17, thereon. Parallel with the shaft 14 is a shaft 18 upon which is mounted a rocking lever 19, one arm of which carries a roller 20, co-operating with the cam 15, and the other arm of which is connected by the link 21 with the rock arm 12. A spring 22 acts upon the other arm of the lever 19 to impart a return movement to the arm 12, and the parts actuated thereby. Adjacent the roller 9 is a guide roller 23.

The cam 15 is so set as to have the rises 16 and 17 operative upon the lever 19 during the interval between the disengagement of a plate with the cloth or rag, and the engagement of said cloth or rag with a succeeding plate.

It is to be understood that the number of rises upon the cam 15 will correspond with the number of plates upon the cylinder 1, and that the construction of the cam may be varied to adapt the mechanism to printing machines in which the plate cylinder is adapted to receive different numbers of plates.

While the rollers 8 and 9 and the actuating means therefor do not have any function in feeding the cloth or rag across the platens 3 and 4, and about the intermediate roller 5, I have designated it a feeding mechanism because it feeds the cloth or rag from its roll, the movement of the cloth or rag with relation to said platens being accomplished through the medium of the take-up mechanism which I will hereinafter describe.

By the mechanism above described, I provide an intermittently operative mechanism for creating slack in the wiping cloth or rag, the actuations of which are timed with regard to the relative positions of the printing plates and the wiping platens, said mechanism being operative while said platens and the wiping cloth or rag thereon are inoperative with relation to the plate, and being inoperative while said platens and said cloth are acting upon the plate.

Substantially simultaneously with the creation of slack in the cloth or rag by the feeding mechanism above described, the take-up mechanism is operative to take up this slack and advance the cloth or rag in relation to the wiping platens. This mechanism is so constructed as to have a tendency to impart traverse to said cloth or rag at a rate in excess of that at which it is being fed from the roll by the rollers 8 and 9. In this manner the strip or cloth will always be held taut, slippage occurring in the take-up mechanism to limit the quantity of movement of the cloth or rag to that predetermined by the rollers 8 and 9.

This take-up mechanism comprises a friction roller 24 mounted in suitable bearings in the frame of the machine, and driven from the shaft 10 by means of a sprocket wheel 25 carried by said shaft, a sprocket chain 26, and a sprocket wheel 27 mounted upon the shaft of the roller 24. Associated with the roller 24 is a rewind reel 28, the arbors of which are seated in an elongated slot in the fitting 128. The length of this slot is such as to ensure the reel 28 and the portion of the cloth or rag wound thereon, bearing upon the roller 24. In this manner the roller 24 governs the operative effect of the take-up mechanism, which is not influenced in any way by the gradual increase in the diameter of the roll upon the reel 28, with the continued operation of a machine. While the frictional engagement of the roller 24 and the cloth upon the reel 28 is relied upon to take up or cause travel of the cloth or rag in relation to the platens 3 and 4, the rewinding of said cloth or rag is merely incidental to the operation of the take-up roller.

Extending laterally of the machine, adjacent the feed rollers 8 and 9, is a clamp bar 29, across the edge, and above which the cloth or rag 7 passes, after leaving the rollers 8 and 9. The edge of said bar with which the said cloth or rag engages, is rounded as shown, thus acting as a drag upon said cloth or rag without interfering with the action of the take-up mechanism. Upon the upper face of the bar 29 is a recess 30 extending laterally of the machine for substantially the full length of said bar, into which recess the cloth or rag 7 is adapted to be forced by a movable clamping member 31, adapted to receive a timely actuation to cause said clamp bar and said clamping member to firmly grip the cloth or rag after the take-up mechanism has ceased to operate thereon, and with the engagement of a plate, with the portions of the cloth upon the platens 3 and 4. The clamping member 31 is pivotally mounted upon one arm of a rocking lever 32, movement of said member being guided by pins 34 moving in slots 33 in the frame of the machine. This pin and slot

construction, and the pivotal connection of the member 31 with the lever 32, is made necessary by the employment of a rocking lever as the actuating means for the movable clamping member, and is largely a matter of machine design.

The actuating means for the movable clamping member 31 comprises a rod 134, one end of which is pivotally connected with the lever 32 and the other arm of which is pivotally connected with a bell crank lever 35. Movement is imparted to the lever 32 in one direction by means of a link 36, one end of which is connected with one arm of the bell crank lever 35, and the other end of which is connected with one arm of a bell crank lever 37 pivoted adjacent the shaft 18. The other arm of the lever 37 is provided with an anti-friction roller 38, co-operating with a cam 39 mounted upon the shaft 18, said cam having a rise thereon extending for substantially 180° of said cam. The cam 39 is driven by means of a gear 40 meshing with a gear 41 upon the shaft 14, the ratio of said gears being such that the cam 39 will receive two revolutions to one of the cylinder 1. This construction, like other details of the invention shown in the drawings, is to adapt the wiping mechanism to a two-plate machine and is capable of variation, if the invention is to be adapted to machines for carrying a greater or less number of plates. The cam and lever mechanism described is adapted to positively disengage the movable member 31 from the clamp bar 29, the setting of said clamp bar resulting from the action of the spring 42 encircling the rod 34, and seated between the block 43 upon said rod and the bracket 44 mounted upon the frame of the machine.

Adjacent the bell crank lever 35 is a guide roller 45, about which the cloth or rag 7 passes after leaving the wiping platens and before engaging the roller 24.

The spring 42 in addition to setting the clamping mechanism also maintains the roller 38 in the proper operative relation to the cam 39.

The operation of the herein described mechanism is substantially as follows:—

Preparatory to a run of the press, the end of the strip of cloth or rag 7 is passed about the roller 23, about and between the rollers 8 and 9, and about the curved end, and across the top, of the clamp bar 29. After leaving the bar 29, this cloth or rag is passed over the face of the platen 3 presented towards the plate cylinder 1, downwardly from said surface and about the roller 5, and then over the surface of the platen 4 presented towards the plate cylinder 1, to and about the guide roller 45, and the take-up roller 24. The end of the cloth or rag is then passed about and secured to the rewind reel 28 in any desired manner as by one or more

turns about this reel. When the cloth or rag has thus been threaded through the machine, the wiping mechanism is ready for use, the subsequent feeding operation thereof being controlled by the various mechanisms heretofore described.

With the relation of parts shown in the drawings, one plate upon the cylinder 1 has passed from its operative engagement with the wiping mechanism, and the other plate upon this cylinder is approaching the operative relation to the inking mechanism 2, the portions of the wiping cloth or rag 7 under these conditions being out of engagement with a plate to be wiped. With the rotation of the cylinder 1, the rise 16 upon the cam 15 will impart a rapid oscillatory movement to the bell crank lever 19, which, through the link 21, will oscillate the arm 12 and the pawl 13, and thus impart a partial revolution to the ratchet wheel 11 and the shaft 10 of the roller 9. By reason of the pressure between the rollers 8 and 9, this movement will result in the drawing of a short length of cloth or rag 7 from its roll, thus creating slack between said rollers 8 and 9 and the clamp bar 29, the quantity of cloth or rag thus drawn from said roll being that required to present the necessary or desired short length of clean cloth or rag at the platen 3 toward the inking mechanism 2. This quantity may be regulated by determining the throw of the lever 12, by the leverage at which the link 21 acts thereon. Simultaneously with the rotation of the roller 9, the chain and sprocket mechanism 25, 26 and 27 will rotate the take-up roller 24, and through said roller, the rewind reel 28. Hence, as slack is created upon one side of the platens 3 and 4, this slack will be simultaneously taken up by said roller 24, thus drawing or advancing the cloth or rag in relation to said platens. The sprocket wheel 25 being of greater diameter than the wheel 27, and the rollers 9 and 24 being of substantially the same diameter, there will always be a tendency of the roller 24 to advance the cloth or rag to an extent greater than the slack created by said rollers 8 and 9, thus causing the roller 24 to exert a constant pull during this interval upon said cloth or rag, which will tend to hold it perfectly taut and smooth. The resistance offered by the platens 3 and 4 and the clamp bar 29 would assist in securing this condition and cause that slippage of the roller 24 in relation to the cloth or rag necessary to limit the operative effect of this roller to that described.

After the cessation of the feeding movement by the rollers 8 and 9 and the take-up movement by the roller 24, and substantially simultaneously with the engagement of the succeeding plate with the cloth or rag upon the platen 3, the rise of the cam 39 will pass

out of the operative relation to the roller 38, thus permitting the spring 42 to rock the lever 32 by means of the rod 134, and bring the clamp bar 31 into clamping engagement with the clamp bar 29, the projection thus not only securing an effective grip upon the cloth or rag 7, which grip will be maintained during substantially 180° of the rotation of the cam 39, but taking up any looseness of the cloth or rag in advance of the platen 3. After the clamp members 29 and 31 are thus set, the entire surface of this plate upon the cylinder 1 passes the platens 3 and 4 successively, and is wiped by the relative movement of said plate and the portion of the cloth or rag upon said platens, the clamp members 29 and 31 remaining set during this entire operation.

As heretofore stated, the said platens receive a lateral, reciprocatory movement in the usual and well known manner, to prevent streaking of the plate.

To secure an effective wipe, considerable pressure is exerted through the platens 3 and 4 and the cloth or rag 7 upon the plate, although by reason of the action of the clamp mechanism described, there can be no movement of said cloth or rag, as a result of the frictional engagement of the plate and said cloth or rag, while the plate is in contact therewith.

Immediately after the rise 16 on the cam 15 ceases to be operative upon the lever 19 to feed the strip from its roll, said lever 19, and the parts actuated thereby, will be returned to normal by the spring acting upon this mechanism, as 22, preparatory to the next actuation of the feeding mechanism.

As the plate being wiped, as above described, passes from engagement with the cloth or rag upon the platen 4, the forward edge of the rise 39 will operatively engage the roller 38 and oscillate the levers 37 and 35 in a manner to draw the rod 34 downwardly and thus rock the lever 32 in a manner to raise the clamp bar 31 and thus release the cloth or rag clamped between it and the bar 29. Immediately thereafter, the rise 17 will become operative upon the lever 19, and the operations above described will be repeated. As the diameter of the roll upon the rewind reel 28 increases, the arbors of this reel will move upwardly in the slot in the fitting 128, thus compensating for this gradual increase of diameter in the roll upon said reel. Since the said reel, and the cloth or rag thereon, is driven entirely by frictional engagement with the roller 24, however, the peripheral speed of the roll upon said rewind reel will remain constant, irrespective of variances in its diameter.

With a mechanism made in accordance with my invention, a short length of cloth or rag is fed after the wiping of each plate

is accomplished, so that a portion of clean cloth or rag will always be presented toward the inking mechanism 2, while the remainder of the cloth or rag in the direction of the rotation of the plate will be saturated with ink, the degree of saturation gradually increasing until that portion of the cloth or rag last engaging the plate, has the maximum degree of saturation. This condition is desirable in the type of machine in connection with which the wiping mechanism of my invention is particularly adapted to be used, as it secures the effective packing of the lines of the plate with ink. With a uniform feeding movement of the cloth or rag with each rotation thereof, the amount of clean cloth or rag presented to each plate will be substantially the same, and succeeding portions of the cloth or rag will always have substantially the same degree of saturation, thus having those portions of the cloth or rag, to which the plate engages, always the same with each wiping action. Furthermore, by the use of a clamp as described, and the avoidance of any movement of the cloth or rag while the plate is in engagement therewith, the interval during which the plate is being wiped, will also remain constant. Hence, the wiping condition during the entire run of the plate will always remain the same and substantially absolute uniformity in the condition of the plate will thus be ensured with each imprint. The use of this clamp will also ensure the cloth or rag being held perfectly taut and smooth during the wiping operation and during the feeding movement of the cloth or rag in relation to the platens.

The invention of my present application relates solely to the wiping mechanism of a machine, it being understood that other mechanisms of the machine now commonly used may be employed and the wiping mechanism of my invention substituted for the wiping mechanism heretofore commonly used with such other mechanisms. Ordinarily it will be found desirable to employ, in addition to a wiping mechanism, the ordinary polishing mechanism. While, if desired, this mechanism may be dispensed with, I have found it preferable to employ it in conjunction with the wiping mechanism of my invention.

It is not my intention to limit the invention to the precise details of construction shown in the accompanying drawings, it being apparent that such may be varied without departing from the spirit and scope of the invention.

Having described the invention, what I claim as new, and desire to have protected by Letters Patent, is:—

1. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently en-

gage a plate or plates, a feeding mechanism upon one side of said platen adapted to create slack in a wiping cloth or rag passed about said platen, a take-up mechanism upon the other side of said platen adapted to draw the cloth or rag fed by said feeding mechanism, across said platen in a direction the same as that of the plate or plates to be wiped, whereby the initial wipe of the plates will be accomplished by a clean portion of wiping cloth and the final wipe thereof with soiled cloth or rag, and intermittently operative means for actuating said feeding mechanism and said take-up mechanism said last named means being operative while said platen is inoperative in relation to a plate.

2. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism adapted, with each actuation thereof, to draw a uniform length of wiping cloth or rag from a roll, a take-up mechanism adapted to advance the length of cloth or rag drawn by said feeding mechanism from the roll across said platen in the direction of movement of the plate or plates to be wiped, and intermittently operative means for actuating said feeding mechanism and said take-up mechanism said last named means being operative while said platen is inoperative in relation to a plate.

3. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism upon one side of said platen adapted to create slack in a wiping cloth or rag passed about said platen, a take-up mechanism upon the other side of said platen adapted to draw the cloth or rag fed by said feeding mechanism, across said platen, actuating means for said feeding mechanism and actuating means for said take-up mechanism, said last named means operating said take-up mechanism at relatively greater speed than said feeding mechanism, whereby said cloth or rag will be held taut between said feeding mechanism and said take-up mechanism, said mechanisms respectively being operative while said platen is inoperative in relation to a plate.

4. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism upon one side of said platen adapted to create slack in a wiping cloth or rag passed about said platen, a take-up mechanism upon the other side of said platen adapted to draw the cloth or rag fed by said feeding mechanism, across said platen, a rewind reel adapted to receive a cloth or rag after it leaves said take-up mechanism,

means whereby said rewind reel is actuated at a uniform rate of peripheral speed, irrespective of the diameter of the roll of cloth or rag thereon, and intermittently operative means for actuating said feeding mechanism and said take-up mechanism said last named means being operative while said platen is inoperative in relation to a plate.

5. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism adapted, with each actuation thereof, to draw a uniform length of wiping cloth or rag from a roll, a take-up mechanism adapted to advance the length of cloth or rag drawn by said feeding mechanism from the roll across said platen in the direction of movement of the plate or plates to be wiped, actuating means for said feeding mechanism and actuating means for said take-up mechanism, said last named means operating said take-up mechanism at relatively greater speed than said feeding mechanism, whereby said cloth or rag will be held taut between said feeding mechanism and said take-up mechanism, said mechanisms respectively being operative while said platen is inoperative in relation to a plate.

6. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism adapted, with each actuation thereof, to draw a uniform length of wiping cloth or rag from a roll, a take-up mechanism adapted to advance the length of cloth or rag drawn by said feeding mechanism from the roll across said platen in the direction of movement of the plate or plates to be wiped, a rewind reel adapted to receive a cloth or rag after it leaves said take-up mechanism, means whereby said rewind reel is actuated at a uniform rate of peripheral speed, irrespective of the diameter of the roll of cloth or rag thereon, and intermittently operative means for actuating said feeding mechanism and said take-up mechanism said last named means being operative while said platen is inoperative in relation to a plate.

7. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates upon a rotating cylinder, a support for a roll of wiping cloth or rag, a pair of friction rollers between said support and said platen, and adapted to draw the wiping cloth or rag from said roll, a take-up mechanism adapted to draw the cloth or rag across said platen, operative connections between said friction rollers and said take-up mechanism, and means

adapted to simultaneously actuate said friction rollers and said take-up mechanism, comprising a cam rotatable with said plate cylinder, and a having a rise or rises thereon, corresponding in number with the number of plates upon said cylinder, and means acted upon by said cam and adapted to impart intermittent movement to said rollers and said take-up mechanism, said cam being so set as to actuate said last named mechanism when the said platen is inoperative in relation to a plate upon said cylinder.

8. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates upon a rotating cylinder, a support for a roll of wiping cloth or rag, a pair of friction rollers between said support and said platen, and adapted to draw the wiping cloth or rag from said roll, a take-up mechanism adapted to draw the cloth or rag across said platen, operative connections between said friction rollers and said take-up mechanism, a rewind reel adapted to receive a cloth or rag after it leaves said take-up mechanism, means whereby said rewind reel is actuated at a uniform rate of peripheral speed, irrespective of the diameter of the roll of cloth or rag thereon, and means adapted to simultaneously actuate said friction rollers and said take-up mechanism, comprising a cam rotatable with said plate cylinder, and having a rise or rises thereon, corresponding in number with the number of plates upon said cylinder, and means acted upon by said cam and adapted to impart intermittent movement to said rollers and said take-up mechanism, said cam being so set as to actuate said last named mechanism when the said platen is inoperative in relation to a plate upon said cylinder.

9. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism upon one side of said platen adapted to create slack in a wiping cloth or rag passed about said platen, a take-up mechanism upon the other side of said platen adapted to draw the cloth or rag fed by said feeding mechanism, across said platen in a direction the same as that of the plate or plates to be wiped, whereby the initial wipe of the plates will be accomplished by a clean portion of wiping cloth and the final wipe thereof with soiled cloth or rag, intermittently operative, means for actuating said feeding mechanism and said take-up mechanism, said last named means being operative, while said platen is inoperative in relation to a plate, means disposed between said feeding mechanism and said platen and adapted to engage and prevent movement of the cloth or rag while said platen is in the operative

relation to a plate and intermittently operative means actuating said last named means, said last named means being operative while the actuating means for said feeding and said take-up mechanisms are inoperative.

10. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism upon one side of said platen adapted to create slack in a wiping cloth or rag passed about said platen, a take-up mechanism upon the other side of said platen adapted to draw the cloth or rag fed by said feeding mechanism, across said platen, means for actuating said feeding mechanism and said take-up mechanism while said platen is inoperative in relation to a plate, and means arranged between said feeding mechanism and said platen adapted to engage and hold said cloth or rag stationary between operative intervals of said feeding and said take-up mechanisms.

11. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism upon one side of said platen adapted to create slack in a wiping cloth or rag passed about said platen, a take-up mechanism upon the other side of said platen adapted to draw the cloth or rag fed by said feeding mechanism, across said platen, means for actuating said feeding mechanism and said take-up mechanism while said platen is inoperative in relation to a plate, means arranged between said feeding mechanism and said platen adapted to engage and hold said cloth or rag stationary between operative intervals of said feeding and said take-up mechanisms, actuating means for said last named means, whereby it becomes operative substantially simultaneously with the initial engagement of the plate and the cloth or rag upon said platen, and means whereby looseness of the cloth or rag between said feeding mechanism and said platen will be taken up prior to said means becoming operative to hold the cloth or rag against movement.

12. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism upon one side of said platen adapted to create slack in a wiping cloth or rag passed about said platen, a take-up mechanism upon the other side of said platen adapted to draw the cloth or rag fed by said feeding mechanism, across said platen, means for actuating said feeding mechanism and said take-up mechanism while said platen is inoperative in relation to a plate, a clamp adapted to engage the cloth or rag between said feeding mechanism and said platen, comprising a bar over which said cloth or rag passes,

and a member movable into and out of engagement with said bar, and means adapted to impart timely actuation to said movable member.

13. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism upon one side of said platen adapted to create slack in a wiping cloth or rag passed about said platen, a take-up mechanism upon the other side of said platen adapted to draw the cloth or rag fed by said feeding mechanism, across said platen, means for actuating said feeding mechanism and said take-up mechanism while said platen is inoperative in relation to a plate, a clamp adapted to engage the cloth or rag between said feeding mechanism and said platen, comprising a bar over which said cloth or rag passes, and a member movable into and out of engagement with said bar, and means adapted to impart timely actuation to said movable member, said bar and said member having a co-operating recess and projection, and said means actuating said movable member becoming operative substantially simultaneously with the engagement of a plate with the cloth or rag upon said platen.

14. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, intermittently operative, means whereby a strip of wiping cloth or rag is drawn across said platen while it is inoperative in relation to a plate, means adapted to hold the cloth or rag against movement with a plate while said platen is operative in relation thereto, and intermittently operative means actuating said last named means, said last named intermittently operative means being operative when said first named intermittently operative means is inoperative, and inoperative when said first named intermittently operative means is operative, whereby said means for holding the cloth or rag is operative to prevent movement thereof during the engagement of the printing plate or plates with the cloth or rag, and is inoperative while the cloth or rag is being fed through the machine.

15. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates, a feeding mechanism upon one side of said platen adapted to create slack in a wiping cloth or rag passed about said platen, a take-up mechanism upon the other side of said platen adapted to draw the cloth or rag fed by said feeding mechanism, across said platen, means for actuating said feeding mechanism and said take-up mechanism while said platen is inoperative in relation to a plate, a clamp adapted to engage the cloth or rag between said feeding

mechanism and said platen, comprising a bar over which said cloth or rag passes, and a member movable into and out of engagement with said bar, a spring adapted to normally set said clamp, and means making said spring inoperative while said feeding and said take-up mechanisms are operative.

16. A wiping mechanism for rotary plate printing machines embodying therein a wiping platen adapted to intermittently engage a plate or plates upon a rotating cylinder, a support for a roll of wiping cloth or rag, a pair of friction rollers between said support and said platen, and adapted to draw the wiping cloth or rag from said roll, a take-up mechanism adapted to draw the cloth or rag across said platen, operative connections between said friction rollers and said take-up mechanism, a rewind reel adapted to receive a cloth or rag after it leaves said take-up mechanism, means whereby said rewind reel is actuated at a uniform rate of peripheral speed, irrespective of the diameter of the roll of cloth or rag thereon, means adapted to simultaneously actuate said friction rollers and said take-up mechanism, comprising a cam rotatable with said plate cylinder, and having a rise or rises thereon, corresponding in

number with the number of plates upon said cylinder, and means acted upon by said cam and adapted to impart intermittent movement to said rollers and said take-up mechanism, said cam being so set as to actuate said last named mechanism when the said platen is inoperative in relation to a plate upon said cylinder, a clamp adapted to engage the cloth or rag between said feeding mechanism and said platen, comprising a bar over which said cloth or rag passes, and a member movable into and out of engagement with said bar, a spring adapted to normally set said clamp, means adapted to make said spring inoperative, and a cam acting in synchronism with said first named cam, and having a rise thereon adapted to make said spring inoperative, while the rise upon said first named cam is operative, to actuate said feeding and take-up mechanisms.

In witness whereof I have hereunto affixed my signature, this 23d day of October, 1919, in the presence of two subscribing witnesses.

WILLIAM H. VOORHIS.

Witnesses:

F. P. WENTWORTH,
FRANK C. MARQUARDT.