

F. MEISEL.  
 PRINTING PRESS.  
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Patented May 17, 1910.

2 SHEETS—SHEET 1.

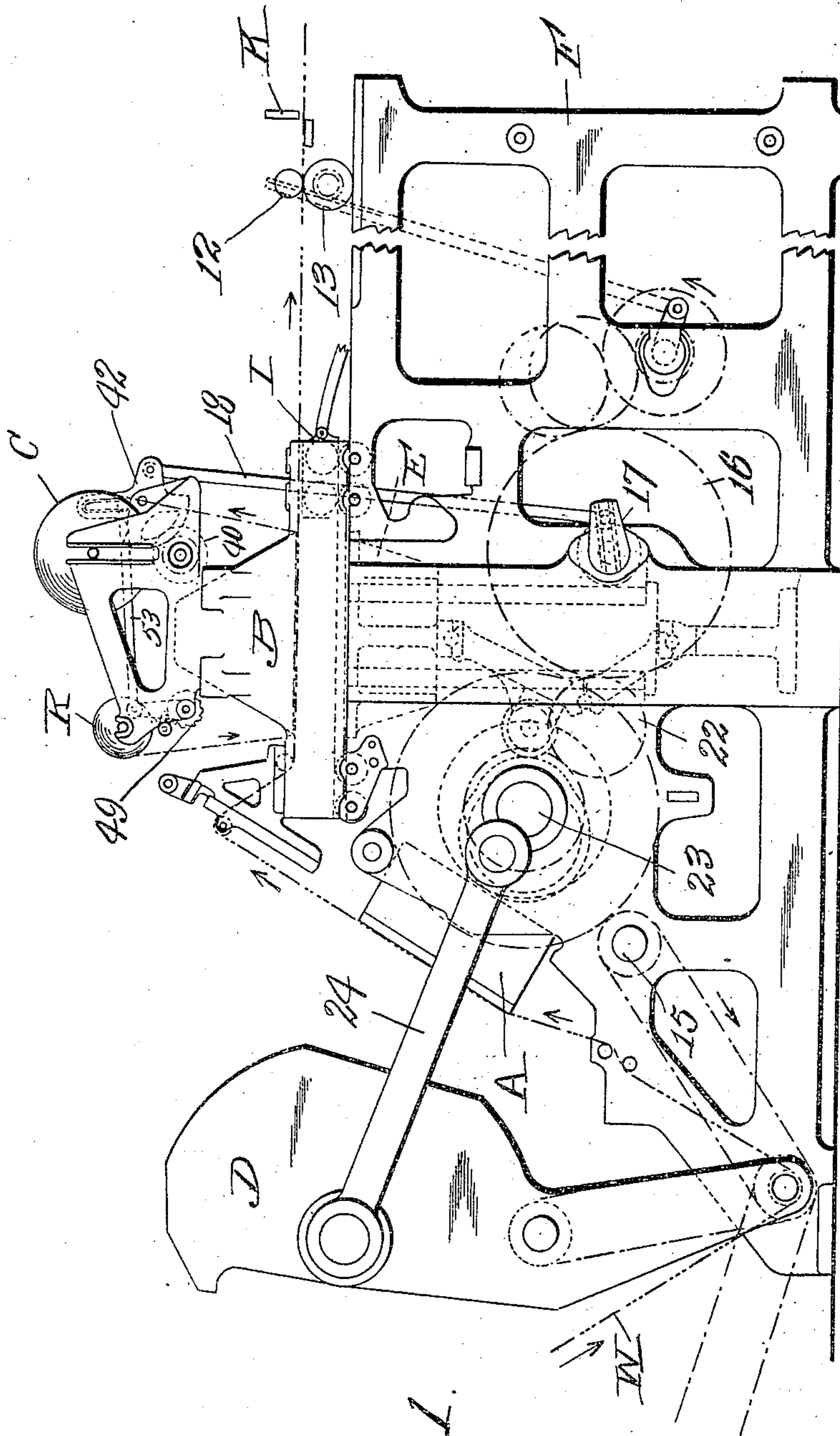


Fig. 1.

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2 SHEETS—SHEET 2.





# UNITED STATES PATENT OFFICE.

FRANCIS MEISEL, OF DORCHESTER, MASSACHUSETTS.

PRINTING-PRESS.

958,662.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed July 13, 1904. Serial No. 216,343.

*To all whom it may concern:*

Be it known that I, FRANCIS MEISEL, a citizen of the United States, residing at Dorchester, in the county of Suffolk and State of Massachusetts, have invented a new and useful Printing-Press, of which the following is a specification.

This invention relates especially to that class of bed and platen printing presses which are intended to print upon webs or strips of paper.

The especial objects of this invention are to provide an improved, simple and efficient means for intermittently shifting an offset web to be used in connection with the platen upon which the web is printed a second time.

In the accompanying two sheets of drawings, Figure 1 is a side view partly broken away of sufficient parts of a printing press to illustrate the application of my invention thereto. Fig. 2 is an enlarged side view illustrating the means for handling an offset web. Fig. 3 is a plan view of the parts illustrated in Fig. 2. Fig. 4 is a detail view of the ratchet wheel which controls the offset web feeding device. Fig. 5 is a fragmentary view partly in section of the connections at one end of the shaft of the offset web feeding drum, and Fig. 6 is a detail view of a pawl to be hereinafter referred to.

In this application for patent I have illustrated my invention applied to a well-known type of bed and platen printing press, but it is to be understood that certain features of my invention may be used in other connections.

Referring to the accompanying drawings for a detail description of a printing press embodying my invention, F designates one of the side frames of the machine. The side frames F are connected together in the usual manner, and fastened between the side frames F at one end of the press is the inclined platen A upon which the web of paper W is printed upon the first side. Also fastened between the side frames F is the second downwardly facing platen B upon which the web is printed a second time. From the platen B the web passes between the feeding out rolls 12 and 13, and printed sheets are severed by means of the knife K. Pivoted in position to cooperate with the platen A is the swinging bed D which may carry a type form and the usual inking mechanism.

Coöperating with the second platen B is the vertically movable bed E which is intended to carry a second type form, which type form may be inked by any of the usual inking mechanisms, as I. These parts, as illustrated, are arranged as in a well-known type of press, and need not be herein described in detail.

The power for driving the press is applied to the driving shaft 15 in the ordinary manner. Fastened upon the driving shaft 15 is a pinion which meshes with and drives a large gear upon the impression shaft 23. Also secured upon the impression shaft 23 is a gear meshing with an intermediate gear 22 which drives a gear 16 secured upon a shaft having a crank-arm 17, which crank-arm 17 is adjustably connected by a link 18 to shift an offset web as hereinafter described. As usual the impression shaft 23 is provided with crank disks having crank pins connected by links 24 to the swinging bed D.

The mechanism which I preferably employ for handling an offset web in connection with the platen upon which the web is printed the second time is most clearly illustrated in Figs. 2, 3 and 5. As shown in these figures, an offset web is drawn from a web roll R and is wound into a coil or roll C upon an arbor vertically movable in slots in the frame-work, the roll C resting upon and being turned by a winding drum 40. Loosely mounted upon the shaft of the winding drum 40 as shown in Fig. 5, is a gear 41, and meshing into and operating the gear 41 is a sector 42 which is operated by the link 18. Turning with the gear 41 is a disk 43 carrying a pawl 44. The pawl 44 as shown most clearly in Fig. 6, is provided with a laterally extending lug or finger 45 which is normally in engagement with a releasing disk 46 which has a conical surface serving to hold the pawl up out of engagement with the ratchet wheel 47, which is fastened upon the shaft of the winding drum.

As shown in Fig. 3, the releasing disk 46 is mounted in a yoke at one end of a lever 48. At its opposite end, the lever 48 co-operates with a tooth 50 extending laterally from a ratchet-wheel 49. The releasing disk is caused to move back when the tooth 50 is not in engagement with the lever 48 by any convenient means, as for example, a spring



480. Coöperating with the ratchet-wheel 49 as shown in Fig. 2 is a pawl 51 carried by a lever 60 adjustably connected to the sector 42 by a link 53. The adjustment is secured  
 5 by fastening one end of the link 53 in any one of a series of holes 61 on the lever 60, and the other end in adjusted position along a slot 62 in an arm on the sector.

By means of this construction the offset  
 10 web will be intermittently shifted after a desired number of impressions have been printed. For example, if the ratchet-wheel 49 contains twelve teeth, and the connections for turning the ratchet-wheel are adjusted  
 15 to advance the ratchet-wheel one tooth for each operation of the press, the laterally extending tooth of the ratchet wheel will be brought into position to swing the lever 48 and permit the turning of the winding roll  
 20 by the pawl 44 whenever twelve printing operations have been completed. This enables me to shift the offset web to bring an entirely fresh section of the web into operative position whenever the desired number of im-  
 25 pressions have been made.

The operation of the several parts has been so fully set forth in describing the construction that a description of the operation of the printing press as a whole is thought to  
 30 be unnecessary.

I am aware that changes may be made in practicing my invention by those who are skilled in the art without departing from the scope thereof as expressed in the claims.  
 35 I do not wish, therefore, to be limited to the constructions I have herein shown and described, but

What I do claim and desire to secure by Letters Patent of the United States is:—

40 1. In a perfecting printing press having impression making means, the combination of an offset web, and means for shifting the web after a predetermined number of im-  
 45 pressions are made to bring a new section of the off-set web into position, with a movable link and means movably connected therewith for adjusting the length of throw thereof to change the period of operation of the shifting means.

50 2. In a perfecting printing press, the combination of an off-set web winding roll, and means for operating the roll after a predetermined number of impressions have been made, with a link having its end adjustable  
 55 for changing the period of operation, said operating means being inoperative until said predetermined number of impressions have been made.

60 3. In a perfecting printing press, the combination of an off-set web winding roll having a shaft, a ratchet wheel fixed on the shaft, a pawl for turning the ratchet wheel oscillatable about the shaft, means on the shaft for normally holding the pawl out of  
 65 engagement with the ratchet wheel and for

permitting the pawl to engage the ratchet wheel and turn the winding roll after a desired number of impressions have been printed, and adjustable means for operating said holding means periodically. 70

4. In a perfecting printing press, the combination of an offset web, and winding mechanism therefor, comprising a winding roll, a ratchet-wheel and operating pawl, a laterally movable releasing plate normally  
 75 holding the pawl out of engagement with the ratchet-wheel, a lever for shifting the releasing-plate, and a second ratchet wheel for operating the lever to release the pawl when a desired number of impressions have  
 80 been printed.

5. In a perfecting printing press, the combination of an offset web, and winding devices therefor, comprising a winding roll, a ratchet wheel, a pawl, a laterally movable  
 85 releasing plate normally holding the pawl out of engagement with the ratchet wheel, a horizontally swinging lever for shifting the releasing plate, and a second ratchet wheel having a cam or tooth for shifting the lever  
 90 to permit the winding devices to operate when a desired number of impressions have been printed.

6. In a perfecting printing press, the combination of an offset web and winding de-  
 95 vices therefor, comprising a winding roll, a ratchet wheel, a constantly vibrating pawl having an extending lug or finger, a laterally movable releasing plate having a conical surface for normally engaging the finger of  
 100 the pawl to hold the pawl out of operation, a horizontally swinging lever for shifting the plate, and a second ratchet wheel having a tooth or cam at one side for moving said lever to permit the winding devices to oper-  
 105 ate when a desired number of impressions have been printed.

7. In a perfecting printing press, the combination of impression making means, an off-  
 110 set web, a segment operatively connected with the impression making means to make an oscillation for every revolution thereof, and means adjustably connected with said segment and operated thereby for shifting the web after a predetermined number of  
 115 impressions have been made to bring a new section of the off-set web into position.

8. In a perfecting printing press, the combination with impression making means, of an off-set web, an oscillating segment, means  
 120 connected with the impression making means for operating said segment, a winding roll, a pinion connected with said winding roll and meshing with said segment, and means operated intermittently by said seg-  
 125 ment for disconnecting said pinion from the winding roll and connecting it therewith.

9. In a perfecting printing press, the combination with impression making means, of an off-set web winding roll, a pinion mount- 130

ed to rotate independently of said winding roll, and means operated from the impression making means for turning said pinion once for each impression and for periodically connecting said pinion with the winding roll, the connections for periodically connecting the pinion with the winding roll comprising a pivoted arm of adjustable effective length, whereby the number of im-

pressions made between operations of the winding roll may be varied.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

FRANCIS MEISEL.

Witnesses:

JAS. D. HENDERSON,  
ANNA E. MEISEL.