W. J. RAMSAIER.

COUNTING ATTACHMENT FOR PRINTING PRESSES.

APPLICATION FILED JUNE 17, 1911.

1,028,905. Patented June 11, 1912.

Fig. 1.

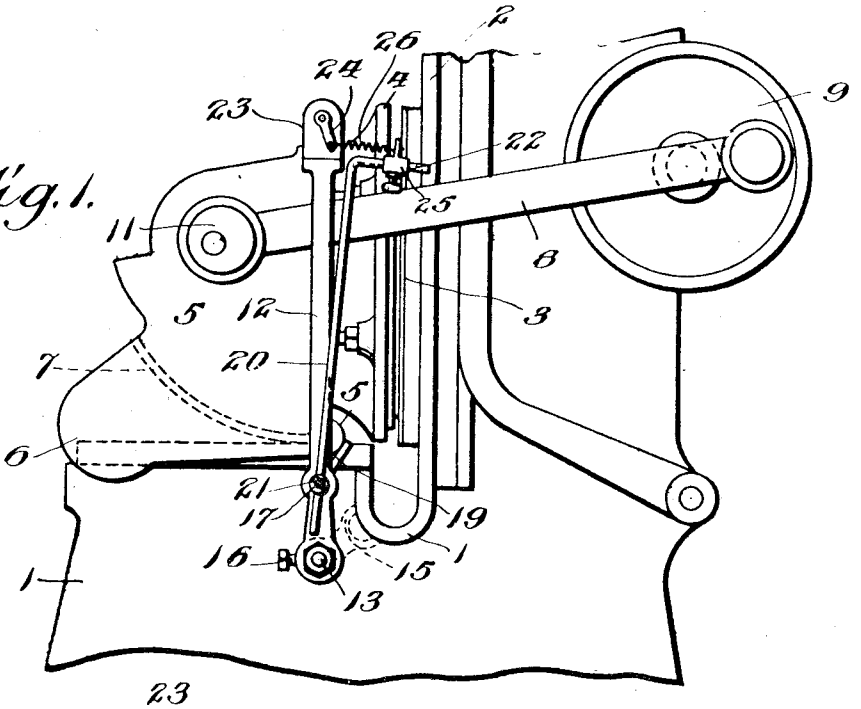


Fig. 2.

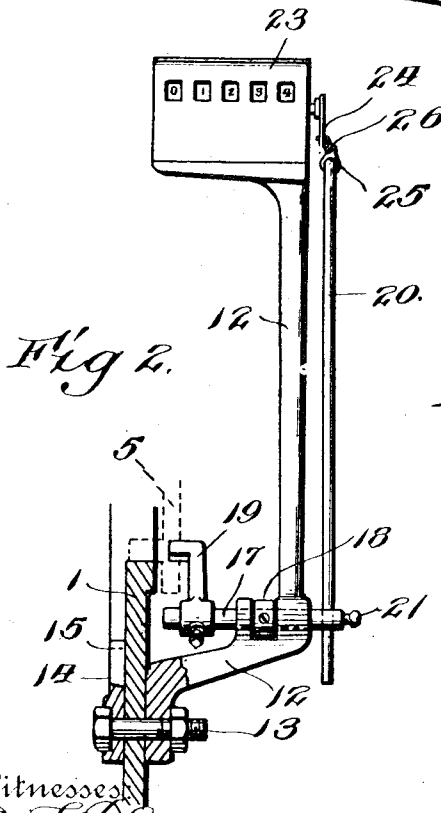


Fig. 3.

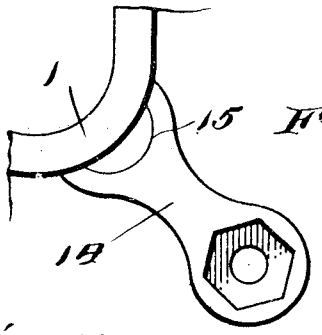
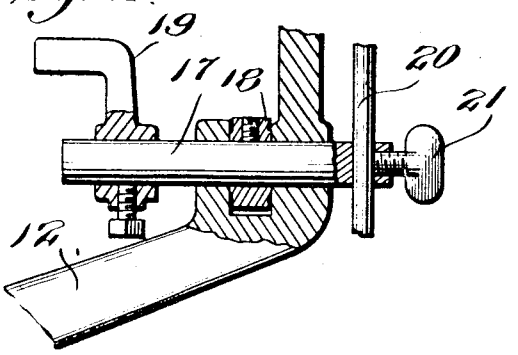


Fig. 4.



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COUNTING ATTACHMENT FOR PRINTING-PRESSES.

1,028,905. Specification of Letters Patent. Patented June 11, 1912.

Application filed June 17, 1911. Serial No. 633,764.

To all whom it may concern:

Be it known that I, WILLIAM J. RAMSAIER, a citizen of the United States, and resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Counting Attachments for Printing-Presses, of which the following is a specification.

This invention relates to the combination of a printing press and a counting device designed particularly for counting the number of impressions made by a platen printing press.

The main object of the invention is to provide a simple, compact and accurately operating device so constructed that it may be secured to a printing press in proper position for operation and with the numbers of the counter in such position that they may be at all times observed by the press operator as he feeds paper to the press.

Another object of the invention is to construct the device with an independent supporting frame or standard carrying all of the operating parts of the device, and which may be connected to a stationary part of the press frame by a single attaching bolt.

Another object of the invention is to so place the counting attachment that it will be operated by the platen carrying means when said platen reaches the printing point, whereby the reciprocation of the platen without printing will not operate the counter.

Other important objects and advantages of the invention will appear hereinafter.

In the drawings, Figure 1 is a side elevation of a portion of a platen printing press known as "Colt's armory press" with my counting attachment applied thereto; Fig. 2 a side elevation of the counting attachment, the supporting frame of the printing press being shown in vertical section; Fig. 3 a detail view showing the device for preventing the rotation of the attaching bolt. Fig. 4 a longitudinal, vertical sectional view of the operating shaft and the supporting bracket.

Referring to the various parts by numerals, 1 designates the supporting frame of the press; 2 the stationary bed, and 3 the type form supported by the bed. The printing platen 4 is carried by a bridge 5 which rocks upon ways or tracks 6 on the frame, the bridge being provided with curved rockers which work on said ways. The bridge is rocked by means of a pair of pitmen or connecting rods 8, (only one of which is shown in the drawings,) and said rods receive motion from a crank disk 9, said disk being rotated in any suitable manner. The bridge is adjusted toward and from the bed by means of a throw-off bar 10 connected to eccentric sleeves 11 which enter the sides of the bridge, so that by throwing the said throw-off bar rearwardly the bridge will be moved rearwardly sufficiently to prevent the platen engaging the type form so that upon the forward movement of the bridge no impression will be made. All of these features are old and well known in the aforesaid "Colt's armory" universal printing press and form no part of my invention.

My counting attachment is designed to be operated by the forward movement of the bridge, and the operating part of the attachment is designed to be so placed that it will be engaged and moved by the forward edge of the bridge just as the platen is making an impression, and the said operating part is so adjusted and positioned that it will not be operated when the throw-off bar is moved rearwardly to prevent the platen making an impression, as will be fully hereinafter described.

The mechanism of the counter is supported on a standard 12 which is rigidly supported by an attaching bolt 13 which passes through the side of the press frame below the forward end of one of the tracks or ways 6. On the inner side of the press frame, surrounding said bolt is a washer 14 having a socket to receive the bolt head and a pair of claws or arms 15 which are adapted to engage a portion of the side of the press frame to prevent the rotation of said washer in either direction. It is manifest that by this means the rotation of the bolt will be prevented. It will, of course, be understood that any means may be employed to prevent the rotation of this bolt, the one shown and

described being a simple and desirable one. By this means the standard 12 will be held in its vertical position. To prevent the rotation of the standard on its attaching bolt I provide a binding screw 16.

Journaled in the standard at a point slightly below the bridge 5 is a short rock shaft 17, said shaft being provided with a collar 18 to prevent longitudinal shifting of said shaft in its bearings. The standard 12 is recessed to receive said collar, as shown clearly in Fig. 2 of the drawing. On the inner end of this rock shaft is adjustably mounted a contact lug or operating part 19, the upper end of which is extended inwardly in position to be engaged by the bridge 5 of the press, the said contact lug being so positioned that it will be engaged by the lower part of one of the side walls of the bridge, as indicated clearly in Figs. 1 and 2 of the drawings. The outer end of the rock shaft is apertured vertically for the passage of an upwardly extending bar 20, said bar being vertically adjustable through the rock shaft by means of a set screw 21. The upper end of this bar extends to a point near the upper end of the standard 12 and is there bent rearwardly to form the arm 22. The standard 12 at its upper end carries a counting mechanism 23 provided with a counter operating arm 24. On the arm 22 is arranged an adjustable collar 25 to which is connected a spring 26, the other end of said spring being connected to the counter operating arm 24.

It is manifest that as the bridge moves toward the printing bed the operating lug will be forced rearwardly, thereby rotating the rock shaft 17 and throwing rearwardly the operating rod 20. This movement of the operating rod extends the spring 26 and operates the counter mechanism through the arm 24. The yielding connection between the operating rod 20 and the operating arm 24 of the counter mechanism permits said arm to have a slightly excess movement without damaging the counter mechanism or retarding in any way the operation of the printing press. It is also manifest that by adjusting the sleeve 25 on the arm 22 the rock shaft may be rotated and the operating lug 19 be properly positioned with respect to the bridge of the printing press. This adjustment of the sleeve 25 also permits the proper tension to be secured in the spring 26.

By means of the vertical adjustment of the operating rod 20 through the rock shaft said arm may be properly positioned with respect to the counter operating arm 24 of the counter mechanism. The operating lug is rotatably adjustable on the rock shaft 17 as well as being adjusted longitudinally thereon. By this means the said operating lug may be properly positioned with respect to the bridge of the press so that it will be engaged at the proper time and move through the proper distance in order to effect the accurate operation of the counter mechanism. The rock shaft 17 may be adjusted longitudinally through its support by loosening the collar 18, and may be held in its adjusted position by securing said collar rigidly to the shaft.

It is manifest from the foregoing that I provide a very simple and readily applied counting attachment; and that said attachment is capable of a very complete and accurate adjustment in order to secure its proper operation.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A counting attachment for printing presses comprising a standard, a horizontal rock shaft carried by said standard, an operating lug carried by said rock shaft and adapted to be engaged by a moving part of a printing press, a vertically extending vertically adjustable rod carried wholly by said rock shaft, a counter mechanism carried by said standard and a spring device connecting the upper end of said rod to said counter mechanism.

2. A counting attachment for printing presses comprising a standard, a horizontal rock shaft carried by said standard, an operating lug carried by said rock shaft and adapted to be engaged by a moving part of a printing press to rotate said shaft in one direction, a vertically extending rod wholly carried by said rock shaft, a counter mechanism carried by said standard, a spring device connecting the upper end of said rod to said counter mechanism, and means for adjusting said spring to vary the normal position of the rock shaft and the operating lug carried thereby.

3. A counting attachment for printing presses comprising a standard, a horizontal rock shaft carried by said standard, an operating lug carried by said rock shaft and adapted to be engaged by a moving part of a printing press, a vertically extending rod carried by said rock shaft, a counter mechanism carried by said standard, a counter operating arm connected to said counter mechanism, a laterally extending arm carried by the said vertical rod, a sleeve adjustably mounted on said arm and a spring device connecting the arm of the counter mechanism to the said sleeve.

4. A counting attachment for printing presses comprising a standard, a horizontal rock shaft carried by said standard, a rotatably and longitudinally adjustable operating lug carried by said rock shaft and adapted to be engaged by a moving part of a printing press, a vertically extending rod carried by said rock shaft, a counter mecha-

nism carried by said standard and a spring device connecting the upper end of said rod to said counter mechanism.

5. A counting attachment for printing presses comprising a standard, a rock shaft carried by said standard, an operating lug carried by said rock shaft and adapted to be engaged by a moving part of a printing press, a vertically extending rod carried by said rock shaft, a counter mechanism carried by said standard near the upper end of said rod, and a device connecting the upper end of said rod to said counter mechanism.

6. A counting attachment for printing presses comprising a standard formed with a shaft bearing and an upwardly extending counter supporting arm, a horizontal rock shaft carried by said standard in said bearing, means to prevent the longitudinal movement of the shaft in its bearing but permitting it to be longitudinally adjusted, an operating lug carried by said rock shaft at its inner end and adapted to be engaged by a moving part of the printing press to rotate said shaft in one direction, means for rotatably and longitudinally adjusting said operating lug, a vertically extending rod wholly carried by the rock shaft at its outer end and extending to the top of the standard whereby said rod will swing in an arc struck from the center of the rock shaft, a counter mechanism mounted on the upper end of said standard, a yieldable device connecting the upper end of said rod to said counter mechanism, said device being adjustable to vary the positions of the upright rod and operating lug and serving to return the parts to their normal positions after a counter actuating movement.

7. A counter attachment for printing presses comprising a standard formed with a shaft bearing and an upwardly extending counter supporting arm, a horizontal rock shaft carried by said standard in said bearing, means to prevent the longitudinal movement of the shaft in its bearing but permitting it to be longitudinally adjusted, an operating lug carried by said rock shaft at its inner end and adapted to be engaged by a moving part of the printing press to rotate said shaft in one direction, means for rotatably and longitudinally adjusting said operating lug, a vertically extending rod wholly carried by the rock shaft at its outer end and extending to the top of the standard whereby said rod will swing in an arc struck from the center of the rock shaft, means for vertically adjusting said rod on the rock shaft, a counter mechanism mounted on the upper end of said standard, a spring connecting the upper end of said rod to said counter mechanism, means to vary the connection of said spring to said rod to vary the positions of the rod and operating lug, said spring serving to return the parts to their normal positions after a counter actuating movement.

8. A counter attachment for printing presses comprising a standard formed with a shaft bearing and an upwardly extending counter supporting arm, a bolt to secure said standard to a printing press frame, means to prevent the rotation of said bolt, means to prevent the rotation of the standard on said bolt, a horizontal rock shaft carried by said standard in said bearing, an operating lug carried by said rock shaft at its inner end and adapted to be engaged by a moving part of the printing press to rotate said shaft in one direction, means for rotatably and longitudinally adjusting said operating lug on said shaft, a vertically extending rod wholly carried by the shaft at its outer end and extending to the top of the standard, said rod swinging in an arc struck from the center of the rock shaft, a counter mechanism mounted on the upper end of the standard, a spring connected to the upper end of the rod and to the counter mechanism, and means for adjusting said spring to vary the normal position of the operating lug, said spring serving to return the parts to their normal positions after a counter actuating movemnt.

9. A counter attachment for printing presses comprising a standard formed with a horizontal shaft bearing and a vertical part extending upwardly from said bearing and formed with a counter supporting means at its upper end, a horizontal shaft in said bearing, means for holding said shaft against longitudinal movement but permitting it to be adjusted longitudinally, an operating lug secured to the inner end of said shaft, an upwardly extending operating rod secured to the outer end of the shaft and vertically adjusted thereon, said operating rod being wholly supported by the said shaft, a counter mechanism secured to the upper end of the standard, a forwardly extending arm carried by the rod at its upper end, a longitudinally adjustable sleeve on said arm, a spring connecting the said sleeve with the counter mechanism, whereby, by adjusting said sleeve the normal position of the operating lug may be varied and said spring will serve to return the rock shaft and the operating lug to their normal positions after a counter actuating movement.

10. In a counter attachment for printing presses the combination of a printing press frame, a standard, a bolt connecting said standard to said frame, means to engage said bolt and the frame to prevent the rotation of said bolt, means to prevent the rotation of the standard on the bolt, a horizontal rock shaft in said standard near the lower end thereof, said standard extending consider-

ably above said bearing and being provided at its upper end with a support for a counter mechanism, an operating lug carried by said rock shaft at the inner end thereof, and adapted to be engaged by a moving part of a printing press, a vertically extending rod carried wholly by said rock shaft and extending to the top of the standard, a counter mechanism carried by the standard, and a spring connecting the upper end of said rod to the counter mechanism.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM J. RAMSAIER.

Witnesses:
WM. R. DAVIS,
F. R. MILLER.