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C. A. WRIGHT.

COUNTING MECHANISM FOR PRINTING PRESSES.

APPLICATION FILED JUNE 2, 1904.

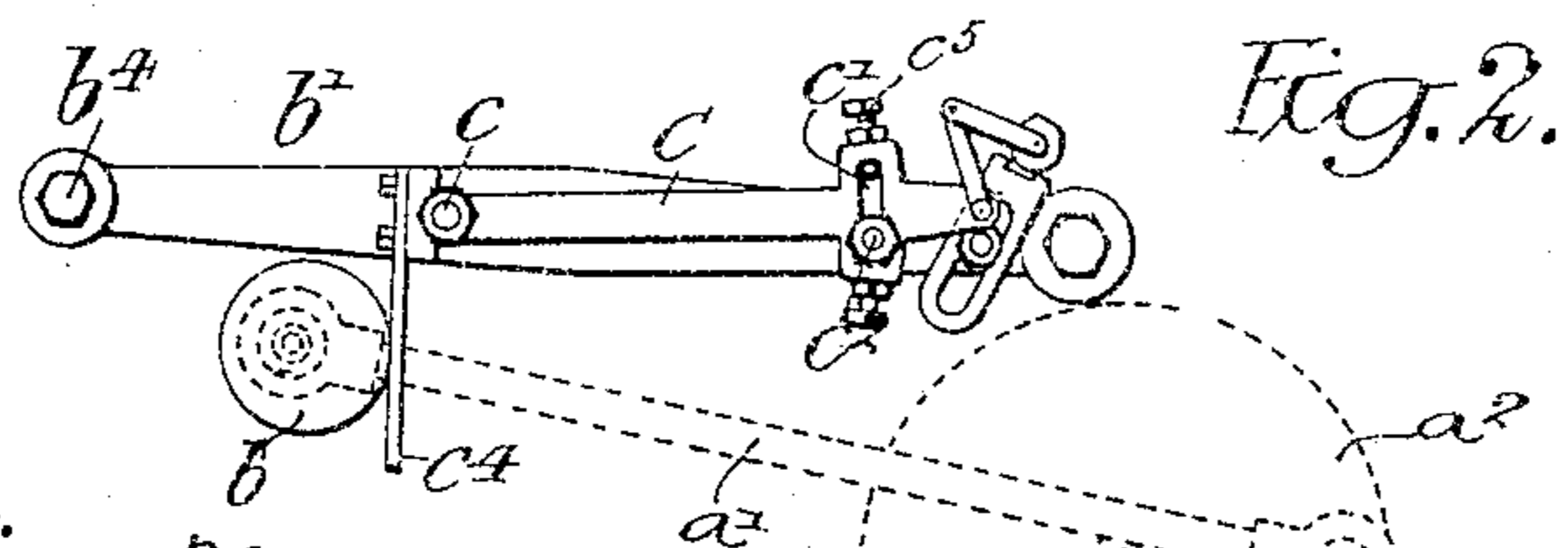
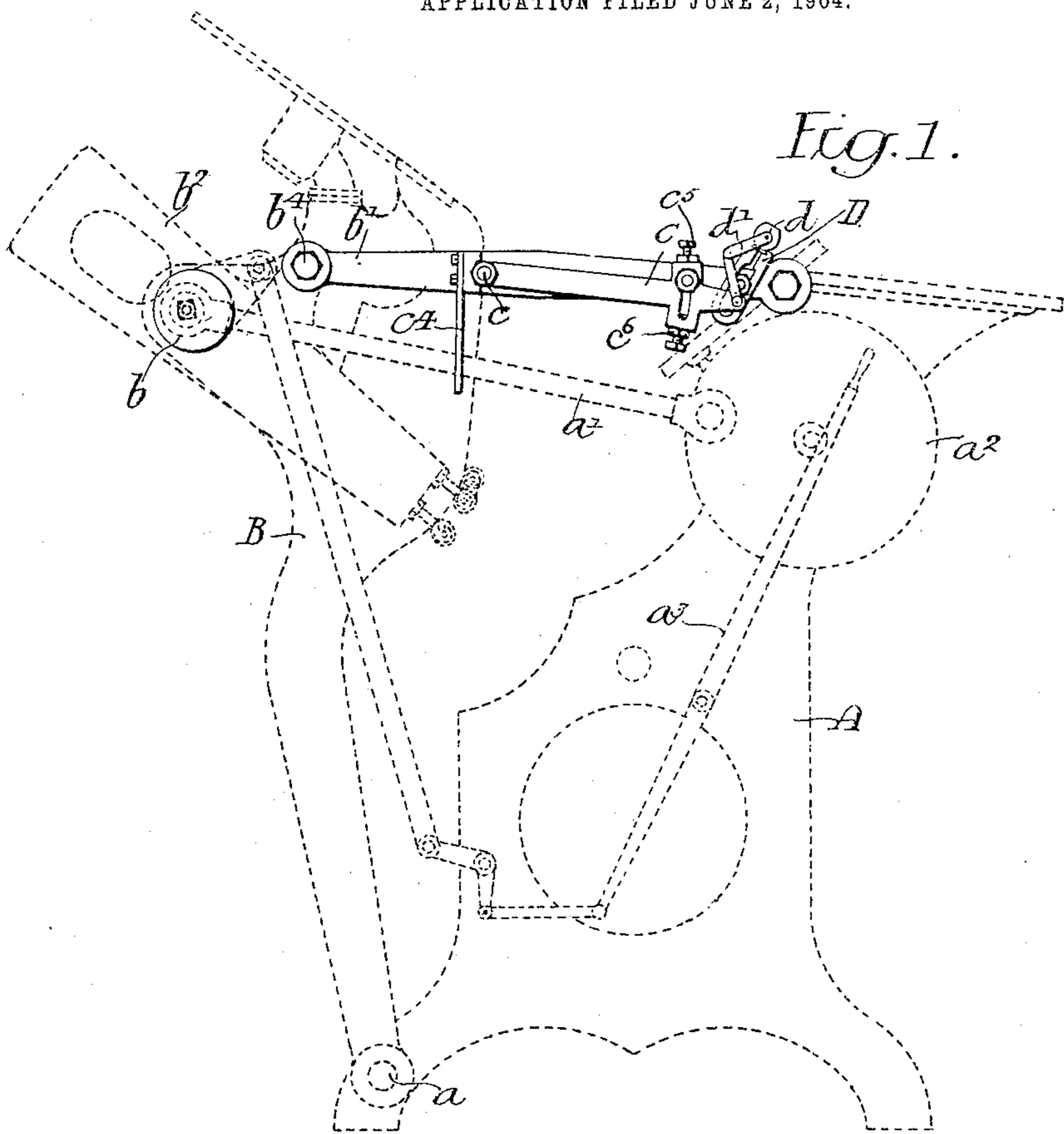


Fig. 3.

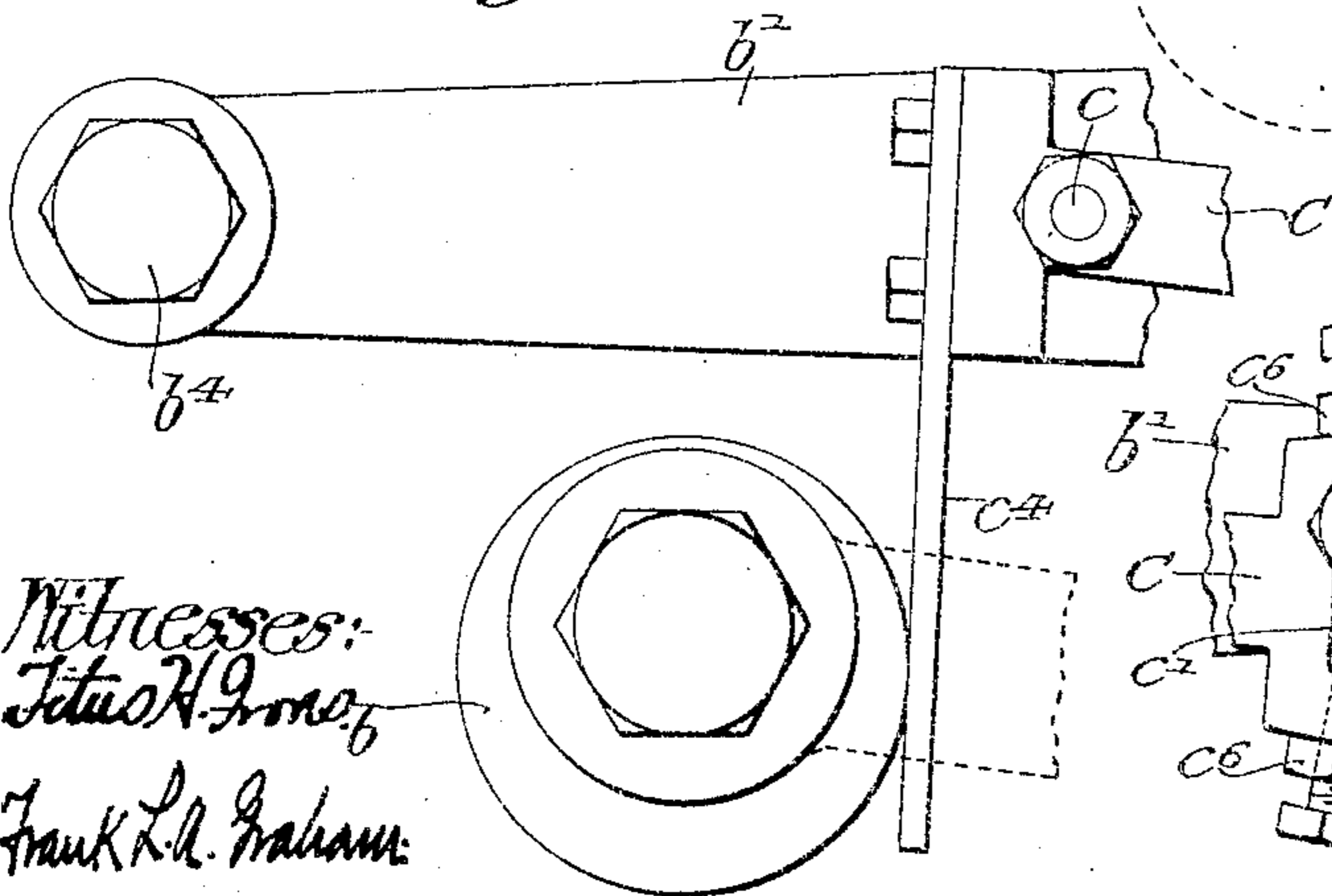
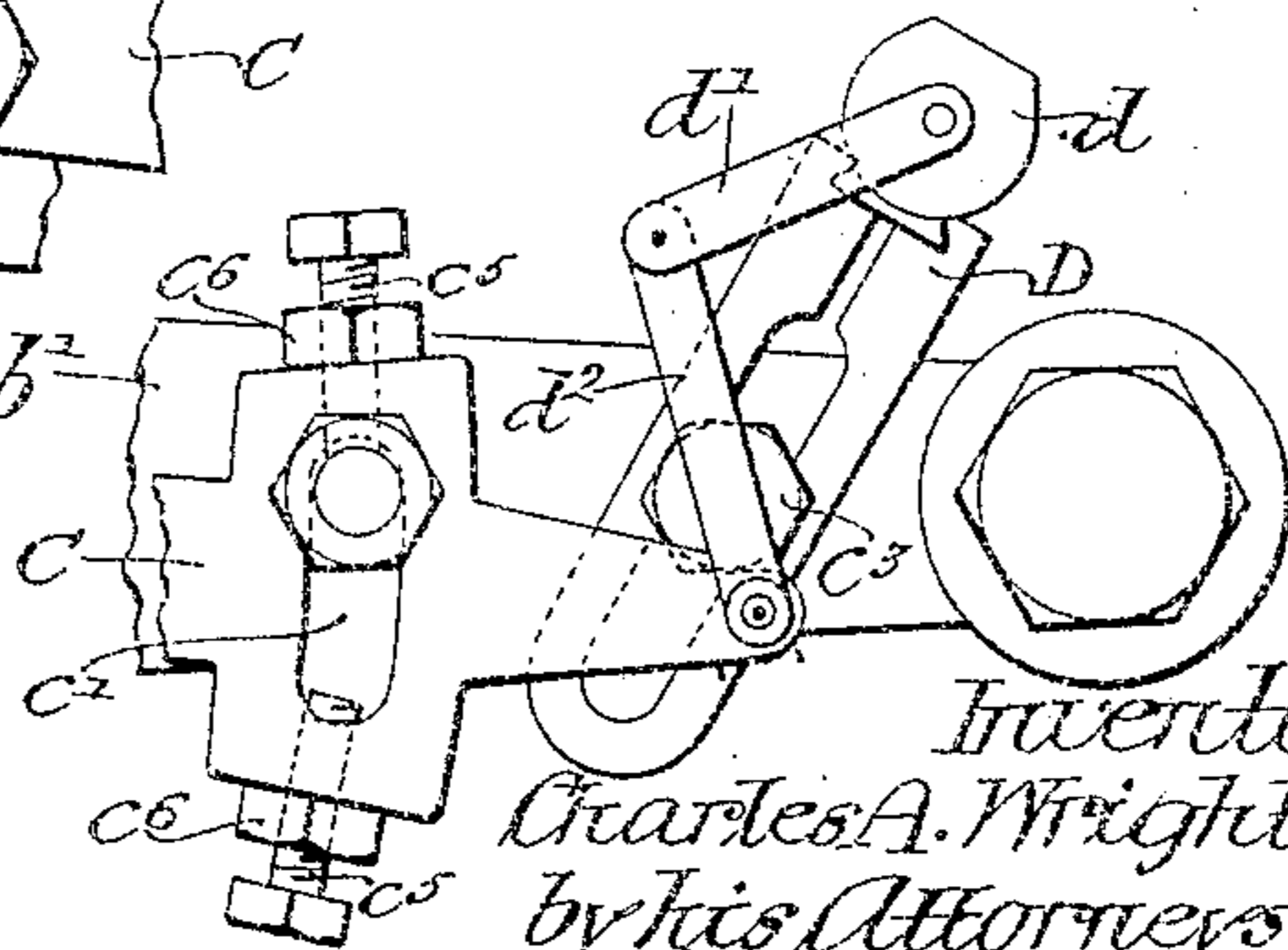


Fig. 4.



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COUNTING MECHANISM FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 778,769, dated December 27, 1904.

Application filed June 2, 1904. Serial No. 210,899.

To all whom it may concern:

Be it known that I, CHARLES A. WRIGHT, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Counting Mechanism for Printing-Presses, of which the following is a specification.

One object of my invention is to provide mechanism for connecting a counting device
10 with some part of a printing-press so constructed and arranged that said device shall be actuated only when the movable member of the press makes a full working stroke or when an impression is actually made by the
15 press.

A further object of the invention is to provide counting mechanism actuated by the eccentrically-mounted or rocker shaft on the movable member of a Gordon press and so
20 arranged that it will be operated only when said shaft has been turned sufficiently to cause the type carried by said movable member to make an impression upon a suitably-placed sheet of material. It is also desired to provide a relatively simple counting attachment
25 for a Gordon press or the like which shall be easy of access, certain in action, and which may be easily attached to presses already in use.

Another object of my invention is to provide mechanism for connecting some moving part of a printing-press and a counting device of such construction that the distance moved by the oscillating arm or equivalent part of
35 said device shall remain constant, even though the nature or dimensions of the work operated on by the press is varied.

These objects I attain as hereinafter set forth, reference being had to the accompanying
40 drawings, in which—

Figure 1 is a side elevation illustrating in dotted lines a Gordon press and showing in full lines my invention as attached thereto. Fig. 2 is a side elevation showing various
45 parts of my device in the positions occupied when the press has made a full working stroke, and consequently caused the counting device to register. Fig. 3 is an enlarged view of a portion of one of the side arms of a Gordon
50 press and also of the rocker-shaft carried by the moving member of the press, illustrating

the positions of a portion of my improved mechanism relatively thereto when said rocker-shaft is turned so that the press is in-operative; and Fig. 4 is a side elevation, also
55 enlarged, further illustrating certain parts of my invention.

In the above drawings, A represents the stationary framework of a Gordon press of the type shown, for example, in the patent
60 granted to F. A. Burnham, No. 604,719, having a movable member B pivoted to its frame at *a*. A connecting-rod *a'* extends between a pin upon a crank *a''* and a rocker-shaft *b*, being connected to said shaft eccentrically, so
65 that when the latter is revolved through an angle of approximately ninety degrees by a proper movement of the throw-off lever *a'''* its position varies from that shown in Fig. 1 to that illustrated in Fig. 3.
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The roller-arm *b'* extends from some fixed point on the frame of the machine to a suitable pin upon a frame *b''*, which latter frame carries the ink-rollers, and I provide an arm or lever C, pivoted at one end by a bolt *c* to
75 said roller-arm *b'*, its opposite end being enlarged and slotted at *c'* for the reception of a bolt or pin *c''*, which is fastened to the roller-arm.

In order to adjust the amount of movement
80 of the lever-arm C, I provide screws *c'''*, threaded in suitably-tapped holes in the enlarged end of said lever and projecting for variable distances into the top and bottom of the slot *c'*. These screws each preferably have a
85 jam-nut *c''''*, whereby they are held in any adjusted positions. The roller-arm *b'* also has adjustably fixed to it by means of a bolt *c'''* a slotted plate or bar D, which carries any desired counting device *d*, in the present in-
90 stance of the type operated by the oscillation of an arm *d'*. A link *d''* connects the end of this arm with a portion of the arm C, projecting beyond the slot *c'*.

To the end of the arm C and adjacent to the
95 pivot *c* is fastened a downwardly-projecting bar *c''*, so placed and of such a length that it is periodically engaged by the shaft *b* at each working stroke of the machine or when said shaft has been turned to an extent sufficient
100 to cause the press to make an impression. At other times—as, for example, when said shaft

has been turned to occupy the position shown in Fig. 3—said bar is not appreciably moved.

Under operating conditions each oscillation of the member B caused by the revolution of the crank-disk a^2 causes the bolt or pin b^4 to move in the arc of a circle around the shaft b as a center, thereby turning the roller-frame on said shaft and causing the inking-rollers of said frame to perform their functions in the well-known way. Such operation causes the rocker-shaft b to alternately approach and recede from the bar c^4 , and if the throw-off lever a^3 be moved so that said shaft occupies the position shown in Fig. 3 this latter will be moved into contact with or adjacent to said bar c^4 without moving the same or its attached parts. If, however, said throw-off lever be in the position shown in Fig. 1, the movement of the member B of the press in making an impression causes the rocker-shaft b to engage the bar c^4 and swing the arm C on the bolt c as a pivot, thus also causing upward motion of the slotted end of said arm, of link d^2 , and of the arm d' , attached to the counting device d . Upon the return stroke of said member B the arm C returns by gravity to the position illustrated in Fig. 1, the said device d having in the meanwhile registered.

By moving the slotted bar D up or down when the bolt c^3 is loosened said bar may be adjusted so that the counting device may be properly operated. It will be seen that such operation will not occur unless the shaft b has been so moved that it causes the type carried by the member B to make an impression upon a suitably-placed sheet of material. In order to render the operation of the counting mechanism independent of variations in the thickness of the sheets of material printed upon, I preferably make the bar c^4 of such material and dimensions that it will be to some extent resilient, also adjusting the screws c^5 so that the angle moved through by the lever C is always the same irrespective of changes in the work operated on.

I claim as my invention—

1. The combination with a printing-press having a rocker-shaft and a roller-arm, of a counting device mounted on said roller-arm, with operating mechanism therefor placed to be actuated by said rocker-shaft, substantially as described.

2. The combination with a printing-press having a rocker-shaft and a roller-arm, of a counting device mounted on said roller-arm, with operating mechanism therefor including a spring and placed to be actuated by said rocker-shaft, substantially as described.

3. The combination with a printing-press having a rocker-shaft and a roller-arm, of a counting device and mechanism for operating said device, the same being placed to be actuated by the rocker-shaft only when the same is in position to cause an impression to be made by the press, substantially as described.

4. The combination with a printing-press having a rocker-shaft and a roller-arm, of a counting device and mechanism for operating the same all mounted on said roller-arm, said mechanism having a portion placed to be actuated by the rocker-shaft, substantially as described.

5. The combination with a printing-press having a rocker-shaft and a roller-arm, of a counting device and a pivoted lever connected thereto, all mounted on said arm, one portion of said lever being placed to be actuated by the rocker-shaft, substantially as described.

6. The combination with a printing-press having a rocker-shaft and a roller-arm, of a counting device mounted on the arm, a lever pivoted to the arm having means for limiting its movement and connected to said device, and an extension from said lever placed to engage the rocker-shaft, substantially as described.

7. The combination with a printing-press having a rocker-shaft and a roller-arm, of a counting device mounted on the arm, a lever pivoted to the arm having adjustable means for limiting its movement and connected to said device, and an extension from said lever placed to engage the rocker-shaft, substantially as described.

8. The combination with a printing-press having a rocker-shaft and a roller-arm, of a lever mounted on said arm having a resilient portion placed to be engaged by said rocker-shaft when the latter is in position to cause an impression to be made by the press, and counting mechanism connected to said lever, substantially as described.

9. The combination with a printing-press having a rocker-shaft and a roller-arm, of a counting device having an operating-arm and mounted upon said roller-arm, a lever pivoted to the roller-arm and having its end connected to the operating-arm of the counting device, there being a portion of said lever placed to be periodically engaged by the roller-arm when the latter is in position to cause the press to make an impression, substantially as described.

10. The combination with a printing-press having a rocker-shaft and a roller-arm, of a lever pivoted thereto having a portion placed to be engaged by said rocker-shaft each time the press makes an impression, with a bar adjustably fixed to said roller-arm, a counting device carried by said bar, and means for connecting said counting device with the lever, substantially as described.

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

CHARLES A. WRIGHT.

Witnesses:

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