

(No Model.)

2 Sheets—Sheet 1.

J. F. McNUTT.
PRINTING PRESS.

No. 597,651.

Patented Jan. 18, 1898.

Fig. 1.

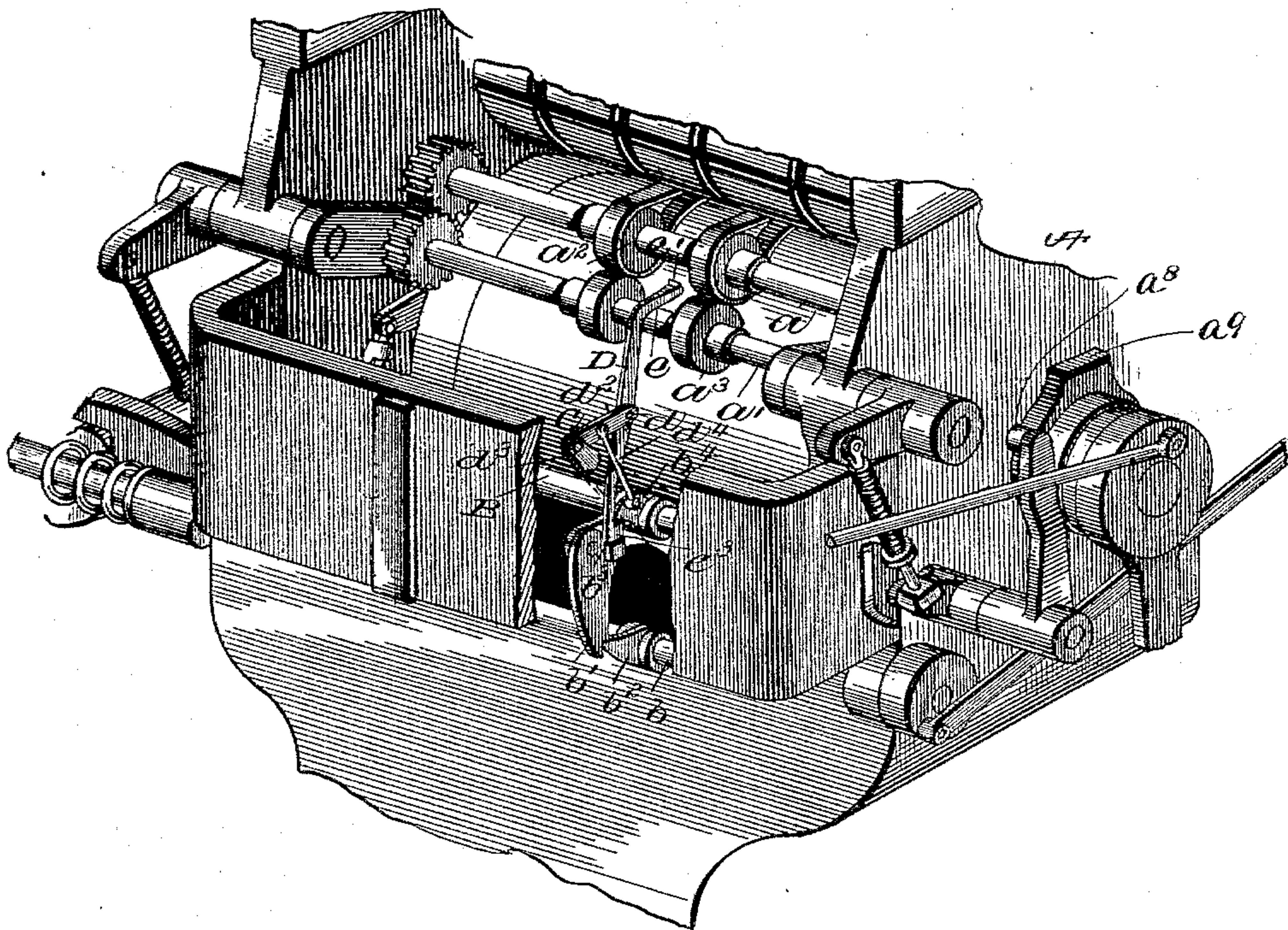
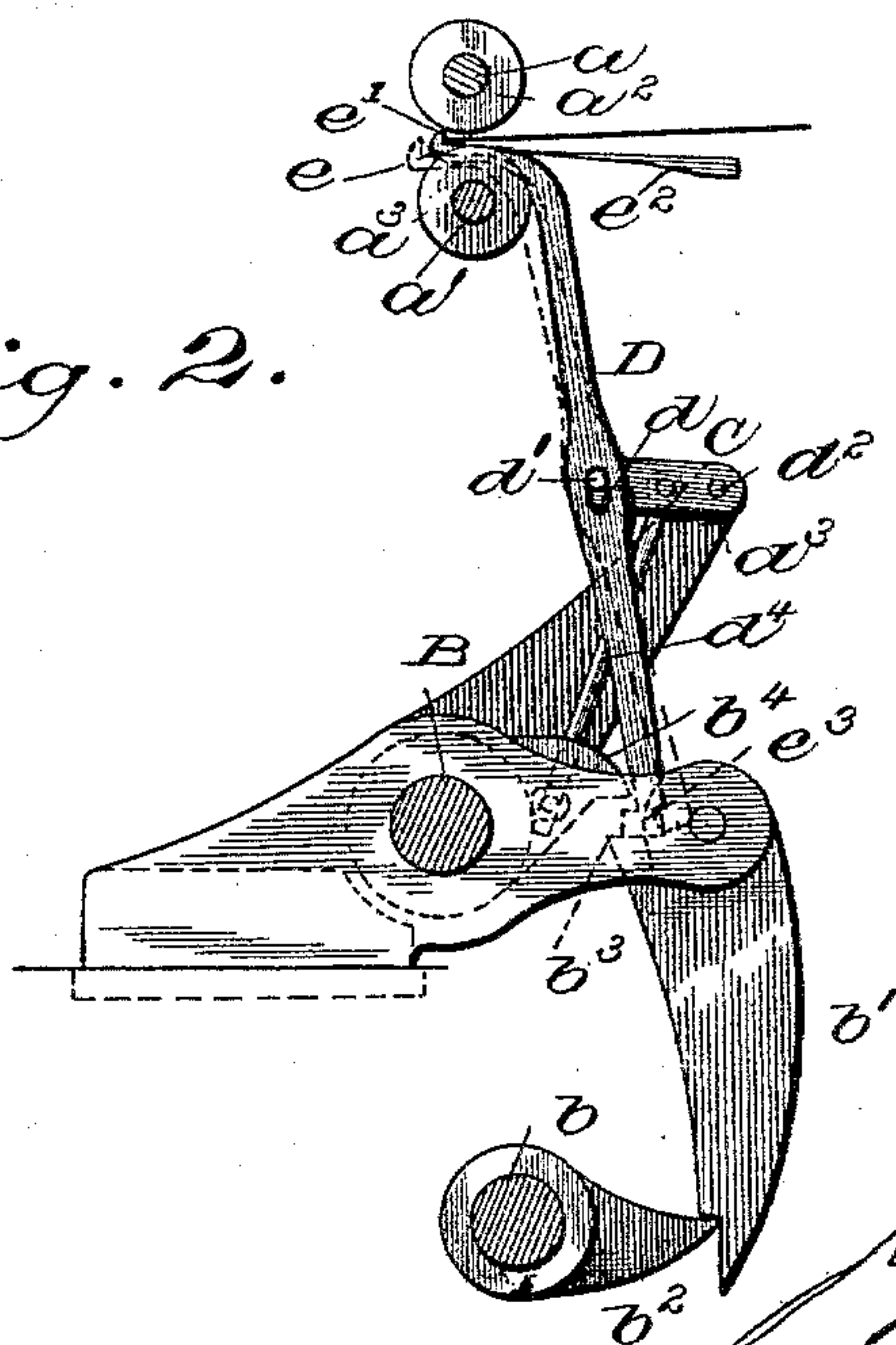


Fig. 2.



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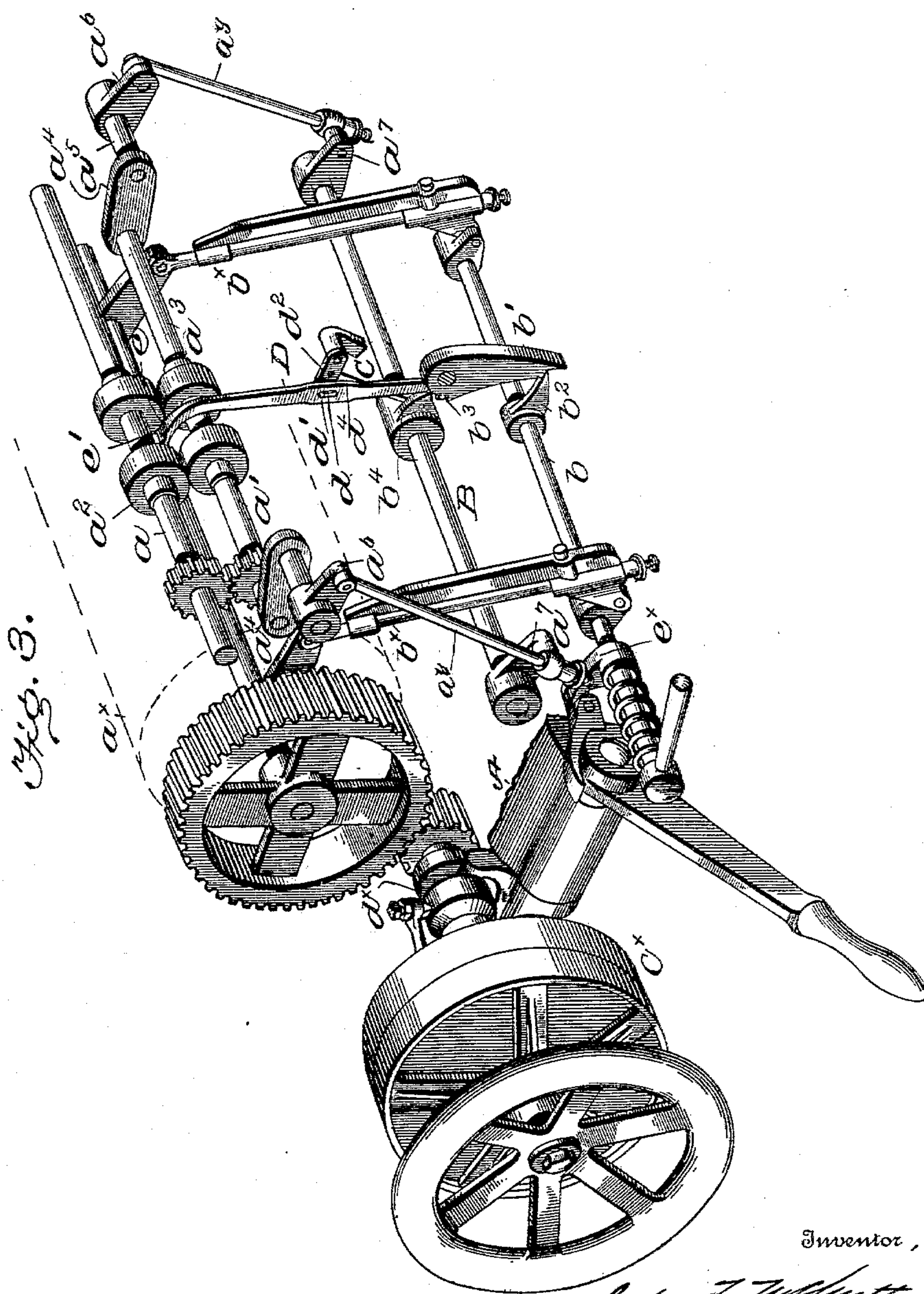
(No Model.)

2 Sheets—Sheet 2.

J. F. McNUTT.
PRINTING PRESS.

No. 597,651.

Patented Jan. 18, 1898.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN F. McNUTT, OF WARREN, OHIO, ASSIGNOR TO THE HARRIS AUTOMATIC PRESS COMPANY, OF NILES, OHIO.

PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 597,651, dated January 18, 1898.

Application filed September 23, 1896. Serial No. 606,745. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. McNUTT, of Warren, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Printing-Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention contemplates certain new and useful improvements in throw-off mechanism for printing-presses.

In Letters Patent No. 577,405, granted to Charles G. Harris and myself on February 16, 1897, is disclosed an intermittently-operated mechanical device for operating the throw-off and stop mechanism of a printing-press in the event of any break or interruption in the feed-supply to the press. That application disclosed an intermittently-operated shaft having an arm or projection movable in line with but not capable of engaging a trip-block, which holds a shaft controlling the throw-off and stop mechanism, and also a lug normally filling the space between the said arm or projection and the trip-block, said lug being moved out of the way, so as not to be engaged by said arm or projection when the stock is properly fed to the press, but remaining in its normal position and aiding in tripping the block in the event of any interruption in the feed-supply. The device shown and described in that application for controlling the position of this lug embraced two levers connected together in such way that upon one lever engaging the article being fed to the press the other lever carrying the lug would be moved so as not to cause the operation of the throw-off or stop mechanism; but in the event of the first lever not being arrested in its movement by such engagement the second lever would remain stationary, so that its lug would aid in tripping the block by which the throw-off and stop mechanism are controlled.

By the present invention I seek to cheapen and simplify the construction of the device for moving the interposed lug by employing one lever to perform the functions of the two levers above mentioned.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of a portion of a printing-press, showing the present improvements. Fig. 2 is an enlarged view of the device with parts in section and others broken away. Fig. 3 is a view illustrating the throw-off and stop mechanism of a printing-press.

Referring to the drawings, A designates a portion of a printing-press, and $a a'$ two shafts or rolls having circumferential enlargements $a^2 a^3$, between and by which the stock is fed to the press. The shaft or roll a' is journaled in arms a^4 , secured on rock-shafts a^5 , which have arms a^6 secured thereto and connected by links a^7 to arms a^8 on shaft B, which is periodically operated by the rotation of the impression-cylinder by an arm a^8 in engagement with a cam a^9 . In this way the roll a' is intermittently raised and lowered.

Adjacent to shaft B is a second spring-impelled shaft b , the operation of which controls the throw-off and stop mechanism, as fully set forth in the before-mentioned Letters Patent and which need only to be briefly referred to herein. The impression-cylinder a^x is eccentrically mounted and its bearings are connected by arms b^x to shaft b , the rocking of which will effect the throw-off. The stop mechanism comprises a clutch-pulley C^x , which is under the control of a sliding collar d^x , the operating mechanism of which effects the throw-off when the shaft b is rotated, a short arm e^x on said shaft striking and releasing a latch or holding means forming a part of said mechanism. All of this is fully set forth in the above-noted patent. The shaft b is normally held against the tension of its spring by a pivoted trip-block b' , engaging an arm or projection b^2 , fast on said shaft, and when the latter is so held the impression-cylinder is in operative position and the driving mechanism is free to operate the press. The tendency of the shaft is to throw the press out of operation by allowing the impression-cylinder to lower and cause the driving mechanism to come to a full stop. The upper shoul-

dered end b^3 of this trip-block is in line with the outer end of an arm or projection b^4 of shaft B.

C designates the intermittently-operated device, by the aid of which the trip-block is operated in the event of any irregularity in the feed to the press. It comprises a lever D, having a central slot d , through which extends a pin d' of an arm d^2 , pivoted at one end to a stationary arm d^3 , extending from and secured to any suitable part of the press-frame. To the center of this pivoted arm d^2 is connected the upper end of a pitman d^4 , the lower end of which is attached to the arm or projection b^4 . Hence as the latter is operated its movement is communicated through pitman d^4 and arm d^2 to lever D. The upper end e of this lever is bent to occupy an approximately horizontal position between the feed-rolls a and a' , being located between the enlargements a^3 of roll a' . The extreme end of this lever is formed with a narrow upturned flange e' , which lies in the path of and is designed to be engaged by the card or the like as the latter passes from the guide e^2 . If so engaged, the lever is moved rearward at its upper end, as shown in dotted lines, and being slightly turned on its fulcrum its lower end swings forward. This lower end of lever D is formed with a laterally-projecting lug e^3 , which nearly fills the space between arm b^4 and the shoulder b^3 of the trip-block. If the lever D is swung, as above stated, its lug e^3 is moved out of the space mentioned and the arm b^4 is free to move downward as the shaft B is partially rotated without operating the trip-block; but if said lever is not so moved, as when the stock is not properly fed or positioned, the lug will remain stationary and upon being engaged by the arm or projection b^4 will trip the block b' , freeing shaft b and thus operating the throw-off and stop mechanism. The slot in lever D allows of the downward movement thereof consequent upon the engagement of arm b^4 with lug e^3 . When the end of the lever has been properly engaged by the stock and as such stock is about to be fed by the rolls a and a' , the lever is lowered by the movement imparted to arm d^2 through pitman d^4 , causing the flanged end thereof to assume a lower position beneath the top of the guide and thus permit of the free passage of the stock to the press. It will be understood that the operation of shaft B—that is, the downward movement of its arm b^4 —occurs at the moment the feed-rolls are to feed the stock to the press. Hence unless the lever D has been swung on its fulcrum its lug will remain in the line of movement of said arm b^4 and the trip-block will be forced out of engagement with the arm or projection of the spring-impelled shaft b , allowing the throw-off mechanism to shift the impression-cylinder and the operative mechanism of the clutch-pulley to bring the press to a full stop.

I claim as my invention—

1. In a printing-press having throw-off and

stop mechanism, and means for controlling the same, a device lying in the path of the stock to be fed to the press, comprising a single lever provided with an upwardly-projecting end designed to be engaged by such stock, whereby said lever will be moved, means for lowering said lever out of the path of the stock after being engaged thereby, and an intermittently-operated member designed to engage with the other end of said lever and free said controlling means in the event of said lever not being engaged and moved by the stock, substantially as set forth.

2. In a printing-press having throw-off and stop mechanism, and means for controlling the same, an intermittently-operated shaft having a projection moving in line with a member of said controlling means but not engaging the same, and a lever having its upper end lying in the path of the stock to be fed to the press and designed to be engaged and moved thereby, its other end having a lug designed to be engaged by said projection and operate said member in the event of said device not being engaged and moved by the stock, substantially as set forth.

3. In a printing-press having throw-off and stop mechanism, and means for holding the same, an intermittently-operated shaft having a projection moving in line with said holding means but not engaging the same, a lever having its upper end in the line of passage of the stock and designed to be engaged thereby and its lower end designed to fit between said projection and holding means, and connection between said shaft and said lever, whereby the upper end of the latter will be lowered out of the way after being engaged by the stock, substantially as set forth.

4. The combination with a printing-press having throw-off mechanism, a trip-block, and an intermittently-operated shaft having a projection, of a lever having its upper end flanged and designed to be engaged by the stock fed to the press, its lower end having a lug designed to fit between said projection and said trip-block, and connection between said latter shaft and said lever, whereby the upper end of the latter will be lowered beneath the line of passage of the stock, substantially as set forth.

5. The combination with a printing-press having throw-off mechanism, a trip-block, and an intermittently-operated shaft having a projection, of a lever having a lug on its lower end designed to fit between said projection and said trip-block, its upper end being flanged and designed to be engaged by the stock in its passage to the press, a pivoted arm on which said lever is fulcrumed, and a pitman connecting said arm to said projection of said intermittently-operated shaft, substantially as set forth.

6. The combination with a printing-press having throw-off mechanism, a trip-block, and an intermittently-operated shaft having a projection, of a lever having a lug on its lower

end designed to fit between said projection
and said trip-block, its upper end being on
the line of passage of the stock and designed
to be engaged and moved thereby, said lever
5 having a slot therein, a pivoted arm having
a pin extended through said slot, and a pit-
man connecting said arm to said projection,
substantially as and for the purpose set forth.

In testimony whereof I have signed this
specification in the presence of two subscrib- to
ing witnesses.

JOHN F. McNUTT.

Witnesses:

GEO. D. KIRKHAM,
ALFRED F. HARRIS.