No. 869,324. PATENTED OCT. 29, 1907.

A. OBERT.

DETECTOR FOR PRINTING PRESSES OR THE LIKE.

APPLICATION FILED JUNE 19, 1906.

Fig. 1.

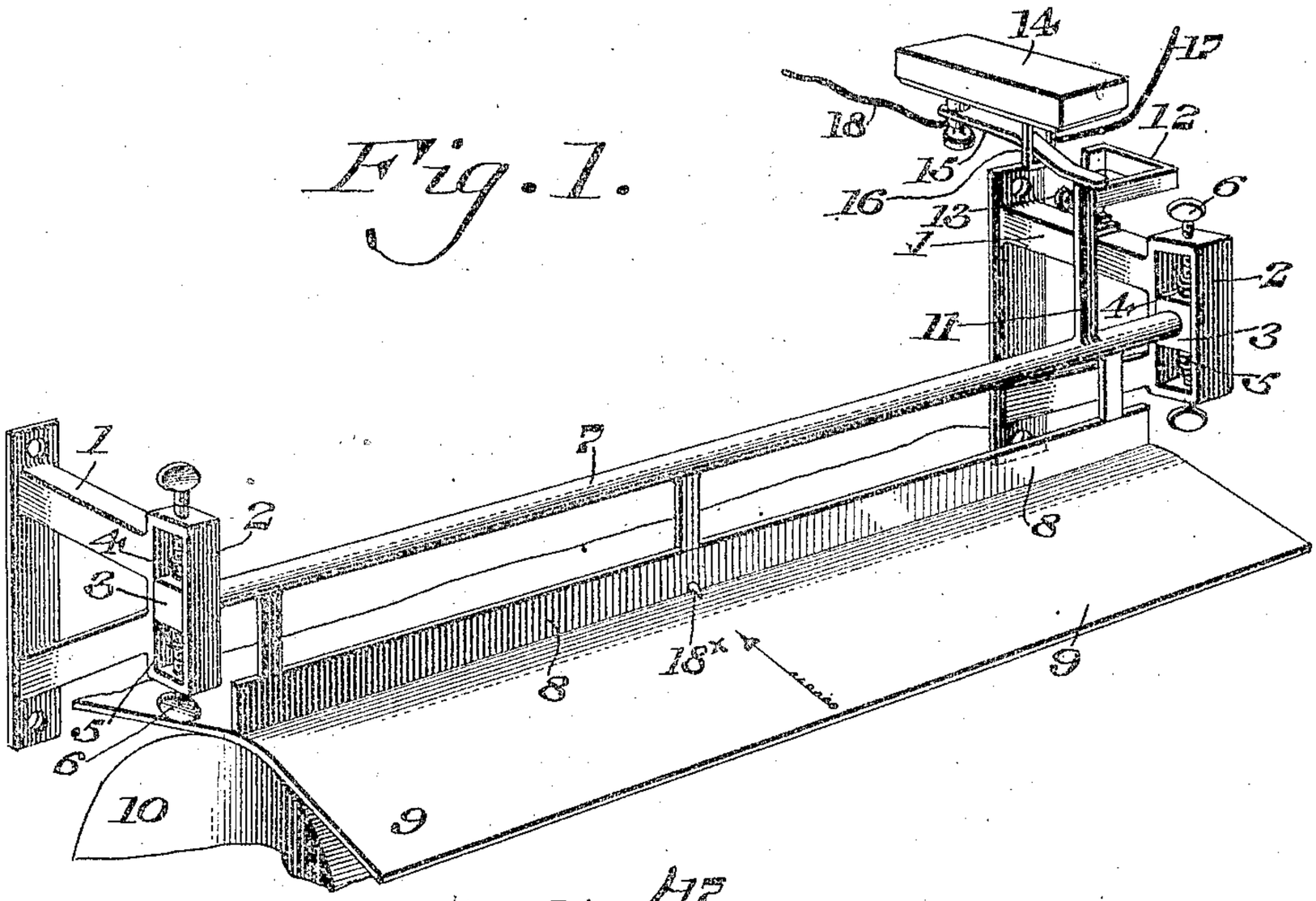
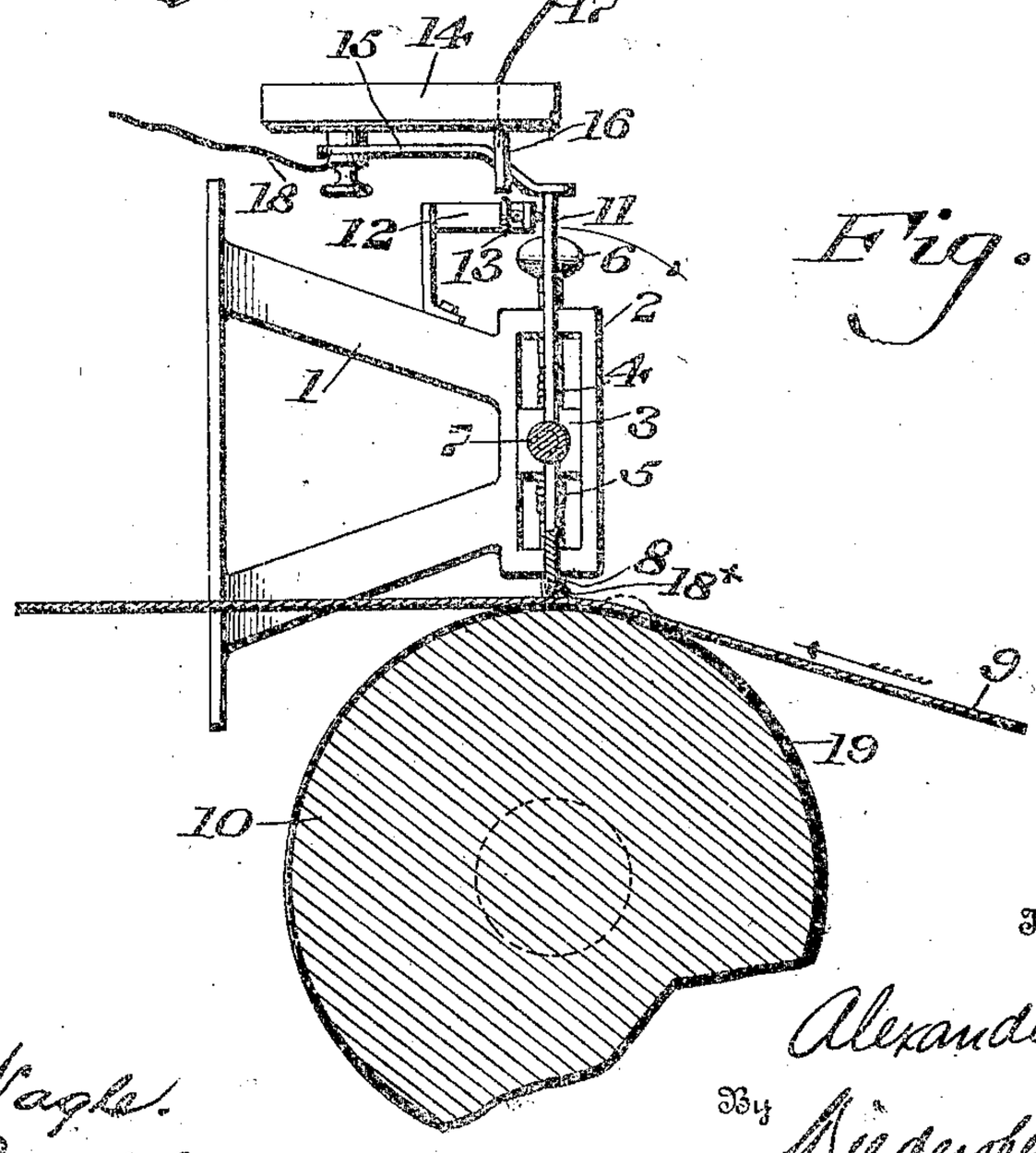


Fig. 2.



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DETECTOR FOR PRINTING-PRESSES OR THE LIKE.

No. 869,324. Specification of Letters Patent. Patented Oct. 29, 1907.

Application filed June 19, 1906. Serial No. 322,435.

To all whom it may concern:

Be it known that I, ALEXANDER OBERT, a citizen of the United States, and resident of the city and county of Camden, State of New Jersey, have invented a new and useful Detector for Printing-Presses or the Like, of which the following is a specification.

My invention relates to a new and useful detector for machines to which stock is fed such as printing presses, calendering machines, textile machines and the like, and consists in providing means for automatically stopping the operation of the machine, should there be imperfections in the stock.

It further consists of other novel details of construction, all as will be hereinafter set forth and described.

Figure 1 represents a perspective view of the detector embodying my invention, showing a portion of the roll over which the paper is passed. Fig. 2 represents a vertical sectional view thereof.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—In printing machines, calendering machines, textile machines and the like, as the stock is fed to the machine, it is found in practice, where splices make imperfections or where lumps, wrinkles or slime marks occur in the said stock, that the latter will be crumpled or creased at this point as the paper in its passage through the machine reaches the cylinders thereof and by reason of this crumpling, imperfect work results, with consequent loss. My invention is for the purpose of preventing this imperfect work and while I am aware that paper for printing or otherwise is examined in the paper mills, that these imperfections often pass the notice of the workman in manufacturing, so that no warning is given to the pressman or operator.

While I have shown means for carrying out my invention in one form, it will be understood that other equivalents might be employed.

1 designates brackets which are adapted to be secured to a suitable portion of the machine and which are provided with the boxes 2 adjacent their outer end. Mounted in said boxes, are the self-alining bearings which consist. in the present instance, of the blocks 3, which are of suitable size, to move in said box 2 and upon the upper and lower surfaces of the blocks bear the springs 4 and 5, which are held in suitable adjusted position by means of micrometer adjusting screws 6, whereby it will be seen that said blocks 3 form self-alining bearings for the rod 7, which is connected with said blocks in any suitable or desired manner. It will be understood that rotative movement of said rod in said bearings is permitted.

8 designates a bar which is connected in any suitable manner with the rod 7 and with which the rod forms a rocker or a caliper, said bar being the portion of the device which is adapted to contact at all times with the paper 9 in its passage to the machine. On said bar 8 is a lug or point $18^{\times}$ which in the normal position of the bar is held slightly away from the paper 9.

10 designates, a lower surface in the present instance, a roller over which the paper passes so that it moves between said bar 8 and the said roller 10 as will be seen, although a stationary surface in place of the roller may be employed. In said lower or stationary surface I form a depression or groove 19 which is adapted to receive the lug $18^{\times}$ when the bar 8 is properly moved.

11 designates an arm which is carried by the rod 7 and which is adapted to normally contact with the adjustable stop 13 which in the present instance is a screw mounted in the arm 12 carried by one of the brackets 1, said stop being adapted to limit the movement of the rod 7 and bar 8 with respect to the position which it is desired the bar 8 to assume in relation to the roller 10 so that said bar 8 can be adjusted according to requirements.

14 designates an insulated plate which is adapted to be secured to any suitable point and which carries the spring contact arm 15 and the stationary contact piece 16, the latter having a conductor 17 leading therefrom while the spring contact arm 15 is in electrical connection with a conductor 18, said spring arm being adapted to be held in elevated position by the arm 11 when the parts are in the position seen in Figs. 1 and 2 and when in this position it is out of contact with the stationary contact piece 16.

It will be understood that the conductors 17 and 18 lead to a suitable device for controlling the operation of the printing press or other machine to which the detector is attached, as for example, the conductors may have a magnet in suitable relation thereto which will, when the circuit is closed, actuate the controller of the machine to stop the latter, although it will be understood that any suitable device may be employed for stopping the machine.

The operation of the detector will be readily seen:— As the paper 9 is fed to the machine in the direction indicated by the arrows in the figures, the bar 8 permits passage of the same until an imperfection is reached or the paper is crumpled or creased. When the imperfection, as for example one shown in dotted lines in Fig. 2, reaches the bar 8 it will move the arm 11 in the direction indicated by the double arrows, Fig. 2, and the support for the spring arm will be removed and will fall, striking the stationary contact piece 16 and the circuit will be closed, actuating the mechanism for stopping the operation of the machine, with evident results. When the bar 8 is actuated by an imperfection or for other reasons, it will be seen that the lug or point $18^{\times}$ will pierce the paper and will form an opening or a tear in the paper in order to indicate at what point the imperfection occurred in the paper. The arm 11, the rod 7 and the bar 8 can be again returned to their op-

erative position by hand when the machine is ready to be started again.

It will be evident that various changes may be made by those skilled in the art which will come within the scope of my invention, and I do not therefore desire to be limited in every instance to the exact construction herein shown and described.

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

1. In a detector for printing presses, a bar, self-alining bearings therefor and a contact arm controlled by said bar, the latter being adapted to be actuated by imperfections in the stock and said bar contacting with the paper across its width whereby every portion of the paper is brought into contact therewith.

2. In a detector for printing presses, a bar, a surface adjacent said bar between which and the bar the paper or stock is adapted to pass, self-alining bearings for said bar, an arm carried by said bar, and a contact piece normally held out of contact with a stationary piece by said arm and said bar contacting with the paper across its width whereby every portion of the paper is brought into contact therewith.

3. In a detector for printing presses, a bar, a surface adjacent said bar between which and the bar the paper or stock is adapted to pass in its movement to the machine and said bar contacting with the paper across its width whereby every portion of the paper is brought into contact therewith, self-alining bearings for said bar, means for adjusting said bearings, an arm carried by said bar, a spring contact piece normally supported by said arm, a stationary contact piece and conductors leading to mechanism for stopping the operation of the machine when the contact pieces are in contact.

4. In a detector for printing presses, brackets adapted to be suitably supported, boxes on said brackets, blocks carried in said boxes, a rod movably connected with said blocks, a bar carried by said rod and contacting with the paper across its width whereby every portion of the paper is brought into contact therewith, an arm on said rod, a stop for said arm, and means for adjusting said stop.

5. In a detector for printing presses, brackets adapted to be suitably supported, boxes on said brackets, blocks carried in said boxes, a rod movably connected with said blocks, a bar carried by said rod and contacting with the paper across its width whereby every portion of the paper is brought into contact therewith, an arm on said rod, a stop for said arm, means for adjusting said stop, a contact piece normally held by said arm, a stationary contact piece adjacent said contact piece and conductors leading to mechanism for automatically stopping the machine when said contact pieces are in contact.

6. In a detector for printing presses, a bar, self-alining bearings therefor, a contact arm controlled by said bar, the latter being adapted to be actuated by imperfections in the stock, and means on said bar for indicating in the paper at what point the imperfections occurred.

7. In a detector for printing presses, a bar, suitable bearings therefor, means carried by said bar for controlling mechanism for automatically stopping the machine, and a lug or point carried by said bar normally out of the path of said paper and adapted to pierce the same when the bar is properly actuated.

8. In a detector for printing presses, a bar, a lower surface between which and said bar the paper must pass in its movement to the machine, said bar and surface extending entirely across the width of the paper in order that every portion of its surface is brought into contact therewith, bearings for said bar, and means actuated by the movement of the bar for controlling the automatic stopping mechanism for the machine said bar being adapted to be actuated by imperfections in the stock.

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