

No. 810,550.

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H. C. McCALLUM.
COUNTING MECHANISM.
APPLICATION FILED FEB. 9, 1905.

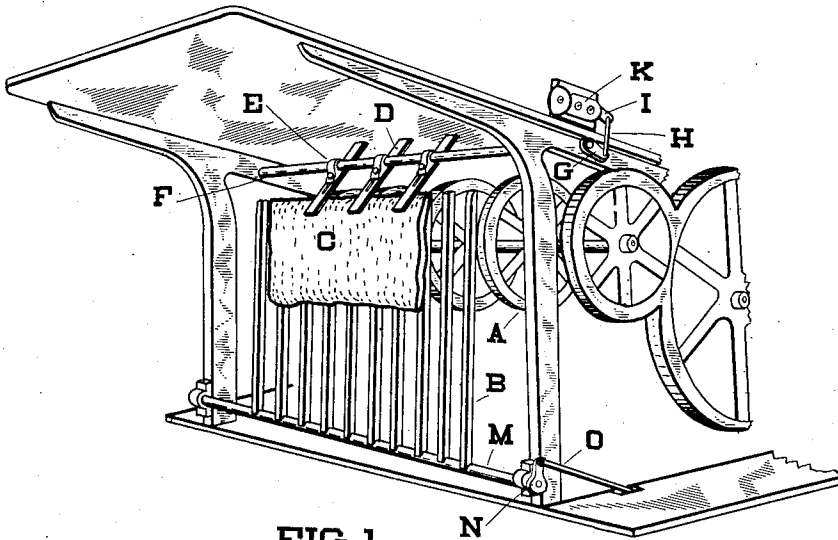


FIG. 1.

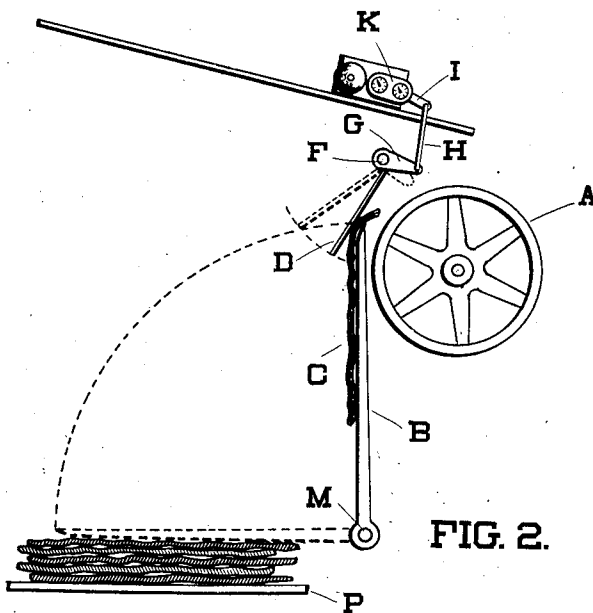


FIG. 2.

WITNESSES.

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COUNTING MECHANISM.

No. 810,550.

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To all whom it may concern:

Be it known that I, HENRY C. McCALLUM, of the city of Montreal, Province of Quebec, Canada, have invented a new and useful Improvement in Counting Mechanisms; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to improvements in that class of mechanical devices which are for the purpose of recording or counting the products of certain machines, and more particularly of that type of machine known as a "printing-press." Every person skilled in the operation of such devices as have heretofore been employed on such machines recognizes the importance of some such device as will operate only when the articles made by the machine are ejected from it.

One object of my invention is the construction of a means for counting the articles produced by a machine which will be operated only when such articles are made or successfully treated by the machine.

A further object of my invention is to provide a device having the aforesaid advantages which is simple and of few parts, adaptable for easy application to any desired machine, and adjustable thereon, so as to meet the varying requirements of such machines.

A still further object of my invention is to create a device which will successfully count relatively thin and flexible objects—such, for example, as bags of cloth or other material, sheets of paper, &c.

Further objects and advantages will appear upon reference to the following description and claims when taken in connection with the accompanying drawings, in which—

Figure 1 is a view taken in perspective, showing my device as applied to the ordinary type of bag-printing machine, having certain parts omitted which form no part of my invention. Fig. 2 is an end elevation of the same machine, showing in full lines the beginning of a count and in dotted lines the final positions assumed by the parts of the device.

In both figures of the drawings similar letters denote similar parts throughout.

A denotes feed-rollers over which the bags are fed after being printed in the printing-press. In the press shown by way of example in the drawings the rollers are separated, so as to allow the swinging arms B to pass between them toward the axle, thereby somewhat facilitating the feeding of the bags onto the arms B. It is obvious, however, that the

rolls A may be replaced by a continuous cylinder or any other desirable substitution of mechanical elements having for their purpose the feeding of the product of the machine without affecting the breadth or scope of my invention. These arms B receive the bags upon their upper ends and then immediately swing downward about the axle M and deposit the bags in a heap upon the table P. The arms are actuated by a moving rod O through the lever N. It is apparent that the bags C are retained upon the arms through the pressure resulting from the movement against the air.

Heretofore the counter K has been actuated by a positive connection with the machine under an assumption that the bags would be fed positively and continuously; but experience soon demonstrated that the bags frequently from various causes failed to be fed, thus causing an erroneous count which was of very little value. In some instances an attempt to remedy this defect has been made by providing a throw-off to be operated by the attendant in cases of failure to feed; but it is clear that such an expedient can only be of partial value. My invention, as will speedily be seen, can operate only when a bag is fed. The arms D are adjustably affixed to the revoluble shaft F by means of thumb-screw in such relation to the swinging feed-arms B that they do not interfere in their respective movements, the arms D being spaced so as to occupy spaces between the arms B. At the end of the shaft F is a crank-arm G, to the end of which is affixed the cord H, which completes the connection with the counter K through its arm I. It is clear that any form of counter may be used in connection with my device.

From the foregoing it will be seen that whenever a bag of flexible material or otherwise passes over the feed-rollers and onto the arms B, these arms B in turn swinging down onto the table P, then the bag or whatever material is being fed will interfere with the arms D and lift them into the position shown by dotted lines, and thereby turn the crank-arm so as to cause the counter to register. This device may be constructed so that very little force will be required to operate it, and it is therefore perfectly adapted to operate upon the thinnest of material, such as paper. When such materials are undergoing movement upon the arms B, they are pressed against them by the air-pressure with some

little force, and will consequently offer considerable resistance to longitudinal sliding displacement, which, as will be seen, is the resultant effect of the contact with the counting-arms D.

I have shown and described my counting mechanism as adapted for use with the arms B. It is to be understood that the full scope of my invention is not limited specifically to this combination; but it is to be understood that broadly my invention comprises such systems as will operate to count through the contacting with the registering mechanism of the articles which are to be counted.

The great benefit arising from the use of this improved counting mechanism and the saving of time and labor effected thereby will be obvious to any one at all familiar with the attachments commonly used at present for such purpose and need not, therefore, be further described.

I claim—

1. In a counting mechanism, a series of spaced feed-arms mounted on a common axle, a series of spaced contact-arms also mounted on a common axle, said contact-arms positioned to occupy the spaces between said feed-arms, a registering means attached to the contact-arm axle and independently-operated means for feeding articles against the contact-arms.

2. In a counting mechanism, a series of

contact-arms mounted on a common axle, registering mechanism mounted adjacent thereto, means for actuating the registering mechanism by the oscillation of said axle in combination with a series of feeding-arms positioned to occupy the spaces between said contact-arms and operated independently of said counting mechanism.

3. In a printing-machine, a series of spaced feed-arms mounted on a common axle, means for supplying articles to be counted to said feed-arms, in combination with a registering mechanism actuated by the oscillation of an axle carrying contact-arms spaced between the feed-arms.

4. In a mechanism for printing and counting articles, a series of spaced feed-arms, means for applying articles to be counted to said feed-arms, in combination with a counting mechanism actuated by the oscillations of an axle carrying contact-arms arranged to be free from interference with the feeding-arms and adapted for operation only by contact with articles carried thereon, substantially as described.

Signed at Montreal, Province of Quebec, Canada, this 21st day of January, 1905.

H. C. McCALLUM.

In presence of—

J. E. BONNER,
T. MULLANY.