(No Model.) 2 Sheets—Sheet 1.

J. GRAHAM.

APPARATUS FOR RECEIVING TICKETS FROM TICKET PRINTING OR NUMBERING MACHINES.

No. 381,126. Patented Apr. 17, 1888.

FIG. 1

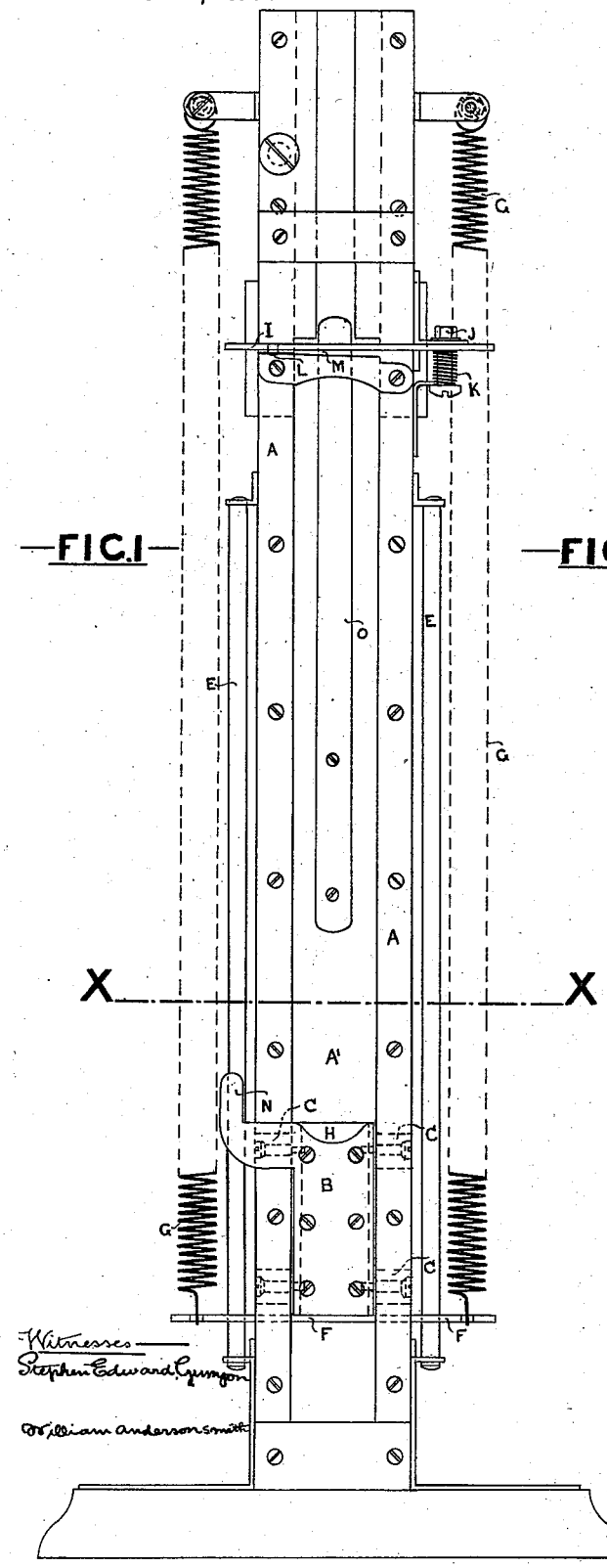
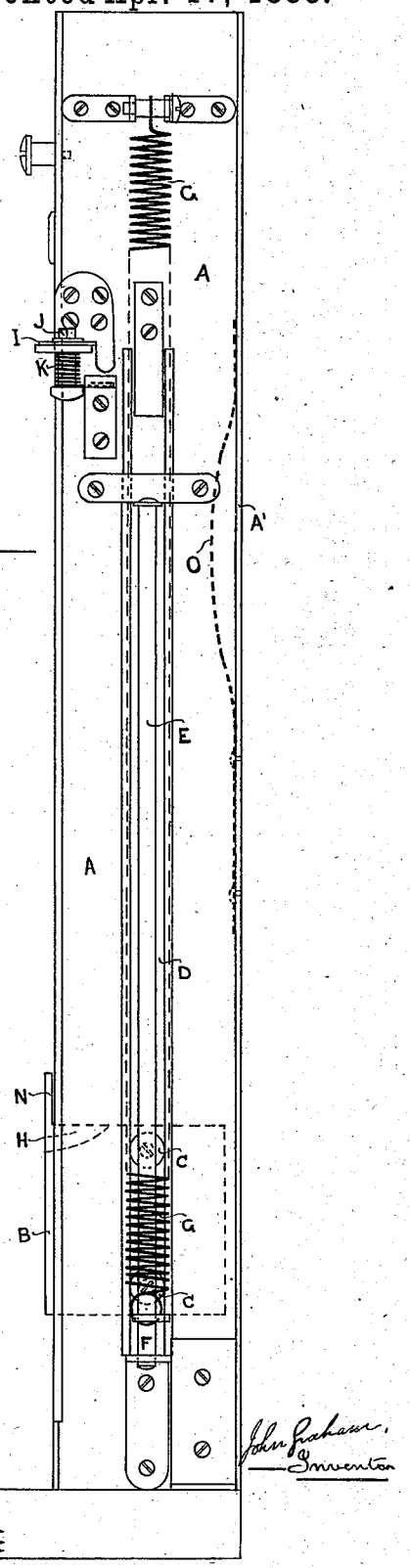


FIG. 2



Witnesses
Stephen Edward Gunson
William Anderson Smith

John Graham,
Inventor

(No Model.) 2 Sheets—Sheet 2.

J. GRAHAM.

APPARATUS FOR RECEIVING TICKETS FROM TICKET PRINTING OR NUMBERING MACHINES.

No. 381,126. Patented Apr. 17, 1888.

FIG. 3

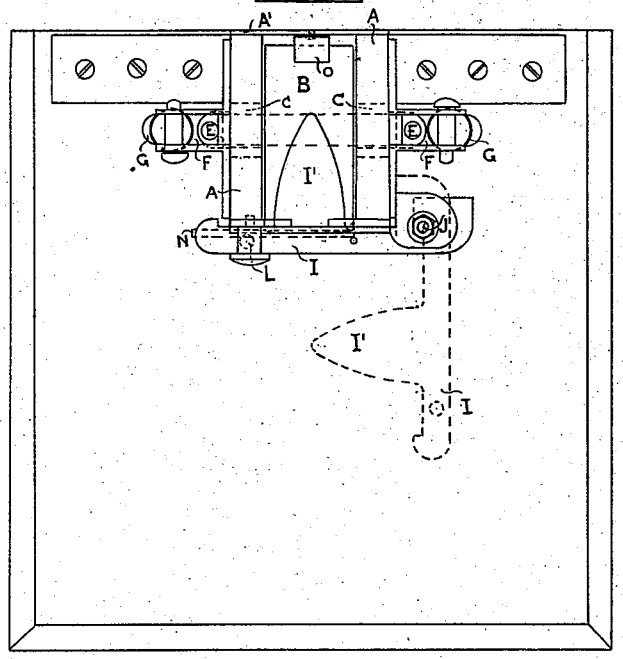
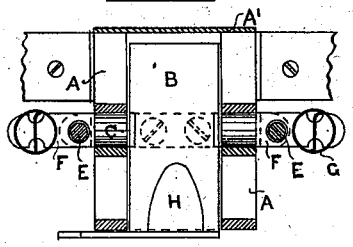


FIG 4.



Witnesses—
Stephen Edward Gunyon.
William Anderson Smith.

John Graham.
Inventor.

UNITED STATES PATENT OFFICE.

JOHN GRAHAM, OF BARNSBURY, COUNTY OF MIDDLESEX, ENGLAND.

APPARATUS FOR RECEIVING TICKETS FROM TICKET PRINTING OR NUMBERING MACHINES.

SPECIFICATION forming part of Letters Patent No. 381,126, dated April 17, 1888.

Application filed November 14, 1887. Serial No. 255,078. (No model.)

To all whom it may concern:

Be it known that I, JOHN GRAHAM, a subject of the Queen of Great Britain, and residing at 35 Bride Street, Barnsbury, in the county of Middlesex, England, railway-ticket printer, have invented certain new or Improved Apparatus for Receiving Tickets from Ticket Printing or Numbering and other Similar Machinery, of which the following is a specification.

In the machinery usually employed for the printing, numbering, &c., of railway-tickets, cards, and the like, the said tickets or other similar articles are finally deposited in a long receiving tube or box, which is detached from the machine as soon as it is full, or nearly so, in order that the finished tickets may be removed therefrom. This periodical removal of the receiving-tube necessitates in some cases the stoppage of the machine, and in others the arrangements by which the stoppage of the machine is obviated are not satisfactory; and the object of my present invention is to provide more perfect arrangements for obviating the necessity of stopping the machines when tickets are being removed therefrom.

In the drawings hereto annexed, Figure 1 is a front elevation of a receiving tube or box constructed in accordance with my invention. Fig. 2 is a side elevation, and Fig. 3 a plan, of same; and Fig. 4, a horizontal section at line *x x* of Fig. 1.

The receiving tube or box is permanently attached to the machine, and consists of two sides, A A, and a back, A′, as shown clearly in the horizontal section, Fig. 4, the front or one side being open, so as to allow of the periodical removal of the tickets from the tube or box without removing the latter from the machine, as will be hereinafter explained. A block or false bottom, B, of hard wood or other suitable material, is arranged to slide freely up and down in the tube or box, being guided therein by friction-rollers C, taking into slots or grooves D, formed in the sides thereof, or by other suitable means. The said block B may also be guided by means of rods E, fixed by brackets or otherwise to the sides A of the tube or box, such guide-rods E passing through holes in the plate F, secured to the bottom of the block B. The sliding block B is constantly drawn upward toward the inlet end of the tube or box by means of springs G, secured at their upper ends to arms fixed to the sides of the tube or box and at their lower ends to the plate F. If desired, the arms to which the upper ends of the springs G are attached may be made adjustable vertically to enable the tension of the said springs G to be varied as may be required. The block B may be drawn or pressed upward by any other suitable means, if preferred. It is provided with a recess or hollow, H, on its upper face, to allow of the introduction of the finger of the operative, for the purpose hereinafter explained.

At a suitable point on the tube or box is fitted an automatic spring-latch, I, having a blade, I′, adapted to enter the tube or box and to intercept the further fall of tickets onto the sliding block B when required. This spring-latch I turns on a center, J, and is constantly pressed outward by a spring, K, so that when released it flies out into the position shown in dotted lines in Fig. 3, its rear end being preferably so shaped as to come against the side of the box or other stop to prevent the latch and blade from being thrown out by the spring K beyond a certain position.

When the latch I, with its blade I′, is closed into the position shown in full lines in Fig. 3, a pin or projection, L, on it takes into a hole or behind a catch in or on the fixed piece M, or is otherwise held in that position until released in the manner hereinafter explained.

In the drawings the block B is shown approximately in the position it would occupy just prior to the box being emptied by the operative, the spring-latch I having been closed, so as to intercept the further supply of tickets to the tube. The space in the tube between the under side of the spring-latch I and the upper side of the block B would, of course, be occupied by tickets; but, for the sake of clearness, these are not shown in the drawings.

The action of the improved apparatus is as follows: The latch I is released, so as to stand in the position indicated by dotted lines in Fig. 3, and the tickets, cards, or other similar objects are fed into the upper end of the tube or box, as usual, from the printing or numbering mechanism, and the block or false bottom B is gradually forced down by them against the resistance of the springs G, or of the other means provided for drawing or pressing the block B

upward. Before the block B has reached the lower end of the tube or box the operator places his finger in the recess or hollow H on the block and forces the latter, with the tickets on it, farther down the tube or box, and at the same time closes the latch I and its blade I′ into the position shown in full lines in Fig. 3, so that the further fall of tickets beyond the said blade is intercepted, space having been provided for the reception of tickets above the blade by the depression of the block B and tickets thereon by the operative, as above described. The tickets between the top face of the block B and the under side of the blade I′ are then removed by the operative, and the block B is immediately drawn upward by the springs G, in readiness to receive further tickets. When the block B is nearing its upper position, a pin or projection, N, on it strikes the spring-latch I, disengaging its pin or projection L from the hole or catch in the piece M, and the said latch I, with its blade I′, flies open under the action of the spring K into the position shown in dotted lines in Fig. 3, withdrawing the blade I′ from the tube or box, so as to allow the tickets which have accumulated above it while those below it were being removed to descend onto the block B, which is again pressed down by them as before, and the operations are repeated.

In order to prevent the block B from striking the latch I and blade I′ with too great force when drawn upward by the springs G, and also to prevent the rebound of the said block, a check or brake spring, O, is secured to the back of the tube or box, or otherwise, so as to press against the block B as it rises and to bring it gradually to rest by the friction thereby produced. By these arrangements the printing or numbering or other similar machine may be allowed to work continuously without danger, the space in the tube or box above the latch I′ being made of sufficient depth to receive all the tickets or other objects printed or numbered during the time those below the said latch are being removed.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I desire to have it understood that I make no claim, generally, to a receiving tube or box so arranged that the printing, numbering, or other machine can be allowed to continue working while the tickets or other articles accumulated in the lower portion of such tube or box are being removed, as I am aware that an arrangement in which the lower part of the tube or box with the tickets therein may be removed and emptied while the machine is still working is already in use; but

I declare that what I do claim is—

1. In a railway-ticket printing or numbering or other similar machine, the fixed receiving tube or box open in front or at one side, and having a block or false bottom, B, sliding therein, and drawn or pressed constantly toward the upper end thereof by means of springs G or other suitable devices, and a spring-actuated latch, I, and blade I′, constructed, arranged, and operating as hereinbefore described, and illustrated in the drawings hereto annexed.

2. The combination, with the receiving tube or box of a railway-ticket printing or numbering or other similar machine, of the latch I, provided with a blade, I′, which serves, when closed, to prevent the descent of the tickets or other similar articles delivered by the machine while those below are being removed, and which is liberated automatically by the ascent of the block or false bottom B, and opened by the spring K, substantially as hereinbefore described, and illustrated in the drawings hereto annexed.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOHN GRAHAM.

Witnesses:

STEPHEN EDWARD GUNYON,
115 *Cannon Street, London.*

WILLIAM ANDERSON SMITH,
117 *Stoke Newington Road, London.*