

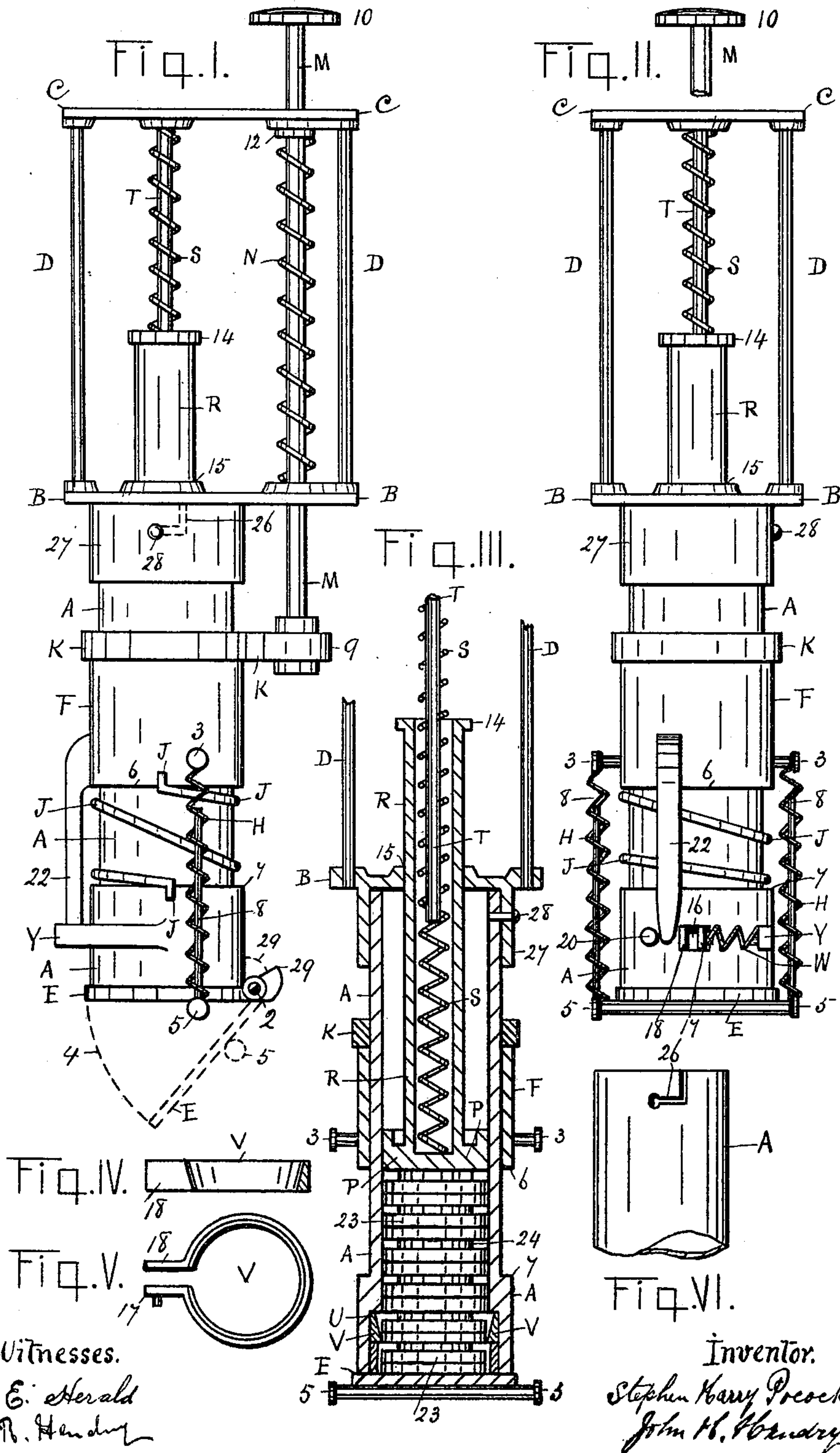
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Patented May 28, 1901.

S. H. POCKOCK.
MONEY EXCHANGING DEVICE.

(Application filed Jan. 17, 1901.)

(No Model.)



Witnesses.

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MONEY-EXCHANGING DEVICE.

SPECIFICATION forming part of Letters Patent No. 675,109, dated May 28, 1901.

Application filed January 17, 1901. Serial No. 43,632. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN HARRY POCOCK, a citizen of Canada, residing at Hamilton, in the county of Wentworth and Province of Ontario, Canada, have invented certain new and useful Improvements in Money-Exchanging Devices; 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.

My invention relates to a money-exchanging device in which are embodied a vertical cylindrical tube containing a number of pieces of coin, the larger ones of which are almost as large in diameter as the tube, and mechanism connected to said tube to allow a certain and given number of coins to drop out of the lower end of the tube upon the depression of a certain button of the connected mechanism.

The objects of my invention are, first, to provide a device which shall be capable of exchanging pieces of coin of a small denomination for money of equal value of a larger denomination; second, to provide a device for exchanging money which shall be very exact and accurate, and, third, to afford facilities for the detachment and attachment of the cylindrical coin-holding tube for the insertion of the exchanging pieces of coin to position in the tube or cylinder. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the coin-exchanging device in its completeness and in normal position. Fig. 2 is a front elevation of the same, the vertical rod of the depressing or operating button being broken near to the button. The lower part of said rod, with its uplifting tension-spring, is not shown in this view, as a part only would be seen. Fig. 3 is a front sectional elevation of the vertical cylindrical coin-holder with coin in position, coin-detainer, coin piston or pusher, cylinder, stationary cover with secured vertical rods broken, studs for spring attachment, and other parts. Fig. 4 is a detail sectional side elevation of the detached coin-detainer. Fig. 5 is a plan of the same; and Fig. 6 is an elevation of the upper part of the coin-cylinder, showing bent slot in the upper part for

attachment of the cylinder and detachment of the same from its upper stationary cover.

Similar characters refer to similar parts throughout the several views.

In the drawings the vertical cylinder is indicated by A and is provided with a cap B and is rigidly connected to the stationary plate C by means of vertical posts D, said cap and plate being a proper distance apart, as a framework, to allow for the connection and operation of the connected mechanism, hereinafter described.

E is a door, which is hinged at 2 to the lower and rear end of the cylinder A. This door is capable of being opened on its said hinge and is shown in closed position and as it would appear when open, as indicated by broken lines, and its opening line of progress by a broken arc-line 4, as in Fig. 1 of the drawings. The cylinder is provided with a sleeve F, provided with stationary projecting side studs 3, to which are secured the spiral springs H. The lower ends of these springs are secured to the headed ends of the bar 5, which is a part of the door E. The tendency of the spiral springs H is to press upward to keep the door E closed. The said sleeve F is retained in shown position by means of the spiral spring J, which presses upward against the lower shoulder 6 of said sleeve and the shoulder 7 of the cylinder A. The springs H may be provided with an inner staying-rod 8, if desirable, and if so the ends of the rods are intended to press against the said studs 3 of the sleeve F and the bar 5 of the door E to open the door when the sleeve F, with its tapered arm 22, has been brought downward a certain distance and in order to steady and strengthen said springs H. The opening of the door E is begun and accomplished after the sleeve F has been brought down a certain distance. This necessitates the top of the rods 8 to terminate a short distance from the studs 3 of the sleeve.

Immediately above the sleeve F and adjoining the same is a loosely-connected collar K, which is capable of sliding downward on cylinder A and forcing the sleeve F downward at the same time. This collar K has a rear projection or lug 9, to which is secured the lower end of the operating-rod M with upper head or button 10, which, when pressed

downward, operates the money-exchanging device, the operation of which will be hereinafter more fully described. This rod M is provided with a stop-collar 12 and a spiral spring N around said rod and between the rear extended part of the cylinder-cap B and the upper secured plate C. The spring N presses against said collar 12 of rod M and the said extended part of the cap B to retain the rod M, hence the ring K, in normal position.

The cylinder is provided with a piston or coin-pusher P, with central vertical tube R, which has an upper flange 14 to rest upon the cap B when the piston is forced downward and to prevent said tube R from possibly passing through the central opening 15 of the cap B, through which the tube R operates, as seen in Fig. 3 of the drawings.

The lower part of the cylinder A has an annular recess or groove U, with a front opening 16 to contain a steel-spring coin-detainer V, provided with two projecting arms 17 and 18, which are capable of being brought closer together to contract said detainer V by mechanism hereinafter described.

W is a spiral compensating spring located between the arm 17 of the detainer V and a stop Y on the outer and lower part of the cylinder A. This stop Y is in horizontal line with the arms 17 and 18 of the detainer. The tendency of the spring W is to extend. Consequently slight pressure and tension are brought to bear against the arm 17, to which said spring connects. In the same horizontal line as the stop Y and arms 17 and 18 is a stop 20, a distance from the arm 18 and stationary with the cylinder A. The arm 18 is capable of being forced into closer proximity to the arm 17 by means of a vertically-operating arm 22, the lower part of which is rounded and tapered and forms a part of the previously-mentioned sleeve F, and when the said sleeve F is brought downward the said lower tapered arm 22 engages the stop 20 and the arm 18 and closes the arms 17 and 18. Consequently the circular opening of the detainer is contracted when detention of the inserted coin 23 and 24 is necessary. The coin referred to is in the lower part of the cylinder A and placed on the top of the other in succession. In this case, for example, the larger coin 23 may be denominated "ten-cent pieces," and the smaller coins, for example, may be denominated "five-cent pieces," (in silver coin,) placed in the following manner: two ten-cent pieces together at the bottom and then a five-cent piece on the top, and soon in succession, as illustrated in Fig. 3 of the drawings. It will be here observed that the distance between the bottom or the lower tapered detaining part of the detainer V and the inner side of the door E is about the same measurement as the thickness of two ten-cent pieces and a five-cent piece together. This measurement denotes the containing-space

of the change to be delivered from the money-exchanging device.

It will here be noticed that the interior of or coin-detaining part of the detainer V is tapered, being smaller in diameter at its lower detaining edge than at its upper edge. This feature is to allow the coin to easily enter or drop into the detainer, and the said lower edge is to detain the desired coin at every operation of the opening of the cylinder-door E, in order, in this case, to exchange two ten-cent pieces and a five-cent piece for the equivalent in larger coin or money.

This device is adapted for exchanging a number of small coin-pieces of the same denomination or a number of coin-pieces of different denominations for the equivalent in larger coin, bills, or money.

To detach the cylinder A from the cap B for the insertion of the exchanging coin, the upper part of the cylinder has an angular slot 26, and the flange 27 of the cover B has a projecting stud 28, which fits through said slot and allows the cylinder to be turned to the left until the vertical part of said slot is in vertical line with the stud. The cylinder may then be brought downward and released. The cylinder when refilled with coin may be attached to the flange of the cover B in like manner.

It is essential in the use of this device that in the first place care must be exercised regarding the proper insertion of the coin in the cylinder, as set forth. In the present case the cylinder may contain as many more coins as is shown in Fig. 3 of the drawings, the piston being capable of being brought almost to the cylinder-cover.

When the cylinder is properly charged with coin, the coin is readily exchanged without counting the same by pressing the button 10 with the finger-tip.

The operation of the device is accomplished in the following manner: When the button 10 is pressed downward, the vertical rod M at the same time forces the sleeve F downward by means of the ring K, with extension 9, to which said rod M is connected. On this sleeve is the arm 22, the lower tapered part of which enters between the rigid stop 20 and the arm 18 of the coin-detainer, pressing the arms 18 and 17 closer together, consequently contracting the coin-detainer V against and around the fourth coin from the door E and allowing the three lower coins to drop when the door E opens. Immediately when the said fourth coin is detained by the detainer V the door E opens. This is accomplished by the rods 8 in the side spiral springs H, which are connected to said sleeve F and to the door E by mechanism previously mentioned. When the door E opens, as described, the three lower coins drop out. At this time the finger-button 10 is released, the door E closes, and the detainer V resumes its normal position. When the finger-tip is released from

finger-pressure, the spiral spring N forces the rod M, with its lower cylinder-ring K, to normal position. The spiral spring J then forces the sleeve F upward against said ring K. Consequently the side springs H, which connect the sleeve F to the door E, bring the door to closed position. When the closing of the door is accomplished, then the lower tapered part of the arm 22 of said sleeve F begins to allow the arms 17 and 18 to expand. Consequently the coin-detainer expands and releases the lower coin. The coins are then forced to the closed door by the pressure of the spiral spring S on the piston P, which engages the uppermost piece of coin.

The door E has a stop 29 near to its hinge 2. When the door E is opened to its full extent, the said stop engages with the outer side of the cylinder, as shown in broken lines, also indicated 29.

An important feature of construction in this coin-exchanging device is that the lower tapered part of the arm 22 must be so arranged and devised that the same shall be capable of bringing the arms 17 and 18 of the coin-detainer V closer together to detain the proper piece of coin previous to the opening of the door E. This is accomplished by reason of the upper ends of the rods 8 being a distance below the studs 3 to allow the sleeve F, with its arm 22, to travel a distance downward before the studs 3 engage with the upper ends of the rods 8 to open the door E. And, again, when the exchanging pieces of coin are delivered the mechanism must be so arranged that the door E must be closed previous to the widening out of the arms 17 and 18 of the coin-detainer V. This is accomplished by means of the springs H, that immediately the sleeve F is brought upward the springs H bring the door to normal position. The arm 22 must be the first to perform its function when delivering the coin, and after said delivery of the coin the door E must be closed previous to the releasing of the arms 17 and 18 by the arm 22. These important features are accomplished by the particular location and extension of the parallel part and the lower rounded tapered part of the arm 22 in their relation to the stop 20 and the arm 18 of the detainer.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a money-exchanging device, a vertical cylinder, to hold coins of the same, or of different denominations, an annular groove with opening in the lower part of the cylinder, a spring coin-detainer with arms in said groove, the arms of the coin-detainer projecting through said opening, a hinged door on the lower end of the cylinder, and means for pressing said arms of the detainer closer together to detain the coin in contact with the detainer, and means for opening the door to allow the lower coin to drop, substantially as described.

2. In a money-exchanging device, a cylinder to hold coin, an annular groove in the lower part of the cylinder, an opening in said groove, a spring coin-detainer in said groove, arms on the detainer to protrude through and beyond said opening, a spring-door hinged on the lower end of the cylinder, a cap on the upper end of the cylinder, and means for bringing the arms of the detainer closer together to detain the coin opposite to and above said detainer.

3. In a money-exchanging device, a coin-cylinder, an annular groove in the lower part of the cylinder, an opening in said groove, a spring coin-detainer in said groove, arms on said detainer projecting through said opening, a spring-door hinged on the lower end of the cylinder, a piston above the coin and in the cylinder, a plate or framework above the cylinder and connected thereto, a spiral spring connecting said plate and piston, to force the piston against the uppermost piece of coin, and means for pressing said arms of the coin-detainer closer together to detain the piece of coin in line therewith, and for opening the door to allow the coin below said detainer, to drop.

4. In a money-exchanging device, a cylinder with lower enlarged part and upper detachable cap, a framework secured to said cap, a sleeve on the cylinder, a collar on the cylinder and resting on the sleeve, a spiral spring around the cylinder with ends pressing against the shoulder of the enlarged part of the cylinder and against said sleeve, a vertical arm on the sleeve and extending downward, the end part of said arm tapered, an annular groove with opening in said enlarged part of cylinder, a spring coin-detainer in said groove, arms on coin-detainer projecting through said opening, and mechanism connected to said collar to bring the sleeve with its arm downward to compress the arms of the coin-detainer.

5. In a money-exchanging device, a cylinder with lower enlarged part, an annular groove in the cylinder with opening through said enlarged part, a coin-detainer in the groove, arms on the detainer protruding through said opening, a stop on the cylinder and opposite to said opening, a sleeve with lower extending and tapered arm to engage said stop and one arm of the detainer to compress the detainer and means for operating said sleeve.

6. In a money-exchanging device, a cylinder, an annular groove in the lower enlarged part of the cylinder, an opening in said groove, a coin-detainer in said groove, arms on the detainer and protruding through said opening, a stop opposite one said arm, a stop opposite the other said arm, a compensating spring connected to one said stop and arm to equalize the pressure of both sides of the detainer when compressed.

7. In a money-exchanging device, a frame-

work, a detachable cylinder supported by said
framework, a collar on the cylinder, a sleeve
on the cylinder adjoining the collar, a verti-
cally-operating rod connecting said collar and
5 framework, a button on said rod to press the
same downward to operate the sleeve, a spiral
spring around said rod to lift the same, a door
hinged to the lower end of the cylinder, spiral

springs connecting said sleeve to the door to
open and close the same. 10

In testimony whereof I affix my signature
in presence of two witnesses.

STEPHEN HARRY POCOCK.

Witnesses:

JOHN H. HENDRY,
S. D. BIGGAR.