

(No Model.)

3 Sheets—Sheet 2.

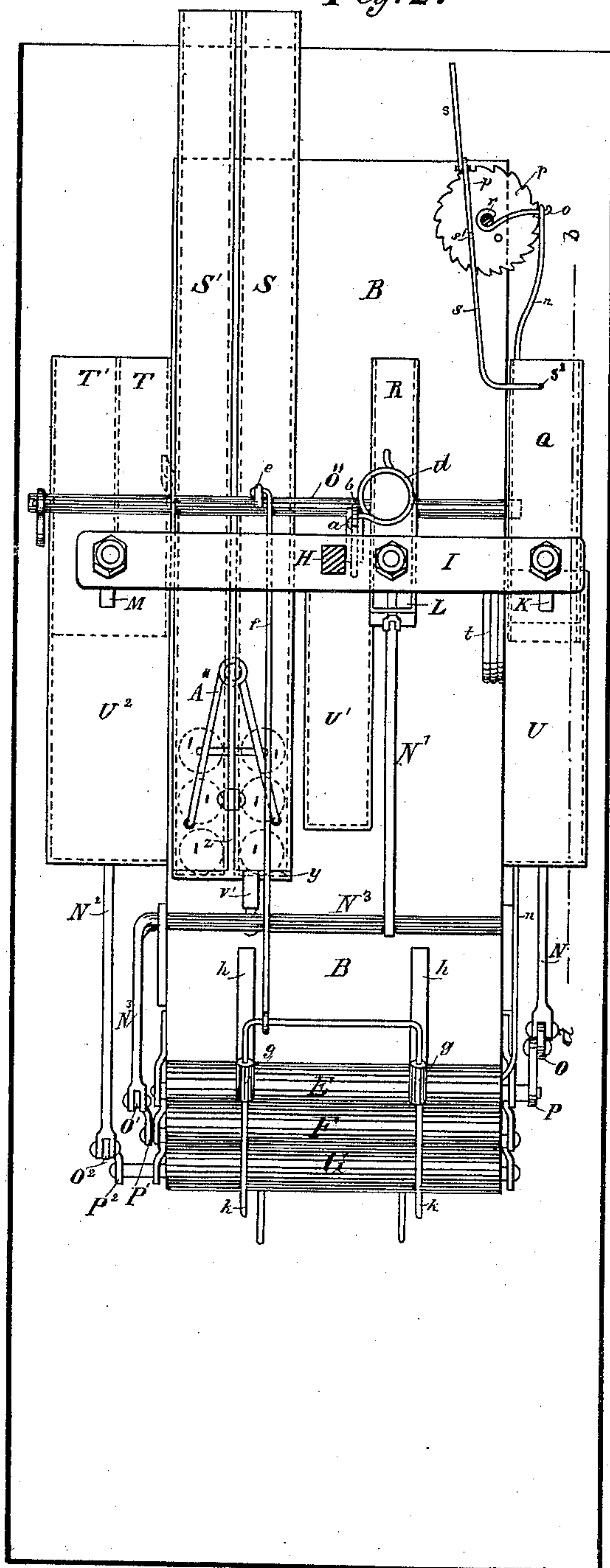
P. C. ÖSTERBERG.

CIGAR RETAILER.

No. 387,103.

Patented July 31, 1888.

Fig: 2.



Witnesses:

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(No Model.)

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Fig: 3.

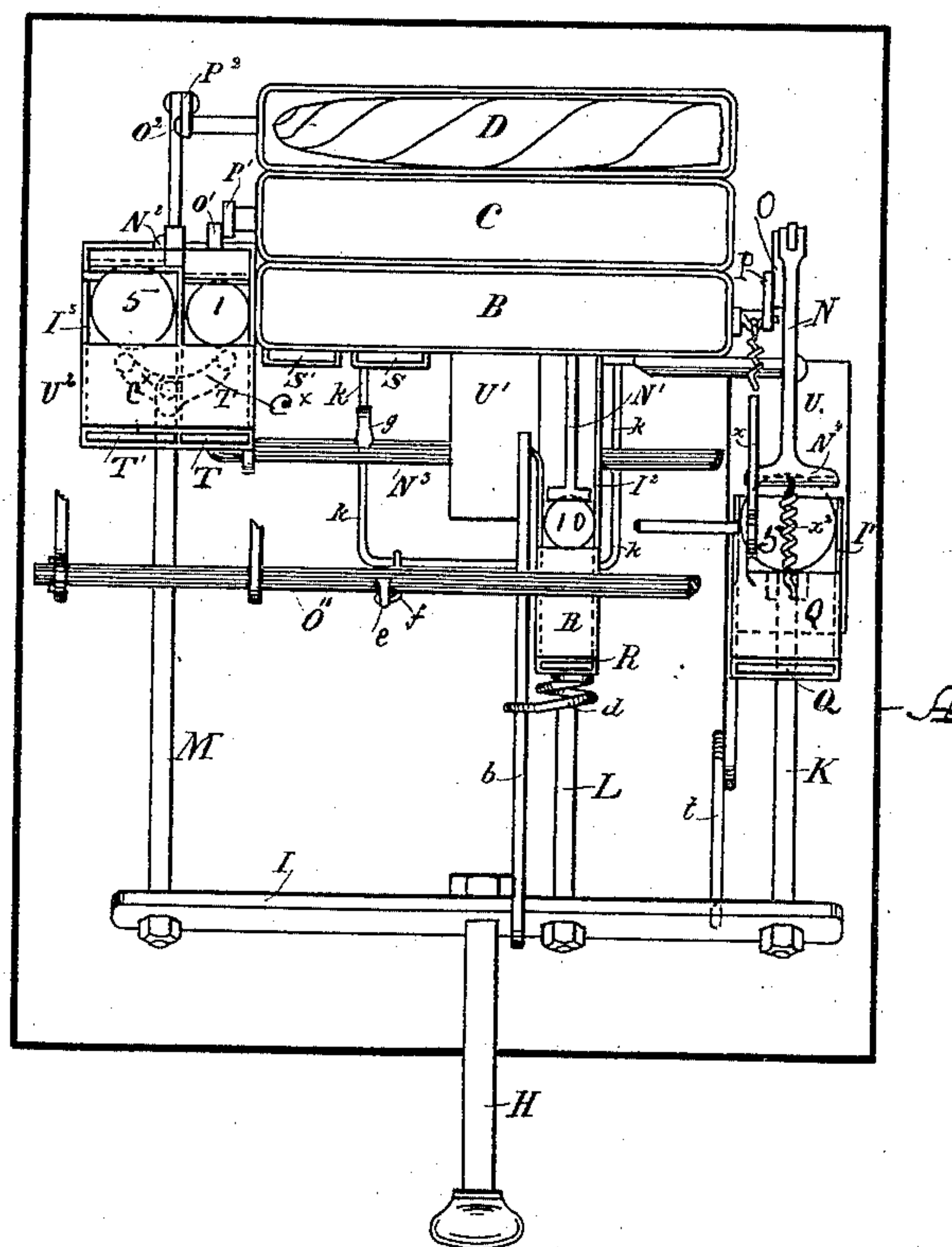


Fig: 4.

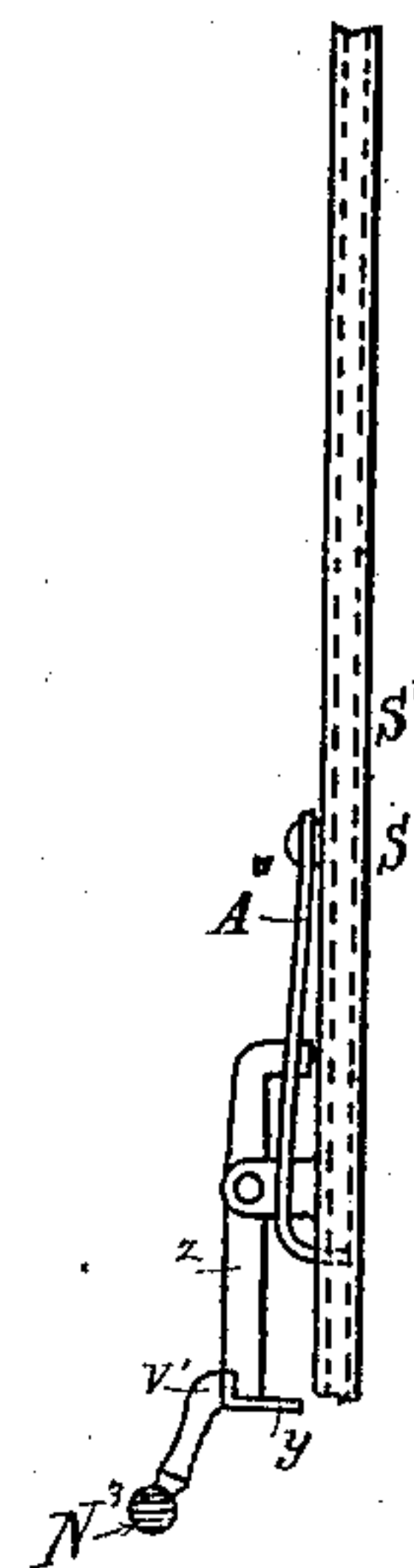
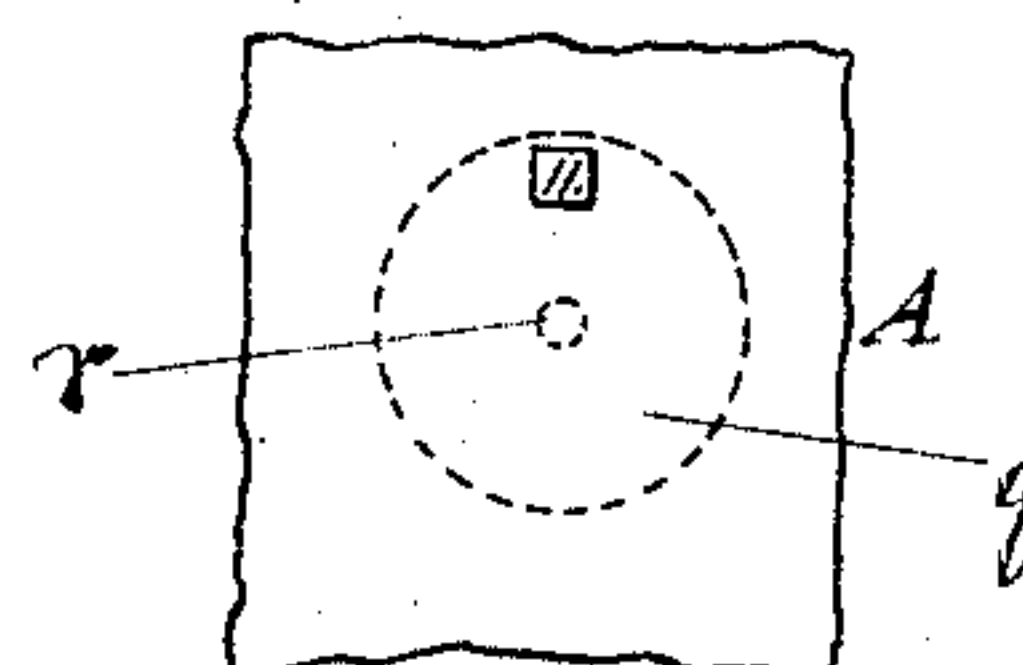


Fig: 5.



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UNITED STATES PATENT OFFICE.

PER CONRAD ÖSTERBERG, OF ÖREBRO, SWEDEN.

CIGAR-RETAILER.

SPECIFICATION forming part of Letters Patent No. 387,103, dated July 31, 1888.

Application filed December 23, 1885. Serial No. 186,512. (No model.) Patented in Sweden April 23, 1885, No. 99; in Germany August 15, 1885, No. 34,630; in France August 29, 1885, No. 170,894; in England September 1, 1885, No. 10,364; in Norway December 31, 1885, No. 508; in Denmark December 17, 1886, No. 350, and in Austria-Hungary January 17, 1888, No. 36,354 and No. 66,075.

To all whom it may concern:

Be it known that I, PER CONRAD ÖSTERBERG, a subject of the King of Sweden, and a resident of the city of Örebro, Sweden, have
5 invented certain Improvements in Cigar-Retailers, (for which Letters Patent have been granted to me in the following countries: in Sweden, No. 99, dated April 23, 1885; in Germany, No. 34,360, dated August 15, 1885; in
10 France, No. 170,894, dated August 29, 1885; in England, No. 10,364, dated September 1, 1885; in Norway, No. 508, dated December 31, 1885; in Denmark, No. 350, dated December 17, 1886, and in Austria-Hungary, No. 36,354
15 and No. 66,075, dated January 17, 1888;) and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

20 The purpose of my invention is to provide an apparatus by which, without requiring an attendant, a purchaser may buy and pay for cigars of different qualities and at different prices, and in some cases may pay for a cigar
25 with a coin of greater value than the price of the cigar and receive back the exact change, while in other cases he may pay for a cigar with two coins which together equal in value the price of the cigar, also by which the num-
30 ber of cigars sold may be indicated or registered.

The accompanying drawings represent an apparatus illustrating an example of each of the ways of receiving and paying for cigars
35 above mentioned.

In the drawings, Figure 1 represents a side elevation of the apparatus, the side of the case next to the point of sight being removed to show the interior construction, and a part of
40 the view being in section, in a plane indicated by the line *a b*, Fig. 2, and looking in the direction indicated by the arrow 1. Fig. 2 is a front elevation of the same, the front side of the casing being removed to show the interior
45 construction, and a part of the view being in section, in a plane indicated by the lines *c d c d*, Fig. 1, and looking in the direction of the arrow 2; Fig. 3, a top view of the same, the top of the casing and some of the upper parts

being removed to show the interior parts be- 50
low; Fig. 4, a detail view of one of the coin-tubes; Fig. 5, a detail view of a part of the registering device.

The exterior casing, A, of the apparatus is made of any suitable material, such as sheet 55
metal or thin cast metal, and of a proper form to conveniently inclose the working parts, the lower part of the case ending in an open spout for the discharge of the cigars, one by one, as they are purchased. In the back part of the
60 case are located as many cigar-receptacles as there are to be different qualities or prices of cigars to be sold from the apparatus. I show three such receptacles, B C D, of proper width to receive the length of the cigars to be placed
65 therein, of sufficient thickness to receive the width or diameter of a single cigar freely, and of sufficient depth to contain as many cigars, one upon another, as may be desired to be held in the respective receptacles at one time. 70
These receptacles are respectively provided with bottoms E F G, which are mounted on pivot-shafts suspended by straps at the side edges of the receptacles, which shafts are respectively provided with crank-arms P P' P'', 75
whereby a partially-revolving movement may be imparted to the bottoms for discharging cigars from the receptacles. The bottoms are trough-shaped or curved in the form of partial
80 cylinders, about semi-cylinders, normally lying with their concave sides upward, in which the lowermost cigars in the several receptacles are held to retain all the cigars in the said receptacles.

In order to discharge a cigar from either re- 85
ceptacle a partial revolution is given to the proper bottom, sufficient to turn around the lower cigar and partly over the same, between it and the next cigar above, the movement of the bottom being far enough to discharge the
90 said lower cigar out of the same, at which moment the next cigar above is sustained directly by the bottom and will continue to be held up by the same till and after it returns to its normal position again. Thus a repetition 95
of the partial revolutions of either bottom in this way and back again discharges one cigar each time. In order to impart this rotary os-

cillating movement to the said receptacle-bottoms, I employ a system of lever movements, all operated by a single handle, H, the arrangement being such that only that bottom is
 5 turned each time for which a coin has been deposited in the apparatus, of the proper value to buy a cigar in the receptacle above the said bottom. These levers and their operative connections with the said handle and with the re-
 10 spective receptacle-bottoms I now describe as follows: For the bottom E of the receptacle B a lever, N, is mounted and pivoted, as clearly shown in Fig. 1. The lower end of this lever is connected by a rod or bar, O, with the crank-
 15 arm P on the pivot-shaft of the bottom. It will be seen that by pushing the upper end of this lever back the bottom E will be turned backward and upward, so as to discharge a cigar therefrom. The handle H is secured to
 20 a cross-bar, I, extending transversely in the case of the apparatus far enough to have secured thereto a set of push-bars, K, L, and M, all directly in front of the respective levers which operate the respective receptacle-bot-
 25 toms. The push-bar K for the lever N has at its rear end a little platform, I', in a nearly horizontal position, as shown. Upon this platform the proper coin for purchasing a cigar in the receptacle B is to be dropped. This is
 30 done by inserting the coin into a coin-tube, Q, of the proper size to admit the coin, the lower end of the tube being just over the front edge of the platform I', and the lower part of the tube being curved backward somewhat, so as
 35 to gently drop the coin flat upon the platform in the right position. The rear edge of the coin then reaches to the center of a horizontally-extended preferably V-shaped groove or
 40 shoulder, N⁴, on the upper end of the lever N, while the front edge of the coin bears against a shoulder at the rear end of the push-bar K, and at the front edge of the platform on which it rests. It will now be clearly understood
 45 that when the handle H is pushed back into the case, and the push-bar K is thereby moved backward, the coin 5 will form an intermediate mechanical connection between the push-
 50 bar and the lever N, and thereby the bottom E will be turned, so as to discharge a cigar from its receptacle, and that if the coin were not therein placed the lever would not be
 55 moved by the push-bar K, and no cigar would be discharged. This construction illustrates how, by this apparatus, cigars are sold and delivered when a single coin just sufficient to
 60 buy a cigar is dropped into the apparatus. I have marked the coin shown by the figure 5 to indicate that a five-cent cigar is to be purchased by such a coin. When the lever N has been
 65 pushed back by the push-bar and coin, as above set forth, it is caught and held back by a pivoted ratchet-bar, x, one of the teeth on the lower edge of which catches over the upper edge of the groove N⁴ of the lever, a spring, x', drawing back on the upper end of the ratchet-bar to hold it down upon the said grooved edge or other suitable part of the said lever.

Then, as the push-bar K and handle H are sprung forward by a spring, t, the coin 5, being released, drops into a receptacle, U. The
 70 lever then is released from the ratchet-bar x and allowed to be drawn forward by its spring x² by a device which also performs another operation, and which I will now describe. A
 75 rock-shaft, O'', is located transversely in the apparatus in a proper position above and forward of the lever N, as shown. On this rock-shaft is a downwardly-projecting arm, l, which is connected with the upper end of the ratchet-
 80 bar x by a connecting-rod, m. It will be seen that when the said arm is swung forward by the rocking of the said rock-shaft the lower end of the ratchet-bar will be lifted and will
 85 disengage the lever N and allow it to be swung forward by its spring x². This releasing of the lever N by the rock-shaft O'' may be considered merely incidental to the main function of
 90 the same, the purpose of which is to swing down a pair of wires or rods, k k, which are located below the cigar-receptacles B C D, and on which the cigars set free from their bottoms
 95 are first dropped. These wires are then to be swung down away far enough to allow the cigars held thereon to drop and fall to the bottom of the case, from which they are then discharged.
 100 For this purpose the wires are held in a pair of pivoted holders, g g, which allow a full swinging movement of the wires on their pivots. The upper ends of the wires (which are shown connected together as one at the upper
 105 end) are connected by a rod, f, with another arm, e, projecting from the rock-shaft O'', as shown in Fig. 1. Now, in order to give the required rocking motion to this rock-shaft, to perform this office of lifting the rod f, as well
 110 as to release the ratchet-bar x, I employ the forward return movement of the handle H and its cross-bar I, as they are sprung out by the spring t after each pushing in of the same. To do this, a draw-bar, b, is suspended by trun-
 115 nions a, in loops or bearings projecting downward from the rock-shaft, and reaches forward, so as to rest upon the cross-bar I. There is a hook-notch or shoulder, b^x, in or on the lower edge of the draw-bar, in such a position
 120 that it will catch over the upper edge of the cross-bar I when the handle H is pushed in for selling any cigar. Then, when the handle and cross-bar are again sprung forward, the draw-bar is drawn forward by the cross-bar,
 125 and is thereby caused to rock the rock-shaft O'', to produce the movements above specified. It remains to show how the shoulder b^x of the draw-bar is set free from the cross-bar as soon as it has been drawn forward far enough
 130 thereby. This is effected by the upturned rear end of the draw-bar, which, when the draw-bar is drawn forward, finally strikes a fixed piece, b', and thereby the forward end of the draw-bar is lifted sufficiently for the purpose,
 135 when it is immediately returned to its previous normal position by a counter-spring, d. This operation is performed every time when a cigar is sold.

I now proceed to describe how a cigar may be sold for a sum less than a given coin put into the apparatus, and the exact change is given back to the purchaser.

5 The drawings are represented to illustrate how an eight-cent cigar may be purchased by depositing a ten-cent coin in the apparatus, which returns two cents to the purchaser. For this purpose a dime is dropped into the
10 coin-tube R, and the handle H is pushed in, as before described, for purchasing a five-cent cigar. The connection is made between the push-bar L and the upper end of the lever N' to turn, by the connecting-rod O', the bottom
15 P' of the cigar-receptacle C by the coin falling on a platform, I', in substantially the same way as described above for a five-cent coin, and as sufficiently illustrated in Fig. 3, the coin being finally deposited in a receptacle, U'. Then, for
20 returning the two cents change, the apparatus is provided with two coin tubes or receptacles, S S', in each of which is kept a sufficient supply of cents. The operation, to be automatically performed as the lever N' is swung back
25 and forward again in the act of discharging a cigar from the receptacle C, is by a suitable device connecting therewith to discharge one cent from each of the two coin-receptacles S S'. The discharging device at the lower end of
30 each of these coin-receptacles is represented in Figs. 2 and 4. A forked or double spring, A'', has inward projections on its lower ends, which spring into the sides of the two coin-receptacles, respectively, about the diameter
35 of a single coin above the lower ends of the two receptacles. Then a vibratory lever, z, outside of the receptacles, has a horizontal inwardly-projecting cross-bar or ledge at its lower end, which, when swung under the two
40 receptacles, furnishes a bottom to both and prevents the discharge of any coin from them for the time being. At the upper end of the lever is another cross-bar which reaches inside or back of the two arms of the spring A'', and
45 is so arranged that when the upper end of the lever is swung out the bar draws the spring-arms outward and withdraws the projections of the spring from the coin-receptacles, thereby allowing the coins to descend in the two re-
50 ceptacles; but at that time the lower bar or ledge of the lever has been swung under the lower ends of the receptacles and prevents the discharge of any coins therefrom. When, however, the lever is swung in the opposite di-
55 rection, the said upper bar of the same allows the projections of the spring A'' to enter the coin-receptacles again below all but the lower coin in each receptacle, while immediately following that movement the lower bar or ledge
60 of the lever is swung away from the lower ends of the receptacles and allows the two coins to drop out therefrom and descend to and be discharged from the lower end of the case simultaneously with the cigar purchased, and thus
65 the purchaser gets his change at the same time and from the same place as his cigar. This

lever z is connected with the operating-lever N', or with a horizontal offset, N³, of the same to bring it in front of the coin-receptacles S S' by a connecting-rod, v', so that the movements
70 of the said lever N' effect the movements of the said lever z; as required.

Next I proceed to describe the means by which a cigar may be paid for with two coins, the two making the exact sum required for
75 the payment.

Suppose, for the present instance, that the price of the cigar is six cents, and it is desired to pay for the same with a five-cent coin and a one-cent coin together. For this purpose
80 there are two coin-receiving tubes, T T', the former to receive the one-cent coin and the latter to receive the five-cent coin, as indicated in Fig. 3. The operation is the same as for a single coin above described, except that
85 at the rear end of the push-bar M there is pivoted a curved or bent bar, c^x, the two ends of which bear simultaneously against the two coins dropped upon the platform from the coin-tubes, as shown clearly in Fig. 3, so that to-
90 gether the coins push against the shoulder of the lever N², which is connected by the connecting-rod O² with the crank-extension P² of the pivot-shaft of the bottom E of the cigar-receptacle D, as shown in Figs. 1 and 3. In
95 this case, if only one coin is dropped into the apparatus, one end of the swiveled bar c^x has nothing to bear against, and the bar simply swings round without moving the lever N². The coins drop into a receptacle, U².
100

I propose to connect with each retailing device in the apparatus a counting mechanism, so that the number of cigars sold therefrom will be accurately shown or registered, and it will be known when the receptacle becomes
105 exhausted and requires replenishing. I show one such counting mechanism to be operated in connection with the first-described selling device from the receptacle B. From an arm or projection of the bottom E of this recepta-
110 cle a connecting rod or wire, n, extends upward to a position near the top of the case where the register is located, as shown. This connecting-rod is attached at its upper end to a ratchet lever or pawl, o, which takes into the
115 teeth of a ratchet-wheel, p, on a shaft, r, and a numbered wheel or disk, q, on the same shaft shows its registering-numbers successively through an aperture in the case, as shown at the figure 11 in Fig. 5. The different connect-
120 ing parts are so proportioned that every oscillation of the bottom E of the cigar-receptacle for discharging a cigar advances the wheel q one number. A spring-detent, s, has a tooth or projection, s', which enters a hole in the
125 face of the ratchet-wheel p, when the wheel has made a full revolution and the cigars in the receptacle are sold out. A similar detent to the s² on the same detent enters the upper part of the corresponding coin-receiving tube
130 Q at the same time, to prevent the dropping in of any more coins. In addition to this, in-

stead of the highest number to be shown on the number-wheel *q* there may be some such word as "out" or "end" to show through the aperture of the case to announce the same fact.

5 I claim as my invention—

1. An apparatus comprising the cigar-receptacles B C D, oscillating bottoms E F G, handle H, cross-bar I, push-bars K L M, levers N N' N², adapted to be moved by the respective push-bars on the intervention of a proper coin between them, and means, as connecting-rods O O' O², for connecting the levers and pivot-shafts of the oscillating bottoms, substantially as herein set forth.

15 2. The combination of a push-bar, as K, bearing a coin-platform, I', thereon, a coin-tube, as Q, and lever, as N, provided with a transverse grooved shoulder, as N⁴, substantially as and for the purpose herein set forth.

20 3. The combination of a lever, as N, ratchet-bar *x*, rock-shaft O'', having an arm, *l*, connecting-rod *m*, shouldered draw-bar *b*, and trip projection *b'*, handle H, and cross-bar I, substantially as and for the purpose herein set forth.

25 4. The combination of the handle H, cross-bar I, shouldered cross-bar *b*, rock-shaft O'', provided with an arm, *e*, connecting-rod *f*, and

cigar-supporting rods *k k*, substantially as herein set forth.

5. The combination of the handle H, push-bar, as L, lever, as N', coin-tube, as R, coin-receptacles S S', double spring A, vibrating lever Z, and means, as the connecting-rod *v'*, for connecting the said coin-discharging device and the said lever, substantially as herein set forth.

6. The combination of the handle H, push-bar, as M, lever, as N², provided with a swiveled bar, *c^x*, and two coin-tubes, T T, adapted to place coins between the swiveled bar and lever, substantially as herein specified.

7. The combination of a cigar-receptacle bottom, as E, connecting wire or rod *n*, pawl *o*, ratchet-wheel *p*, numbered wheel *q*, coin-receiving tube, as Q, and detent *s*, provided with detent projections *s'* and *s²*, substantially as herein set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 18th day of August, 1885.

PER CONRAD ÖSTERBERG.

Witnesses:

G. O. W. LÜNDGREN,
A. HELAND.