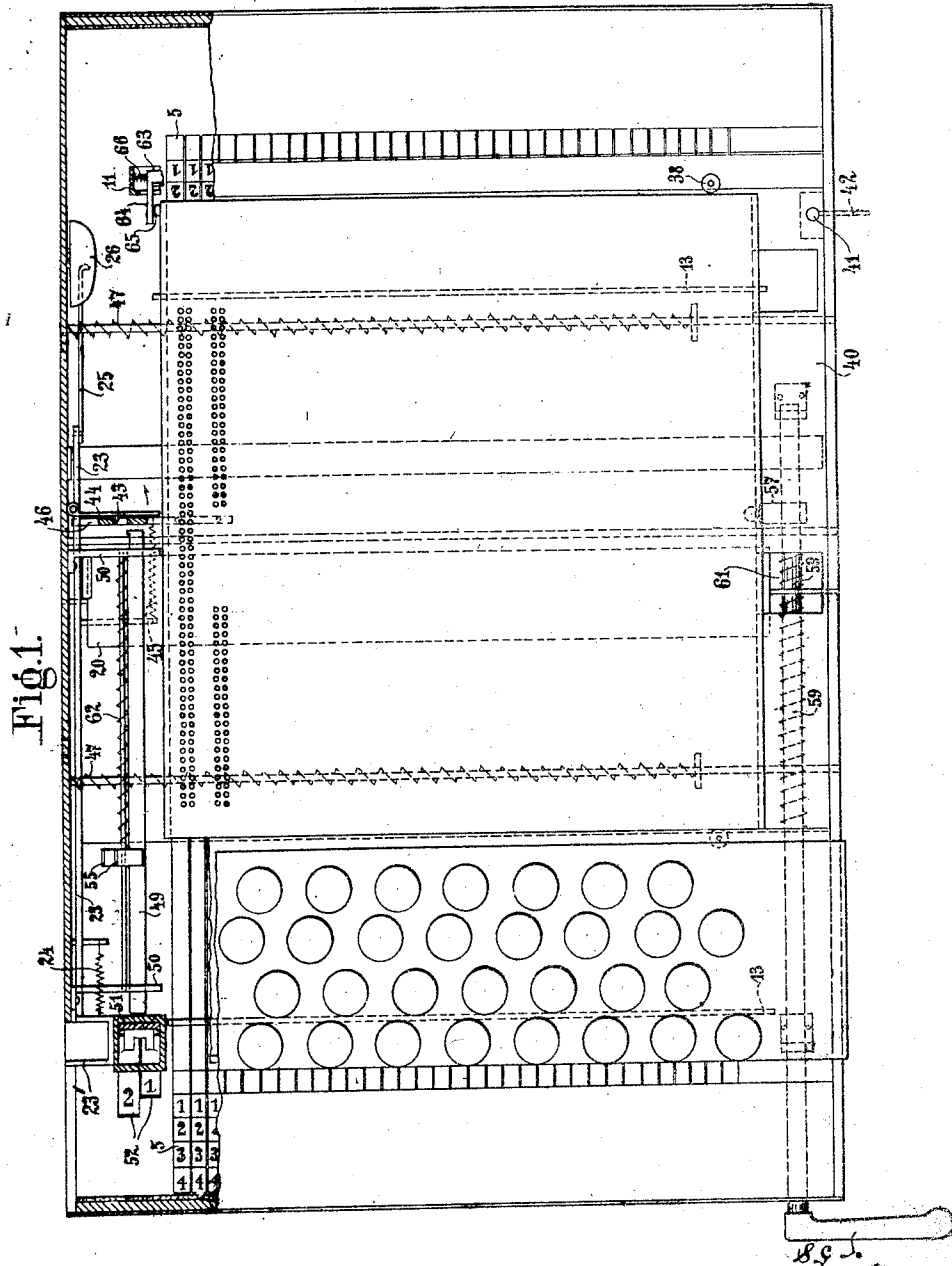


V. PODUSCHKA.
 REGISTERING AND RECORDING APPARATUS.
 APPLICATION FILED AUG. 2, 1909.

1,047,837.

Patented Dec. 17, 1912.

3 SHEETS—SHEET 1.



Witnesses.

[Signature]
[Signature]

Inventor
 Victor Poduschka
[Signature]
 James L. Norris
[Signature]

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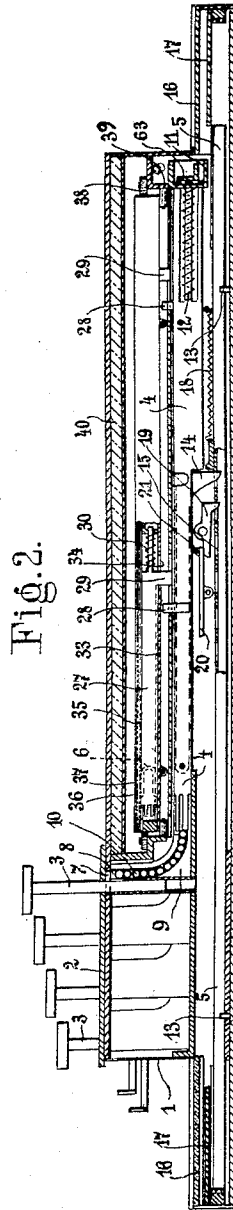


Fig. 2.

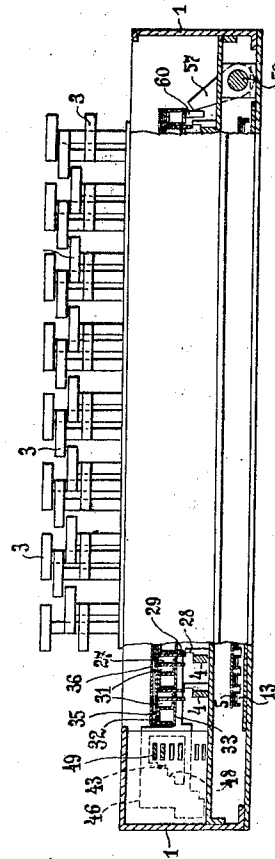


Fig. 3.

Witnesses:

W. B. Keeler

C. H. Kesler

Inventor
Victor Poduschka

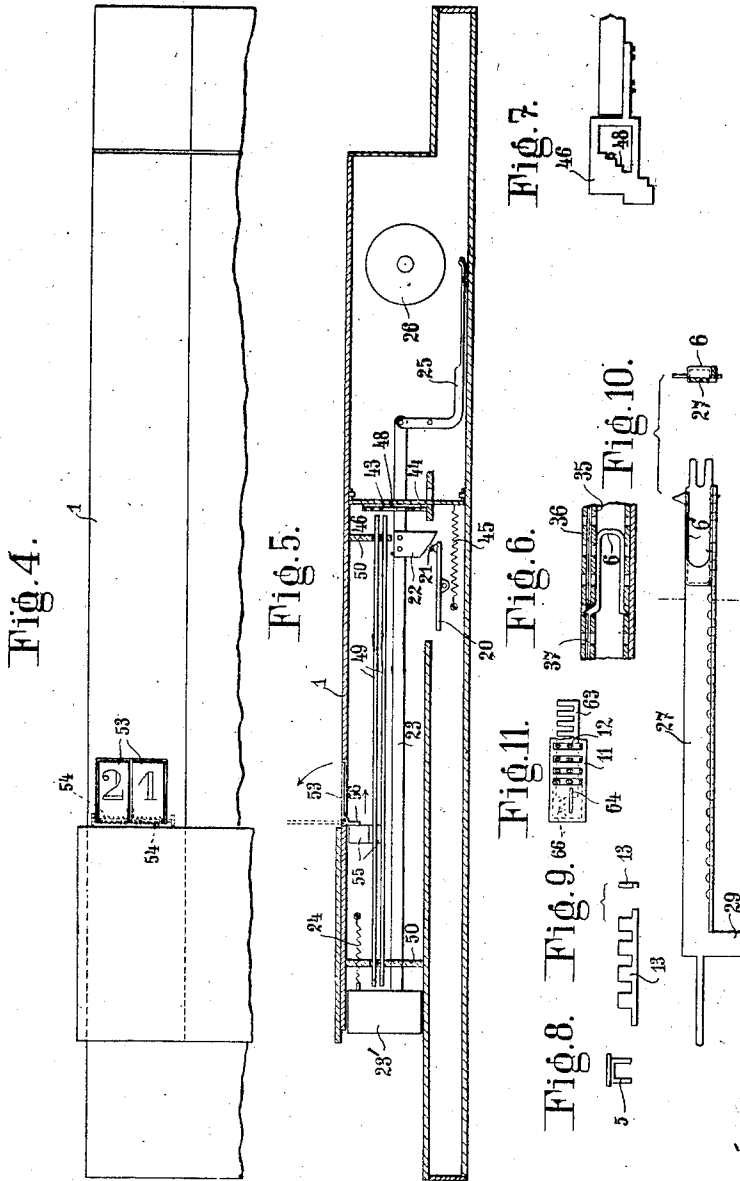
James L. Norris
Atty

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Witnesses:

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[Signature]

Inventor

Victor Poduschka

James L. Norris

[Signature]

UNITED STATES PATENT OFFICE.

VICTOR PODUSCHKA, OF KLOSTERNENBURG, NEAR VIENNA, AUSTRIA-HUNGARY.

REGISTERING AND RECORDING APPARATUS.

1,047,837.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed August 2, 1909. Serial No. 510,748.

To all whom it may concern:

Be it known that I, VICTOR PODUSCHKA, a subject of the Emperor of Austria-Hungary, residing at Klosternenburg, near Vienna, Austria-Hungary, have invented certain new and useful Improvements in Registering and Recording Apparatus, of which the following is a specification.

The invention has for its object a registering and recording apparatus arranged for a number of pay places in which, at each depression of a key, which can only take place under control, a slide is displaced one hole at a time in a row of holes formed in a recording carriage by means of a striking bar displaced by a key bar, the several rows of holes forming scales for the classes of goods to be sold, so that from the position of the slide in the several rows of holes, the sum of each of the kinds of goods that have been sold can be ascertained. In the appliances of this kind as hitherto constructed as many carriages are arranged one above the other as there are pay places, while in accordance with the present invention, only a single carriage is provided for all the pay places. In addition to the simplification of the construction and reduction of the total height of the apparatus thereby obtained, the further advantage is secured that at any time merely by inspecting the carriage, which is protected by a glass plate, the quantity sold from all the pay places can be ascertained, while in the case of the devices heretofore used each of the lower carriages had to be withdrawn from the casing. Further, the considerable height of the apparatus necessitated by the presence of a number of carriages impeded the view of the person attending to or using the apparatus.

The provision of a single recording carriage for all the pay places is rendered possible in accordance with the present invention, owing to the fact that instead of being formed with single rows of holes, the carriage is furnished with groups of rows of holes, with as many rows of holes as there are pay places, and is adjustable transversely, with one row of holes of the groups relatively to the key bars for actuating the striking bars.

The accompanying drawings illustrate by way of example a checking and recording apparatus arranged for two pay places—but this checking and recording apparatus can be modified for as many as six pay places.

In said drawings, Figure 1 is a plan view of the apparatus, with parts in section; Fig. 2 is a longitudinal sectional view, and, in Fig. 3 a cross-sectional view; Fig. 4 is a plan view of the parts shown in section in Fig. 1 and Fig. 5 is a longitudinal section of the same; while Figs. 6 to 11 illustrate details which, with the exception of Fig. 10, are drawn to a larger scale than Figs. 1 to 5.

The apparatus comprises a box or casing 1, with a key plate 2 through which pass keys 3, each of which keys corresponds to a class of the goods to be sold and recorded, and when depressed these keys displace a key bar 4 (Fig. 2) which operates a strip 5 and a recording slide 6. The strips 5 serve as registers, as will appear later. For the purpose of displacing the key bar 4, each of the keys 3 is provided with a projection 7 which, upon the depression of the key, presses upon the uppermost ball of a row of balls 10 guided in a channel 8 in a ball casing 9, the lowermost of these balls acting upon the key bar 4. This bar is forked at both ends. Its two-pronged end which is directed toward the keys, is guided in the ball casing 9, while its other end, which is formed with three prongs, extends into a locking casing 11 and is subjected to the action of a compression spring 12 which returns the key bar 4 and the keys 3 to their normal position when released. The strips 5 present the cross-sectional shape shown in Figs. 3 and 8, and rest upon guide combs 13 which extend transversely over the base of the casing. (See Fig. 1.) In order to permit the actuation of said strips by the depression of the keys, a pawl 14 is pivoted to each key bar 4, said pawl engaging in holes 15 in the corresponding strip 5, and advancing the latter one step during the forward movement of the key bar.

In order to enable both the person manipulating the apparatus, and the assistant or waiter, as the case may be, to check up or keep tab on the depressions of the keys, both

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ends of each strip 5 are provided with serial numbers 1, 2, 3, 4, (Fig. 1), and above the ends of the strips are arranged cover plates 17 protected by glass plates 16; these cover plates permit of reading only that number which corresponds to the depression of the key. Accordingly, assuming that the same key is depressed four times in succession, the number "4" will appear at both ends of the apparatus. This number suffices for the maximum number of the simultaneous sales of similar articles, for example, four glasses of beer, so that it is not necessary to make the strip 5 longer. If similar or different registrations or key depressions are to follow in succession, the strip must be previously returned to its normal position. To this end each strip in its forward movement distends a spring 18, the retractive action of which is, however, prevented by means of a locking pawl 19 which falls into one of the holes 15 in the strip 5. A transverse plate 20 is pivoted in the casing 1 over the pawls 19; this plate is provided with a roller 21 which is encountered by a projection 22 (Fig. 5) on a releasing rod 23, provided with a handle 23' and displaceably mounted in the casing 1, as soon as the latter is drawn back. The projection 22 then presses upon the roller 21 of the plate 20 and said rod upon the pawl 19, whereby the latter is lifted from the registering strip 5, and the said strip is then returned to its normal position by its spring 18. The releasing rod 23 is returned to its normal position by a spring 24, (Fig. 5). A lever 25 pivotally mounted in the casing 1 is pivoted to the front end of the releasing rod 23, and when the releasing rod is pushed back, said lever strikes against a bell 26 arranged in the casing 1 so that each time the registering strips 5 are replaced, which should be effected immediately before each depression of a key, a signal is given which calls attention to the depression of the key or the operation of the apparatus.

The recording slides 6 are shifted in the manner usual in appliances of this kind by means of striker bars 27, (Figs. 2, 3 and 10), each of which belongs to a group and is displaced by a nose 28 on the key bar 4 which strikes against a nose 29 on the striker bar 27. The return of the striker 27 to its normal position is effected by a spring 30. The strikers 27 are L-shaped in cross section; they are formed with a row of holes at their bottom and lie in channels 31, (Fig. 3), formed by L-shaped guides 32 and a bottom plate 33. In the bottom plate are formed slots 34, (Fig. 2), through which the noses 29 of the strikers project.

The recorder 6, in the construction illustrated, is in the form of a U-shaped spring clip, the lower leg of which bears against the perforated bottom of the corresponding

a perforated plate 35 covering the above mentioned channels 31. Upon plate 35 rests a perforated registering and recording cover plate 36, the upper face of which is divided in accordance with the character of the goods to be sold. Between plates 35 and 36 there is clamped a sheet of paper 37 which is printed in a similar manner. The free ends of the legs of the recorder are formed with sharp noses which take into the perforations in the bottoms of the strikers 27 and in the plates 35 and 36. Accordingly, each time that a key is depressed, the corresponding striker will carry its recorder 6 forward one step, *i. e.*, hole, whereupon the nose upon the upper leg of the recorder will spring upwardly when the new hole is reached, thereby perforating the paper sheet and thus recording the actuation of the key. The end of the nose just referred to will be visible through the cover plate 36. When the striker returns to its original position under the influence of its spring 30, the recorder is unaffected, and remains in the position into which it has been shifted by the forward movement of the striker, as above described, this being due to the beveling of the noses on the recorder legs. See Fig. 6. Fig. 2 illustrates the initial position of the recorder. The members 27, 32, 33, 35 and 36 constitute the recording carriage which is displaceable in the casing 1 transversely, that is to say perpendicularly to the key bars 4, and is guided by rollers 38, 39, (Figs. 1 and 2). A glass plate 40 is inserted in the casing 1 and is locked by a bolt 41 (Fig. 1) which can be engaged with and disengaged from said plate by a key or spanner 42.

The rows of holes in the carriage are arranged in groups which correspond to the classes of goods to be recorded, and each group comprises as many rows of holes as there are pay places. By pay places, are meant that number of tables, counters or the like in a place of business, such as a restaurant, for example, in which the recording of the foods, drinks or other articles sold necessitates a single assistant, waiter or cashier. The following, for example, might be regarded as classes of goods: half pints of beer, quarter pints of wine, and so forth. Now, when, for instance, there are two pay places, each group of rows of holes must comprise two rows of holes, each of which has its recording slide 6 and its striker 27, while each group has only one key or bar 4 and one registering strip 5. The strikers of a group are arranged side by side and the channels 31, (Fig. 3), are wide enough to afford room for two strikers to be arranged side by side in them.

The recording carriage has connected therewith a pair of expansible coil springs 47, which springs exert thereon a tendency toward movement to the right with respect

to Fig. 1. Said carriage is, however, held normally against such movement by means of a latch 43 engaged with a keeper plate 46 fixed to the bottom of the casing, said latch being formed upon a wing or flap 44 pivotally mounted in the casing. This flap is normally held against keeper plate 46 by a spring 45. When the carriage is in its normal position, the noses 29 on the strikers 27 are removed from the path of the noses 28 on the key bars 4, and in consequence, no payments can be recorded at such time. It is necessary, therefore, in order that a sale at any pay place may be recorded, that the carriage be adjusted transversely, so as to bring the noses on the strikers corresponding to that place into alinement with those on the key bars. To effect this adjustment, there is formed on the keeper plate 46 a series of steps 48 which coöperate with a corresponding number of adjusting bars 49, the number of bars and steps being the same as that of the pay places. In the present instance, the adjusting keeper plate 46 has six steps, (see Fig. 7), so that the apparatus can be used for as many as six pay places; obviously, in such case, there must be a correspondingly larger number of adjusting bars and striking bars in each group. The arrangement of the adjusting bars is such that when any one thereof is moved forwardly, as hereinafter described, its inner end will strike against the locking flap 44, and will force the same to swing upon its pivots, thereby releasing latch 43 from the adjusting keeper plate 46. When this release takes place, the carriage will be free to move to the right under the influence of springs 47. The adjusting bars, moreover, are arranged one above another, (Fig. 3), and in line with the corresponding steps 48 on keeper plate 46. The extent of movement of the carriage will vary, therefore, according to the particular adjusting bar operated, and the carriage will move into position to permit the actuation of the corresponding key bar.

The adjusting bars 49, (Figs. 1, 3 and 5), which are passed through guide plates 50 are held by means of springs 62 in their normal position and terminate in front of a key casing 51 which permits only of the actuation of the adjusting bar 49 corresponding to a pay place by means of the key 52 belonging to that pay place. Accordingly, the apparatus can be locked for a particular pay place by withdrawing the key for that pay place. If an adjusting bar 49 is actuated by means of the proper key 52, it rotates the flap 44 forward so that its latch 43 releases the adjusting keeper plate 46. The recording carriage will then be shifted by the springs 47 until the bar 49 actuated is engaged by the corresponding step 48 of the adjusting keeper plate. The

carriage is then arranged for the corresponding pay place. In order to keep check on this adjustment by rendering the same visible, a small indicating plate 53 furnished with a sign or number on both sides is provided for each pay place, (Figs. 4 and 5); this plate is held in horizontal position in a recess in the cover plate of the casing by a spring 54, and when the corresponding adjusting bar 49 is pressed forward a projection 55 upon said bar, (Fig. 5), will strike against an extension 56 of the plate 53, thereby raising said plate and holding it in upright position until the recording carriage has been returned to its normal position. This return to normal position is effected by means of a finger 57, (Fig. 3), on a shaft 59 rotatable in the casing and provided with a handle 58, (Fig. 1), this finger acting upon an extension 60, (Fig. 3), of the recording carriage as soon as the handle 58 is rotated inward. In order to facilitate this return to the normal position, a helical spring 61 is coiled around the shaft 59; one end of this spring is secured to the bottom of the casing while its other end is secured to the shaft 59, so that it applies the finger 57 with constant pressure against the extension 60 of the carriage. When the handle 58 is rotated to the left until the latch 43 of the flap 44 engages the adjusting keeper plate 46, whereby the recording drawer is again locked in its normal position. Simultaneously, the adjusting bar 49 springs back into the normal position under the influence of the spring 62 and the same operation takes place with the indicating plate 53 under the influence of its spring 54, so that the carriage is ready for re-adjustment for a pay place. When the recording drawer occupies its normal position, no record can be made, as the strikers 27 cannot be displaced by the key bars 4.

In order that the keys 3 may be locked when the recording drawer occupies its normal position, the slotted casing 11 is arranged transversely of the key bars 4, (Figs. 1, 2 and 11), the front ends of the key bars being designed to pass through these slots. There is also arranged within casing 11 a comb-like slidable strip 63 provided with a lateral arm 64, (see Fig. 1) which extends into the path of a projection 65 on the carriage. When said carriage is in its normal position, the teeth on strip 63 will aline with the slots in casing 11, and thus prevent the actuation, *i. e.*, forward movement, of the key bars, the strip being held in position by a spring 66 arranged within the casing and bearing against arm 64. When, however, the carriage is set for a pay place, as above described, spring 66 will move the strip in the same direction, so that the spaces be-

tween the teeth of said strip will register with the slots in the casing.

The rows of holes of each group of the recording drawer can either extend over the entire length of the recording drawer, as shown in Fig. 1, or only over a part of its length, in which case two or more short groups of rows of holes may be utilized. The shorter groups of rows of holes then serve for recording the goods for which there is the smallest sale and the longer groups of rows of holes for recording the more salable goods. Of course, each group of rows of holes has its own key 3 with key bar 4 and registering strip 5.

When the apparatus is in use the recording operation is as follows: If an article assigned to a given pay place is sold, the key 52 corresponding to this pay place is inserted in the key casing 51, so as to adjust the carriage, and erect the corresponding indicating plate 53. Then the key 3 corresponding to the article in question is depressed, the actuation of the key being indicated by the registering strip 5 which is thereby moved forward. The corresponding recording slide 6 is moved forward one step, as above described, whereupon its pointed upper nose will perforate the record sheet 37 between the perforated plates 35 and 36. The sale of goods during business hours can be ascertained from the position of the pointed upper nose of the recording slide 6 in the upper perforated plate 36. At the end of business hours all the keys are withdrawn, the record sheet 37 removed, utilized for making up the books or any other purpose, and replaced by a fresh one for the following day; the recording slides 6 should, however, be returned separately by hand to initial position, before the new sheet is inserted, this being readily effected subsequent to the removal of the original sheet.

I claim as my invention:

1. In an apparatus of the class specified, the combination of a movable carriage adapted to carry with it a record sheet; a spring clip for perforating said sheet; and key-operated devices for actuating said clip.

2. In a checking and recording apparatus, the combination of a movable carriage adapted to carry with it a record sheet; a skeleton keeper secured to said carriage; a spring-controlled movable latch normally engaged with said keeper for holding said carriage against movement; an endwise-movable member having its inner end projecting through said keeper for releasing said latch; means for automatically moving said carriage in one direction when such release takes place; and means for making a record upon said sheet.

3. In a checking and recording apparatus, the combination of a movable carriage

adapted to carry with it a record sheet; a skeleton keeper secured to said carriage; a spring-controlled movable latch normally engaged with said keeper for holding said carriage against movement; an endwise-movable member having its inner end projecting through said keeper for releasing said latch; means for automatically moving said carriage in one direction when such release takes place; means for making a record upon said sheet; and means for subsequently moving said carriage in the opposite direction, to return same to its initial position and to reengage said latch with said keeper.

4. In a checking and recording apparatus, the combination of a movable carriage adapted to carry with it a record sheet; a skeleton keeper secured to said carriage; a spring-controlled movable latch normally engaged with said keeper for holding said carriage against movement; an endwise-movable member having its inner end projecting through said keeper for releasing said latch; means for automatically moving said carriage in one direction when such release takes place; means for making a record upon said sheet; a shaft provided with a member adapted to engage said carriage for moving the latter in the opposite direction, to return same to its initial position and to reengage said latch with said keeper; and means for operating said shaft.

5. In an apparatus of the class specified, the combination of an adjustable sheet-carrying element; recording means for acting on the sheet; key-operated devices for actuating said recording means; means for adjusting said element; a slide associated with said devices for locking the same against actuation until the adjustment of said element has been completed; and connections between said element and said slide for actuating the latter from the former.

6. In an apparatus of the class specified, the combination of an adjustable sheet-carrying element having distinct feed movements of different extents; recording means for acting on the sheet; selective means for imparting such feed movements to said element; a slide associated with recording means for locking same against actuation until a feed movement of said element has been completed; and connections between said element and said slide for actuating the latter from the former.

7. In an apparatus of the class specified, the combination of a support adapted to carry a record blank; devices arranged interiorly of said support for perforating said blank; and means for progressively advancing said devices bodily in one direction within said support.

8. The combination, with a carriage adapted to carry a record sheet; of a spring

member arranged within the carriage for perforating said sheet; and means for progressively advancing said member.

9. The combination, with a support adapted to carry a record sheet, said support having a perforated top; of a member arranged interiorly of the support and having a point adapted to project through the perforations in said top, to perforate said sheet; and means for bodily shifting said member in one direction.

10. The combination of a support provided with a pair of superposed perforated plates adapted to receive a record sheet therebetween; a member arranged interiorly of said support and having a point adapted to project through the perforations in said plates, to perforate said sheet; and means for bodily shifting said member in one direction.

11. The combination, with a movable carriage adapted to carry a record blank; of means for moving said carriage in one direction to adjust the position thereof; a recording device arranged interiorly of said carriage for acting on said sheet; and means for advancing said device bodily in a direction at right angles to that of the movement of said carriage.

12. The combination, with a support for a record sheet; of a device for perforating said sheet; a member for progressively advancing said device; a key-operated member for actuating the first-named member; and means for controlling the actuation of said key-operated member.

13. The combination of a support for a record sheet having a perforated top plate against which said sheet is disposed; a member arranged interiorly of said support and having a perforated bottom plate; and a recorder having pointed ends arranged for interchangeable engagement in the perforations in said top and bottom plates, said recorder being moved progressively in one direction by the actuation of said member.

14. The combination, with a support for a record sheet; of a registering strip; a self-acting member for perforating said sheet; and mechanism for simultaneously shifting said member and strip from one position to another.

15. The combination, with a support for a record blank; of an endwise movable registering strip having its opposite end portions marked with reversely-arranged numerals; a recorder for acting on said blank; a casing wherein the aforementioned parts are inclosed provided adjacent its opposite end with a pair of sight openings disposed above the numbered portions of said strip; and means disposed within said casing for simultaneously operating said recorder and shifting said strip in one direction.

16. The combination, with a carriage having distinct feed movements of different extent and adapted to carry a record blank with it; of a selective series of recorders for acting upon said blank; and means for moving said carriage a distance corresponding to the particular recorder selected.

17. The combination, with a carriage having a variable feed movement and adapted to carry a record blank; of a selective series of recorders for acting upon said blank; a separate registering strip for each recorder; means for moving said carriage a distance conforming to the particular recorder selected; and means for simultaneously actuating said selected recorder and the corresponding strip.

18. In an apparatus of the class specified, the combination of a carriage adapted to carry with it a record sheet and having means associated therewith for moving it automatically in one direction; a stepped member secured to said carriage; a movable latch normally engaged with said member for holding said carriage against such movement; selective adjusting bars for releasing said latch from engagement with said member, each bar being coöperative with one of said steps to limit the extent of movement of said carriage consequent upon such release; and means for making a record upon said sheet.

19. In an apparatus of the class specified, the combination of a movable carriage adapted to carry with it a record sheet; and having means associated therewith for moving it automatically in one direction; a member secured to said carriage; a latch normally engaged with said member for holding said carriage against such movement; an endwise-movable bar associated with said member for releasing said latch; a movable indicator coöperative with said bar and movable by the latter into operative position when said bar is actuated; and means for making a record upon said sheet.

20. In an apparatus of the class specified, the combination of a movable carriage adapted to carry with it a record sheet; means for adjusting said carriage; recording means for acting on said sheet; a key-bar for actuating said recording means; a member provided with a slot through which said key-bar is adapted to project when actuated; and a member operatively connected with said carriage and having a slot adapted to be brought into and out of registration with the first named slot to control the actuation of said key-bar.

21. In an apparatus of the class specified, the combination of a carriage adapted to carry with it a record sheet; means for moving said carriage in one direction; recording means for acting upon said sheet;

selective key-actuated bars for operating
said recording means; a checking strip op-
eratively associated with said operating
means; means for holding said strip in po-
5 sition upon actuation; releasing means as-
sociated with said holding means; and a
signal operatively connected with said re-
leasing means.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit- 10
nesses.

VICTOR PODUSCHKA.

Witnesses:

JOSEF RUBARCH,
AUGUST FUGGER.