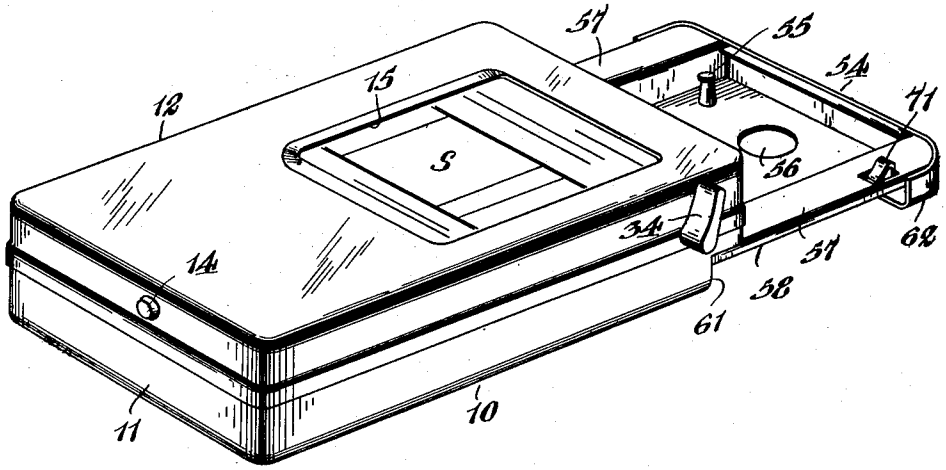
Aug. 22, 1939. W. A. PRINGLE ET AL 2,170,093

PORTABLE AUTOGRAPHIC REGISTER

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Fig. 1.



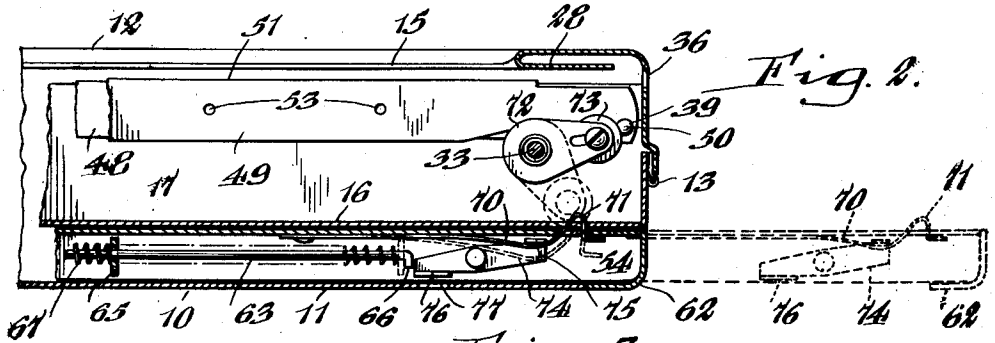
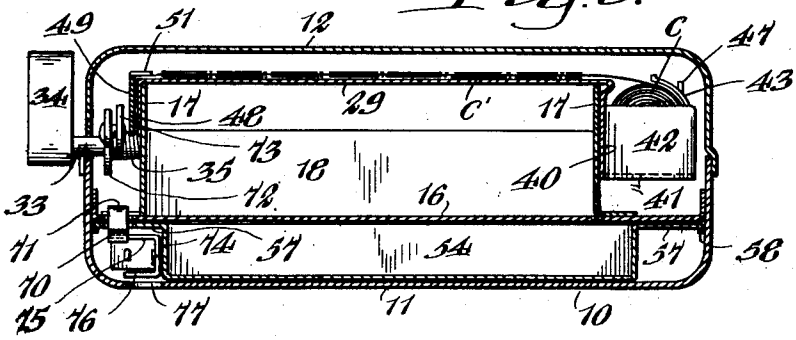


Fig. 2.

Fig. 3.



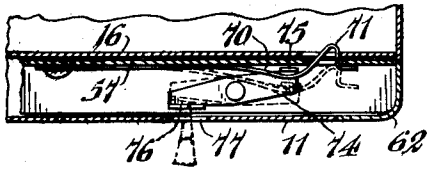


Fig. 6.

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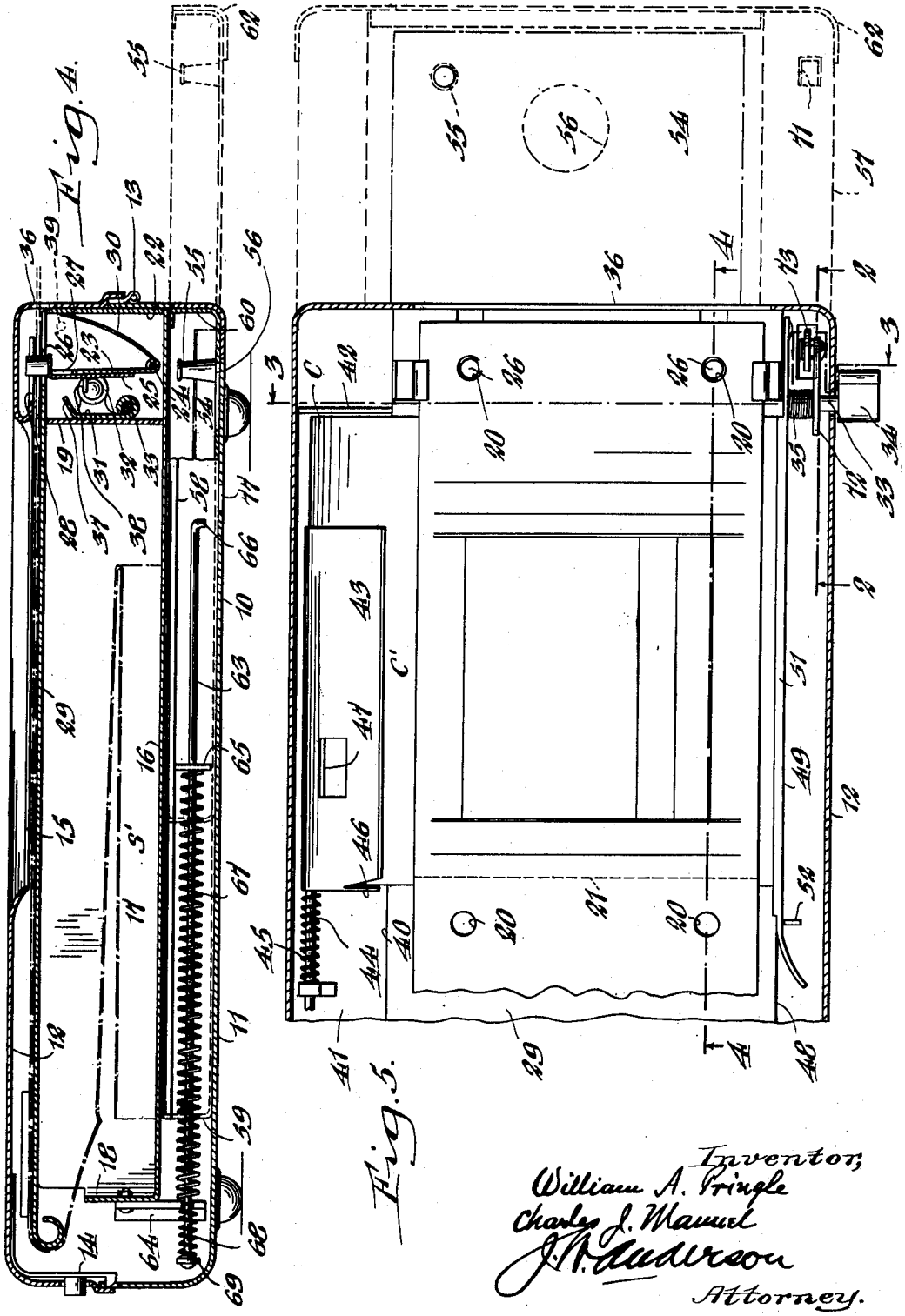


Fig. 4.

Fig. 5.

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Patented Aug. 22, 1939 2,170,093

UNITED STATES PATENT OFFICE

2,170,093

PORTABLE AUTOGRAPHIC REGISTER

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Application March 11, 1935, Serial No. 10,398

4 Claims. (Cl. 45—7)

This invention relates to improvements in record or writing machines of the autographic register type, and although the improvements may be embodied in various forms of recording apparatus of the autographic register type, they are herein disclosed for illustrative purposes in an autographic register of the portable type.

It is a general object of the invention to provide an apparatus of the class mentioned having improved arrangement for housing and supporting the supplies of record and transfer strips and for disposal of inscribed loose sheets.

A further object is to provide, in an apparatus of the class mentioned, an improved arrangement for a drawer or support for loose record strips or leaves together with improved means for mounting and controlling the same.

A further object is to provide an improved mechanism for controlling the projection and retraction of the drawer and to provide an automatic device dependent upon operation of the record strip feeding mechanism to cause the drawer to be projected.

Still another object is to provide an improved dual control for controlling the projection of the drawer either automatically upon strip-feed operation or manually according to the desire of the operator.

Another object is to provide an improved spring-motor actuation for the drawer and an improved buffing mechanism for cushioning the opening movement of the drawer.

A further object is to provide an improved drawer structure providing for its rigidity and durability, and for the mounting and support thereof in the register casing, whereby it is satisfactorily supported in its movements and when closed is practically invisible, its exposed parts being in conformity with the general contour of the register casing.

A further object is to provide an improved means for supporting and housing the carbon or record strip supply wholly within the casing walls of the register.

Other objects of the invention will be in part pointed out in the following detailed disclosure of an illustrative but preferred embodiment of the invention, and will be in part obvious in connection with this disclosure.

The invention accordingly comprises the features of construction, combination of elements, and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the claims.

For a more comprehensive understanding of the nature and objects of the invention, reference is had to the following detailed description and to the accompanying drawings, in which:

Fig. 1 is a perspective view of an autographic register of the portable type constructed in accordance with the invention;

Fig. 2 is a fragmentary, longitudinal, vertical section taken substantially on the line 2—2 of Fig. 5, looking in the direction of the arrows;

Fig. 3 is a transverse vertical section, taken substantially on the line 3—3 of Fig. 5;

Fig. 4 is a longitudinal vertical section partly taken on the line 4—4 of Fig. 5, and the lower part thereof being taken through the spring-motor housing;

Fig. 5 is a fragmentary plan view, parts being removed and in horizontal section; and

Fig. 6 is a fragmentary sectional view showing details of the drawer-latching device.

Referring to the drawings for a detailed description of the embodiment of the invention there shown, it will be seen that the improvements are embodied in an autographic register of the portable type which may be readily held in tne hand during entry of inscriptions, being light and of small bulk so as to be readily carried by the operator from place to place. The casing 10 may be of any preferred construction, preferably made of sheet material, such as sheet metal, and including a base section 11 and a top or upper section 12 preferably hinged at one end to the lower section as by a hinge 13. The top or cover section fits closely over the lower section and a latch 14, preferably a spring latch, is mounted at the rear end of the casing, being provided with an operating button extending through the casing wall. In this manner the cover 12 may be readily released and swung to open position. An opening 15 is provided in the cover for rendering the record strip S accessible for the entry of inscriptions.

Within the casing is a horizontal partition 16 extending from side wall to side wall of the casing and appropriately attached to said side walls and dividing the interior space into upper and lower compartments. Upstanding from the partition 16 are two longitudinal partitions 17 appropriately attached to the partition 16 and each being inwardly spaced a short distance from the adjacent casing side wall so as to provide relatively narrow compartments adjacent opposite casing side walls and an inner compartment between said partitions for accommodating the supply of record strips S. The rearward end of the

horizontal partition 16 is provided with an upwardly disposed part or flange 18 forming a rear wall for the supply compartment while a plate 19 forms the forward wall thereof. This supply compartment may be of any desired size and proportions, that shown being for the accommodation of the record supply pad S^1 which is in the form of a zigzag folded pad provided by reversely folding the record strips transversely at intervals therealong. The record strips S are fed from this supply into writing position upon the platen and any desired number of strips may be used in this manner.

These record strips are ordinarily provided with blank forms spaced therealong for the reception of inscriptions and said strips are also provided at spaced intervals therealong with feed control apertures 20. Transverse weakened severance lines 21 are also provided on the strips between adjacent record forms and the apertures 20 are provided at the forward ends or tops of each of the record form sheets inwardly spaced a short distance from the adjacent weakened severance line.

At the forward end of the casing is a record strip feed mechanism appropriately housed in a compartment forwardly of the transverse partition 19 and between the latter and a forward partition 22. While any preferred form of feeding mechanism designed to feed or start the record strips forwardly may be provided, the mechanism shown for illustrative purposes includes a swingable or oscillatable feed plate 23 extending transversely of the casing and pivotally mounted at 24 for forward and rearward oscillation. The plate 23 extends upwardly from the pivot 24, and mounted thereon for upward and downward sliding movement is a plate 25 carrying at its upper edge strip-controlling pins 26 adapted to enter into the strip apertures 20. For this purpose the pins, when projected upwardly, extend across the strip path as shown in Fig. 4, the upper ends of the pins extending into slots 27 in a strip-guiding plate 28 which may, as shown, be formed by bending the upper cover wall downwardly and outwardly, thus providing a narrow space between the guide plate 28 and the forward end of the platen or writing plate 29. The oscillatable feed plate 23 is normally urged into its rearward position by means of a spring 30 and is moved forward manually by means of a feed-actuating arm 31, carrying operating rollers 32 engaging with the feed plate 23. The feed-actuating arm 31 is mounted upon an oscillatable operating shaft 33 appropriately mounted in the register and extending at one end outwardly through the side wall of the casing and provided with an exterior operating handle or lever 34. A spring 35 normally urges the operating shaft and actuating arm 31 into the rearward position shown in Fig. 4.

As above mentioned, any appropriate strip-feeding mechanism may be provided for the purpose of this invention, that herein shown for illustrative purposes being substantially the feed mechanism disclosed in the Diesbach Patent No. 1,982,606, dated November 27, 1934. As will be clear from the above brief description of the strip-feeding or starting mechanism, and from the full disclosure of the Diesbach patent, when the pins 26 are moved forwardly by operation of the actuating arm 31, the record strips are started forwardly so that the forward ends thereof project beyond the forward end of the casing, whereupon they may be grasped and pulled forwardly the distance of a form-length. The forwardly fed inscribed form-lengths may then be severed along the weakened lines 21 by exerting a tearing action against the tearing edge or knife 36. Furthermore, as will be clear from the Diesbach patent, the lug or projection 37 at the outer end of the actuating arm 31 engages with a lug 38 mounted upon the pin plate 25, thus retracting the pins 26 downwardly into strip-disengaging position. This permits the strips to be freely pulled forwardly. When the feed actuating plate 23 moves rearwardly, the pins 26 are released and are moved upwardly by spring-actuation into operative position for engagement in the next successive strip apertures 20. Since the feed mechanism and the operation thereof are fully described in the Diesbach patent, further disclosure thereof herein is unnecessary.

The platen plate 29 overlies the upper edges of the partitions 17, being supported thereon and pivoted thereto as at 39 and 50 near the forward end of the casing. The mounting of the cover plate 12 and of the platen 29 provides for opening the record strip storage supply compartment for access to the latter, and for renewing the supply. It will be understood that both the cover and platen may be simultaneously swung upwardly upon their pivotal mountings for this purpose.

The record strips S are led rearwardly from the supply around the rearward rounded edge of the platen and forwardly therefrom into writing position.

At one of its lateral longitudinal edges, the platen 29, as best shown in Fig. 3, is provided with a downwardly extending flange or plate 40 positioned immediately outside of the adjacent partition 17 and providing a support for a supply roll C of transfer strip C^1. The supply roll may rest upon a lower plate 41 attached to the lower edge of flange 40 and having, at one end thereof, a wall 42 against which the end of the roll rests. The plate 41 may, as shown, be an integral flange extending outwardly from the lower edge of the flange 40. The supply roll C is held in position and the forward movement of the carbon strip controlled by a curved control plate 43 pivotally mounted upon a rod 44 and urged into strip-engaging position by means of a spring 45. The control plate 43 is formed at its rearward end with an integral plate 46 extending across the end of the supply roll to retain it in position, and a lug or handle 47 is struck up from the plate whereby the plate may be raised. At the opposite longitudinal edge of the platen from the carbon supply roll there is another downwardly extending flange 48 just outside the adjacent partition 17 at the forward end of which a clamping bar 49 is pivoted at 50, coincidently with the pivotal mounting of the platen. This clamping bar has an inwardly turned flange 51 overlying the upper edge surface of the platen. In this manner the forwardly extended end of the carbon strip C^1 may be securely clamped both against the upper edge of the platen and the outer edge of the downwardly extending flange 48. The clamping bar is held in its operative position by means of a latch or clip 52. It will thus be seen that the transfer strip supply, together with the clamping bar, are movable with the platen as a unit and when the platen is raised to expose the record supply compartment, the carbon supply is also raised. The clamping bar 49 is preferably provided with apertures or depressions

53 engageable with outwardly struck, integral formations upon the flange 48 for the purpose of securely gripping and holding the transfer strip.

Within the compartment below the partition 16 is a record support herein disclosed as a drawer 54 mounted for sliding movement within the compartment. This drawer is provided with a space adapted for the reception of loose record sheets. Upstanding from the bottom of the drawer, within the receiving space and adjacent to a forward corner thereof, is a post or pin 55 preferably slightly enlarged at its upper end, as shown. This post is adapted to enter one of the apertures 20 of each of the record sheets that may be severed after inscription from the record strips. Near to this post is an opening 56 in the bottom of the drawer through which an object may be passed to facilitate lifting of the sheets from the post.

The record drawer 54 is preferably constructed from an integral sheet metal plate bent to provide bottom and side walls and outwardly extending flange 57 at the upper edges of the side walls, each with a downturned terminal flange 58. The flanges 57 are positioned close to the partition 16 so as to guide and support the drawer in its movements, and the downturned flanges 58 cooperate with the side walls of the casing for a similar purpose. The rear wall 59 of the drawer is formed integrally with the bottom and the forward wall 60 is similarly formed.

At its forward end the casing wall is cut away at 61 at the lower portion thereof, providing an opening for receiving the drawer. A terminal plate 62 is welded or otherwise attached to the forward end of the drawer, providing a reenforcement and finishing plate. This terminal plate is of the same size and proportions as the part of the casing cut away at 61 so as to exactly fit into the cut-away portion and preserve the original contour of the casing.

In the compartment provided beneath one of the drawer flanges 57 a spring motor is housed for the purpose of moving the drawer into projected position. This spring motor includes a rod 63 slidably mounted in an aperture of a bracket 64 attached to the register. This rod extends longitudinally of the casing alongside of the drawer passing through an aperture in a follower plate 65 attached to and extending laterally from the side wall of the drawer. At its forward end the rod is formed with a stop lug 66 for engagement with the follower plate. The main driving spring 67 of the motor is confined between the bracket 64 and the follower plate 65, being normally compressed when the drawer is in closed position, and tending to project the drawer forwardly into open position, indicated in full lines in Fig. 1 and in dotted lines in Figs. 2 and 4. At the opposite side of the bracket, the rod is surrounded by a buffer spring 68 resting at one end against the bracket and confined at its opposite end by a terminal washer 69 on the rod.

For the purpose of holding the drawer in closed position against the tension of the spring motor, a drawer-latching device is provided which is herein shown in the form of a latch spring 70 riveted to the under side of the flange 57 and having a latching lug 71 adapted to pass through openings in the flange 57 and the partition 16. In this manner the latch engages the aperture walls so as to lock the drawer in closed position as clearly shown in Fig. 2, the spring being biased to move the latch into locking position when the drawer is moved into closed position. As shown, the latch spring 70 is preferably of the leaf or bar type adapting it for attachment in a simple and inexpensive manner directly to the record drawer 54. With this simple arrangement the drawer is effectively retained in its closed position and the release of the latching device may be easily accomplished by a mechanism free of complications.

An automatic release for said latching device is provided for releasing the drawer to opening movement upon operation of the strip-feeding mechanism. For this purpose, in the embodiment herein disclosed, a latch-releasing arm 72 is attached upon the operating shaft 33 of the strip-feeding mechanism, being provided with a disk or roller 73 positioned for engagement with the latch lug 71 to release the latch. This releasing action occurs when the feeding mechanism is operated to move the releasing roller 73 to the dotted line position in Fig. 2, and to feed the strips forwardly.

An independent release is also provided for the drawer latch whereby the latter may be released independently of operation of the strip-feed mechanism. As shown, this release includes a rocker arm 74 pivoted to the side wall of the drawer and having an extension 75 engaging with the latch spring 70 and an operating extension 76 positioned in alignment with an opening 77 in the casing when the drawer is in closed position. By this means the latch may be released by inserting an appropriate instrument through the opening 77 and operating the rocker arm 74 to effect latch release.

From the foregoing it will be seen that operation of the strip-feed mechanism will release the latch 70, whereupon the spring motor will become effective to project the drawer into open position. When the drawer approaches its open position under the operative impulse of the spring motor, such movement is checked by virtue of engagement of the follower plate 65 with the stop lug 66 on the rod 63, the impulse then being transmitted through the rod to the buffer spring 68, thus providing an effective cushion check for the drawer avoiding shocks and noise.

Since certain changes may be made in the above construction and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the acompanying drawing shall be interpreted as illustrative and not in a limiting sense.

Having described our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a record device, in combination, a casing having a compartment in which a projectable and retractible sheet-supporting drawer is mounted, a rod anchored to the record device and extending alongside of said drawer, a spiral spring mounted on said rod, a follower plate attached to said drawer and engaging said spring to stress it when the drawer is in closed position, and a spiral spring buffer mounted on said rod for cushioning opening movement of said drawer.

2. In a record device, in combination, a casing having a compartment in which a projectable and retractible sheet-supporting drawer is mounted, a rod anchored to the record device and extending alongside of said drawer, a spiral spring mounted on said rod, a follower plate attached to said drawer and engaging said spring to stress it when the drawer is in closed position, a stop lug on said rod and positioned for cooperation with said fol-

lower plate to limit drawer projection, a buffer connected to said rod to cushion the drawer in its opening movement and a latch for holding the drawer closed.

3. In a record device, in combination, a casing having a compartment in which a projectable and retractible sheet-supporting drawer is mounted, a rod extending along said drawer, a supporting bracket slidably mounting said rod, a spring mounted on said rod at one side of said bracket, a follower plate attached to the drawer and engaging said spring to stress the latter when the drawer is closed, means on said rod for limiting movement of said follower plate so as to check drawer-projecting movement, and a buffer spring on said rod at the opposite side of said bracket to absorb shocks transmitted through the rod incident to drawer projection.

4. In a record device, in combination, a record support movably mounted in said device for projection and retraction, a spring motor operatively connected to said record support for moving the latter into projected position, a latching device for holding said record support in retracted position in opposition to said spring motor including a latch spring of the bar type firmly attached to said record support and movable therewith, a latch member mounted on said record support and operatively connected to said latch spring and biased thereby into latching position to retain the record support in its retracted position, means for releasing said latching device, a laterally extending guiding and supporting flange on said record support beneath which said latch spring is mounted and through which said latch member projects into latching position, a rocker arm mounted on said record support beneath said flange and having operative connection with said latching device for releasing the same, and an operating element connected to said rocker arm in juxtaposition to an opening in the casing of the record device for operative access whereby said latching device may be operated to release the same against the stress of said latch spring independently of operation of said first mentioned releasing means.

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