March 10, 1936. B. A. SCHROEDER 2,033,742

AUTOGRAPHIC REGISTER

Filed June 22, 1934

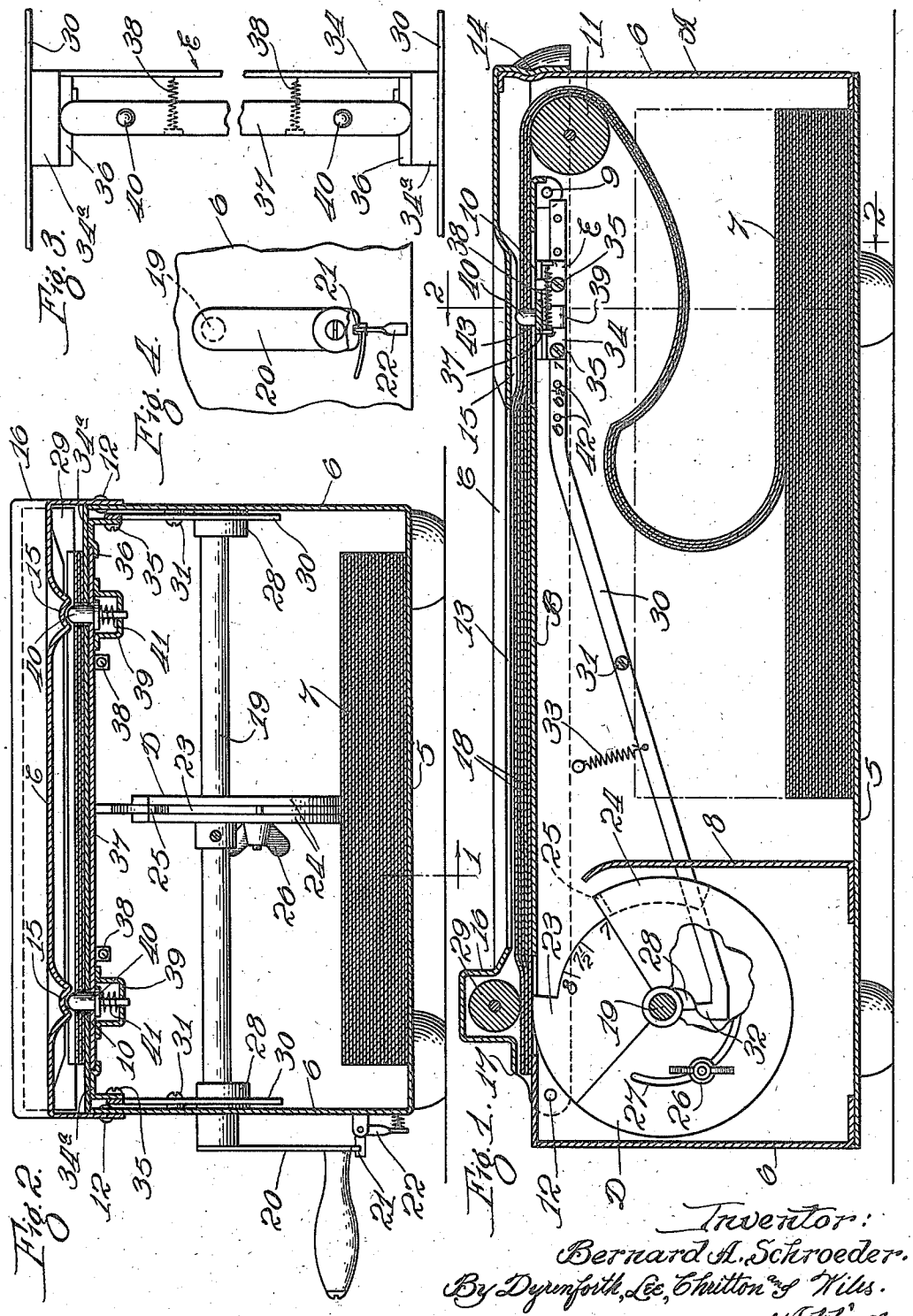


Fig. 3.

Fig. 4.

Fig. 2.

Fig. 1.

Inventor:
Bernard A. Schroeder.
By Dyrenforth, Lee, Chritton & Wiles.
Attys.

Patented Mar. 10, 1936 2,033,742

UNITED STATES PATENT OFFICE

2,033,742

AUTOGRAPHIC REGISTER

Bernard A. Schroeder, Evanston, Ill., assignor to United Autographic Register Co., a corporation of Illinois

Application June 22, 1934, Serial No. 731,953

7 Claims. (Cl. 282—21)

This invention relates particularly to autographic registers employing continuous-form stationery strips.

The primary object of the invention is to provide a simple form of mechanical feed for the strips which cooperates with a tensioning-device at the rear of the platen to tension the strips during the writing operation.

A further object of the invention is to provide mechanism whereby the strips are drawn back into alignment at the beginning of a feeding operation, that is, after the forms have been filled in.

The invention is illustrated in a preferred embodiment in the accompanying drawing, in which—

Fig. 1 is a broken longitudinal sectional view of an autographic register embodying the invention; Fig. 2, a transverse sectional view taken as indicated at line 2 of Fig. 1; Fig. 3 a broken plan view of a portion of the tensioning mechanism; and Fig. 4, a broken side elevational view showing the crank-locking device.

In the embodiment illustrated, A designates a casing; B, a platen forming a top closure for the casing A; C, a skeleton-cover; D, feed-mechanism; and E, tensioning-mechanism.

The casing A may be of any desired construction, preferably having a bottom wall 5 and side-walls 6 which form a receptacle for a packet of continuous-form strips 7. The casing may be further provided with an abutment 8 to prevent the supply of stationery from coming in contact with the feed-mechanism D.

The platen B is pivotally connected at 9 to the side-walls of the casing A. The platen is provided with longitudinal slots 10 through which register-pins may project into the path of the stationery strips 7. A guide-roll 11 is journaled in the side-walls of the casing and directs the strips from the supply-compartment around the rear of the platen to writing position.

Preferably, the skeleton-cover C is pivotally connected to the side walls of the casing at its upper front portion as indicated at 12. The cover has an open portion 13 to permit access to the stationery strips. The cover is provided at its rear portion with a snap button 14 which engages a depression in the rear wall of the register and holds the skeleton-cover in position. Preferably, the cover is provided with downwardly struck portions 15, overlying the slots 10 in the platen so that the stationery strips will be pressed into contact with the register-pins. The front portion of the skeleton-cover may be provided with a housing 16 for an upper feed-roll and the front edge-portion of the housing may be sharpened to form a tear-off edge 17. Carbon strips 18 may be interleaved between the stationery strips 7 over the platen, and held in position by the skeleton-cover.

The feed-mechanism D comprises a shaft 19 equipped with an operating handle 20 having a notch 21 in its end-portion adapted to be engaged by a pivotally-mounted spring catch 22. A feed-disk 23 is fixedly mounted on the shaft near its central portion and is flanked by two segmental feed-disks 24, connected to each other at 25 and adjustably held in position by means of a thumb-screw 26. The feed-disks are provided with slots 27 so that by loosening the thumb-screw 26 the feeding length of the feed-disk 23 may be effectively lengthened. The shaft 19 is further provided with a pair of cams 28 which raise and lower the tensioning-mechanism E. An upper feed-roll 29 is journaled in the housing 16 and cooperates with the adjustable feed-wheel to feed out stationery when the crank 20 is rotated.

The tensioning-mechanism E is supported on a pair of rearwardly extending arms 30 which are pivotally mounted on the side walls of the casing at 31. The front ends of the arms are provided with projections 32 which engage cams 28. A pair of tension-springs 33 urge the front ends of the arms 30 upwardly. Between the rear end-portions of the arms 30 is secured a U-shaped frame 34 by means of screws 35. Lateral end-portions of the frame 34 may be turned inwardly as indicated at 34a and struck downwardly and inwardly to provide guide-ways 36. Upon the guide-ways 36 a cross-member 37 is slidably mounted and is urged rearwardly by means of tension-springs 38. The cross-bar is provided on its lower side with stirrups 39 which support register-pins 40 which are yieldingly urged upwardly by means of compression-springs 41.

As shown in Fig. 1, the arms 30 are provided with additional tapped perforations 42 so that the frame 34 may be adjusted to take care of various lengths of forms. These adjustments, of course, must conform with the adjustments on the feed-roll D.

To operate the machine, after a writing operation, the spring-stop 22 is depressed and the crank revolved until it is re-engaged by said stop. At the beginning of the operation the cut-away portion of the feed-wheel comes opposite to the upper feed-roll 29 and the strips are released so that the register-pins 40 may draw the strips rearwardly a short distance under the influence

of springs **38** and thereby align the stationery. As the crank is further rotated, the feed-wheel re-engages the stationery and feeds out one form-length. The cam **28** is adjusted so that immediately after the pins have retracted the strips the arms **30** will lower the tensioning-device from engagement with the stationery and the device will not be brought back into operative position until the feed of a form-length has been practically completed. At this time the cam **28** will cause the tensioning-device to be raised and the pins to be yieldingly urged against the strips until they encounter a set of register-perforations **43** and draw the pins and the member **37** forwardly. Preferably, this movement is very small, a quarter of an inch being sufficient. Thus it will be understood that during the writing operation the strips are gripped at their front end by means of the feed-rolls and held under tension at the rear end by means of pins **40**. It may be noted that the aligning is accomplished after a writing operation instead of before as has heretofore been the practice. However, the aligning is more of a checking operation as the strips seldom are more than $\frac{1}{16}$ of an inch out of register and this does not interfere, materially, with the manifolding of the strips.

The foregoing description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible in view of the prior art.

I claim:

1. An autographic register comprising: a casing having a platen over which stationery strips provided with register perforations may be drawn from the rear; feed mechanism at the front of said platen for advancing said strips; tensioning and aligning means near the rear of said platen comprising spring retractable register pins adapted to engage perforations in the strips and be moved forwardly therewith; and means for releasing the strips at the front of the platen while under tension and means for withdrawing the pins from the perforations after the tension has been released.

2. Mechanism as specified in claim 1, in which the means for withdrawing the pins from the perforation comprises a cam mounted on the feed mechanism and a lever arm actuated by said cam.

3. An autographic register comprising: a casing having a platen over which stationery strips provided with register-perforations may be drawn from the rear; feed-mechanism at the front of said platen for advancing said strips; tensioning mechanism at the rear of said platen comprising a forwardly movable member, springs urging said member rearwardly, and register-pins mounted on said member so as to be yieldingly urged upwardly towards said strips into the path of the forwardly advancing perforations; and a lever supporting at its rear end said tensioning-mechanism and having its front end in operative engagement with said feed-mechanism.

4. Mechanism as specified in claim 3, in which the feed-mechanism is equipped with a cam for actuating the lever-arm in timed relation to the feeding of the strips and said lever is in the form of a pivotally-mounted rock-arm.

5. Mechanism as specified in claim 3, in which the feed-mechanism is equipped with a cam for actuating the lever in timed relation to the feeding of strips, and said cam is shaped so as to move the tensioning-mechanism into engagement with the stationery after substantially a form-length has been fed out of the register.

6. An autographic register comprising: a casing; a platen pivotally connected to the upper rear portion of said casing; a skeleton-cover pivotally connected to the upper front portion of said casing over said platen and adapted to permit access to stationery strips provided with register-perforations led over said platen from the rear; feed-mechanism in the front of said casing for advancing said strips; aligning and tensioning-means at the rear of said platen adapted to engage said perforations and exert a yielding rearward tension thereon; means for releasing the strips from the feed-mechanism while under tension to permit the tensioning-means to draw them rearwardly into alignment; and means for withdrawing the pins from the perforations after the tension has been released.

7. An autographic register comprising: a casing having a platen over which stationery strips provided with register-perforations may be drawn from the rear; feed-mechanism at the front of said platen for advancing said strips; tensioning mechanism at the rear of said platen comprising forwardly movable register-pins, means for yieldingly urging said pins upwardly into the path of the forwardly advancing strips, and means for yieldingly urging said pins rearwardly; and a lever supporting at its rear end said tensioning mechanism and having its front end in operative engagement with said feed-mechanism.

BERNARD A. SCHROEDER.