

No. 827,150.

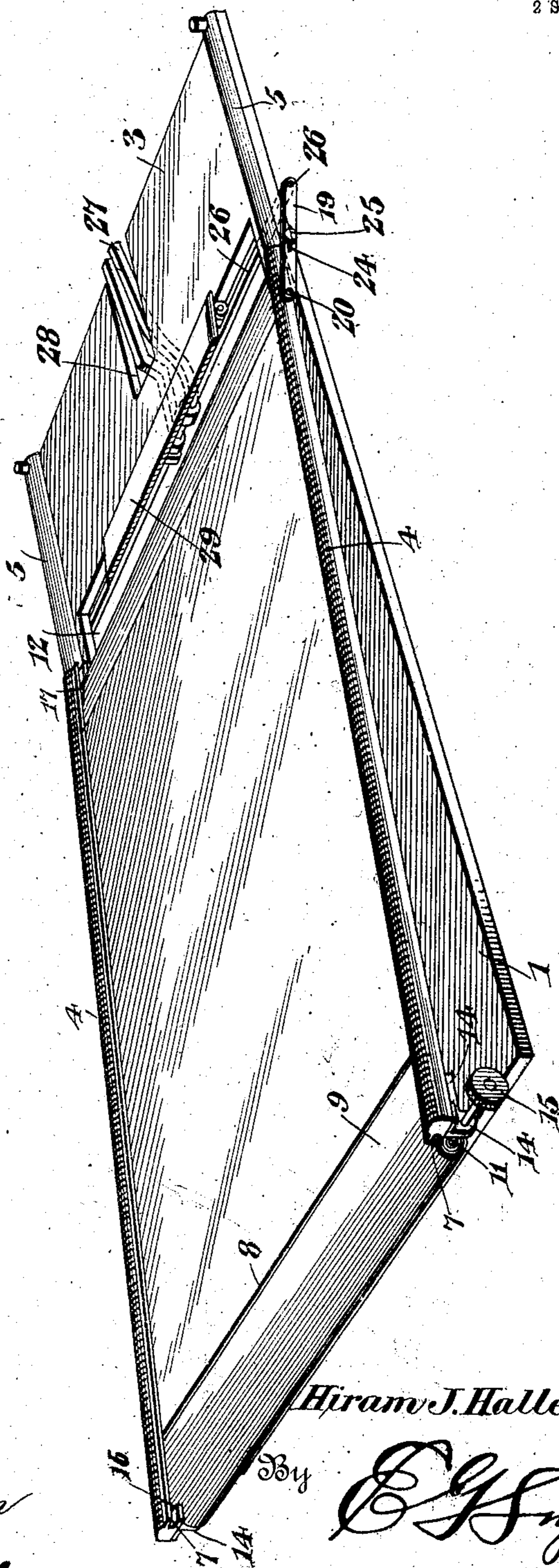
PATENTED JULY 31, 1906.

H. J. HALLE.

PLATEN FOR TYPE WRITING MACHINES.

APPLICATION FILED DEC. 22, 1904.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

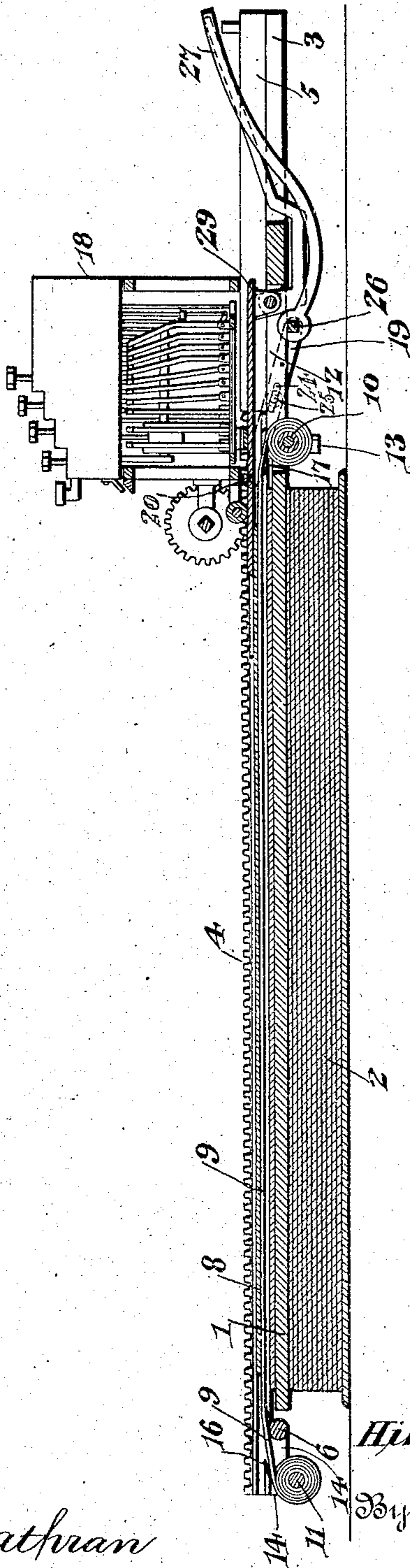
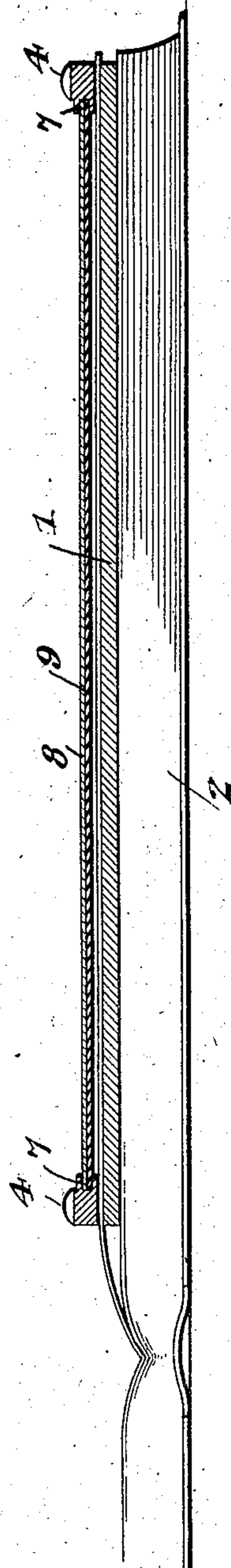


Fig. 3.



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# UNITED STATES PATENT OFFICE.

HIRAM J. HALLE, OF NEW YORK, N. Y., ASSIGNOR TO ELLIOTT-FISHER COMPANY, OF NEW YORK, N. Y.; A CORPORATION OF DELAWARE.

## PLATEN FOR TYPE-WRITING MACHINES.

No. 827,150.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed December 22, 1904. Serial No. 237,961.

*To all whom it may concern:*

Be it known that I, HIRAM J. HALLE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Platen for Type-Writing Machines, of which the following is a specification.

This invention relates to type-writing machines, and more particularly to that class embodying a flat platen and type-writing mechanism movable longitudinally and transversely thereof for the line and letter spacing of the writing.

The object of the invention is to provide a platen with a novel arrangement of work-holding and carbon-carrying means arranged to be operated by the machine in a manner to facilitate the displacement, replacement, and adjustment of the work.

To this end the invention contemplates the equipment of a flat platen constituting the writing-surface with a swinging machine-supporting frame equipped with work-holding and carbon-carrying means and arranged to be elevated or swung up from the platen by an operating-cam disposed for actuation by the machine when the latter is moved back beyond the swinging structure to a position above a fixed machine-support located in rear of the printing area of the platen.

Subordinate objects of the invention and other structural characteristics thereof will appear more fully hereinafter as the succeeding description of the illustrated embodiment of the invention is developed.

In the accompanying drawings, Figure 1 is a perspective view of a type-writing-machine platen equipped in accordance with my invention, the machine-supporting frame being shown elevated to facilitate the removal or adjustment of a record sheet or page or the insertion of a new sheet or page between the transfer element and the platen. Fig. 2 is a longitudinal sectional view of the platen shown in use in connection with a book, the machine-supporting frame being shown in its depressed position and the type-writing machine being indicated more or less diagrammatically; and Fig. 3 is a transverse section showing the manner in which the leaf of a book is held upon the platen by the machine-supporting frame in proper relation to the transfer element and the original work-sheet carried by the frame.

Each part is indicated by the same reference character throughout the several views.

For the purpose of this disclosure the invention is illustrated in connection with an ordinary form of flat platen employed in connection with an Elliott-Fisher type-writing machine of the Fisher type. It should be understood, however, that the invention is not limited in its application to any particular character of type-writing machine. In fact, in certain aspects of the invention it is immaterial whether or not a type-writer is employed in connection with the platen, since the invention relates, primarily, to holding means for the work element or elements and the transfer element and is possessed of special utility regardless of the particular form of recording instrument by means of which the record is made. In the drawings, however, is shown a comparatively thin flat platen 1, adapted to be inserted between the leaves of a book 2, as shown in Fig. 3, and having an extension 3 beyond the printing area. Overlying the platen 1, at opposite sides of the printing area thereof, are vertically-swinging tracks or guides 4, hinged at their rear ends to stationary track-sections 5, carried by the platen extension 3. The swinging tracks 4 are connected adjacent to their front ends by a transverse bar 6 to produce a swinging structure, which is ordinarily termed a "machine-supporting frame." In practice that portion of the platen in advance of the extension 3 is slipped between the leaves of a book, as shown in Fig. 3, with one leaf imposed upon the writing-surface of the platen and confined thereon by the machine-supporting frame. Unless it is desired to print directly upon the page of the book the frame may also confine a loose work-sheet and a carbon-sheet, by means of which a record printed or otherwise recorded on the sheet will be transferred to the page of the book. The present invention, however, contemplates special provision for the retention of the loose work-sheet and the transfer element by the movable machine-supporting frame, whereby when the frame is elevated it will carry with it the original work-sheet and the carbon, so as to facilitate the displacement, replacement, or adjustment of the underlying leaf or, perchance, an underlying loose record-sheet.

Extending along the inner sides of the tracks

4 are longitudinal work-holders, preferably defined by longitudinal grooves 7 formed in the tracks. These grooves are adapted to receive the opposite longitudinal edges of a loose work-sheet 8 and an underlying carbon element or web 9. The web 9 is wound at its opposite ends upon rotary carriers 10 and 11, carried by the machine-supporting frame and platen, respectively. The carrier 10, upon which the unused portion of the carbon is wound, is located within a transverse slot or opening 12, formed in the platen, so that the upper edge of the carbon-roll wound on said carrier will be located in a slightly-lower plane than the grooves 7 in the tracks.

The manner of mounting the carrier 10 is not material, but it is preferably carried by bearing-brackets 13, secured by the platen. The carrier 11, upon which the used portion of the carbon or transfer element is wound from time to time to present a fresh or unused portion of said element opposite the printing area, is mounted in brackets 14, pendent from the front ends of the tracks, and at the outer end of the carrier is fixed a thumb-wheel 15 to facilitate the winding of the carbon from one carrier or roll to the other. The front carbon-roll is also dropped sufficiently to dispose its upper side below the plane of the grooves 7, and in order to permit the reception of the edges of the carbon within the grooves notwithstanding the depressed positions of the carbon-rolls the under ledge of each of the grooves is formed with openings 16 and 17.

It will now be seen that while the tracks serve to clamp the record sheet or leaf upon the platen they are also equipped with holding and guiding means for the original sheet, as well as for a transfer element or web, thus facilitating the production of manifold records. Therefore, as the machine-supporting frame, including said tracks, is movable toward and from the platen it follows that the described arrangement comprehends machine-supporting, work-holding, and transfer means movable in unison toward and away from the writing-surface. No claim is made, however, to this subject-matter broadly, the same being described and claimed in the copending application of Stackpole and Laganke, Serial No. 52,213, filed March 21, 1901.

Aside from the specific construction described, the present invention relates more particularly to means whereby the type-writing machine will effect the elevation of the machine-supporting frame for the purpose of releasing the underlying leaf or sheet and for the further purpose of effecting the separation of the transfer element and the primary or original work-sheet from the platen to facilitate the manipulation of the work when the device is employed for manifolding.

Mounted to travel on the tracks or guides 4

is a type-writing machine 18, the machine here shown being what is known as the "Fisher" type-writer, exemplified, for instance, in Patent No. 573,868, to R. J. Fisher. This machine traverses the printing area of the platen and is operated to print directly upon a work sheet or leaf retained or confined upon the platen or upon a primary work-sheet supported by the tracks above the transfer element, which is also supported by the tracks in the manner described and arranged to transfer the record from the primary sheet to a subjacent record sheet or leaf. When the record has been completed, the machine is moved back beyond the vertically-movable machine-supporting frame and is supported by the stationary track-sections 5 while the work is being manipulated. When the machine is moved back from the movable machine-support to the relatively stationary machine-support, it is designed to effect the automatic elevation of the machine-supporting frame to the position shown in Fig. 1. To this end a pair of lifting-arms 19 are pivoted at their front ends, as indicated at 20, to the outer sides of the tracks 4 in advance of their hinges. At points intermediate of their ends these arms are provided with longitudinal slots 24 for the reception of headed pins 25, projecting from the opposite side edges of the platen to effect a loose pivotal connection between the arms and platen, permitting the former to swing for the purpose of elevating the machine-supporting frame. The rear ends of the arms 19 are connected by a cross-bar 26, disposed below the platen and having attached thereto a rearwardly-disposed cam-arm 27, the end of which projects upwardly through an opening 28 in the platen extension 3 and is disposed in the path of the machine 18.

When the machine is moved back over the platen extension, it engages the cam-arm 27, which, it will be seen, is located between the tracks or guides, and depresses said arm to swing the arms 19, and thus elevate the machine-supporting frame to separate the latter, the carbon element carried thereby, and the upper or primary work-sheet from the platen. When the frame is thus elevated, it will be observed that the underlying sheet or leaf may easily be removed, replaced, or adjusted, the automatic elevation of the carbon obviating the necessity for handling the same and the retention of the frame and its associated parts in their elevated positions, enabling the operator to use both hands while manipulating the work. It should also be especially noted that the described arrangement, while permitting the automatic elevation of the movable machine-support and associated parts, does not necessitate the depression of the machine from its normal plane. On the contrary, the machine when operating the swinging frame is sustained by

a stationary support, so that when the swinging frame drops back to its normal position the two machine-supports are located in the same plane to permit the unimpeded travel of the machine from one to the other. When a pen, pencil, stylus, or other form of recording instrument is employed in lieu of a type-writing machine, the parts are manipulated in the manner already described, except that the elevation of the frame is effected by the manual depression of the operating member or cam-arm 27.

In connection with the invention is shown an automatically-operated work-clamp 29, designed to protect the top edge of the work-sheet from contact with the traveling machine. This plate and its operating mechanism constitute no part of the present invention and are described and claimed in Patent No. 747,958 to R. J. Fisher.

It may be stated in conclusion that in addition to the broad subject-matter already disclaimed certain other features embraced by the described arrangement were invented by Stackpole and Laganke and disclosed in their application before identified and are therefore not claimed herein. Such, for instance, is the broad idea of automatically operating a machine-support, a transfer element, and a work-holder to effect their separation from the platen, also the broad idea of a machine-operated machine-support, work-holder, and transfer element.

The foregoing description, taken in connection with the drawings, is believed to be sufficient for the purposes of this disclosure. Obviously, however, the invention is susceptible of wide variation, and the right to effect such changes, modifications, and variations of the illustrated structure as may come fairly within the scope of the invention is therefore expressly reserved.

What I claim is—

1. The combination with a flat platen, of a movable track-frame, a printing-machine mounted to travel on said frame, a stationary machine-support in rear of the track-frame, and frame-elevating means arranged to be engaged and operated by the printing-machine when the latter is moved onto the stationary support from the track-frame.

2. The combination with a flat platen, of a movable track-frame, a traveling printing-machine, a stationary machine-support in rear of the track-frame, and frame-elevating means including a cam member associated with the stationary support and adapted to be engaged and operated by the printing-machine when the latter is moved onto the stationary machine-support from the track-frame.

3. The combination with a flat platen and a type-writing machine, relatively movable to space the type-written matter, of front and rear machine-supports associated with

the platen and normally alined, the front support being movable away from the platen independently of the rear support, and means connected to the front machine-support to raise the same and located in position to be engaged and operated by the type-writing machine when the relative movement of the machine and platen presents said machine opposite the rear machine-support.

4. The combination with a platen, of tracks or guides comprising fixed rear sections and hinged front sections, means connecting the hinged front sections of the tracks to form a machine-supporting and work-holding frame movable toward and from the platen, a frame-operating member extended above the platen in rear of the machine-supporting frame and operatively connected thereto, and a type-writing machine mounted to travel on the tracks or guides and adapted to engage and operate the frame-operating member when said machine is moved back to the fixed track-sections.

5. In a type-writing machine, the combination with a flat platen and a platen extension located in rear thereof, of a vertically-movable machine-supporting frame arranged to support a machine disposed over the platen, stationary track-sections extending along the opposite side edges of the platen extension, a type-writing machine mounted to travel upon the machine-supporting frame and also upon the fixed track-sections, and a frame-elevating member connected to the machine-supporting frame and extended upwardly through the platen extension to be engaged and operated by the machine when the latter is moved back to the stationary track-sections, whereby the machine-supporting frame may be elevated by the machine without necessitating the depression of said machine from its normal horizontal plane and without necessity for lifting the weight of the machine in order to restore the frame to its normal depressed position.

6. The combination with a flat platen and a hinged machine-supporting frame, of a type-writing machine supported opposite the platen by the frame, a rigid machine-support located in rear of the platen, lifting-arms carried by the platen and having connection with the machine-supporting frame to lift the latter, and a cam connected to the lifting-arms and disposed in the path of the type-writing machine when the latter is moved back from the platen to a position upon the rigid machine-support.

7. The combination with a flat platen, of a pair of tracks or guides hinged at their rear ends and having their front ends connected to form a vertically-movable machine-supporting frame, projections extended from the platen, arms having their front ends pivotally connected to the tracks or guides and provided with longitudinal slots receiving

the projections on the platen, a cross-bar located below the writing-surface of the platen and connecting the rear ends of the lifting-arms, a cam-arm connected to the cross-bar and extended above the writing-surface of the platen at a point beyond the rear end of the platen, and a rigid machine-support located in rear of the platen and adapted to support a traveling type-writing machine in position to operate the cam-arm and thereby elevate the machine-supporting frame from the platen.

8. The combination with a flat platen and a platen extension located in rear thereof and having an opening, of tracks or guides hinged at their rear ends and having their front ends connected to form a vertically-movable machine-supporting frame, a pair of fixed track-sections located in rear of said frame and extending along the opposite side edges

of the platen extension, lifting-arms located at opposite sides of the platen and provided with slots intermediate of their ends, a pivotal connection between the front end of each lifting-arm and a vertically-movable track or guide, projections extended laterally from the platen and received within the slots of the lifting-arms, a cross-bar connecting the rear ends of the lifting-arms and located below the platen, and a cam-arm connected to the cross-bar and extended upwardly through the opening in the platen extension.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HIRAM J. HALLE.

Witnesses:

JOHN H. SIGGERS,  
GEORGE TATE.