

No. 740,426.

PATENTED OCT. 6, 1903.

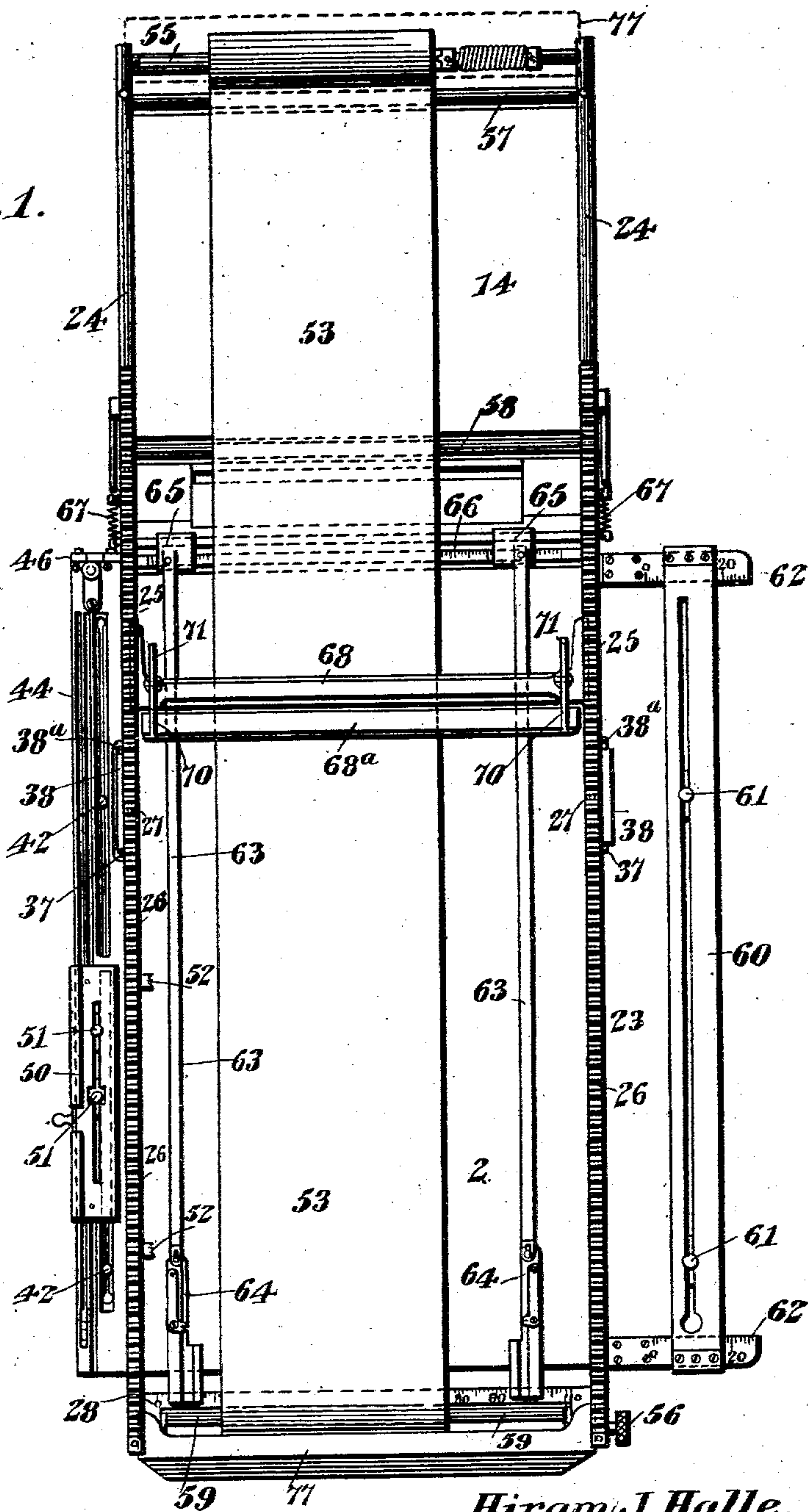
H. J. HALLE.

EXTENSIBLE PLATEN FOR TYPE WRITING MACHINES.

APPLICATION FILED MAY 31, 1902.

NO MODEL.

6 SHEETS—SHEET 1.



Hiram J. Halle, Inventor

ॐ५

E. G. Siggers

Attorney

Witnesses
Jas E. McLaughlin
Louis E. Juhn

H. J. HALLE.

EXTENSIBLE PLATEN FOR TYPE WRITING MACHINES.

APPLICATION FILED MAY 31, 1902.

5 SHEETS—SHEET 2.

NO MODEL.

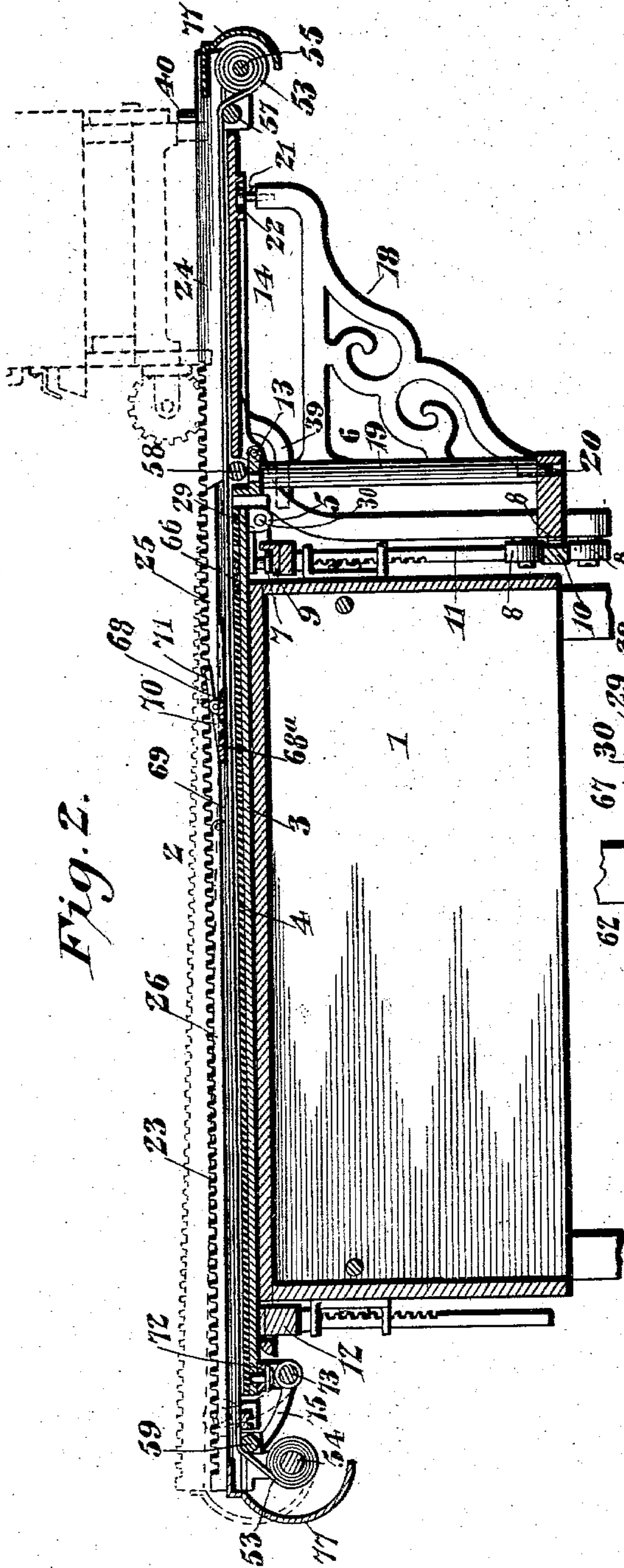


Fig. 2.

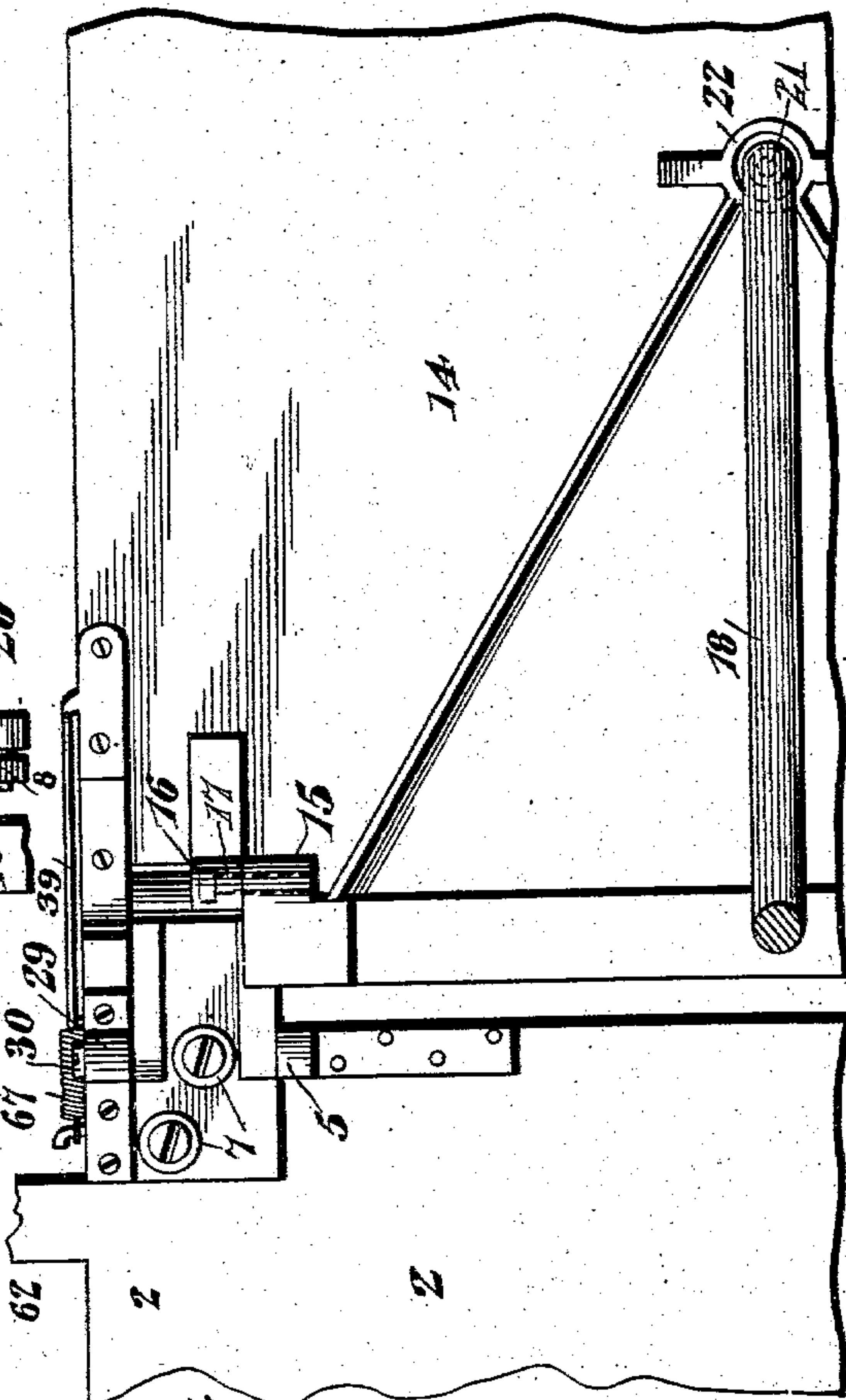


Fig. 4.

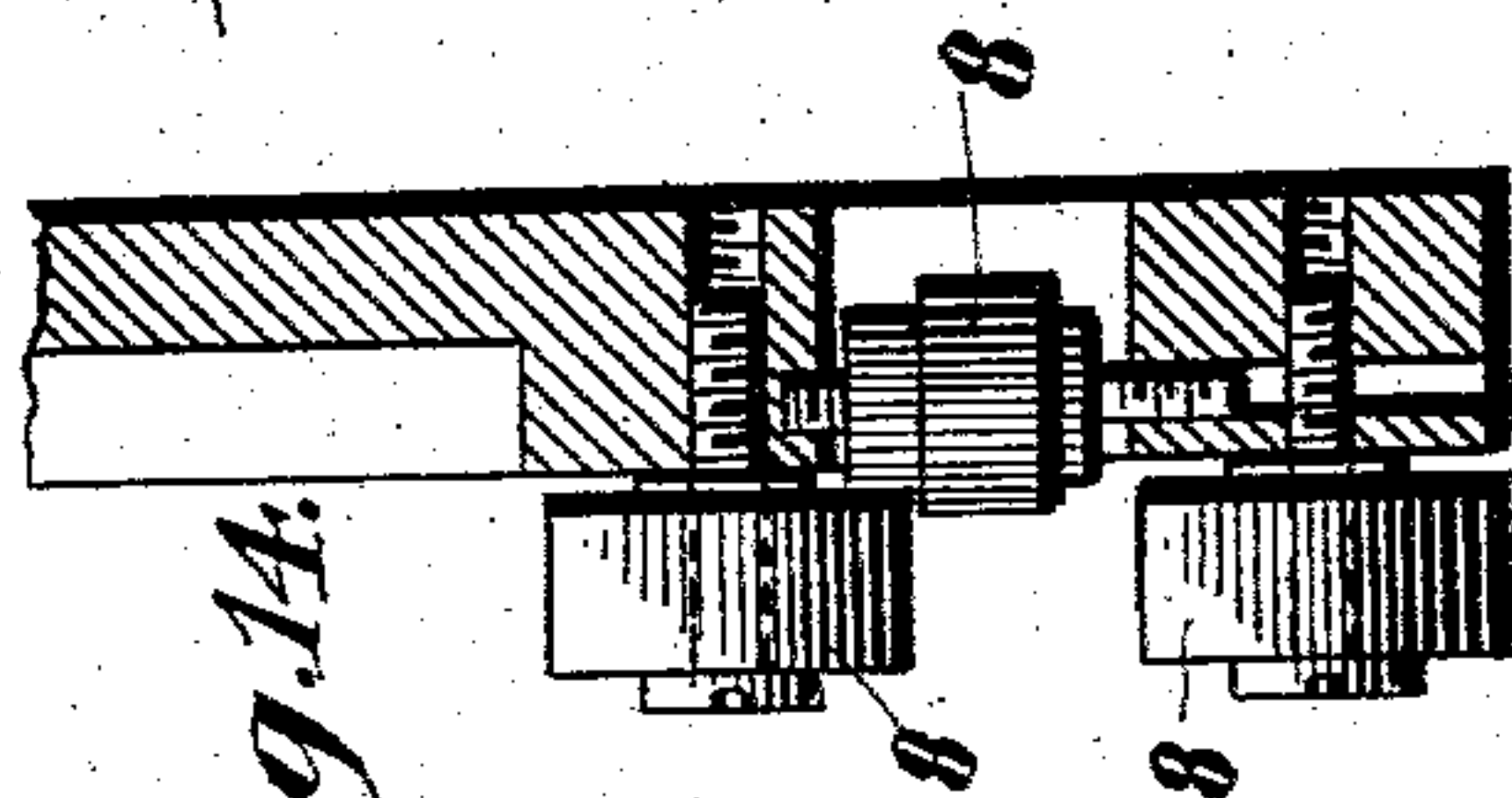


Fig. 14.

Hiram J. Halle, Inventor

By

E. G. Siggers

Attorney

Witnesses
Jas. K. McCathran
Louis G. Gulikn

H. J. HALLE.

EXTENSIBLE PLATEN FOR TYPE WRITING MACHINES.

APPLICATION FILED MAY 31, 1902.

NO MODEL.

5 SHEETS—SHEET 3.

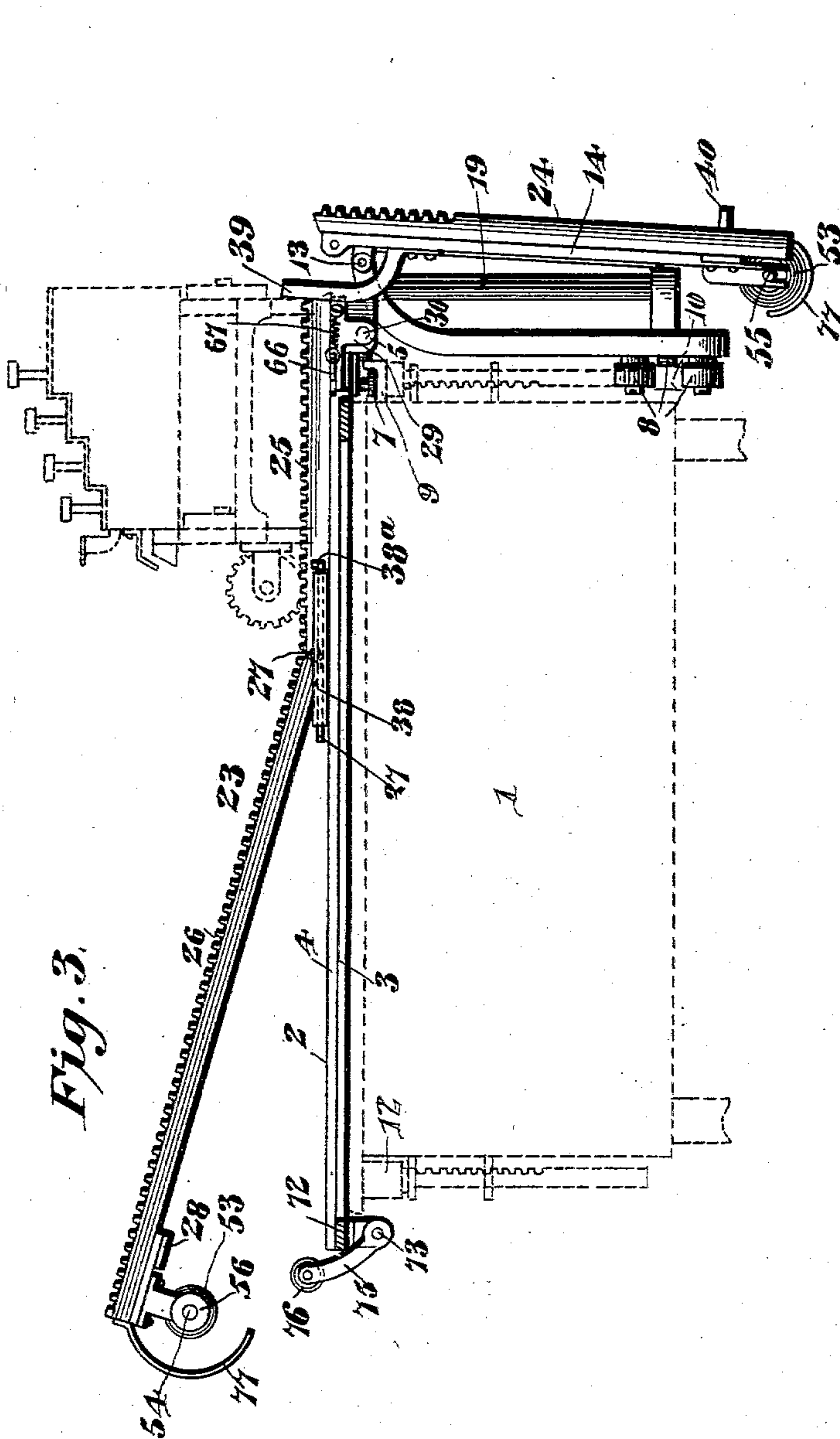


Fig. 3.

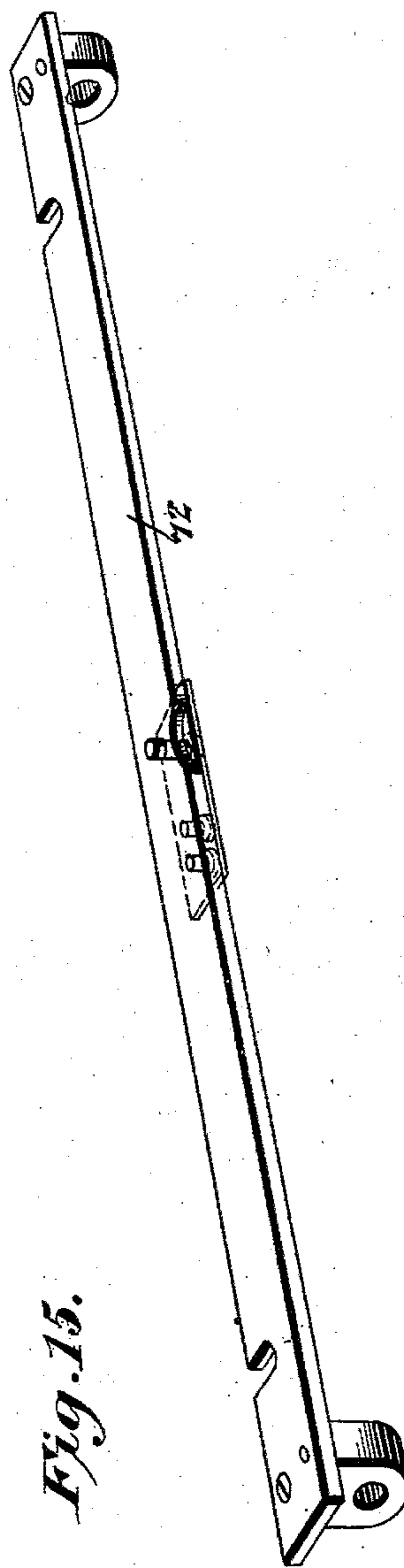


Fig. 15.

Hiram J. Halle, Inventor

By

E. G. Siggers

Attorney

Witnesses
Jas. H. McLaughlin
Louis G. Julihn

H. J. HALLE.

EXTENSIBLE PLATEN FOR TYPE WRITING MACHINES.

APPLICATION FILED MAY 31, 1902.

5 SHEETS—SHEET 4.

NO MODEL.

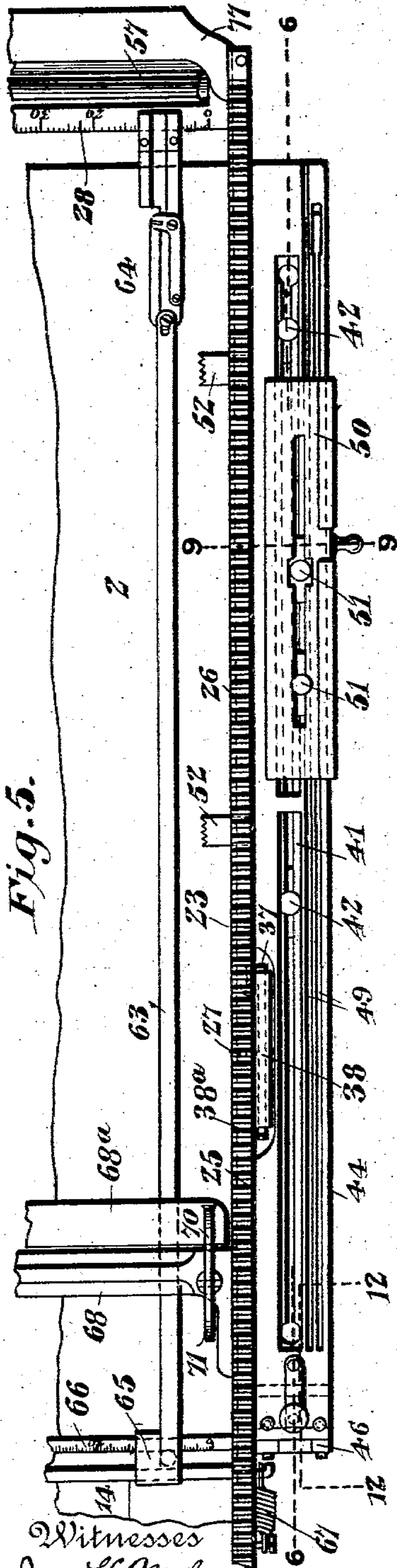


Fig. 5.

Witnesses
Jas. K. McEachran
Louis G. Julihn

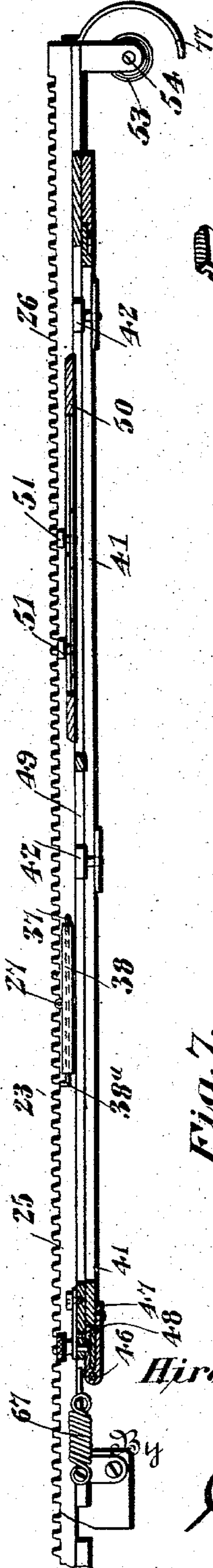


Fig. 6.

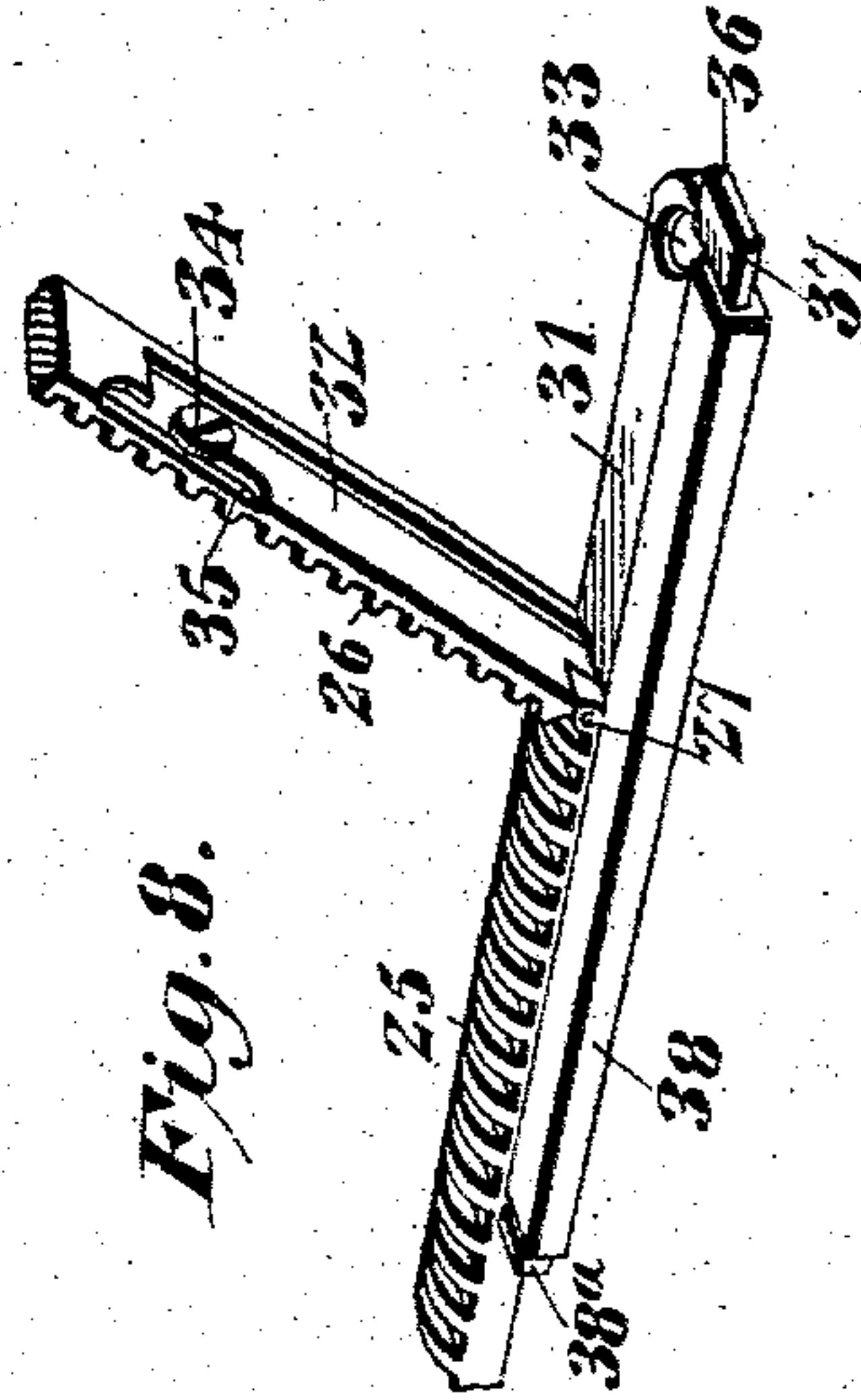


Fig. 7.

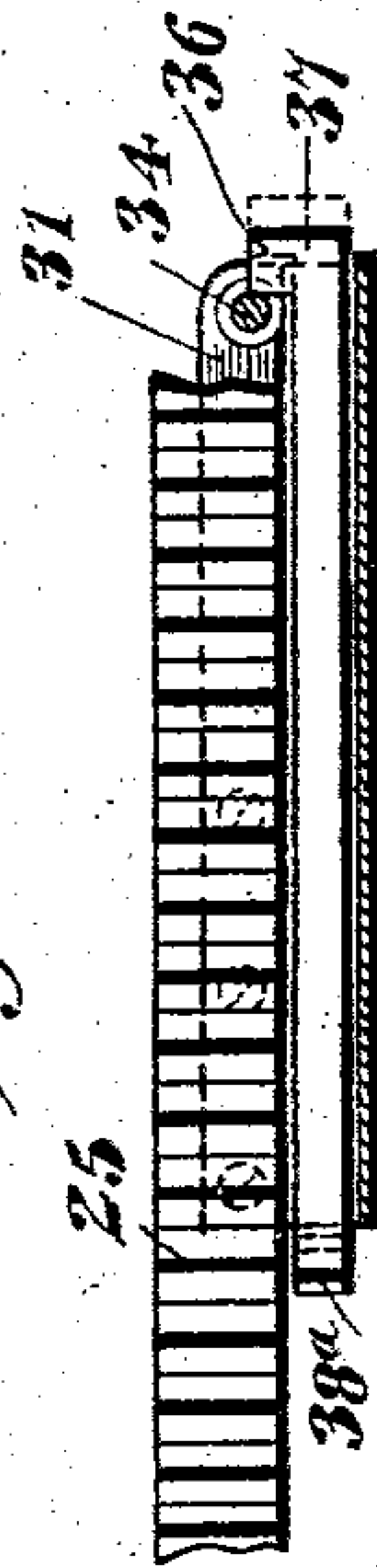


Fig. 8.

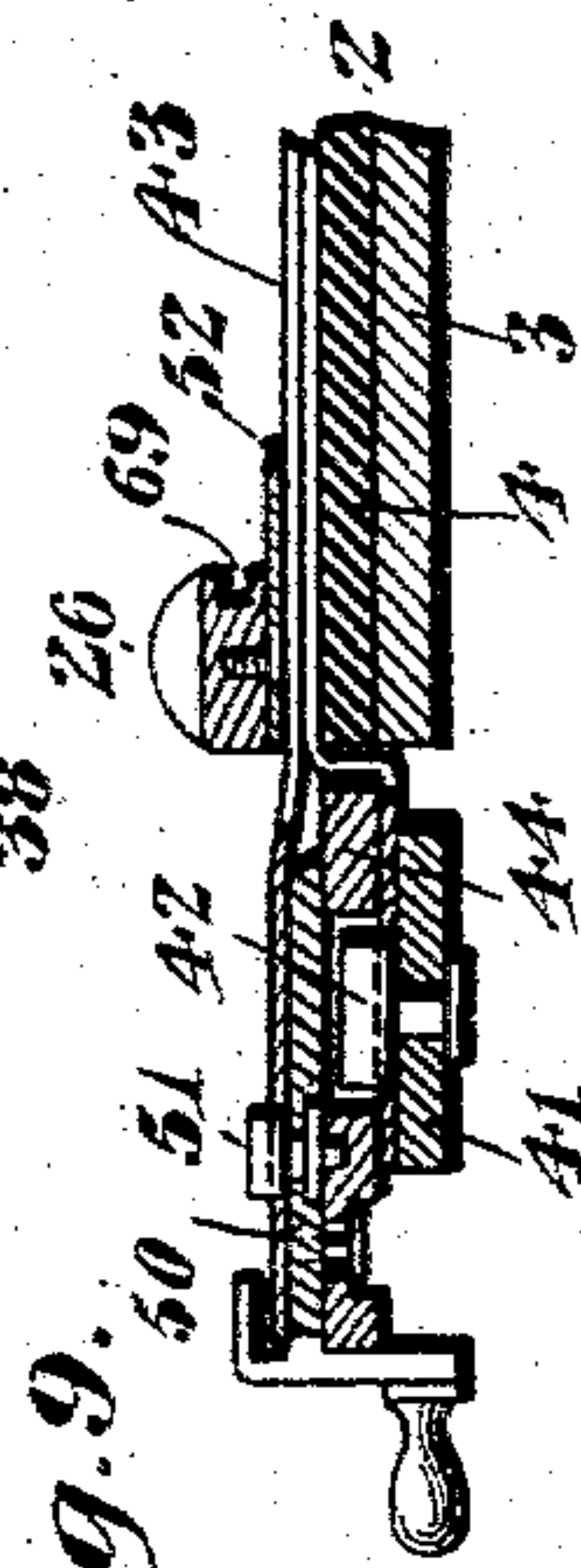


Fig. 9.

Hiram J. Halle, Inventor

E. G. Siggers
Attorney

No. 740,426.

PATENTED OCT. 6, 1903.

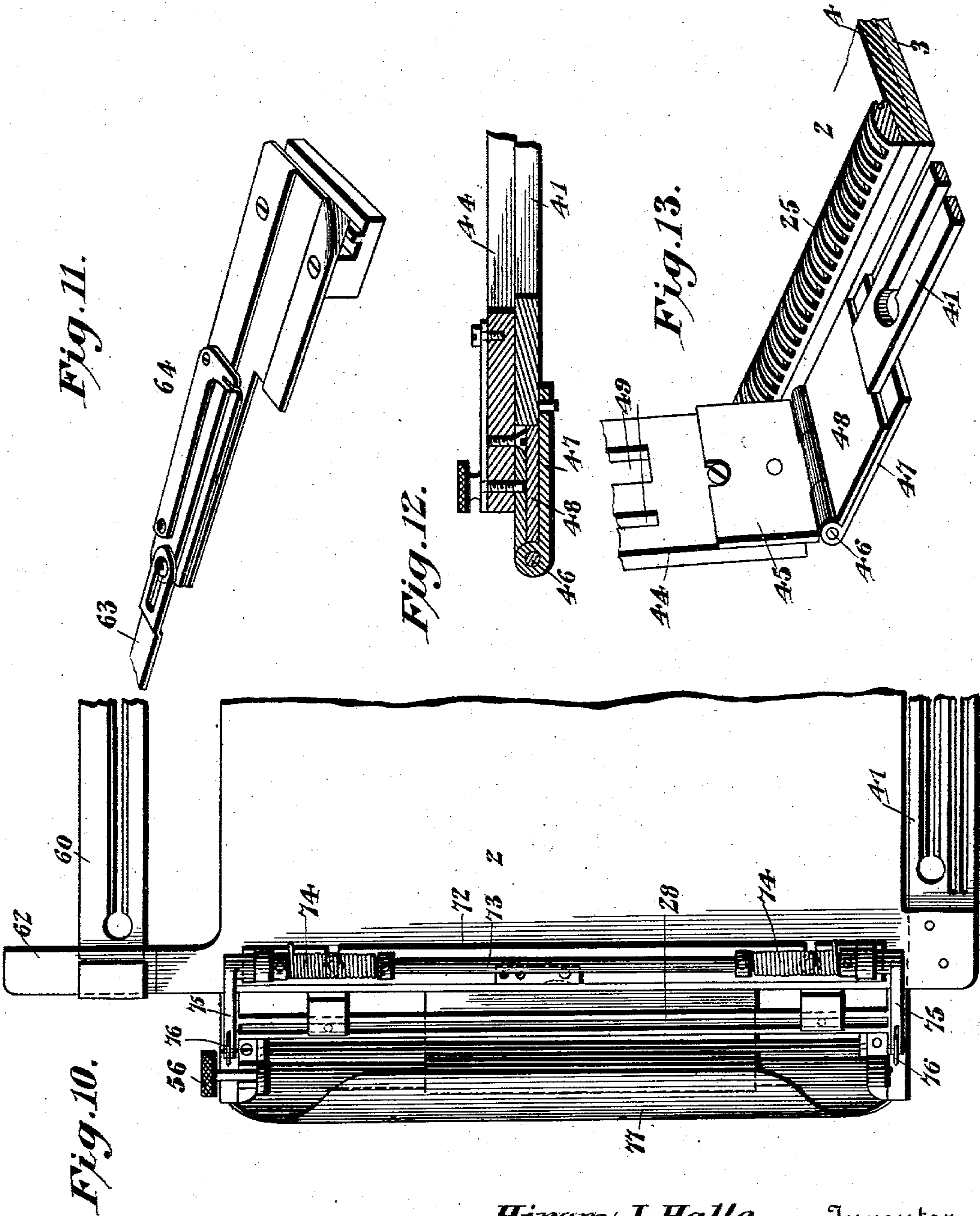
H. J. HALLE.

EXTENSIBLE PLATEN FOR TYPE WRITING MACHINES.

APPLICATION FILED MAY 31, 1903.

NO MODEL.

5 SHEETS—SHEET 5.



Hiram J. Halle, Inventor

By

E. G. Siggers

Attorney

Witnesses
Jas. S. McLaughlin
Louis E. Julian

UNITED STATES PATENT OFFICE.

HIRAM JOSEPH HALLE, OF CLEVELAND, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO ELLIOTT-FISHER COMPANY, A CORPORATION OF DELAWARE.

EXTENSIBLE PLATEN FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 740,426, dated October 6, 1903.

Application filed May 31, 1902. Serial No. 109,738. (No model.)

To all whom it may concern:

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

My present invention relates to a platen for type-writing machines of that class which print upon a sheet supported in a flat or spread-out condition upon a flat stationary platen over which the machine is movable both laterally and longitudinally. This type of machine, exemplified in Patents Nos. 562,625 and 573,868 of R. J. Fisher, is generally intended for writing in books or on loose sheets and for making up records and reports and copies thereof. The flat platen is equipped with main tracks or guides designed for the support of a machine-frame movable longitudinally of the platen or in the direction of line-spacing and supporting a carriage movable on the frame transversely of the platen and equipped with writing mechanism. These tracks or guides support the machine for movement to any desired position opposite the printing area and are also extended beyond the printing area to support the machine outside of or beyond the writing-surface and over a platen extension. This provision for supporting the machine either directly above or beyond the printing area constituted the broad novelty disclosed in my Patent No. 621,660, dated March 21, 1899, and was intended to facilitate the displacement of the machine from the printing area for the purpose of displacing, replacing, or adjusting the work sheet or leaf. The retention of the work sheet or element in its proper position is facilitated by work-holding means associated with hinged track or guide sections longitudinally coextensive with the printing area of the platen and movable away from the platen to permit the displacement or replacement of the work element after the machine has been moved back upon the fixed sections of the tracks or guides, and thereby positioned above the platen extension beyond

the printing area of the platen. The various uses for which this type of machine is peculiarly adapted have necessitated the manufacture of platens of different lengths, as it is obvious that a platen designed primarily for letter-sheets or other short work elements is not of sufficient length to accommodate the long strips or sheets which are used—as, for instance, in making up lengthy records or reports.

The primary object of my invention, therefore, is to produce an extensible platen which may be quickly arranged for the support of sheets of either normal or abnormal lengths. To this end the invention contemplates the equipment of the platen with a displaceable extension normally depending vertically from the rear end of the normal platen extension, but capable of being presented in the horizontal plane of the platen when an extension of the latter is desired. This platen extension when in its horizontal position is designed as a machine-support located beyond the printing area of the platen, and is therefore provided with track or guide sections constituting continuations of the tracks or guides of the platen proper. When the platen is elongated by the elevation of the displaceable extension, the printing area is increased by utilizing the normal platen extension as a continuation thereof, and provision is therefore made for rigidly connecting the front and rear sections of the tracks or guides at the hinge-joints thereof and for swinging said tracks from an axis located adjacent to the front edge of the drop extension.

Other objects subordinate to that stated and various novel features of construction will appear during the succeeding description of the illustrated embodiment of my invention.

In the accompanying drawings, Figure 1 is a plan view of a platen constructed in accordance with my invention, the extension being shown in its elevated or horizontal position. Fig. 2 is a longitudinal sectional view of the platen and supporting-stand therefor, the machine being indicated above the extension in dotted lines and the tracks

or guides being similarly shown in their elevated positions. Fig. 3 is a side elevation of the platen with the extension dropped down to its vertical position and the tracks or guides elevated, the supporting-stand for the platen and the machine located above the normal platen extension being indicated in dotted lines. Fig. 4 is a detail view, in bottom plan, showing the hinge connections of the platen and the drop extension. Fig. 5 is a plan view of a portion of the platen and its equipment. Fig. 6 is a longitudinal section on the line 6 6 of Fig. 5. Fig. 7 is a detail view of one of the track-locks, parts being shown in section and other parts broken away. Fig. 8 is a detail perspective view of the subject-matter of Fig. 7 with the parts in different positions. Fig. 9 is a transverse sectional view on the line 9 9 of Fig. 5 and with the top and bottom sheets in place. Fig. 10 is a bottom plan view of the front end of the platen, showing the track-elevating mechanism, the front carbon-carrier, and complementary parts. Fig. 11 is a detail perspective view of one of the card-guides and the connected end of one of the flexible guard-strips. Fig. 12 is a detail sectional view on the line 12 12 of Fig. 5. Fig. 13 is a detail perspective view showing the mounting of the billing-strip. Fig. 14 is a detail sectional elevation of the lower end of the drop-frame, and Fig. 15 is a detail perspective view of the detachable supporting-bracket for the track-elevating device.

It has been stated that this invention owes its existence to the demand for a platen adapted for various kinds of work. While, therefore, the invention, so far as the present application is concerned, comprehends only those instrumentalities whereby sheets of different lengths are accommodated, I have nevertheless illustrated in the accompanying drawings a platen constructed in accordance with the invention and equipped with various devices which facilitate the retention and manipulation of different classes of work elements—such, for instance, as the leaf of a book, a card, a folded bill, an ordinary letter-sheet, and the bills and subjoined sales-sheet employed in those billing systems which contemplate the entry upon the sales-sheet of successive carbon copies of the bills. It should be understood, however, that this complementary equipment of the platen together with those supplemental devices for properly positioning a carbon element or web to facilitate manifolded are not herein claimed, although they involve many features of patentable novelty. They are illustrated and described merely for the purpose of disclosing a complete operative structure conducive to a proper understanding of the subject-matter claimed and an appreciation of the advantages accruing therefrom.

Referring to the characters employed to designate corresponding parts throughout the several views, 1 indicates a suitable sup-

port or stand supporting the platen 2, comprising, as usual, a metallic base 3, covered by a rubber or other suitable writing-surface 4.

It is sometimes desirable to elevate the platen for the purpose of facilitating the manipulation of the leaves of a book when the device is employed in connection with this character of work element, and for this reason said platen is hinged at its rear end, like the platen shown in my Patent No. 621,660, above mentioned. Instead, however, of having a direct pivotal connection with the front end of the platen extension, as in the patented construction, the platen has a hinge connection, as indicated at 5, with what may be termed a "drop-frame" 6, disposed vertically at the rear end of the platen and supported in any suitable manner.

By preference the frame 6 is provided at its upper end and below the plane of the platen with guide-rollers 7 and at its lower end with other guide-rollers 8, the rollers 7 engaging a rail 9 and the rollers 8 engaging a similar rail 10. The rails 9 and 10 are connected by one or more rack-bars 11 and are designed to be raised and lowered in unison with a front rail 12, located in front of the stand 1 and supporting the front end of the platen. The equipment of a stand with these rails for raising and lowering the platen in order to facilitate the use of the latter in connection with the leaves of a book is common, as also is the mechanism (not illustrated) for adjusting the rails vertically.

The specific construction of the drop-frame 6 is beyond the purview of the present invention and for this reason need not be described in detail. It is sufficient to state that this frame constitutes a support to which the platen is hinged at its rear end and which serves the additional purpose of a support to which is hingedly connected, as indicated at 13, an extension 14 of the platen. This hinged connection is preferably effected by forming the drop-frame with a pair of bearing-ears 15, received between similar ears 16, connected to the front end of the platen extension 14 and constituting bearings for the pintles 17, one of which is indicated in dotted lines in Fig. 4.

The extension 14 constitutes, when in its horizontal position, a continuation of the platen 2, and while in the present construction it is connected to said platen by an intermediate supporting-frame it is evident that it might be otherwise mounted at the rear end of the platen—as, for instance, by being hinged directly thereto. Normally the extension 14 is disposed vertically, as indicated in Fig. 3, but when a platen of additional or abnormal length is required is supported in the horizontal plane of the platen by a swinging supporting-bracket 18, including a vertically-disposed bearing-bar 19, having trunnions 20, received within suitable bearings in the top and bottom horizontal members of the drop-frame 6.

At its outer or free end the bracket 18 is provided with an adjustable supporting-head 21, preferably in the form of a screw and designed to be received within a concave socket 22, formed in the under side of the platen extension 14 to prevent the bracket from being accidentally swung laterally when the extension is in use. By reason, however, of the fact that the axis of movement of the bar 19 is located in advance of the hinged mounting of the extension said extension may be lifted slightly to disengage the head 21 from the socket 22, and the bracket 18 may then be swung around to a position at right angles to that shown in Fig. 2 to permit the extension to drop to its vertical position.

The main tracks or guides 23, designed for the support of the traveling machine-frame, extend continuously along the opposite side edges of the platen and the extension 14 and project slightly beyond the front end of the platen and the rear end of the extension. These tracks or guides are toothed, as usual, for the greater portion of their length for engagement with toothed wheels constituting elements of the line-spacing mechanism of the machine and are composed of three sections—to wit, what may be termed the “extension” or “auxiliary” sections 24, rigidly connected to the extension 14 and designed to move therewith, the rear sections 25, which are normally stationary and are located at opposite sides of the normal platen extension, and the front sections 26, disposed at opposite sides of the normal printing area of the platen and hingedly connected at their rear ends to the front ends of the rear sections 25 by hinges 27. Normally the extension 14 is dropped down at the rear end of the platen, and the machine when not in use is disposed over the rear end of the platen, constituting the normal platen extension, and is supported by the rear track-sections 25. That portion of the platen lying in advance of this normal platen extension constitutes the normal printing area, and the hinging of the front track-sections 26 is designed to permit their elevation to facilitate the displacement of a work-sheet from the platen or its replacement or adjustment thereon when the machine has been moved back beyond the normal printing area, as indicated in dotted lines in Fig. 3, the front track-sections 26 being connected for movement in unison toward and away from the platen by a transverse bar 28, as usual. This general arrangement of the platen and of the main tracks or guides having hinged sections extending along the opposite sides of the printing area and stationary sections for supporting the machine over the platen extension is quite ordinary; but, as has already been stated, the primary object of my invention, so far as the present application is concerned, is to provide for the extension of the printing area without dispensing with a machine-support located beyond the printing area for the support of the

machine during the manipulation of the work. For this reason the rear track-sections 25 are hinged at their rear ends, and suitable means is provided for locking the front and rear track-sections 26 and 25 rigidly together in properly-alined positions, so that what are normally the fixed and swinging sections of the main tracks or guides become swinging sections disposed along the opposite sides of an abnormal printing area including both the normal printing area and the normal platen extension. When the printing area of the platen is thus extended to include the normal extension or machine-support, the extension 14 is swung to and supported in its horizontal position to constitute a machine-support for the reception of the machine when the latter is moved back beyond the abnormal printing area.

The manner of hinging the rear track-sections 25 is not material so far as the invention in its broader aspects is concerned, since the only requisite is that they be capable of swinging from an axis beyond the rear end of the normal printing area when an extension of such area is desired. Inasmuch, however, as the present construction contemplates the hinging of the platen to permit the same to be swung up in a manner described in my patent aforesaid, I have shown the track-sections 25 provided at their rear ends with depending bearing-ears 29, pivotally connected, as by pintles 30, with the upper portion of the drop-frame 6, the hinged mountings of the platen and rails being disposed in alinement to permit the movement of the platen and rails in unison in the event of the platen being raised. Likewise the particular manner in which the front and rear track-sections are locked rigidly together is not essential; but a simple and convenient hinge-lock is illustrated more particularly in Figs. 7 and 8 and contemplates the extension of one track-section and a device for connecting such extension to the other track-section at a point removed from the hinge. The locks employed in connection with the track-sections at each side of the platen are identical in construction, and one only need therefore be described.

The front end of the rear track-section 25 has attached thereto a plate 31, seated flush with the under side of the track and extended beyond the hinge 27, connecting the front and rear sections. The extended portion of this plate is disposed for reception within a recess 32, formed in the under side of the front track-section 26 and extending from the hinge 27, and adjacent to its end is provided with an opening 33 for the reception of a head or projection 34, which fits within the opening 33 and terminates flush with the bottom of the plate 31. This head or projection 34 is preferably the head of a small screw screwed into an opening in the bottom of the recess 32. At one side of the screw the track-section 26 is formed with a counter-recess 35 for the reception of the angular end 36 of a latch-bolt 37,

mounted within a casing 38, formed by bending up and over the outer side edge of the plate 31.

When the front track-section is swung down to its horizontal position in alinement with the rear track-section, the head 34 enters the opening 33 in the plate 31 and serves to assist in preventing any lateral movement of the track-section in a horizontal direction. When the parts are in this position, the angular end 36 of the latch-bolt 37 will be located in one end of the counter-recess 35, and by moving said bolt endwise the end 36 may be slid over the head 34—that is to say, between the head 34 and the bottom of the recess 35—to effect the connection of the front track-section with the extension of the rear track-section at a point in advance of the hinge 27. This movement of the latch-bolt is facilitated by the provision at its rear end of a finger-piece 38, which may be engaged by the finger-nail in an obvious manner. When the front and rear track-sections are thus locked rigidly in alinement, they obviously constitute a single swinging track-section hinged at the rear end of the platen or abnormal printing area and capable of movement toward and away from the platen to facilitate the manipulation of the work elements.

We have now seen that the platen is equipped with main tracks or guides comprising connected front sections movable toward and away from the platen and rear sections located beyond the normal printing area to support the machine while the front sections are manipulated and having hinges located at their rear ends and locking devices for connecting their front ends rigidly with the front sections, so that the hinged frame, including the track-sections and their connections, may swing upon an axis located beyond the normal axis of movement of said frame when an extension of the printing area is desired. It may be noted, however, that under some circumstances—as, for instance, when comparatively narrow work-sheets are being used—it is not necessary to elevate both rails, and it is therefore within the purview of this invention to construct only one rail or track in sections in the manner described. We have also seen that the platen is equipped with an extension retained in a horizontal plane to constitute a machine-support in rear of the normal platen extension and designed to support the machine at a point beyond the abnormal printing area, including the normal printing area and the normal platen extension or machine-support. It remains, therefore, to be described in what manner the machine is stopped at its proper position above the normal platen extension or above the drop extension, as the case may be.

By reference more particularly to Fig. 3 of the drawings it will be seen that the machine is normally arrested by machine-stops 39 when moved back beyond the normal print-

ing area. These machine-stops are preferably carried by the extension 14 and extend parallel with the under side of the latter to a point slightly beyond its front edge, so that when the drop extension is down the machine-stops will project slightly above the tracks or guides at the rear ends of the rear track-sections 25 to arrest the machine in the position indicated in dotted lines in Fig. 3. The specific construction of these machine-stops 39 is not material, nor is it essential that they be mounted upon the platen extension. It is sufficient if provision is made for the presentation of a machine-stop in position to arrest the machine over the normal platen extension or machine-support and for the withdrawal of said stop from such position to permit the machine to travel back upon the drop extension when the latter is in use. For instance, the extension instead of being dropped when not in use may be raised to an upright position to effect its displacement and in such position would constitute a machine-stop located at the rear end of the normal platen extension. It would also be possible to locate the hinge of the extension a short distance in rear of its front edge, so that the latter would project up to constitute a machine-stop when the extension is dropped. It is desirable, however, to provide, as in the present construction, for the automatic presentation of the machine-stops 39 into the path of the machine when the platen extension 14 is dropped down and for the automatic withdrawal of said stops when the drop extension is swung up, so that the machine may travel back over the drop extension, where it will be arrested by the machine-stops 40 in the form of pins or projections extending from the track-sections 24 adjacent to their rear ends.

Having completed the description of that structure upon which the subjoined claims are predicated, I shall now proceed to describe briefly the complementary equipment which renders the platen available for different classes of work. It may be noted at this point, however, that some of the features of the platen equipment herein shown and hereinafter described were not invented by me. On the contrary, the billing strips and slide were devised by John A. Smith, the card-guides and connected tapes and the fol-lower-plate having a machine-operated clamping or guarding member were invented by C. F. Laganke, and the carbon-roll carried by the platen extension, the tension mechanism for the tapes, and the specific form of bill-slide or invoice-holder were invented by Joram Ziegler. To such features I make no claim.

Along one side of the platen and outside of the adjacent track or guide is detachably secured a slotted gage-strip 41, equipped with gage pins or projections 42, adjustable along the strip and designed to coincide with and engage the file-openings of a sales-sheet 43,

imposed upon the platen. (See Fig. 9.) In cooperative relation with this gage-strip is disposed a billing-strip 44, having detachable connection with one leaf, 45, of a hinge 46, the other leaf, 47, of which is fixed to a projecting portion 48 of the platen at a point beyond the rear end of the gage-strip 41. When attached as in use, the billing-strip is designed to swing down upon the gage-strip 41 with its upper edge substantially flush with the writing-surface. It serves the purpose of a work-holder, inasmuch as it clamps the edge of the sales-sheet and prevents the latter from becoming disengaged from the gage pins or projections 42, the upper ends of the latter being accommodated by one or more slots 49 in the billing-strip.

Ordinarily the sales-sheet, secured in the manner stated, completely covers the writing-surface of the platen and is designed to receive the transferred copy or record-entry of successive bills as they are made out on the platen. The billing-strip 44 is therefore equipped with a sliding work-holder or bill-slide 50, having work-engaging devices—as, for instance, a pair of upstanding gage projections or studs 51. The work-engaging projections of the bill-slide are adjustable to accommodate them to the file or binding holes in the edge of the bill, and by reason of the shiftable mounting of the slide upon the billing-strip the former may be moved to various positions for the purpose of retaining successive bills upon the platen and in such position with respect to the sales-sheet as to cause the copy or record-entry to be made directly below or following the copy of the preceding bill. During the manipulation of the sales-sheet and bill to properly position them upon the platen the swinging sections of the main tracks or guides are sustained in an elevated position and are subsequently swung down upon the work-sheets to assist in their retention, the clamping action of the tracks being augmented by one or more spring-clips 52, carried by a track and extending inwardly therefrom.

Obviously the reproduction of the bills upon the sales-sheet necessitates a transferring element between the bill and sheet. For this purpose a loose carbon-sheet or one secured by the billing-strip might be employed. I have, however, shown the platen equipped with a carbon element or web 53, extending between carbon-carriers 54 and 55, mounted at the rear end of the drop extension 14 and at the front end of the platen, respectively. As the carbon element becomes worn it is unwound from the delivering-roll upon the carrier 54 and is wound upon the front carrier 55 by the rotation of the latter through the medium of the thumb-wheel 56, suitable guide-rollers 57, 58, and 59 being mounted at the opposite ends of the drop extension 14 and at the front end of the platen, respectively. It will be noted that the location of the guide-roller 58 at the front end of the

drop extension permits the carbon element to be moved with equal facility whether the drop extension is up or down, as in the latter position this roller will be located at the upper edge of the extension to guide the web in an angular direction.

While the front guide-roller 59 and the front carbon-carrier 55 are located at the front end of the platen, they are not directly carried thereby, but are sustained by the track-frame for movement therewith through the medium of suitable brackets, as shown.

At the side of the platen opposite the billing-strip 44 is located a laterally-adjustable gage-strip 60, provided with gage projections 61 and supported at its opposite ends by scale-bars 62, provided with graduations which facilitate the adjustment of the gage-strip. While not limited to such use, the provision of the gage-strip 60 at the right-hand side of the platen is intended to enable the sales-sheet to be held in reversed position, so that both sides thereof may be used.

The platen is further equipped with work holding and guarding strips or tapes 63, disposed longitudinally thereof between the tracks and secured at their front ends to card-guides 64 and at their rear ends to slides 65. These tapes are designed to be adjusted laterally to present them at the edges of work-sheets of different widths, and the card-guides 64 are therefore slidably secured to the frame-bar 28, provided with a scale or series of graduations corresponding with the graduations upon a transverse tension-bar 66, slidably supporting the slides 65 and constantly urged rearwardly by springs 67, attached as shown. These strips or tapes are designed to guard the opposite edges of cards properly positioned upon the platen with the aid of the card-guide, and when folded bills employed in connection with some billing systems are to be written upon the right-hand tape is received within the folded edge or bight of the bill, with the other strip or tape disposed to guard the opposite edge thereof. Instead of employing a pair of strips or tapes, as shown, the platen may be equipped with one only if it is simply desired to provide for the engagement of the fold or bight of a bill, for instance.

The platen is further equipped with a transversely-disposed protecting-plate 68, having its opposite ends slidably received within the grooves 69, formed in the inner faces of the tracks to permit the adjustment of the plate lengthwise of the platen. While the protecting-plate is capable of being advanced over the work-sheet as the work progresses, it is designed particularly for the protection of the top edge of the sheet imposed upon the platen and is therefore equipped with a movable work holding or guarding member 68^a, carried by the front ends of operating-levers 70, fulcrumed upon the protecting-plate and having their rear ends 71 extending upwardly into the path of the front bar of the machine-frame. When the machine is moved

back from over the work, the frame-bar is designed to contact with the rear ends of the operating-levers 70 for the purpose of swinging the levers, and thereby effecting the automatic elevation of the work holding or guarding plate or member 69^a from the work. The platen is also provided with a detachable device for assisting in the raising of the tracks or guides. This device consists of a bracket 72, detachably connected to the under side of the platen at its front end and constituting a support for a rock-shaft 73, urged in one direction by a spring 74 and having terminal lifting-arms 75, provided with small antifriction-rollers 76, which bear against the undersides of the tracks or guides. The power of the spring 74 is just sufficient to counterbalance the swinging frame comprising the tracks or guides and their connections, so that said frame may be easily manipulated by the operator. It is also desirable to protect the carbon-rolls by detachable guards 77, as shown.

Ordinarily the drop extension 14 is located in its inoperative position, as shown in Fig. 3, and the front track-sections 26 are free to swing independently of the rear track-sections 25. That portion of the platen lying between the rear track-sections 25 therefore constitutes the normal platen extension, to a position over which the machine is moved, as shown in dotted lines, when it is desired to elevate the swinging frame for the purpose of displacing the work element or elements from or replacing or adjusting the work within the normal printing area defined by that portion of the platen lying in advance of the rear track-sections. When the platen is used in this manner, the machine is stopped in its proper position by the machine-stops 39, secured at the front end of the drop extension. When, however, it is desired to write upon work-sheets of abnormal length, the drop extension is raised to its horizontal position, where it is retained by the bracket 18, and the front and rear sections of the tracks or guides are rigidly connected in alinement by the locking devices shown in Figs. 7 and 8. The raising of the drop extension withdraws the machine-stops 39 from the path of the machine and presents the auxiliary track-sections 24 in alinement with the track-sections disposed above the platen. The machine may now be moved back upon the extension beyond the rear end of the platen, where it will be arrested by the machine-stops 40. The swinging frame will then comprise the front and rear track-sections, movable in unison toward and away from the platen and swinging from an axis located at the rear end of the normal platen extension, which thus becomes a part of the printing area of the platen.

In conclusion it may be stated that the platen extension 14 constitutes both a machine-support and a displaceable supplemental platen extension. Viewed merely as

a machine-support it embraces a wide range of equivalents, because the invention in one aspect thereof comprehends the broad idea of providing a machine-support of any character whatsoever located beyond the main body of the platen and displaceable from its normal position either by actual removal or by a mere change of position. The expression "displaceable machine-support" used in the claims is employed in this broad sense. Considered in another aspect, however, the extension 14 constitutes a displaceable continuation or section of the main body of the platen, since while it is primarily designed to perform the function of a machine-support it is nevertheless capable of being and under some conditions is designed to be utilized for the support of a work element or a portion of a work element, upon which a limited amount of matter may be printed by a machine located above the extension. In another aspect, therefore, the invention will be seen to comprehend a sectional platen, each section of which is capable of displacement from its normal position whether by actual removal or by such movement as will displace it from that position which it normally assumes.

I make no claim to the subject-matter disclosed and claimed in the copending application of John A. Smith, Serial No. 67,346, the work-retaining devices being herein illustrated for the sole purpose of showing a fully equipped platen.

It is thought that from the foregoing the construction and mode of manipulation of the platen, as well as the advantages accruing from its use, will be readily understood by those skilled in the art; but since the invention in its broader aspect is of sufficient scope to include many constructions other than that described I wish to be distinctly understood as reserving the right to effect such changes, modifications, and variations of the illustrated structure as may fall properly within the scope of the protection prayed.

What I claim is—

1. A type-writing-machine platen having an extension beyond the normal printing area, and a machine-support designed to receive the machine when said extension is utilized as a part of the printing area of the platen.

2. A type-writing-machine platen having an extension located beyond the normal printing area, and a displaceable machine-support designed to receive the machine when said extension is utilized as a part of the printing area of the platen.

3. A type-writing-machine platen having an extension located beyond the normal printing area, and a machine-support designed to receive the machine when said extension is utilized as a part of the printing area of the platen, said machine-support being movable to a substantially vertical position.

4. A type-writing-machine platen having an extension located beyond the normal printing area, and a hinged machine-support de-

signed to receive the machine when said extension is utilized as a part of the printing area of the platen.

5 A type-writing-machine platen having an extension located beyond the normal printing area, a displaceable machine-support designed to receive the machine when said extension is utilized as a part of the printing area of the platen, and means for sustaining
10 the support in position to receive the machine.

6. A type-writing-machine platen having an extension located beyond the normal printing area, a drop-support designed to receive
15 the machine when said extension is utilized as a part of the printing area of the platen, and a bracket movable into and out of position to sustain or release said support.

7. A type-writing-machine platen having
20 an extension located beyond the normal printing area, to receive the machine when the latter is moved back from over the work, and a machine-support hinged at or adjacent to its front edge to said extension and designed in
25 one position thereof to receive the machine when the extension is utilized as a part of the printing area of the platen.

8. A type-writing-machine platen having an extension beyond the normal printing area,
30 to support the machine when the latter is moved back from the work, and a machine-support disposed to receive the machine when said extension is utilized as a part of the printing area of the platen, the platen and the machine-support being independently movable
35 from their operative plane.

9. A type-writing-machine platen mounted to swing and having an extension located beyond the normal printing area, to receive the
40 machine when the latter is moved back from the work, and a swinging machine-support associated with the platen to receive the machine when the extension is utilized as a part of the printing area of the platen.

45 10. In a type-writing machine, the combination with a drop-frame, of a platen hinged to the frame and having an extension located beyond the normal printing area of the platen, to receive the machine when the latter is
50 moved back from the work, and a machine-support extending from the side of the frame opposite the platen, to receive the machine when the extension is utilized as a part of the printing area of the platen.

55 11. In a type-writing machine, the combination with a drop-frame, of a platen extending in one direction from the frame and having an extension located beyond the normal printing area, and a machine-support dis-
60 placeable from its operative position and extending from the other side of the frame, said machine-support being designed for the reception of the machine when the extension is utilized as a part of the printing area of the
65 platen.

12. In a type-writing machine, the combination with a drop-frame, of a platen having

an extension located beyond the normal printing area, for the support of the machine when the latter is moved back from the work, a dis- 70
placeable machine-support designed to receive the machine when the extension is utilized as a part of the printing area of the platen, and means carried by the drop-frame for sustaining the support in position to re- 75
ceive the machine.

13. In a type-writing machine, the combination with a drop-frame, of a hinged platen extending from the frame and having an extension beyond the normal printing area, to
80 receive the machine when the latter is moved back from the work, a hinged machine-support located beyond the extension to receive the machine when said extension is utilized as a part of the printing area of the platen, 85
and a swinging bracket mounted on the drop-frame to sustain the machine-support.

14. In a type-writing machine, the combination with a platen having an extension located beyond the normal printing area, a ma- 90
chine-support designed to receive the machine when said extension is utilized as a part of the printing area of the platen, and a machine-stop movable into and out of the path of the
95 machine.

15. In a type-writing machine, the combination with a platen having an extension located beyond the normal printing area, a machine-support designed to receive the machine
100 when said extension is utilized as a part of the printing area of the platen, and a machine-stop movable into and out of the path of the machine, said machine-stop being located in one position to arrest the machine opposite
105 the platen extension.

16. In a type-writing machine, the combination with a platen having an extension located beyond the normal printing area, to re-
110 ceive the machine when the latter is moved back from the work, and a vertically-movable stop arranged to be projected into the path of the machine, to arrest the latter opposite the extension.

17. In a type-writing machine, the combination with the platen, and the main tracks 115
or guides for the traveling machine, of a machine-stop movable into and out of the path of the machine, and a machine-support located beyond said stop.

18. In a type-writing machine, the combination with the platen, and the tracks or
120 guides, of a machine-support displaceable from its operative position, and a machine-stop arranged in the path of the machine to arrest the latter in advance of the machine-
125 support, said machine-stop being mounted for withdrawal from the path of the machine to permit the latter to move back upon the machine-support when said support is in its
130 operative position.

19. In a type-writing machine, the combination with the platen, and the tracks or
guides for the traveling machine, of a movable machine-support, a machine-stop, and

means for automatically presenting the machine-stop in position to arrest the machine in advance of the support when the latter is moved to an inoperative position.

5 20. In a type-writing machine, the combination with the platen, and the main tracks or guides, of a machine-support displaceable from its operative position, and a machine-stop carried by the machine-support and movable thereby into position to arrest the machine in advance of the support.

21. In a type-writing machine, the combination with the platen, and the main tracks or guides for the traveling machine, of a drop-support disposed beyond the printing area of the platen for the reception of the machine, and a machine-stop disposed to arrest the machine in advance of the support when the latter is in its inoperative position.

20 22. In a type-writing machine, the combination with the platen, and the main tracks or guides, of a machine-support hinged at its front end and disposed beyond the printing area of the platen, and a machine-stop carried by the machine-support and arranged to be swung into or out of the path of the machine by the movement of the machine-support.

23. In a type-writing machine, the combination with the platen, and the main tracks or guides for the traveling machine, of a drop-support arranged beyond the printing area of the platen for the reception of the machine, a machine-stop for arresting the machine when the latter is moved back upon the support, and another machine-stop for arresting the machine in advance of the support when the latter is in its inoperative position.

24. In a type-writing machine, the combination with the platen, and the main tracks or guides for the traveling machine, of a drop-support for the reception of the machine, a machine-stop carried by said support to arrest the machine in proper position thereon, and another machine-stop carried by the drop-support and arranged to be swung into the path of the machine when the support is moved to its inoperative position.

25. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections mounted for movement toward and away from the platen and front sections movable toward and away from the platen independently of the rear sections or in unison therewith.

26. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable toward and away from the platen and front sections hinged to the rear sections and movable independently thereof or in unison therewith.

27. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections mounted for movement toward and away from the platen and front sections movable independently of

the rear sections, and means for connecting the front and rear sections to compel their movement in unison.

28. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections mounted for movement toward and away from the platen and front sections movable toward and away from the platen independently of the rear sections, and locking means for rigidly connecting the front and rear sections to compel their movement in unison.

29. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections mounted for movement toward and away from the platen and front sections hinged to the rear sections, and locking means cooperating with the front and rear sections to compel their movement in unison.

30. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections mounted for movement toward and away from the platen and front sections hinged to the rear sections, and locks associated with the hinges to rigidly connect the track-sections for movement in unison.

31. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable toward and away from the platen and front sections movable independently of the rear sections, and latch-bolts for rigidly connecting the front and rear sections to compel their movement in unison.

32. In a type-writing machine, the combination with the platen, of a main track or guide comprising hingedly-connected sections, a latch-bolt carried by one section and movable into engagement with another section to lock said sections rigidly together.

33. In a type-writing machine, the combination with the platen, of a main track or guide comprising hingedly-connected sections, an extension upon one section, and means for effecting the interlocking engagement of said extension with another section.

34. In a type-writing machine, the combination with the platen, of the tracks or guides comprising rear sections movable toward and away from the platen and front sections movable independently of or in unison with the rear sections, and a machine-support disposed beyond the rear sections of said tracks or guides.

35. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable toward and away from the platen and front sections movable independently of or in unison with the rear sections, and a machine-support disposed beyond the tracks or guides and displaceable from its operative position.

36. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable to-

ward and away from the platen and front sections movable independently of or in unison with the rear sections, a machine-support displaceable from its operative position, and a machine-stop for arresting the machine upon the rear sections of the tracks or guides when the support is not in use.

37. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable toward and away from the platen and front sections movable independently of or in unison with the rear sections, a machine-support disposed beyond the platen and displaceable from its operative position, and an automatically-operated machine-stop for arresting the machine upon the rear sections of the tracks or guides when the machine-support is not in use.

38. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable toward and away from the platen and front sections movable independently of or in unison with the rear sections, a drop-support, and means for sustaining the drop-support in position to receive the machine from the main tracks or guides.

39. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable toward and away from the platen and front sections movable independently of or in unison with the rear sections, a drop-support, means for sustaining the drop-support in position to receive the machine from the main tracks or guides, and a machine-stop movable into and out of the path of the machine by the drop-support.

40. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable toward and away from the platen and front sections movable independently of or in unison with the rear sections, a drop-support disposed to receive the machine from the tracks or guides, and a machine-stop carried by the drop-support and movable into the path of the machine to arrest the latter upon the rear sections of the tracks or guides when the machine-support is dropped.

41. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable toward and away from the platen and front sections movable independently of or in unison with the rear sections, a drop-support disposed to receive the machine from the tracks or guides, a machine-stop for arresting the machine in proper position upon the machine-support, and another machine-stop for arresting the machine upon the rear sections of the tracks or guides when the support is not in use.

42. In a type-writing machine, the combination with the platen, of main tracks or guides comprising hingedly-connected sec-

tions movable toward and away from the platen, means for locking the sections of the main tracks or guides for movement in unison, and a machine-support disposed to receive the machine from said tracks or guides.

43. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising hingedly-connected sections movable toward and away from the platen, locking means for connecting the sections for movement in unison, a drop-support disposed to receive the machine from said tracks or guides, and machine-stops automatically movable into the path of the machine to arrest the latter in advance of the machine-support when said support is not in use.

44. In a type-writing machine, the combination with the platen, of main tracks or guides comprising hinged rear sections disposed to swing toward and away from the platen and front sections hinged to the rear sections and movable independently thereof, and means for locking the front and rear sections to compel them to swing in unison.

45. In a type-writing machine, the combination with the platen, of the main tracks or guides comprising rear sections movable toward and away from the platen and front sections movable independently of or in unison with the rear sections, and a machine-support disposed beyond the platen, said machine-support including auxiliary track or guide sections.

46. A type-writing-machine platen having an extension disposed beyond the normal printing area, and a supplemental displaceable extension.

47. A type-writing-machine platen having an extension beyond the normal printing area, and a supplemental drop extension.

48. A type-writing-machine platen having an extension located beyond the normal printing area, a supplemental extension, and means for removably supporting the supplemental platen extension in the plane of the platen.

49. A type-writing-machine platen having an extension located beyond the normal printing area, a supplemental extension mounted to drop away from the plane of the platen, and means for removably supporting the supplemental extension in its operative position.

50. A type-writing-machine platen having an extension located beyond the normal printing area, a movable supplemental extension, and a support movable into and out of position to sustain or release said supplemental extension.

51. In a type-writing machine, the combination with the platen having an extension located beyond the normal printing area, and main tracks or guides, of a supplemental platen extension displaceable from its operative position and having auxiliary track or guide sections.

52. In a type-writing machine, the combi-

nation with the platen, of the main tracks or guides, one of which comprises a rear section mounted for movement toward and away from the platen and a front section movable
5 toward and away from the platen independently of the rear section or in unison therewith.

53. In a type-writing machine, the combination with a platen, of the main tracks or
10 guides, one of which comprises a rear section mounted for movement toward and away from the platen and a front section hinged to the rear section, and locking means cooperating with said sections to compel their move-
15 ment in unison.

54. In a type-writing machine, the combination with a platen, and the main tracks or guides for the traveling machine, of a machine-support displaceable from its normal
20 position, and serving when displaced to present a stop into the path of the machine.

55. In a type-writing machine, the combination with a platen, of main tracks or guides

comprising movable front sections at opposite sides of the normal printing area, and
25 rear sections to receive the machine when the latter is moved back from the work, and a machine-support located beyond the rear sections of said tracks or guides.

56. In a type-writing machine, the combination with a platen, of main tracks or guides comprising movable front sections at opposite
30 sides of the normal printing area, and rear sections to receive the machine when the latter is moved back from the work, and a machine-support located beyond the rear sections of said tracks or guides and displaceable
35 from its operative position.

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

HIRAM JOSEPH HALLE.

Witnesses:

JOHN H. SIGGERS,
FLORENCE E. WALTER.