

No. 754,271.

PATENTED MAR. 8, 1904.

J. ALEXANDER.
TYPE WRITING MACHINE ALINER.

APPLICATION FILED AUG. 2, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

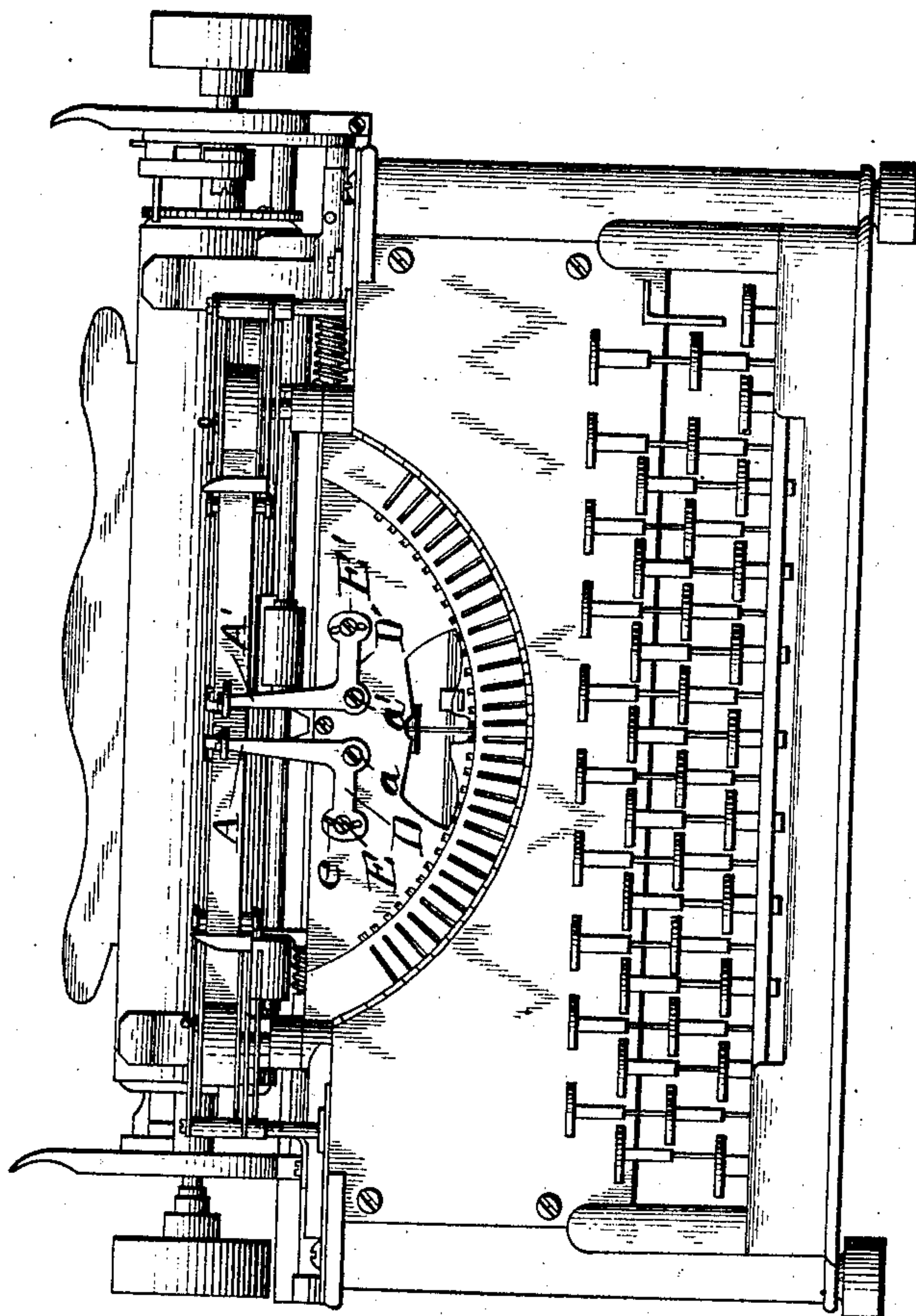
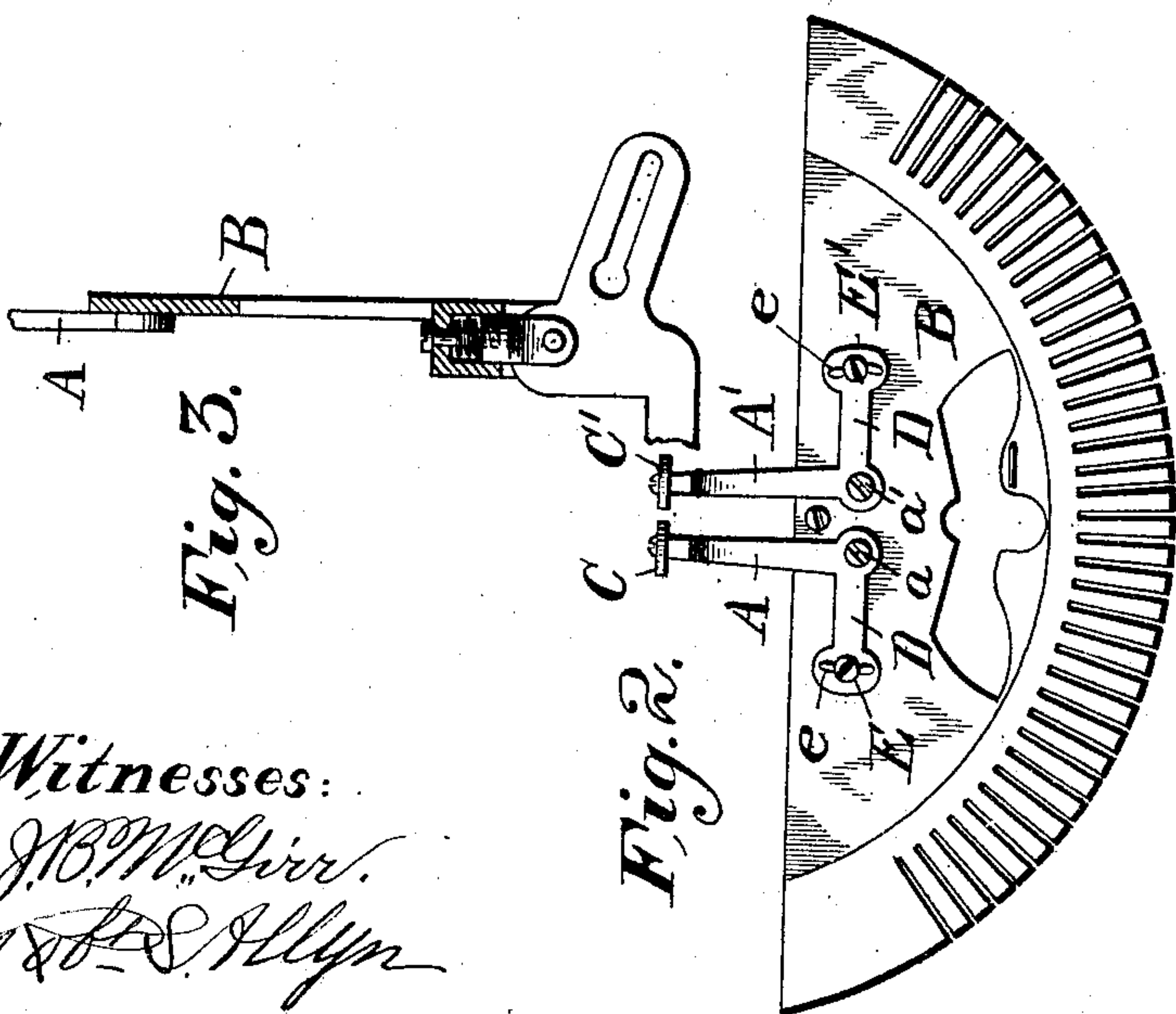


Fig. 3.



Witnesses:
J.B.M. Gurr.
J.B. S. Hlyn

Fig. 2.

Inventor
Jesse Alexander.
by R. A. Mitchell.
Attorney.

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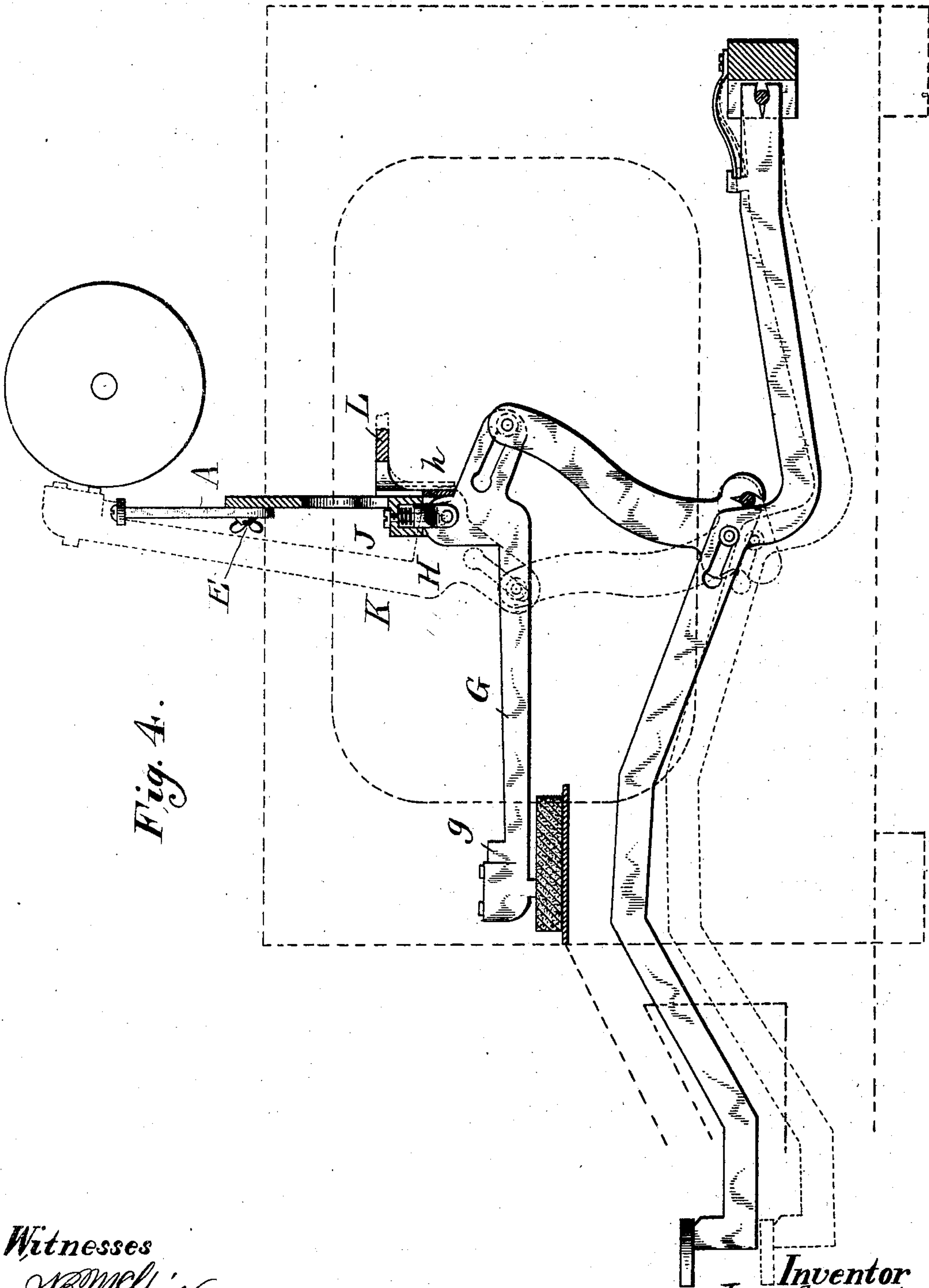
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2 SHEETS—SHEET 2.



Witnesses
J. B. McGiv.
Robt S. Allyn

Inventor
Jesse Alexander
by R. Mitchell
Attorney

UNITED STATES PATENT OFFICE.

JESSE ALEXANDER, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF
TO ARTHUR LETTS, OF LOS ANGELES, CALIFORNIA.

TYPE-WRITING-MACHINE ALINER.

SPECIFICATION forming part of Letters Patent No. 754,271, dated March 8, 1904.

Application filed August 2, 1902. Serial No. 118,086. (No model.)

To all whom it may concern:

Be it known that I, JESSE ALEXANDER, a citizen of the United States, residing at Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Type-Writing-Machine Aliners, of which the following is a full, clear, and exact description.

My invention relates to improvements in type-writing machines, and particularly to mechanism for facilitating the adjustment and proper alinement of the type-bar mechanism. It will be found to relate more particularly to visible-writing machines in which the type is arranged to strike a platen on an approximately vertical plane. The details of such a machine other than as herein set forth not being the subject-matter of this application are unnecessary of description herein.

The object of my invention, as will be seen on an inspection of the drawings and the description herein, is to insure the proper alinement of the type in the writing position and an adjustment of the parts at this point. It will be found to be economical in its construction and most effective in its operation.

It consists in the improvements substantially as herein described and shown.

In the drawings, Figure 1 is a vertical projection or front elevation of a machine embodying the improvements herein set forth. Fig. 2 is an enlarged detail of what may be termed the "type-bar pivot-plate" and the "horizontal aliners." Fig. 3 is a detail, partly in cross-section, of the type pivot-plate and a portion of a type-bar. Fig. 4 is a view, partly in cross-section and partly in elevation, of a key and type-bar mechanism and the type pivot-plate and aliners.

Details of construction as herein set forth will be seen on inspection by one skilled in the art to be applicable to machines of other types than that herein particularly described; but for convenience and conciseness this specification will be confined to the visible-writing type of machines. In this general class of visible-writing machines the platen is constructed so as to be properly guided and pass

from right to left during the operation of printing. The type-bars themselves carrying the type may be conveniently arranged in the arc of a circle, as shown particularly in Fig. 1. When the type are brought into their printing position by the key and type-bar mechanism, as, for example, shown in Fig. 4, the type is caused to strike the platen at the front thereof and at a point necessarily dependent on the position of the platen. In order that this printing position of the type may be uniform throughout the different positions of the platen, I have provided the guide-posts or aliners A A', as particularly shown in Fig. 2. These guide-posts are pivoted at *a a'* to what I term for convenience the "type pivot-plate" B and are adapted thus to swing about the points *a a'*. The upper end of these guide-posts A A' carry the guide wheels or disks C C', which are in their turn pivoted to the upper ends of the guide-posts and adapted to revolve freely about their axes, as will be evident on inspection of the drawings. In order that the positions of the guide-posts, and consequently the positions of the guide-wheels C C', may be adjusted as desired, I have provided the posts A A' with projecting arms D D', which extend to the right and left, respectively, from the posts. The outer ends of these arms are slotted on the arc of a circle substantially of the radius equal to the distance from the pivots *a a'* to these slots *ee'*. In order to provide considerable amount of adjustment, the ends of the arms may be enlarged at E E', as shown. The set-screws or thumb-nuts F F' are provided, adapted to take into the type pivot-plate B and having a shoulder to coact with the enlarged portions E E' of the arms D D' to hold the arms in whatever position is desired. By these means the distance between the guide-wheels C C' may be increased or diminished, as desired. It will also be noted that by moving the guide-post A' on the right to the right and the guide-post A on the left to the right an equal distance each the space between the guide-wheels will remain the same as before, while the open-space position between the guide-wheels will have

been shifted to the right. The same adjustment may be effected in the reverse direction to move the guide-space to the left.

The construction thus far described is adapted to be used with any suitable construction of type-bar or type-bar pivot, the essential feature being that the type-bar G shall be so constructed at a point for instance, point *g* - as to pass between the faces of the guide wheels or disks C C'. Thus when the type-bar is operated this guide-surface *g* will be caused to pass through the guide-space between the wheels C C'. The wheels or disks being pivoted afford a guide which is practically frictionless, since when the guide portion of the type-bar *g* enters between these wheels there is a rolling contact between the surfaces. The same is true when the type-bar is withdrawn from the printing position. The guide-posts A A' may be adjusted to give as close or ample a space between the disks, and consequently freedom to the type-bar, as desired.

The form of type-bar pivot which is particularly adapted to be used with this form of alining device is shown in Fig. 4. The mechanism already described provides for the horizontal alinement of the type, while that next to be described refers to the vertical alinement. The type-bar G, being of a suitable construction, is pivoted at *h* to a lift-block H. This lift-block may be made, preferably, of cylindrical form and be guided in a recess in an enlarged portion of the type pivot-plate B, the lower end of the lift-block being bifurcated to form side plates adapted to carry the pivot-pin *h*. In the top of the enlarged portion of the plate B a drilled hole is provided, in which a screw J may move freely, the lower end of the screw taking into the lift-block H for the purpose of adjusting the position of the same. Between the top of the lift-block and the under surface of the recess in the enlarged portion of the plate B may be provided a helical spring K for the purpose of facilitating the adjustment and taking up any loose play which might otherwise occur at this point. On an inspection of Fig. 4 it will be noted that when the type-bar is in the printing position, as shown dotted, the vertical adjustment depends upon the position of the type-bar pivot H. This, as described, may be effected by means of the screw J to the extent desired and in a simple and convenient manner.

The universal bar of this machine may be provided, as at L, at a point rearward of the type pivot-plate B. The striking-face of this universal bar should for practical reasons be made of a depth sufficient to allow for the desired vertical adjustment of the type-bar, as will be noted in Fig. 4.

The construction and detailed description of the key and type-bar mechanism and of the other features of the type-writing machine are not included herein, since they will

be found in other applications filed by me, Serial Nos. 118,083, 118,084, 118,085.

The type pivot-plate B is provided with a series of recesses adapted to carry the lift-blocks H, one for each of the type-bars. These, as indicated in Fig. 1, may be arranged substantially on the arc of a circle. The machine is preferably of what is called a "single-shift" type, in which a portion of the type are on a lower case and a portion on the upper case, so that each type-bar is provided with two type-faces. By this construction it is possible to obtain in a much more compact form the type-bars of a small number and the necessary variety of letters and other characters, besides other advantages.

What I claim is --

1. An alining device for type-writing machines comprising pivoted guide-posts having their axes at right angles to the axis of the platen, pivoted revoluble guide-wheels carried thereby having a guide-passage between them and means for adjusting the position of the guide-posts for varying the width of the guide-passage.

2. An alining device for type-writing machines comprising guide-posts attached to the frame of a machine and carrying at their upper ends pivoted revoluble guide-wheels having a guide-passage between the same and between said posts and means for moving the guide-wheels toward or away from each other or to one side or the other for adjusting the position or extent of the guide-passage, substantially as described.

3. An alining device for type-writing machines comprising pivoted guide-posts, pivoted guide-wheels carried thereby, said guide-posts having extension-arms and means for adjusting the position of the same.

4. An alining device for type-writing machines comprising guide-posts pivoted to the frame of a machine and having extension-arms, said extension-arms being slotted and screws working in the slotted portion of said extension-arms and adapted to engage the frame of the machine.

5. An alining mechanism for type-writing machines comprising a type pivot-plate having recesses therein, lift-blocks operating in said recesses said lift-blocks having pivots for the type-bars, and means for adjusting the vertical position of said lift-blocks comprising screws passing through the walls of the recesses to draw the lift-blocks up or to let them down.

6. In an alining mechanism for type-writing machines, a type pivot-plate, a lift-block carried thereby, a type-bar pivoted to said lift-block, and means for adjusting the vertical position of said lift-block and type-bar comprising a screw operating through the pivot-plate and in the lift-block to raise or lower the block.

7. The vertical alining mechanism for a

type-writing machine comprising a type pivot-plate, recesses therein, a lift-block having a pivot for the type-bar, a helical spring normally depressing said lift-block and a screw
5 for adjusting the position of said lift-block, substantially as described.

8. In an alining mechanism for type-writing machines, the combination of the horizontal
10 and vertical adjustment comprising pivoted guide-posts attached to the frame of the machine, said guide-posts carrying guide-wheels, and lift-blocks carried by the frame of the machine and having an individual pivot for the type-bar and a screw for adjusting the
15 position of said lift-block.

9. In an alining mechanism for type-writing machines, the combination of the horizontal and vertical adjustment comprising the guide-

posts pivoted to the frame of the machine, the revoluble guide-wheels carried by said
20 guide-posts and the spring-pressed lift-blocks having pivots for a type-bar, and means for adjusting the position of the same.

10. In an alining mechanism for type-writing machines, the combination of the horizontal
25 and vertical adjustment comprising the guide-posts carried by the frame of the machine, the revoluble guide-wheels carried by said guide-posts and the spring-pressed lift-blocks having pivots for a type-bar, and means for
30 adjusting the position of the same.

JESSE ALEXANDER.

Witnesses:

L. VREELAND,
ROBT. S. ALLYN.