

No. 750,788.

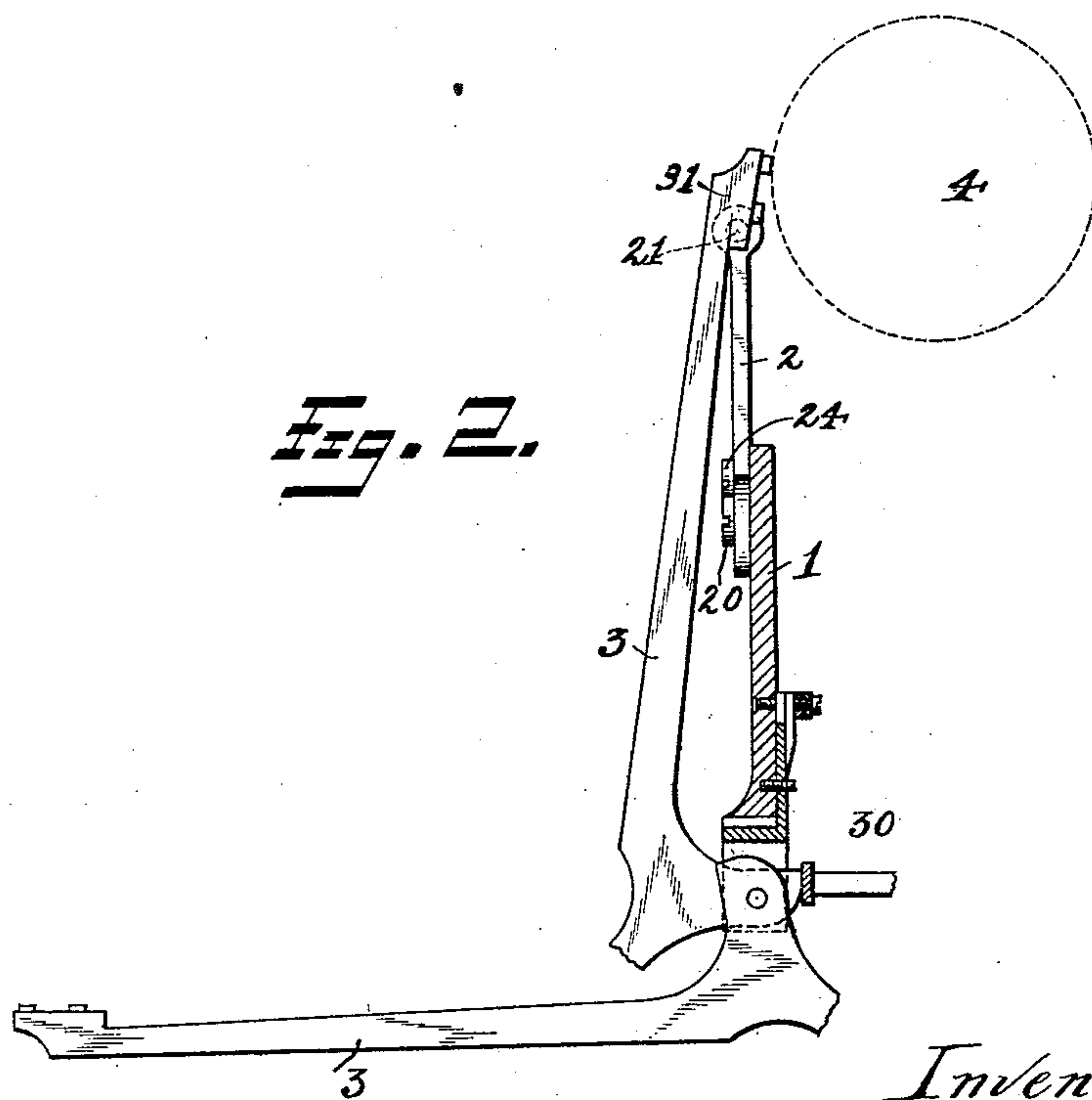
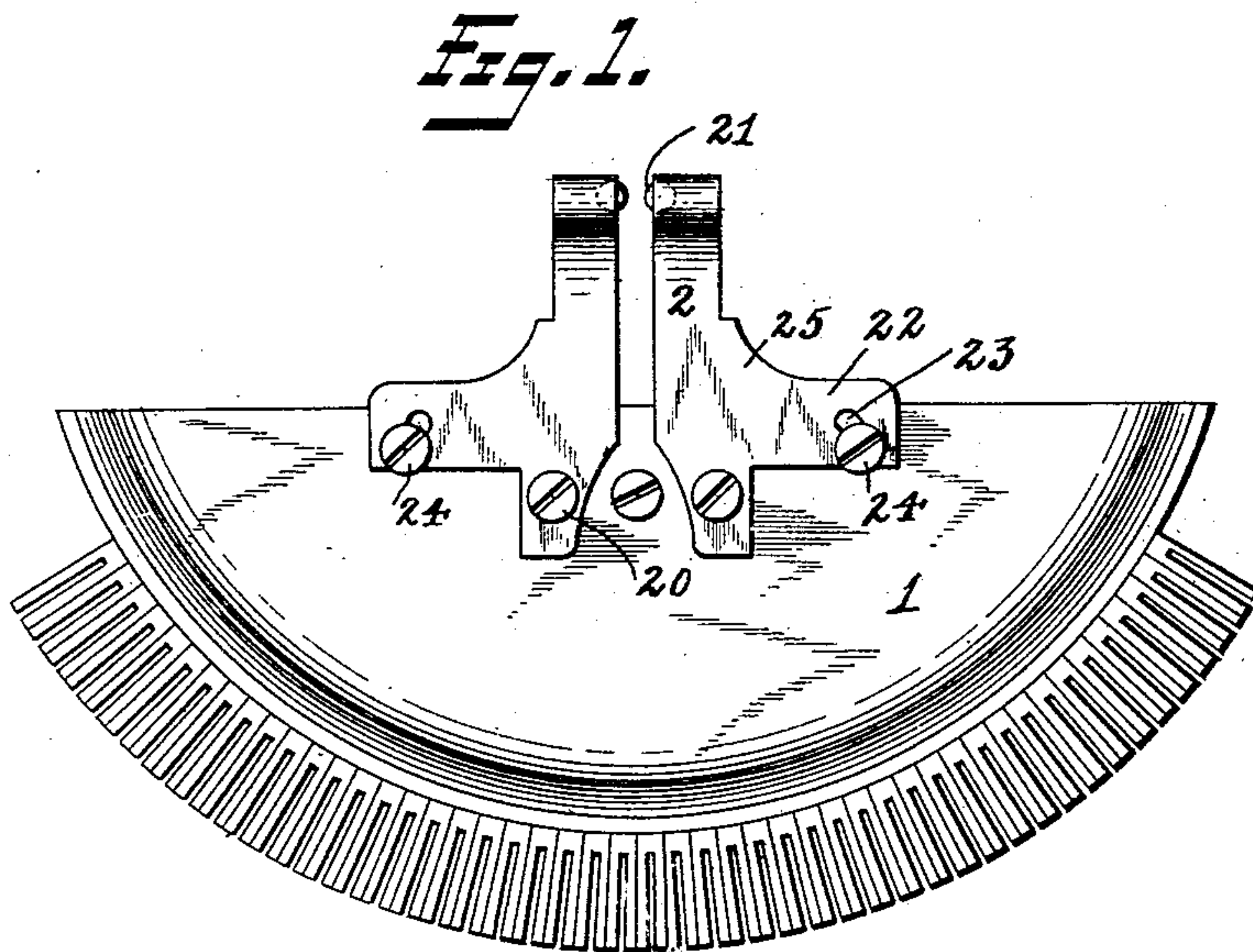
PATENTED FEB. 2, 1904.,

J. ALEXANDER.
TYPE WRITER ALINEMENT AND ADJUSTMENT.

APPLICATION FILED NOV. 8, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
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2 SHEETS—SHEET 2.

Fig. 3.

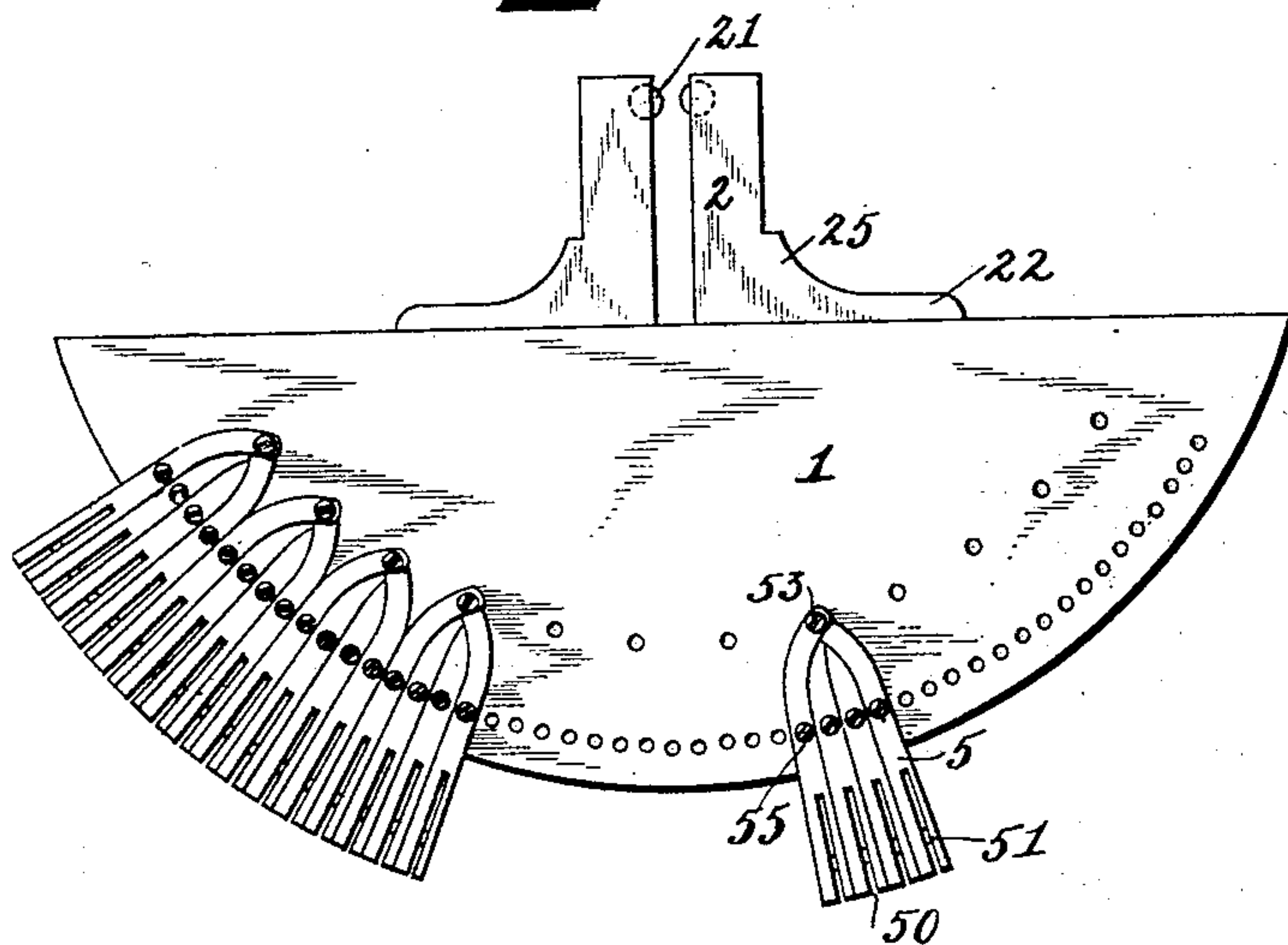
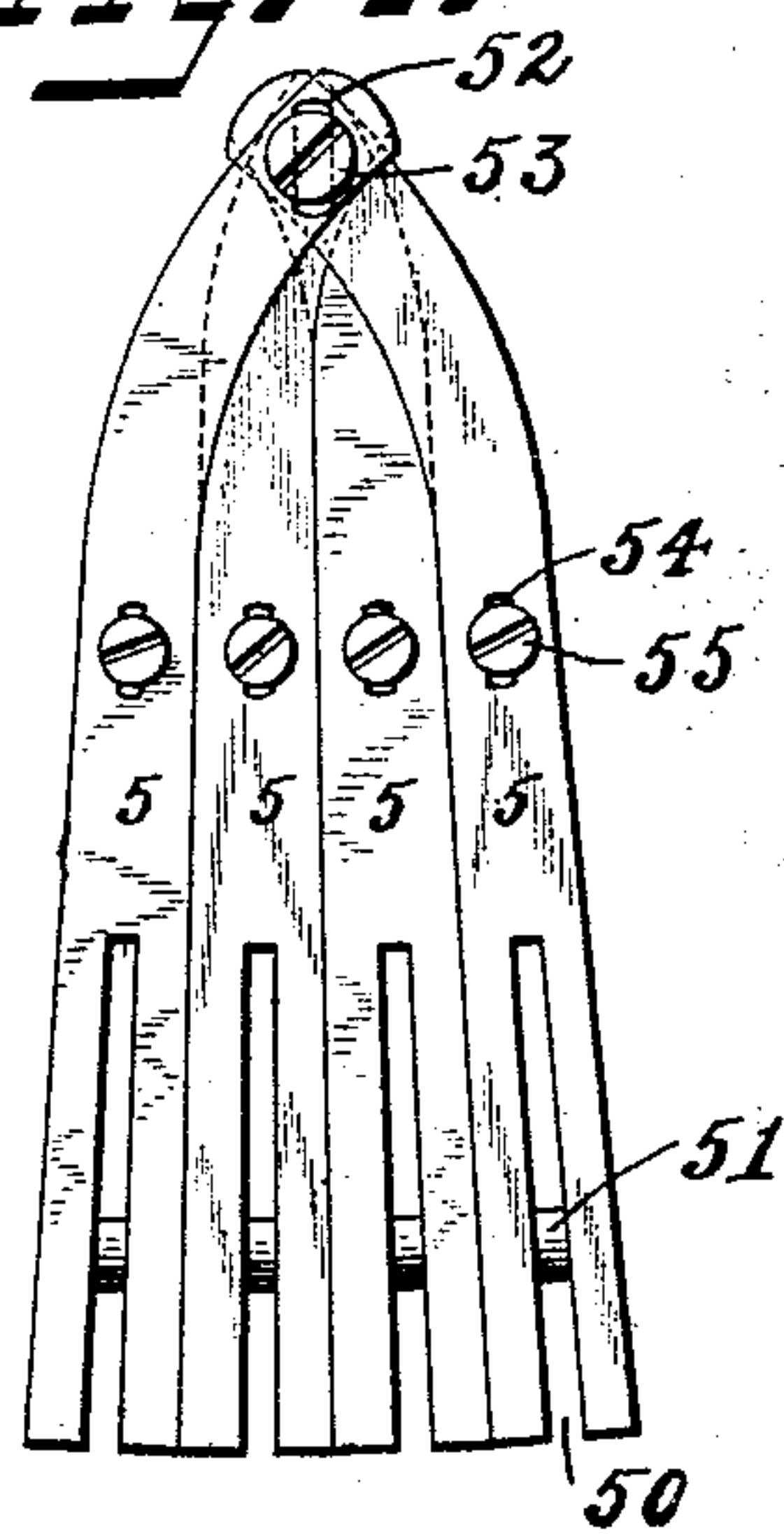


Fig. 4.



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UNITED STATES PATENT OFFICE.

JESSE ALEXANDER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
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TYPE-WRITER ALINEMENT AND ADJUSTMENT.

SPECIFICATION forming part of Letters Patent No. 750,788, dated February 2, 1904.

Application filed November 8, 1902. Serial No. 130,547. (No model.)

To all whom it may concern:

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

10 My invention relates to type-writing machines, and particularly to mechanism for providing alinement and adjustment of the type and type-bars. The construction will be found particularly adapted for use with a machine of the class in which the printed line appears on a horizontal line before the operator.

It is the object of my invention to provide a means for guiding the type to the printing position which shall be substantially frictionless and susceptible of adjustment in a simple manner. The structure mentioned more immediately affects the horizontal position of the printed letter and may be conveniently termed a "horizontal-alining" mechanism.

20 My invention also contemplates a means for adjusting the type-bars in such a manner as to vary the position of the printed letter vertically or in reference to a horizontal plane. This may be termed the "vertical-alining" mechanism.

The invention will be found to consist in providing means which may be conveniently mounted and arranged upon a single supporting-plate for effecting the horizontal and vertical adjustment referred to, and more particularly shown in the accompanying drawings and described in the following specification.

40 Figure 1 is a vertical projection of a structure embodying my invention. Fig. 2 is a cross-section and elevation of the same with the addition of two type-bars—one in the normal position and the other in the printing position before a platen shown dotted. Fig. 3 is a rear elevation of a structure embodying my invention with some of the parts removed. Fig. 4 is a view, relatively enlarged, of a detail of the vertical alining or adjusting mechanism.

Referring to Fig. 1, the plate which affords a support for the alining mechanism is designated by the numeral 1. At the upper portion of this plate are pivoted similarly-formed but oppositely-arranged brackets 2. The lower end is pivoted and held in place at 20 by a screw which passes through a hole in the same and takes into the plate 1. In the upper ends of the two brackets are secured loosely-mounted balls 21. The side of each bracket is extended from the central portion into an arm 22, which is slotted at 23 to receive the screw 24, which takes into a tapped hole in the plate 1. It is preferred that the side arms 22 should be substantially above the pivot 20 and be connected with the main upright portion of the bracket by the web portion 25. The upright is therefore substantially reinforced and may be made of a very light weight material. The distance between the surfaces of the balls 21 may be adjusted within considerable limits by releasing the pivots 20 from the friction of the head of the screw, loosening the screw 24, and moving the brackets as desired. It is also possible to vary the vertical position of the space between the balls in a similar manner by adjusting both brackets to an equal extent each to the right or to the left, as desired.

50 In Fig. 2 I have shown two type-bars as in place in a structure embodying my invention, in which the numeral 3 refers to the type-bar and 31 to the head of the type-bar, which is adapted to pass between the faces of the guide-balls 21 at substantially the printing position before a platen suggested by the dotted outline 4. The type-bar itself is provided with a slotted portion 30, adapted to be pivotally supported by slotted fingers 5, which fingers carry the pivot or pin 51, upon which the type-bar is mounted. These fingers are provided in groups for the purpose which will hereinafter appear and are herein shown to consist of four members. Each finger at its upper end is slotted at 52 and adapted to be secured in place by a screw 53. Between the slot 52 and the pin 51 is another slot 54, which in a manner similar to 52 is adapted to provide a passage for a screw 55. Each of these

screws 53 and 55 take into the rear of the plate 1. The screw 55 is made of substantially smaller size than the screw 53. It is important in adjustment devices of this character
 5 that the fingers should be provided with two points of support and separated from each other by such a distance that they may be securely held in place at all times. To provide a screw of any considerable size and holding
 10 power, it is necessary that the finger should be of considerable width to provide a bearing for it. For this reason and since the available space for such a fastening device decreases rapidly as the center of the arc of the plate 1
 15 is approached I have provided a common support 53 for a number of fingers. When it is desirable to effect the adjustment of any one of the type-bars supporting pivots 51, it is merely necessary to loosen the screw 53 at the
 20 upper end and the screw 55 corresponding to that particular pivot-supporting finger. The finger may then be moved in a substantially radial direction through the desired amount, which in any event would be quite small. It
 25 will be noted that at this time all the other fingers of the group will be held in position by their individual holding-screws 55, which remain secure. It is possible, therefore, to adjust one finger without affecting the others,
 30 although a group does have a common holding-screw 53.

The horizontal-alining device herein shown, consisting of the balls 21, provides a practically frictionless guide for the head of the type-
 35 bar, since the balls may rotate in any direction freely, and while providing an entrance-passage of considerable size nevertheless has but a small contact or actual guiding surface through the narrower portion of the opening.
 40 In this connection it will be noted that since the type-block is moving through the arc of a circle when approaching the printing position there is a tendency to give the guide-balls a slight twisting motion, which they are adapted to take up. Both of these alining mechanisms, the vertical as well as the horizontal,
 45 may be conveniently mounted upon the same supporting-plate 1, as shown.

What I claim is—

50 1. An alining device for a type-writer, comprising, a supporting-plate, a pair of pivoted

brackets, a pair of revoluble balls situated between their adjacent faces, each bracket having a side extension-arm slotted to provide adjustment about the pivots and set-screws 55 for securing said brackets.

2. An alining device for type-writers, comprising, pivoted L-shaped brackets having upright and horizontal arms, revoluble guide-balls carried by the uprights and reinforcing
 60 web portions from the uprights to the arms, said arms being slotted for permitting the adjustment of said arms and brackets.

3. An alining mechanism for type-writers including a supporting-plate, a series of type-
 65 bar-carrying fingers mounted in groups on said plate with the pivot-axes for said type-bars in a single curved line, and a common securing-screw for each group to fasten said group to the supporting-plate. 70

4. An alining mechanism for type-writers comprising, a supporting-plate, a series of type-bar-carrying fingers mounted in groups on said plate, a common securing-screw for each group and an individual securing-screw
 75 for each finger.

5. An alining mechanism for type-writers comprising, a supporting-plate, a series of type-bar-carrying fingers mounted in groups on said plate, a common securing-screw for
 80 each group and an individual securing-screw for each finger, said fingers being slotted to receive said screws.

6. An alining mechanism for type-writers comprising, a substantially semicircular supporting-plate, a series of type-bar-carrying
 85 fingers mounted radially in groups on said plate, a common securing-screw for each group and an individual securing-screw for each finger. 90

7. An alining mechanism for type-writers comprising, a substantially semicircular supporting-plate, a series of type-bar-carrying fingers mounted radially in groups on said
 95 plate, a common securing-screw for each group and an individual securing-screw for each finger, said fingers being slotted to receive said screws.

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