

No. 709,005.

Patented Sept. 16, 1902.

R. J. FISHER.

CARD OR SHEET PLATEN FOR TYPE WRITING MACHINES.

(Application filed Apr. 30, 1901.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

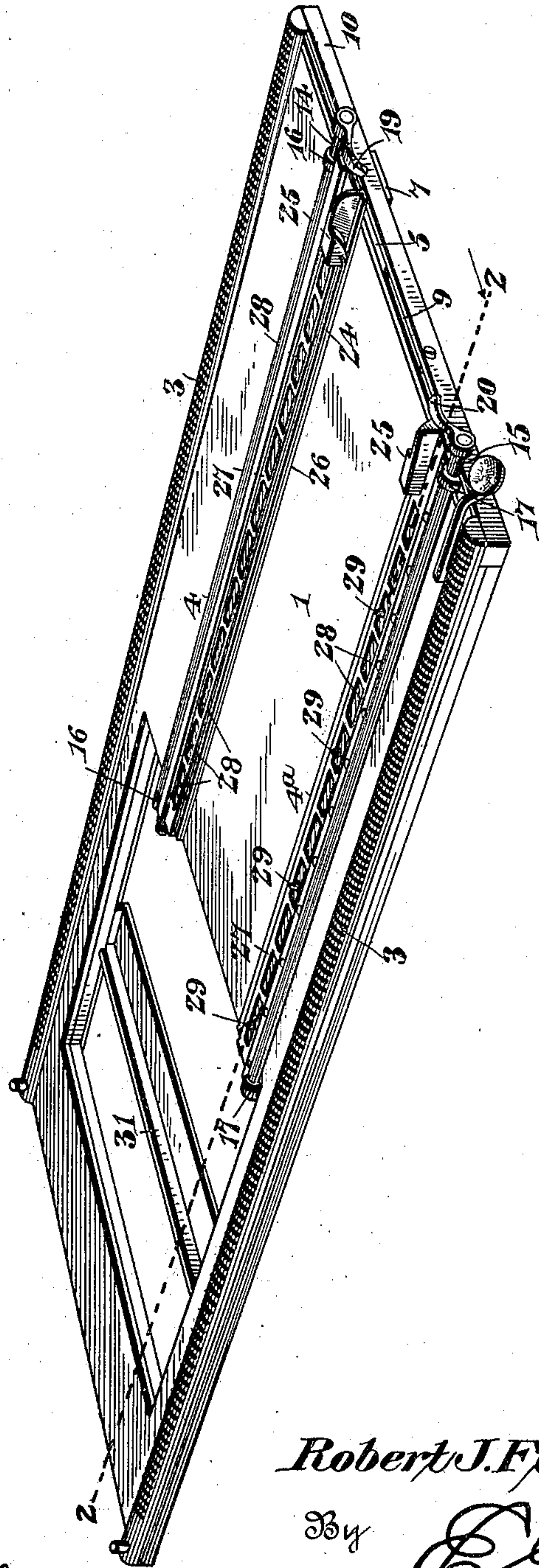
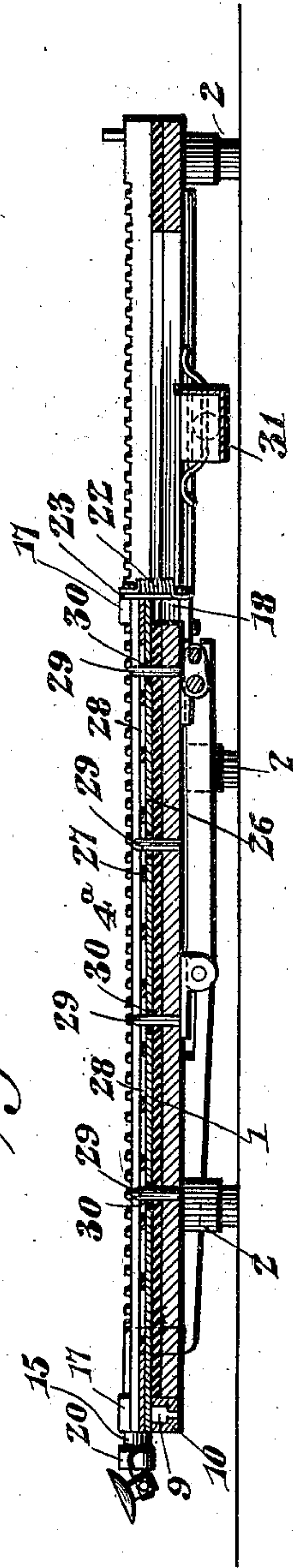


Fig. 2.



Robert J. Fisher, Inventor

By

E. G. Siggers

Attorney

Witnesses
Jas. E. McLaughlin
Louis E. Julihn

No. 709,005.

Patented Sept. 16, 1902.

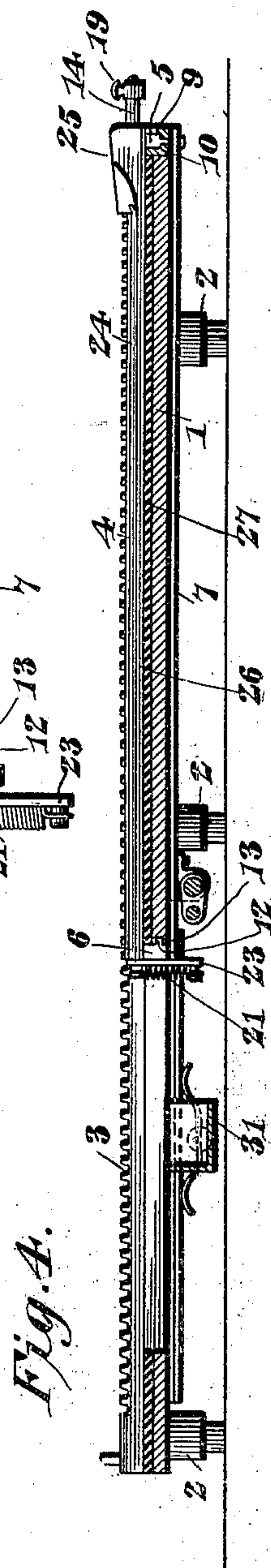
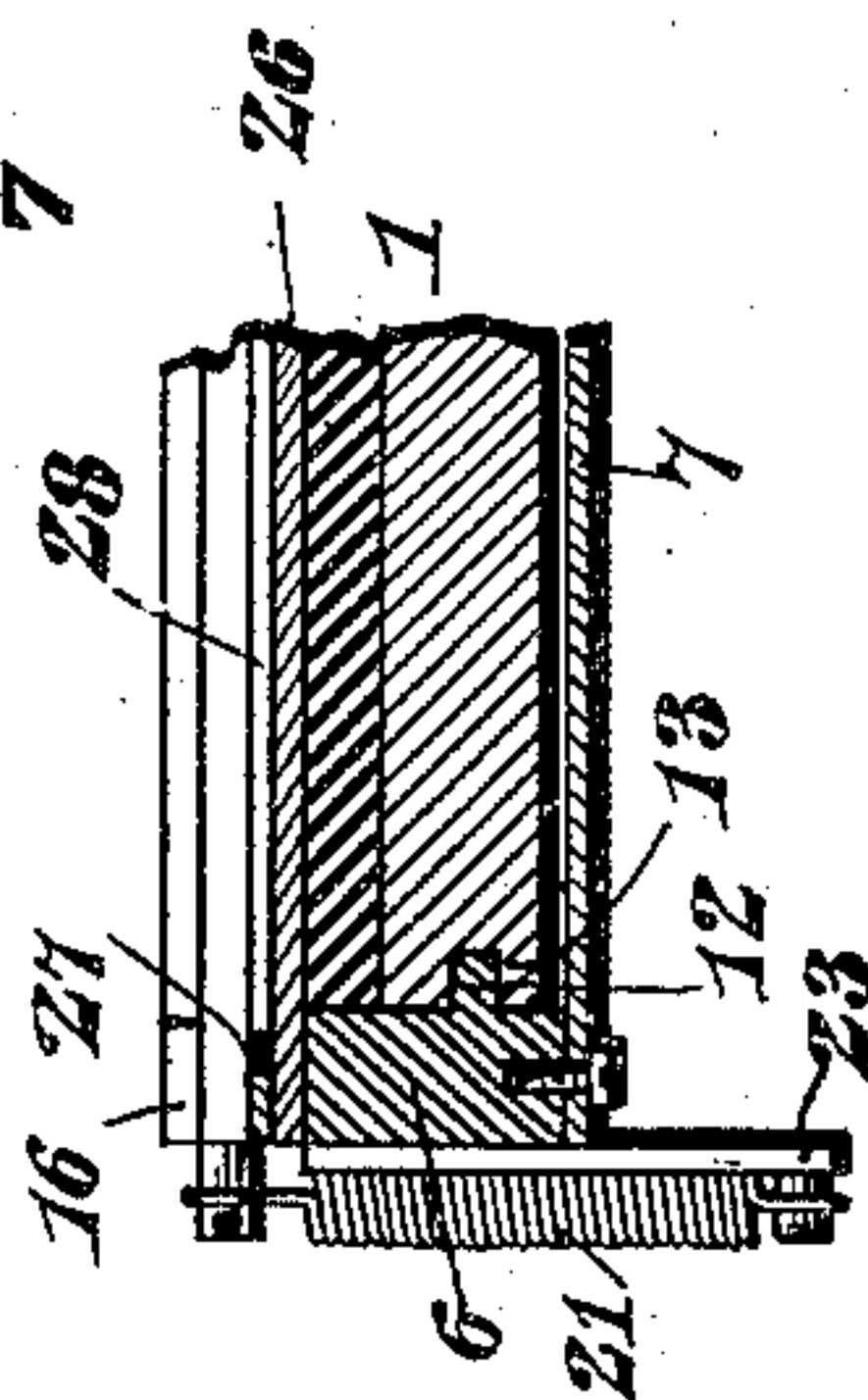
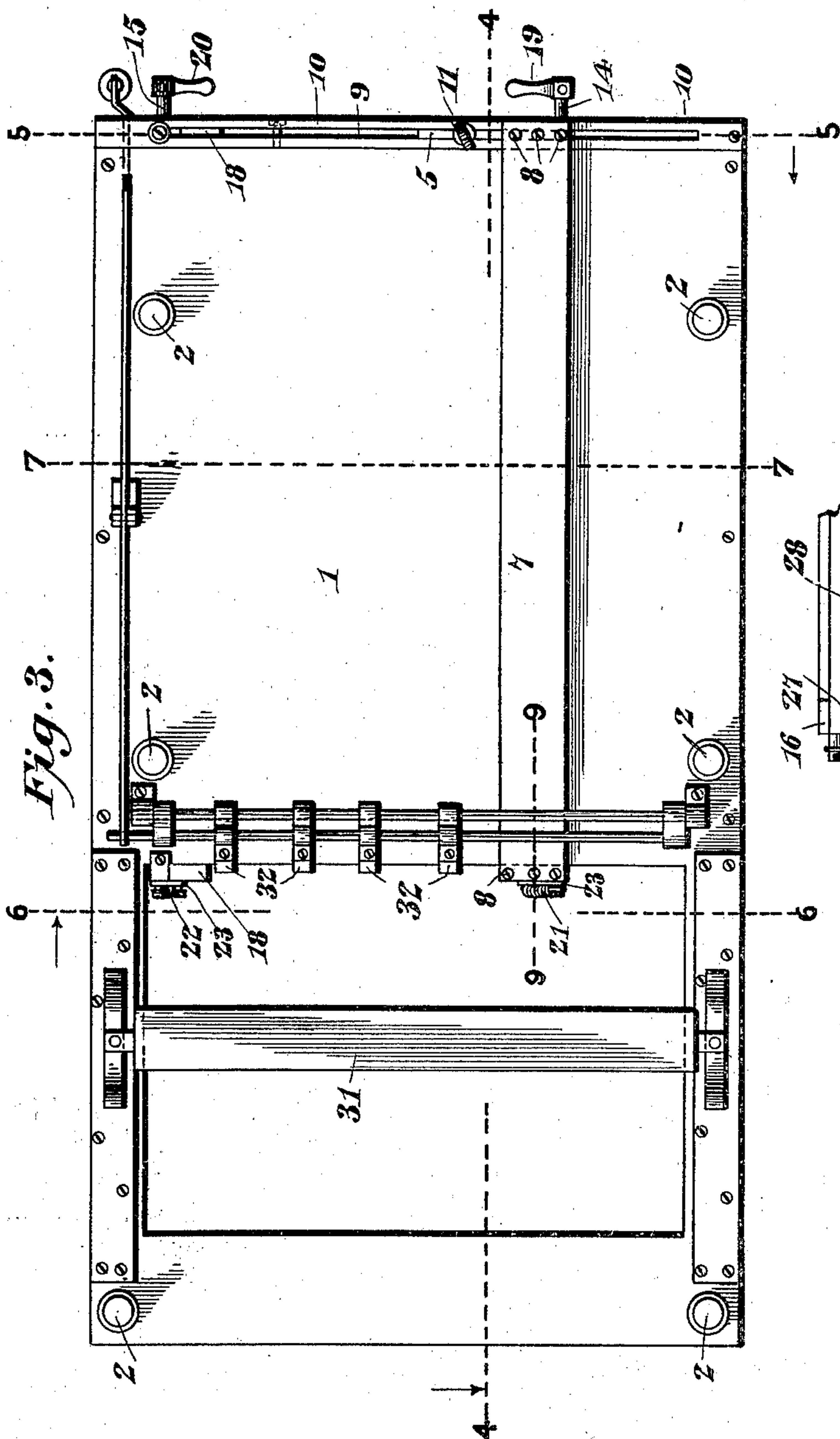
R. J. FISHER.

CARD OR SHEET PLATEN FOR TYPE WRITING MACHINES.

(Application filed Apr. 30, 1901.)

(No Model.)

3 Sheets—Sheet 2.



Robert J. Fisher, Inventor.

३५

E. G. Figgers

Attorney

Witnesses
Jas E. McClathran
Louis G. Julihn

No. 709,005.

Patented Sept. 16, 1902.

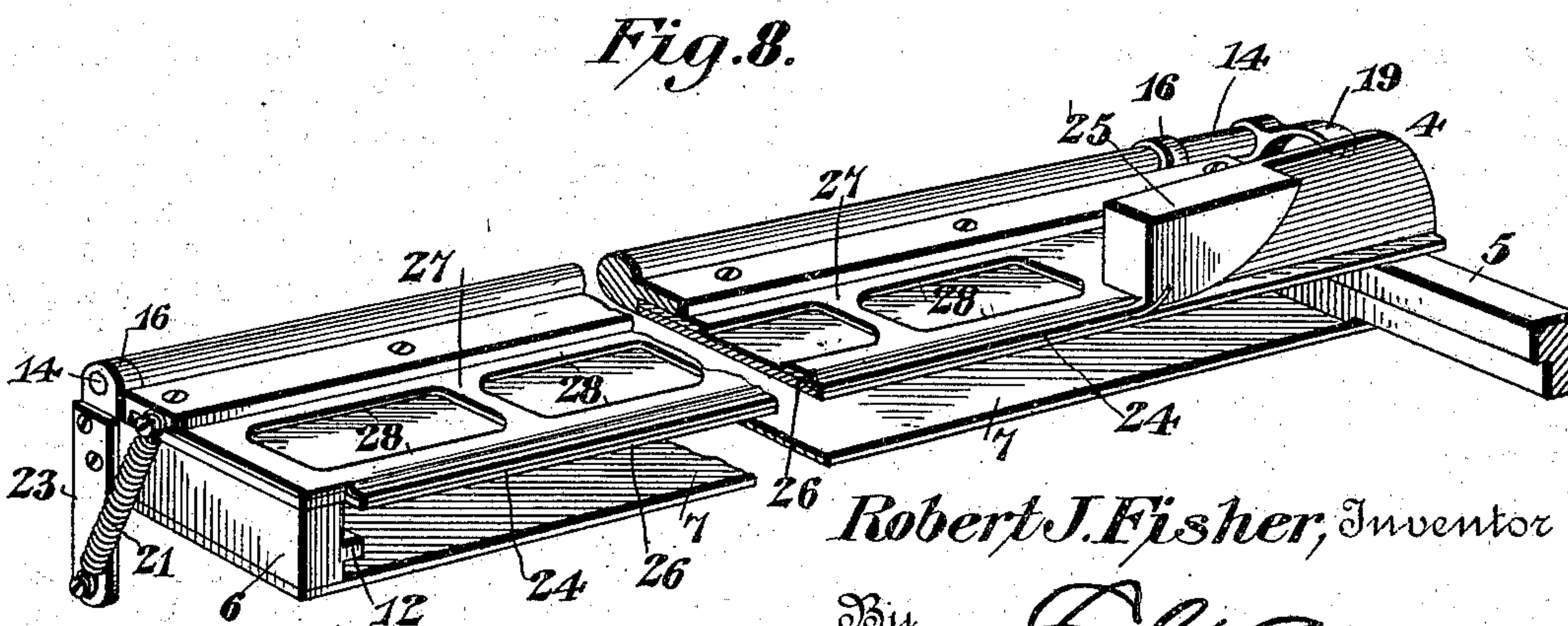
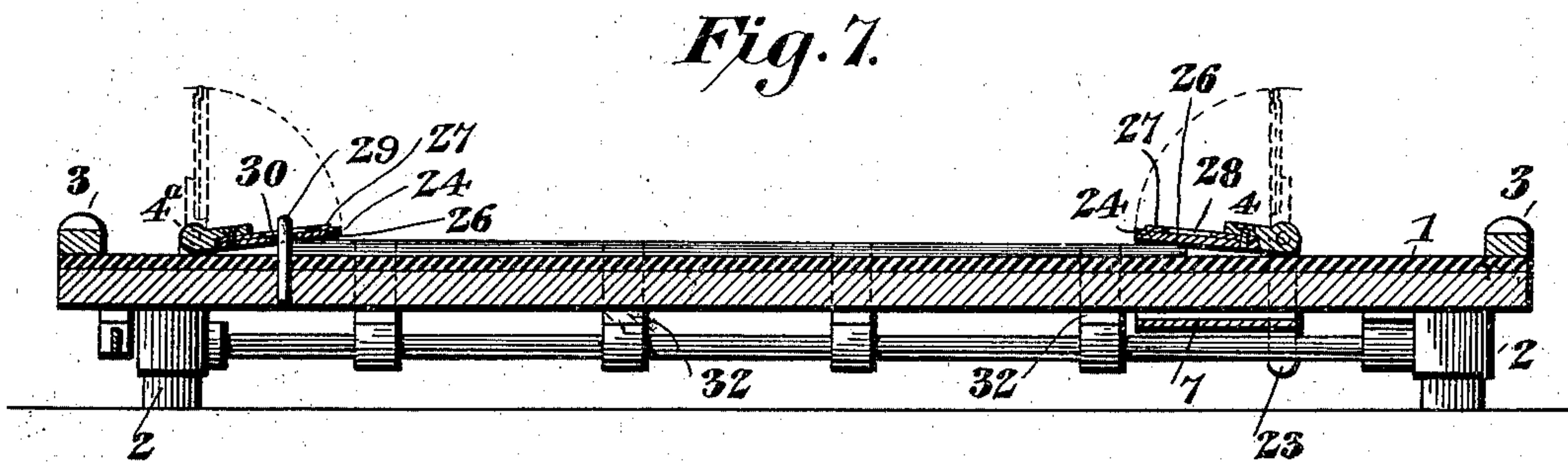
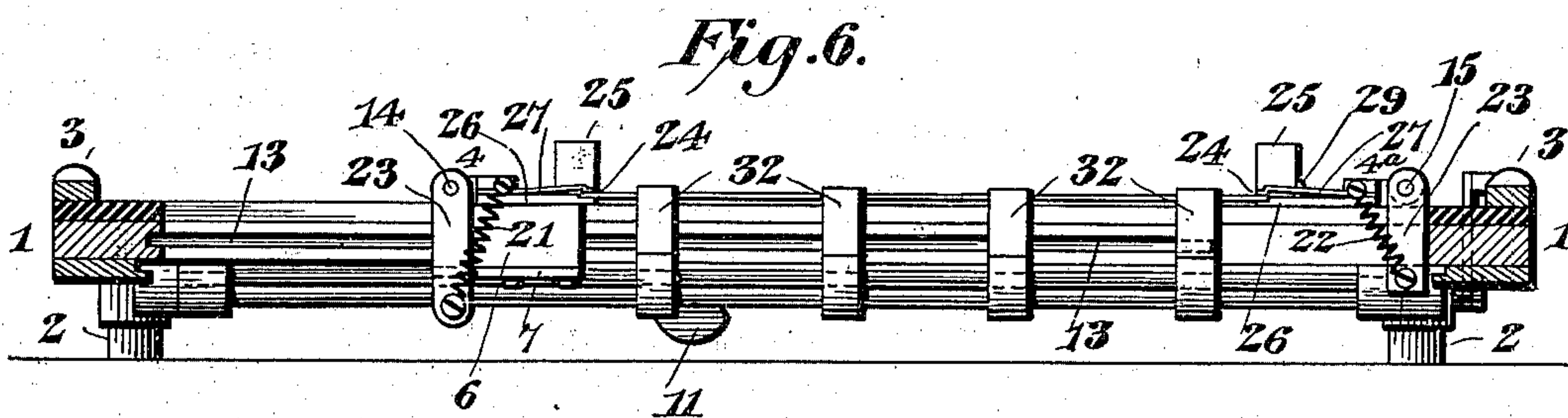
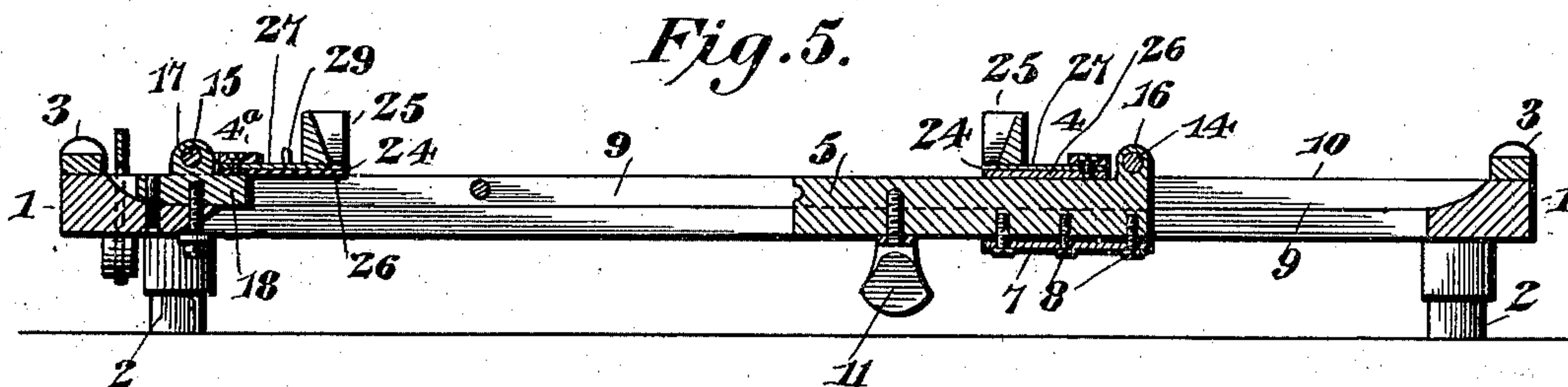
R. J. FISHER.

CARD OR SHEET PLATEN FOR TYPE WRITING MACHINES.

(Application filed Apr. 30, 1901.)

(No Model.)

3 Sheets—Sheet 3.



Robert J. Fisher, Inventor

By

E. G. Siggers

Attorney

Witnesses
Jas. E. McCathran
Russ G. Julihn

UNITED STATES PATENT OFFICE.

ROBERT JOSEPH FISHER, OF ATHENS, TENNESSEE, ASSIGNOR TO THE
FISHER BOOK TYPEWRITER COMPANY, OF CLEVELAND, OHIO, A
CORPORATION OF DELAWARE.

CARD OR SHEET PLATEN FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 709,005, dated September 16, 1902.

Application filed April 30, 1901. Serial No. 58,182. (No model.)

To all whom it may concern:

Be it known that I, ROBERT JOSEPH FISHER, a citizen of the United States, residing at Athens, in the county of McMinn and State of Tennessee, have invented a new and useful Card or Sheet Platen for Type-Writing Machines, of which the following is a specification.

This invention relates to type-writing machines, and has special reference to an improved card and sheet platen designed to facilitate the handling of card and sheet work particularly.

The object of the invention in one aspect thereof is to produce a platen having a complete equipment of work holding and guiding means for facilitating the guiding of different classes of work to a proper printing position upon the platen and the secure holding of the work in such printing position during the manipulation of the printing mechanism. In the concurrent application of Herman F. Eckert, Serial No. 36,733, is described and claimed a platen which it is the special object of the present invention to improve. The Eckert platen as described in the application aforesaid is characterized by the provision of work-holding guides disposed upon the platen between the main tracks or guides for the traveling machine-frame of a book type-writing machine, said holding-guides being designed to engage the opposite edges of a card or sheet and to guide the work to the proper printing position, where it is held by the guides during the imprinting of the desired data upon the index-card or letter-sheet, as the case may be. It is well understood in the art that index-cards and similar work vary in size, shape, thickness, and ruling, according to the purpose for which they are adapted, and the Eckert platen is especially designed to meet these different requirements by providing means for insuring accuracy in printing upon the card or sheet irrespective of the size, shape, or ruling thereof. This means, as shown in the application aforesaid, embraces holding guides or guideways for the work which are automatically adjustable or variable to accommodate different thicknesses of work—as, for instance, index-cards of different qualities. These

guides are formed by cooperating relatively movable sections or strips between which the edge of the work is received, one of the strips being resilient to permit the yielding thereof as the card is moved along the guides to its printing position. The Eckert platen is highly efficient for the handling of cards and also facilitates the positioning and retention of letter-sheets in the proper printing position. There are some uses, however, for which the Eckert platen is not entirely available. For instance, if the paper is particularly thin or if a number of carbon copies are required the moving of the work to its proper printing position, with its edges engaged by the guides, is attended with more or less difficulty and cannot be done with the despatch which is highly desirable in the practical operation of type-writing machines.

The primary object of the invention now under consideration is to improve the Eckert platen in a manner to facilitate its use for a wider range of work, but more particularly for the securing of a number of carbon copies of the letter or other sheet upon which the printing is done.

To this end the invention contemplates the provision of work-holding members formed with guideways for the opposite edges of the work, substantially in accordance with the Eckert guides, and also capable of bodily movement toward and away from the writing-surface for the purpose of clamping the edges of a number of sheets—as, for instance, an original and several carbons, which are thereby positioned upon the platen—that is to say, the present invention contemplates work-holding members which may be utilized as clamps to engage and retain the edges of the letter-sheet imposed directly upon the platen or a plurality of work-sheets and the alternating carbon elements which are necessarily employed in making a single original and a number of carbon copies thereof simultaneously. Subordinate to this general object is the provision of work-holding means which will not only hold a number of superimposed sheets in position upon the platen, but which will permit the edges of the several sheets at one side of the writing-surface to be released, so that the several sheets may be corrected by

successively turning them back and making the necessary erasure without disturbing the retention of the several sheets in a registering relation. Viewed in this aspect the invention consists in employing work-clamps arranged to engage the opposite edges of the work and independently movable away from the platen to release either edge of the work while the other edge of the work is securely held by the other clamp, which latter maintains the proper registering relation of the several sheets during the making of such corrections as may be desired.

With these and other objects in view, all as will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and succinctly defined in the appended claims.

In carrying the invention into effect the illustrated structure is necessarily susceptible to a wide range of modification without departing from the spirit or scope thereof; but the preferred embodiment of the present improvements is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a card and sheet platen for type-writing machines equipped in accordance with the present invention. Fig. 2 is a longitudinal section on the line 2 2 of Fig. 1. Fig. 3 is a bottom plan view of the platen. Fig. 4 is a longitudinal section on the line 4 4 of Fig. 3. Fig. 5 is a transverse sectional view on the line 5 5 of Fig. 3. Fig. 6 is a similar view on the line 6 6 of Fig. 3. Fig. 7 is a transverse sectional view on the line 7 7 of Fig. 3 and showing the work guiding and clamping members swung to their upright positions in dotted lines. Fig. 8 is a perspective view of the adjustable work guide and clamp and of the mounting thereof detached, and Fig. 9 is a detail sectional view on the line 9 9 of Fig. 3.

The work holding and guiding means constituting the subject-matter of the present application are particularly designed for use in connection with the flat platen of a book type-writing machine and possess special utility in connection with the type of platen illustrated in the drawings and designated by the numeral 1. This platen is of the same general character as that shown in the Eckert application and employed commercially in connection with the Fisher book type-writing machines, a type of which is illustrated in my Patent No. 573,868, and the invention, while being designed primarily as an improvement of the Eckert platen, is intended for the same general purpose as that disclosed in the pending application of H. J. Halle, Serial No. 732,921. Inasmuch as the platen *per se* is of a type well known in the art, a detailed description thereof is unnecessary; but, as has been premised, the present improvements are intended to render the platen distinctively

efficient for card and sheet work, and particularly for the purpose of multicopying. As usual, the platen 1 is provided with a plurality of pendent rest-feet 2 at the underside thereof and with the usual track rails or guides 3 for the reception of the printing mechanism designed to travel over the upper surface of the platen, it being immaterial so far as the present invention is concerned whether the rails or guides are separable from the platen or permanently attached thereto, as in the various kinds of platens employed with the Fisher book type-writing machines.

The invention comprehends the employment of work holding and guiding members or work guides and clamps arranged in one or more pairs in proper relation to the traveling printing mechanism and its platen and having guiding and holding means for the edges of the card or sheet and also constituting clamps for holding a number of sheets in position upon the platen when multicopying is desired, whereby the work may not only be guided to and held in the proper position for being printed upon, but in the case of multicopying will also be held in a manner to permit the original and the several carbon sheets of copies to be turned back to facilitate the making of erasures and other corrections without interfering with the registering relation of the several sheets.

In that embodiment of the invention illustrated in the accompanying drawings is shown a pair of work-holding members, which may be termed work "guides" and "clamps," arranged longitudinally of the platen over the writing-surface thereof and disposed in substantial parallelism. These combined clamps and guides 4 and 4^a may be variously mounted upon the platen; but it is desirable that the mounting be such as will permit the guides to have a wide range of relative adjustment to accommodate work of widely-differing sizes and to permit practically the entire platen or any part thereof to be utilized as the printing area. This wide range of adjustment is preferably accomplished by fixedly positioning one of the members or guides—as, for instance, the member 4^a—at a point contiguous to one edge of the platen and adjacent to one of the machine rails or guides 3 and by mounting the other member or guide 4 in a manner to render it capable of transverse adjustment between the fixed member or guide and the machine-rail 3 at the opposite side of the platen. To permit this adjustment of the member 4, the latter may be slidably mounted through the medium of instrumentalities of various forms, one of which is illustrated in the Eckert application; but it is preferable to mount the member or combined clamp and guide 4 upon a sliding carriage comprising a slide block or stem 5, disposed at one end of the platen, a slide 6, disposed at the opposite end thereof, and a flat plate or strip 7, extending longitudinally of the platen against the under face thereof

and secured at its opposite ends, as by screws or other suitable securing means 8, to the slides 5 and 6. (See Figs. 3, 5, 8, and 9.) The slide block or stem 5 of the carriage is approximately T-shaped in cross-section and is slidably fitted within a channel or slot 9, formed longitudinally in the transverse guide-bar 10, arranged at the front edge of the platen 1 and extending transversely from side to side thereof. The slide 5 projects laterally beyond the guide 4 and is retained in its adjusted positions within the slot 9, as by a binding-screw 11, disposed below the platen and screwed into the slide or block 5, so that when the screw is tightened against the under side of the platen it serves to lock and hold the slide in fixed position, and thereby effects the retention of the member 4 in any position to which it may have been adjusted over the platen for the accommodation of any character of work. The slide 6 of the carriage instead of being housed within a guide-bar is located against the rear edge of the platen defined at the front side of the usual drop-opening and is provided with a tongue 12, (see Fig. 8,) engaging a groove 13 in the under face of the platen, so that when the binding-screw 11 is loosened the carriage for the work-holding member 4 may be readily adjusted transversely in an obvious manner.

The use of the members 4 and 4^a as work-clamping means necessitates the bodily movement of said members toward and away from the platen. Obviously such movement of these parts may be effected in many ways; but in the practical construction of the platen for card or sheet work the holding members or guides 4 and 4^a are arranged over the printing-surface and are hinged at their outer or opposite longitudinal edges, so that they may be swung into an upstanding position over an axis running in the direction of their length and substantially parallel with the main tracks or guides. When these members are used for holding a number of sheets, as in multicopying, the clamp may be removed from either side edge of the sheets to permit the latter to be folded back whenever the operator desires to examine or individually manipulate any one of the several sheets without disturbing its registering relation with respect to the others.

The hinging of the holding members or guides is effected in the present embodiment of the invention by providing said guides at the outer corners thereof with trunnions 14 and 15, journaled in suitable bearing-ears 16 and 17. The bearing-ears 16 are preferably formed at the opposite ends of the carriage for the member 4—as, for instance, upon the slides 5 and 6, as shown in Figs. 5 and 8—while the bearing-ears 17 are preferably formed upon blocks 18, secured in fixed relation to the platen, one against the rear end thereof (see Fig. 3) and the other within one end of the slot 9 in the guide-bar 10. It will be seen that by means of this mounting the work-

holding members while capable of relative adjustment to accommodate work of any size within the capacity of the platen are also capable of independent bodily movement toward and away from the writing-surface to facilitate the retention and release of the sheet or sheets resting upon the platen within the printing area.

The convenient manipulation of the work-holding members is facilitated by the provision of thumb-plates 19 and 20, carried by the forwardly-projecting ends of the trunnions 14 and 15 and disposed slightly in advance of the front end of the platen, as indicated in Figs. 1, 3, and 4. These thumb-plates are suitably formed for engagement by the thumbs of the operator and are employed in swinging the members or clamps 4 and 4^a upon their axes. For some uses the members or clamps would alone be sufficient without the operating means described; but it is preferable to employ means for facilitating the manipulation of these clamps, and it is also desirable to equip the platen with means for effectually retaining the work-clamps in either their depressed or elevated positions. Such retaining means are embodied in the illustrated structure in the form of a pair of springs 21 and 22, secured at their lower ends to the lower ends of bracket-plates 23, depending from the slide 6 and the block 18, respectively, and located substantially in the vertical planes of the axes of the swinging members, so that the points of attachment of the lower ends of the springs will be substantially in the vertical planes of the axes of movement of said parts. (See Figs. 6 and 8.) The opposite ends of the springs 21 and 22 are connected to the rear ends of the clamps at a suitable distance from the axes of the latter. (See Fig. 6.) When said members or clamps are depressed to their holding positions, they will be yieldingly retained by the springs against upward movement. These springs are designed, however, to perform the function of retaining means for the clamps in both the depressed and elevated positions of the latter. This result is accomplished by the particular arrangement specified, because while the clamps are held depressed by the springs it is evident that when the former are swung to their upstanding positions, as shown, for instance, in dotted lines in Fig. 7, the upper end of each spring will be located in the vertical plane of its lower end. The clamp therefore will be held in its elevated position by the spring until said clamp or member has been swung inward sufficiently to move the upper end of the spring out of alinement with the axis of the clamp and the lower end of the spring, when, as will be obvious, the spring will again become active to depress the clamp to its horizontal position.

The specific construction of the individual work-holding members illustrated in the drawings is not essential to the present invention

except as noted, since in one aspect the invention resides, broadly, in the equipment of the platen with a work-clamp adjustable over the platen and movable toward and away from the writing-surface. In another aspect of the invention, however, it embraces the idea of one or more work-engaging members having the characteristics of both a work-clamp and card-guide. It is therefore desirable to equip said members with work-guiding means designed to be employed more particularly in connection with cardwork. In fact, I prefer to construct these individual members substantially in the manner shown in the Eckert application aforesaid—that is to say, the work-holding members or combined clamps and guides each consist of a straight elongated body provided at one edge with a guideway 24, closed at the upper and lower sides thereof to form a complete housing for the edge of the card or sheet slidably engaged therein, and said guideway is preferably open at both ends and extends the full length of the guide-body to permit the entrance of the individual cards or sheets at one end and their displacement or delivery from the opposite end. To facilitate the entrance of the individual cards or sheets to the guideways 24, the latter preferably terminate short of the front ends of the holding members or guides, and beyond such point of termination the latter are provided with elevated entrance-guides 25 of the character illustrated in both the Halle and Eckert applications heretofore identified.

The automatic self-adjustment of the holding-guides is effected by constructing each of the members with a base-strip 26 and a yielding section or strip 27, arranged in superimposed relation to the strip 26 and preferably formed of spring sheet metal having sufficient inherent resiliency to permit the retention under pressure of such cards or sheets as may be placed in the guideways 24, the requisite delicacy of action of the sectional plate 27 being insured by forming the latter with a plurality of weakening-openings 28, as shown more clearly in Fig. 8. This specific construction of the work holding and guiding members 4 and 4^a is preferable, because by the provision of the guides for the edges of the card or sheet said members may be employed either as work-clamps for a single sheet or for multicopying or may be utilized as holding and guiding means for cards, which latter are used extensively in card-indexing systems and for other commercial uses. This particular construction is not essential, however, except as it contributes to the embodiment of the broad idea of one or more work-clamps independently movable toward and away from the platen and disposed to engage the edges of the work at opposite sides of the printing area or to the embodiment of the invention in that aspect wherein it contemplates the employment of combined clamping and guiding members capable of

being manipulated either for the guiding and holding of cards or the like or the clamping and retention in registering relation of a number of superimposed sheets, as in multicopying.

In a still further development the invention contemplates within its purview the additional equipment of the platen by the provision thereon of a work alining or guiding device designed to facilitate the accurate alinement or positioning of the sheet or sheets and disposed in cooperative relation with one of the guiding and clamping members to aline and clamp the sheet or sheets. One embodiment of such gage device is illustrated in Figs. 1, 2, and 7 and comprises a number of upstanding gage-pins 29, arranged in longitudinal series upon the platen within the vertical plane of the clamp and guide member 4^a, the base section or plate 26 of the latter being formed with openings 30 for the accommodation of the gage-pins and arranged opposite the openings 28 in the yielding upper section or plate 27 of the member. When the platen is designed for use in connection with card-work, the clamp and guide member 4 are adjusted transversely to the desired position and the cards are fed to the printing position in a manner well understood in the art, the members 4 and 4^a being held flat upon the upper surface of the platen by the springs 21 and 22. If now it is desired to secure a number of carbon copies of the letter, the original and the several copy-sheets, together with the alternating carbon elements, are placed upon the platen, the clamp and guide members having first been raised to their upstanding or elevated positions, as shown in Fig. 7. The several sheets are properly alined by abutting the edges thereof against the gage-pins 29, and the clamps are turned down to the full-line position of Fig. 7 to engage the opposite side edges of the sheets. After the printing has been completed the sheets may be readily released by again throwing back the clamps, or if during the printing operation an error is made the clamp and guide member 4 may be elevated and the sheets turned back successively to facilitate their inspection and correction without disturbing the member 4^a, which during this manipulation of the sheets retains the latter at one edge, and thereby prevents their being accidentally moved out of registering relation. After the necessary corrections have been made the sheets are again turned down to their original positions, and the clamp member 4 is returned to its holding or engaging position to permit a continuance of the printing operation.

Of course the reversing of the cards where the platen is used for card-indexing will be effected, as usual, by the trip-ledge 31, with which the platen is equipped, and the positioning of the cards and perhaps of the sheets will be facilitated by the disappearing stops 32, located at the rear end of the writing-surface

of the platen, or by a suitable alining-guide located at the front edge of the platen; but as the trip-ledge and disappearing stops constitute no part of my present invention and are fully described and claimed in the application of Eckert aforesaid I do not consider it necessary to enter into a detail description of these parts, and have only illustrated them in order to disclose a platen fully equipped for any character of card or sheet work.

From the foregoing it is believed that the construction, operation, and many advantages of the card and sheet platen herein described will be clearly apparent, and in conclusion I desire it to be distinctly understood that I reserve the right to effect such changes, modifications, and variations of the illustrated structure as may be embraced within the scope of the protection prayed.

What I claim is—

1. The combination with a flat platen and the main tracks or guides, of a work-holder disposed between said tracks or guides and cooperating with the platen to clamp the work thereon, said work-holder having guiding means for a card or sheet.

2. The combination with a flat platen and the main tracks or guides, of a work-holder disposed between the tracks or guides and comprising members cooperating with the platen to clamp the work thereon, said members having holding-guides to guide and hold a card or sheet.

3. The combination with a flat platen, of a work-holder comprising members cooperating with the platen to clamp the work thereon, said members having adjustable work-holding guides to guide and hold cards or sheets of different thicknesses.

4. The combination with a flat platen, of a work-holder comprising members cooperating with the platen to clamp the work thereon, said members having opposed self-adjusting holding-guides for the reception of a card or sheet to guide the same to the printing position.

5. The combination with a platen, of a work-holder comprising members cooperating with the platen to clamp the work thereon, said members having guiding means disposed out of the plane of the bottom of the members to guide a card or sheet to the printing position.

6. The combination with a platen, of a work-holder comprising members cooperating with the platen to clamp the work thereon, said members having work-holding guides disposed in a plane above the bottom of the members and designed to guide a card or sheet to the printing position and to retain it in such position during the printing operation.

7. The combination with a platen, of a work-holder comprising members cooperating with the platen to clamp the work thereon, each of said members being provided in a plane above its bottom with an open-ended

longitudinal guideway for the reception of the edge of a card or sheet.

8. The combination with a flat platen and the tracks or guides, of a bodily-movable work-clamp cooperating with the platen between the tracks or guides to clamp the work thereon and formed with a guide along which a work-sheet may be guided to the printing position.

9. The combination with a platen, of a work-holder comprising members movable toward and away from the platen to clamp the work between said members and the writing-surface of the platen, the members of the work-holder being formed with guiding means disposed in opposed relation and designed to guide a card or sheet to the printing position.

10. The combination with a platen, of a work-holder comprising members movable toward and away from the platen and designed to clamp the work against the writing-surface thereof, said members being provided with open-ended guideways for the reception of the edges of a card or sheet.

11. The combination with a flat platen and the tracks or guides, of a work-holder disposed between the tracks or guides and comprising members movable toward and away from the platen and designed to clamp the work-sheet against the writing-surface thereof, said clamping members being relatively adjustable to accommodate work of different sizes.

12. The combination with a flat platen and the tracks or guides, of a work-holder disposed between the tracks or guides and comprising members cooperating with the platen to clamp the work thereon, said members being adjustable relatively to accommodate work of different sizes and having guiding means for a card or sheet.

13. The combination with a flat platen and the tracks or guides, of a work-holder disposed between the tracks or guides and comprising members movable toward the platen to clamp the work against the printing-surface thereof, said members having opposed guideways for the edges of the card or sheet, and one of said members being adjustable over the platen to accommodate work of various sizes.

14. The combination with a platen, of a work-holder comprising members movable toward the platen to clamp the work against the writing-surface thereof and having opposed open-ended guideways located at their inner edges for the reception of the edges of a card or sheet, one of said members being movable over the face of the platen to accommodate work of various sizes.

15. The combination with a flat platen and the tracks or guides, of a hinged work-holder cooperating with the platen between the tracks or guides to clamp the work and having guiding means for a card or sheet.

16. The combination with a flat platen and the tracks or guides, of a work-holder coop-

erating with the platen between the tracks or guides to clamp the work, and bodily movable to different positions over the platen to accommodate work of various sizes, said holder having holding and guiding means for a card or sheet.

17. The combination with a flat platen and the tracks or guides, of a work-holder disposed longitudinally of the platen between the tracks or guides and independently movable upon a longitudinal axis, said work-holder having holding and guiding means for a card or sheet.

18. The combination with a flat platen and the tracks or guides, of a work-holder disposed between the tracks or guides and comprising opposed members movable upon longitudinal axes, and means for retaining said members against movement.

19. The combination with a flat platen and the tracks or guides, of a work-holder disposed between the tracks or guides and comprising members movable upon longitudinal axes to clamp the work against the writing-surface of the platen, and means for retaining said members in their elevated and depressed positions.

20. The combination with a flat platen and the tracks or guides, of a work-holder disposed between the tracks or guides and comprising members movable upon longitudinal axes located at the outer longitudinal edges of the members, said members being designed to cooperate with the platen to clamp the work thereon and arranged parallel with the tracks or guides.

21. The combination with a platen, of a work-holder having a longitudinally-disposed member movable upon a longitudinal axis and cooperating with the platen to clamp the work thereon, said member having a guide located along its free edge to guide a card or sheet in its movement to the printing position.

22. The combination with a flat platen and the tracks or guides, of a work-holder comprising opposed members disposed longitudinally of the platen between the tracks or guides and hinged at their outer longitudinal edges, and opposed longitudinal guides at the opposed inner edges of the members for the reception of the edges of the card or sheet to guide the latter to the printing position.

23. The combination with a flat platen and the tracks or guides, of a work-holder located between the tracks or guides and comprising members disposed longitudinally of the platen and hinged at their outer longitudinal edges, and opposed longitudinal guides at the inner edges of the members for the reception of the edges of a card or sheet, said members being relatively adjustable to accommodate work of different sizes.

24. The combination with a flat platen and the tracks or guides, of a work-holder located between the tracks or guides and comprising members cooperating with the platen to clamp

the work thereon and having guiding means for a card or sheet, one of said members being hinged for movement on a longitudinal axis.

25. In a type-writing machine, the combination with the platen and the main tracks or guides for the traveling printing mechanism, of a longitudinally-hinged work-holder disposed between the tracks or guides and cooperating with the platen to clamp the work thereon.

26. In a type-writing machine, the combination with the platen and the main tracks or guides for the traveling printing mechanism, of a work-holder disposed between the tracks or guides and comprising members independently hinged for movement on longitudinal axes and cooperating with the platen to clamp the work thereon.

27. The combination with the platen and the tracks or guides, of a work-gage and a work-holder cooperating therewith, said work-holder comprising a combined sheet-clamp and card-guide, cooperating with the platen to clamp the sheet thereon.

28. The combination with a platen, and a gage device carried by the platen and disposed to aline the work thereon, of a work-holder comprising a longitudinally-hinged member cooperating with the gage and platen to clamp the work in the printing position.

29. The combination with a platen and the main tracks or guides for the traveling printing mechanism, of a gage device carried by the platen to aline the work, and a work-holder mounted on the platen between the tracks or guides and comprising a hinged member cooperating with the work-gage and with the platen to clamp the work upon the writing-surface of the latter.

30. The combination with a platen and the main tracks or guides for the traveling printing mechanism, of a gage device carried by the platen and disposed to aline the work, and a work-holder comprising a member hinged independently of the tracks or guides and cooperating with the work-gage.

31. The combination with the platen and the main tracks or guides for the traveling printing mechanism, of a work-gage comprising an alined series of gage projections, and a work-holder comprising a member hinged independently of the tracks or guides for movement toward and away from the platen, said member being disposed for cooperation with the gage-pins to clamp a work-sheet in its proper printing position against the platen.

32. The combination with a platen and the main tracks or guides for the traveling printing mechanism, of a gage device comprising an alined series of gage-pins projecting above the surface of the platen, and a work-holder disposed between the tracks or guides and independently hinged for movement on a longitudinal axis, said member being apertured for the reception of the gage-pins and cooperating with the platen to clamp the work thereon.

33. The combination with a platen, and a gage device disposed to aline the work, of a work-holder comprising a hinged member cooperating with the gage device and platen and disposed to clamp the work against the writing-surface of the latter, said member being provided with guiding means for a card or sheet.

34. The combination with a platen having gage-pins, of a work-holder comprising a hinged member cooperating with the platen to clamp the work thereon and also cooperating with the gage-pins, said member being provided with a guide defined between an apertured base, and a yielding upper section formed with openings, said gage-pins being disposed to pass through the apertures in the base and the openings in the yielding section of the guide.

35. The combination with a platen, of a work-holder comprising a member cooperating with the platen to clamp the work thereon, and an adjustable carriage for the member, said carriage comprising slides disposed at opposite ends of the member and said member being movable with respect to the carriage.

36. The combination with a platen, of a work-holder comprising a member cooperating with the platen to clamp the work thereon, and an adjustable carriage for said member, said carriage comprising a pair of connected slides each having interfitting engagement with the opposite edges of the platen.

37. In combination with the platen, and a gage device, the work-holder cooperating with the gage device to aline and clamp the work

upon the platen, said work-holder being composed of members having opposed guides for the edges of a card or sheet.

38. In combination with the platen, the combined card-guide and sheet-clamp composed of two members, each bodily movable toward and away from the platen to clamp or release the work and having opposed guides disposed to engage the edges of the work-sheet to guide the same to the printing position.

39. In combination with the flat platen and the tracks or guides, of the swinging card-guide and sheet-clamp mounted on the platen and cooperating therewith to clamp or release the work and having a guide disposed to engage the edge of the work-sheet to guide the same to the printing position.

40. In combination with the flat platen and the tracks or guides, the work-holder arranged over the platen and provided with guiding and holding means for the opposite edges of a card or sheet and bodily movable toward and away from the platen to clamp a sheet between its under surface and the platen.

41. In combination with the flat platen, the tracks or guides, and a gage device, of the combined card-guide and sheet-clamp cooperating with the gage to aline and hold the work.

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

ROBERT JOSEPH FISHER.

Witnesses:

ALBERT E. FEIHL,
GEO. C. RUSSELL.