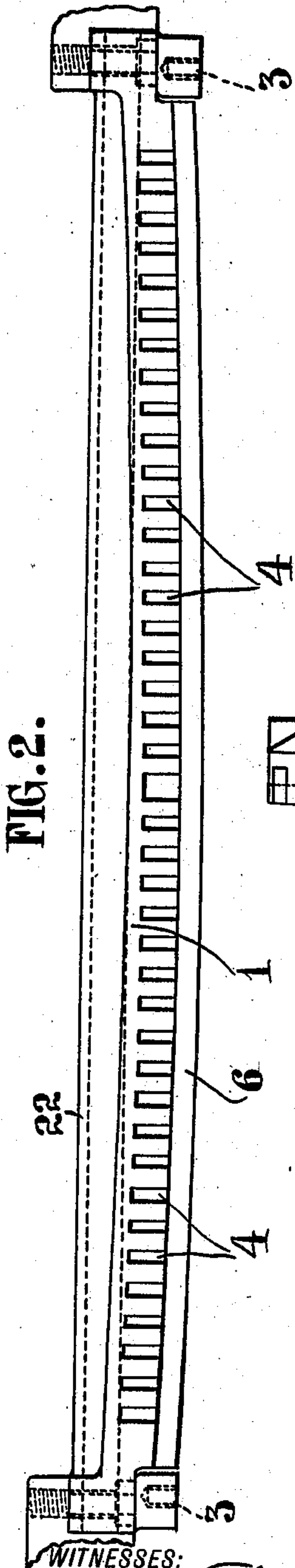


No. 894,497.

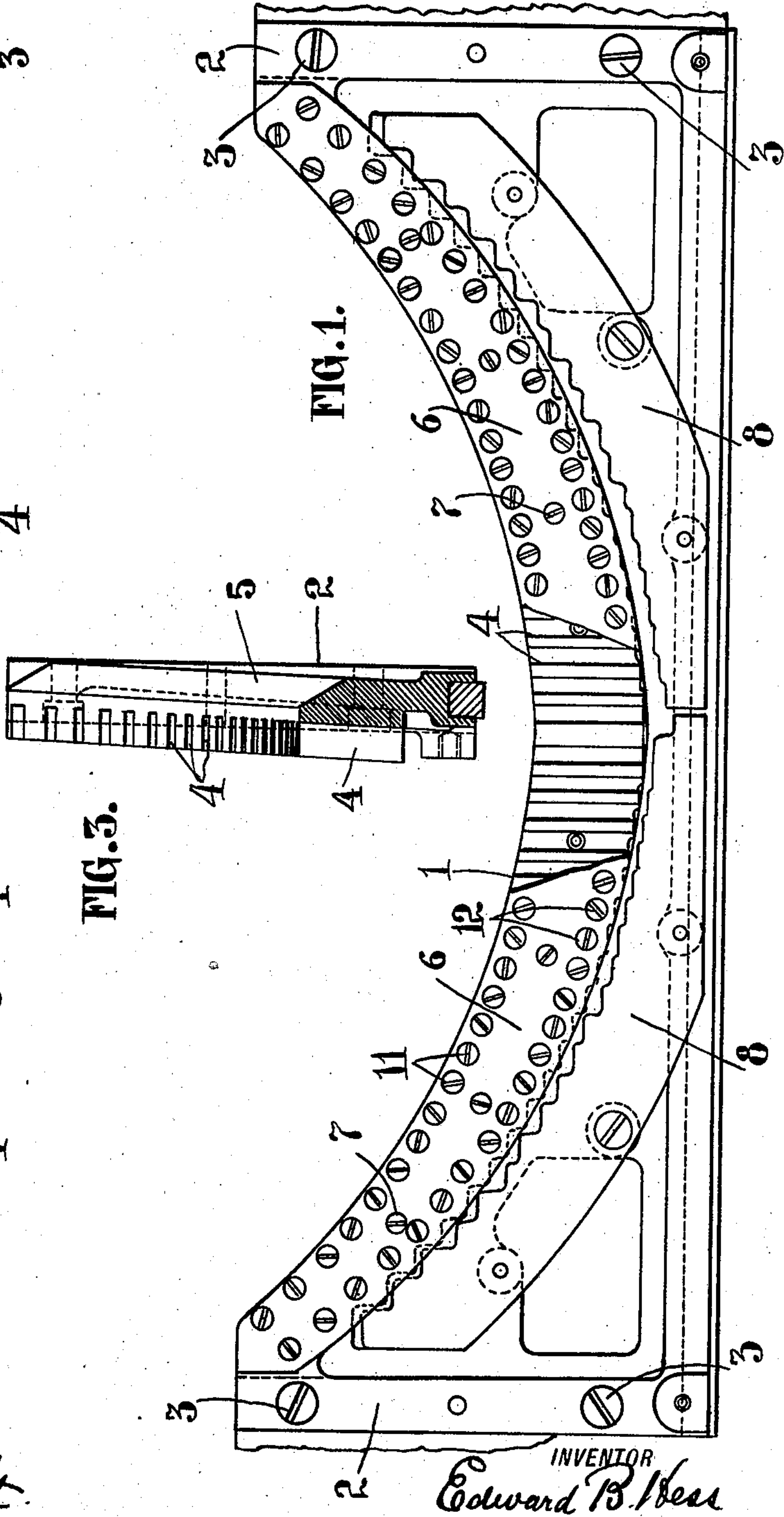
PATENTED JULY 28, 1908.

E. B. HESS.  
WRITING MACHINE.  
APPLICATION FILED APR. 2, 1908.

3 SHEETS—SHEET 1.



WITNESSES:  
*Lynd B. Wright*  
*C. F. Early*



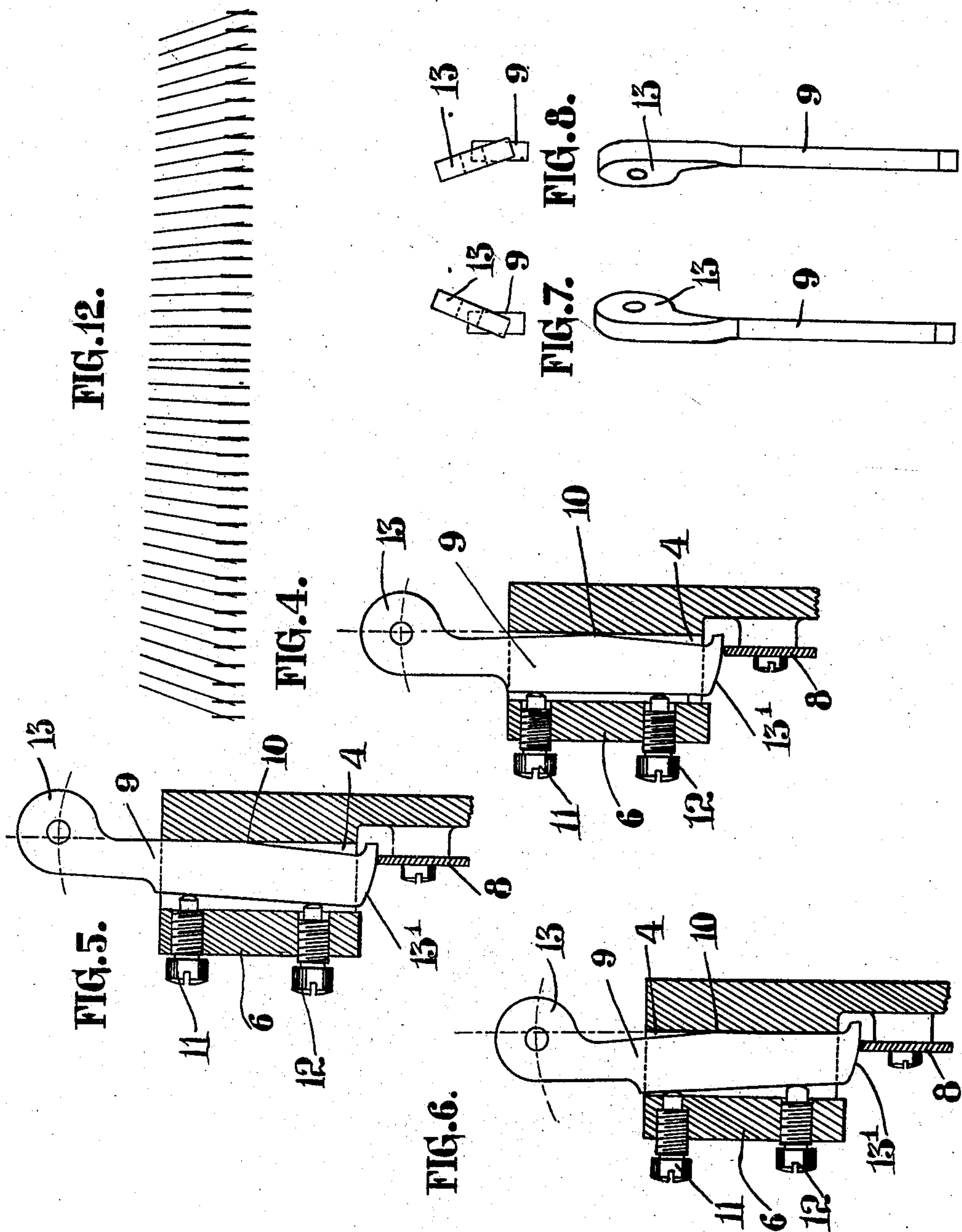
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No. 894,497.

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E. B. HESS.  
WRITING MACHINE.  
APPLICATION FILED APR. 2, 1908.

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No. 894,497.

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WRITING MACHINE.

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3 SHEETS—SHEET 3.

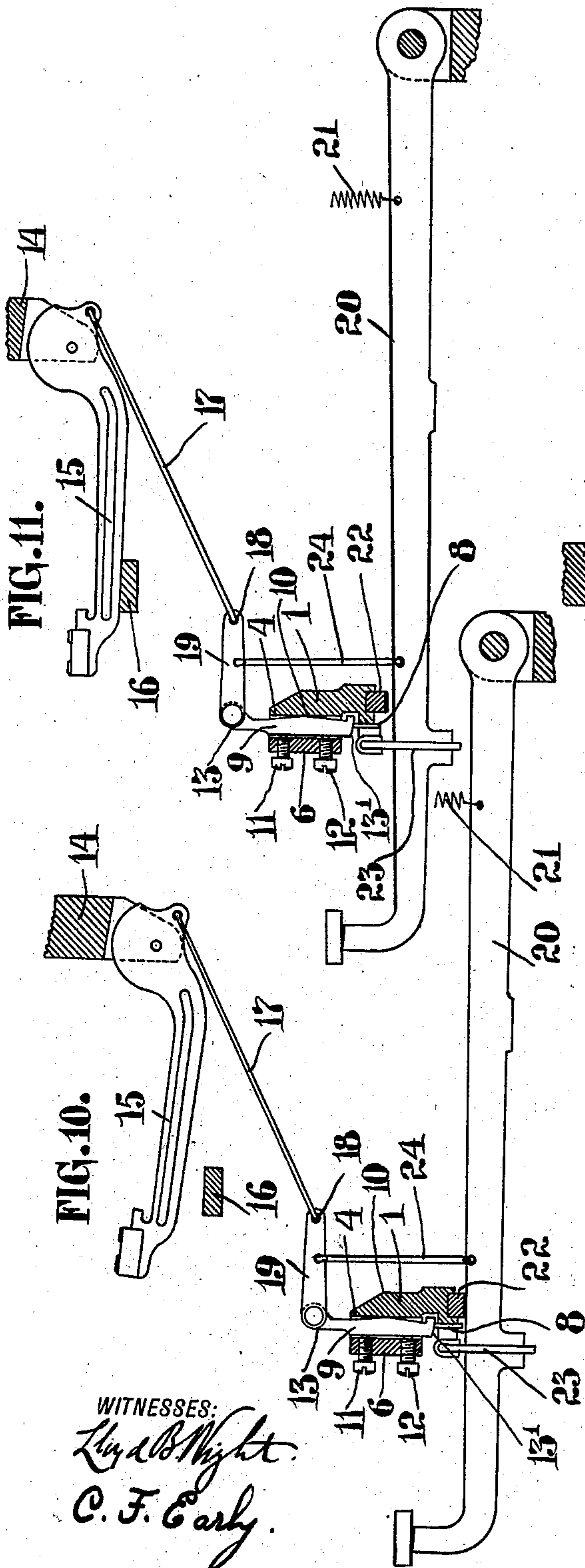
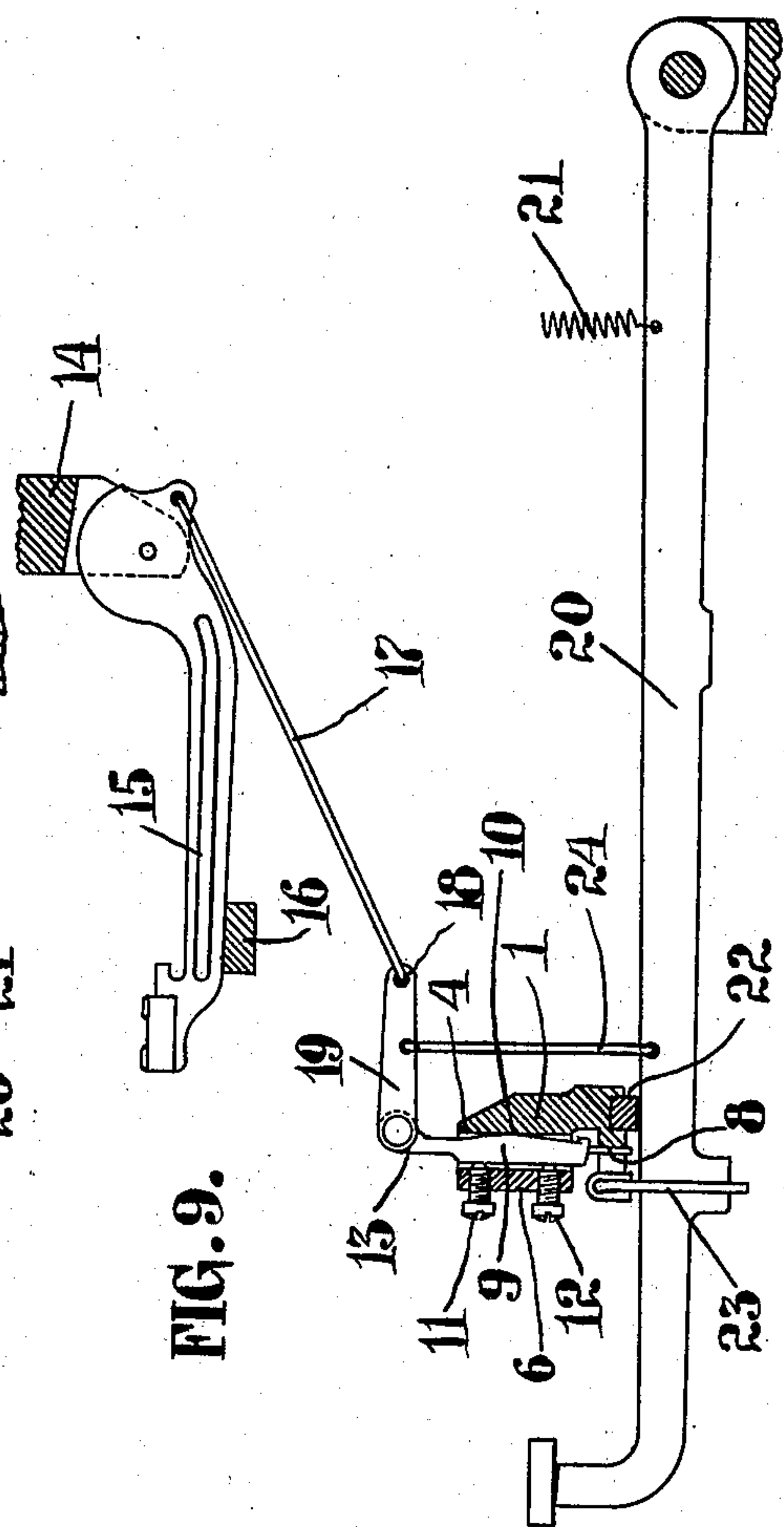


FIG. 10.

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# UNITED STATES PATENT OFFICE.

EDWARD B. HESS, OF NEW YORK, N. Y., ASSIGNOR TO ROYAL TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## WRITING-MACHINE.

No. 894,497.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed April 2, 1908. Serial No. 424,839.

*To all whom it may concern:*

Be it known that I, EDWARD B. HESS, a citizen of the United States of America, residing in the borough of Brooklyn, city and State of New York, have invented certain Improvements in Writing-Machines, of which the following is a specification.

This invention relates primarily to a front strike typewriting machine of the general character disclosed in my application No. 300039, filed February 8, 1906, although not limited in its application to a key lever machine. Its purpose is to provide a durable, economical and satisfactory manner of mounting the pivotal or anchorage point of a link constituting part of a type bar actuating connection. In my prior application, the type bar operating connections have their anchor points in or on a segment located at the front of the machine. That segment is disposed vertically, its chord being a horizontal line and the anchor points or pivotal supports for the front ends of the front links of the type bar actuating connections are upon posts carried in said segment and having their heads lying in a line corresponding generally to the contour of the upper concave edge of the segment. Furthermore, the segment is disposed at a slight inclination rearwardly so that the pivotal or anchor points on each side of the center will be located nearer to the segment in which the type bars are pivoted. The purpose of that arrangement is to make feasible the use of links of uniform length.

The invention comprises an organization wherein the vertically disposed posts constituting the anchor points of the type bar operating connections may each be individually rocked about an axis transverse to the machine and securely locked in position. Such adjustment affords a ready means of accurately assembling the machine with the parts in exact position, notwithstanding that some of the parts may not conform precisely to the design with respect to location, or disposition, or exact dimensions.

In the accompanying drawings, Figure 1 is a front view showing the segment, in which the anchor point posts are mounted, and some associated parts: Fig. 2, a plan view thereof: Fig. 3, a vertical longitudinal section through Fig. 1: Figs. 4, 5 and 6 are respectively enlarged detail views showing one of the vertically disposed anchor posts adjusted

in different positions: Fig. 7 comprises a view in elevation and plan of the left hand anchor post of the series: Fig. 8, a view in elevation and plan of the right hand anchor post of the series: Fig. 9, a sectional view showing a type bar and its operating connection, key lever and associated parts properly adjusted. Fig. 10 indicates a condition that may arise in assembling where the parts are so related that the type bar does not lie against its rest or back stop. Fig. 11, a similar view showing a condition, that may exist in the assembling, in which the key lever does not lie against its upper stop: and Fig. 12, a diagrammatic view illustrating by radial lines the angular disposition of the enlarged heads of the various anchor posts.

The anchor point segment 1 is formed with a skeleton frame having side posts 2 by which it is bolted to the main frame by bolts 3. As seen in Fig. 3, it is inclined from the bottom slightly toward the rear of the machine and viewed in plan as in Fig. 2 it is slightly curved transversely, the convex face being at the front. In the front face of the segment are milled a series of vertical channels 4, the bottoms or rear faces of which are preferably parallel with the rear face 5 of the segment. The front open faces of the series of vertical channels 4 are closed by a cover plate 6 secured to the segment by a series of screws 7 which pass through the plate and into the body of the segment intermediate channels therein. Below the segment and conforming in general curve thereto is a stepped positioning plate shown, in this instance, as formed of two parts 8, 8, the flat shoulders on said plate being respectively below the channels 4. Such a positioning plate is disclosed in my prior application above mentioned. Its purpose is to support in proper position the several anchor point posts located in the grooves 4 and resting upon the shoulders of the plate. Each anchor post 9 has its rear face formed with a high point 10 that bears on the bottom of the vertical groove 4. Preferably, this high point is formed by straight bevels extending therefrom upwardly and downwardly. The bottom of the anchor post is of such width as to rest upon the stepped positioning plate in any of the positions to which it may be adjusted. The posts are preferably of flat metal being rectangular in cross section and their front edges are straight. For each



groove and anchor post or plate there are provided two lock bolts 11, 12, working in threaded apertures respectively above and below the high point or fulcrum 10 of the post, and having reduced ends adapted to bear against the front straight edge of the post. By setting up or loosening these screws respectively the angular position of the anchor post may be varied so as to throw its upper end to the front or rear. It may be positively locked in any position to which it is adjusted. This will be quite plain on inspection of Figs. 4, 5 and 6. Each post 9 has an enlarged flat head 13 for pivotal connection of the front link of the type bar actuating connection. Since the anchor post segment has a longer chord than the type bar segment, the heads 13 of the various posts should be disposed radially so that lines drawn therefrom through the points on the type bars at which their operating connections are applied will meet at a focus somewhere beyond the type bar segment. This radial arrangement of the flat heads 13 may be accomplished as follows. All of the anchor posts may be blanked out from the same die and their flat heads 13 be adjusted to the radial arrangement suggested by twisting them. As is plain from the diagram, Fig. 12, the heads of the posts at the right and left of the series have imparted to them a greater degree of angular displacement and this degree lessens as the center of the machine is approached.

14 in Fig. 9, indicates a type bar segment of any suitable construction for a front strike machine. A type bar 15 pivoted therein lies toward the front of the machine upon its rest 16. To the heel of the type bar is jointed a link 17 hinged at its front end at 18 to the rear end of a link 19 pivotally mounted upon the head 13 of its anchor post 14.

20 is the key lever normally drawn upward by a properly disposed spring 21 against its horizontal stop bar 22 extending across the lower part of segment 1.

23 is an ordinary comb plate for guiding the key levers vertically and 24 is a vertically disposed link extending from the key lever to the front link 19 being shown connected thereto (in this instance) at a point in front of the hinge connection 18. If in the setting up of the machine a type bar fails to reach its rest 16, as shown in Fig. 10 in an exaggerated way, the upper end of the anchor post must be carried to the rear sufficiently to permit the type bar to properly seat on its rest. This is accomplished by screwing up the upper lock screw 11 and easing up the lower lock screw 12. If, as in Fig. 11, the key lever is not brought by its spring up against its upper stop 22, then by screwing in the lower lock screw and easing up the upper one 11, the head 13 of the anchor post will be moved forward the action being to permit the front link 19 to rise and the key

lever to come against its upper stops. In all positions the lower edge 13' of the anchor post will remain in contact with its seat on the stepped positioning plate which determines the position, vertically, of the post.

I claim:

1. In a front strike writing machine, the combination of a link forming part of a type bar actuating connection, an anchor member to which it is connected at one end mounted to rock about an axis transverse to the link, and means for rocking said member and locking it.

2. In a front strike writing machine, the combination of a link forming part of a type bar actuating connection, an anchor member to which the front end of the link is pivoted mounted to rock about an axis transverse to the link and means for rocking said member and locking it.

3. In a front strike writing machine, the combination of a type bar actuating connection, an anchor member to which the front end of the link is pivoted mounted to rock about an axis transverse to the link, and a second link connected at its rear to the type bar and at its front to the rear end of the first link.

4. In a front strike writing machine, the combination of a link forming part of a type bar actuating connection, an anchor member to which it is connected at one end mounted to rock about an axis transverse to the link and adjusting lock screws applied to the anchor member respectively above and below said axis.

5. In a front strike writing machine, the combination of a vertically disposed anchor post support, a type bar segment arranged in rear thereof, a type bar pivoted therein, an anchor post mounted in the said support to rock about an axis transverse to the machine, a type bar actuating connection comprising two links hinged together, connected at its rear end to the type bar and pivoted at its front end to the anchor post, and means for rocking the post and locking it.

6. In a front strike writing machine, the combination of a vertically disposed anchor post support, a type bar segment arranged in rear thereof, a type bar pivoted therein, an anchor post mounted in said support to rock about an axis transverse to the machine, a type bar actuating connection comprising two links hinged together, connected at its rear end to the type bar and pivoted at its front end to the anchor post, and adjusting lock screws applied to the post respectively above and below said axis.

7. In a front strike writing machine, the combination of a vertically channeled anchor post support, an anchor post loosely seated in a channel therein, a stepped positioning plate supporting the lower end of the anchor post, means for rocking the post to



move its outer end to the front or rear, means for locking it in adjusted position and a type bar actuating connection pivoted to the upper end of the post and extending rearwardly.

8. In a front strike writing machine, an anchor post, for a type bar operating connection, having a high point upon its rear edge upon which it may rock, a support for the post and adjusting lock screws applied to the front edge of the post respectively above and below said high point and a positioning member upon which the lower edge of the post rests.

9. In a front strike writing machine, the combination of a vertically channeled anchor post support, a type bar segment in rear thereof, type bars pivoted in the segment, a series of anchor posts mounted in the channels of said supports, each adapted to rock about an axis transverse to the machine and each having its upper end or head angularly disposed so as to be radial to the heel of its corresponding type bar mounted in the segment, type bar operating connections converging from front to rear of the machine and connected at their rear ends to the heels of their respective type bars and at their front ends pivoted to their corresponding anchor posts and means for independently rocking the anchor posts about their respective axes.

10. In a front strike writing machine, the combination of a vertically channeled anchor post support, a type bar segment in rear thereof, type bars pivoted in the segment, a series of anchor posts mounted in the channels of said supports, each adapted to rock about an axis transverse to the machine and each having its upper end or head angularly disposed so as to be radial to the heel of its corresponding type bar mounted in the segment, type bar operating connec-

tions converging from front to rear of the machine and connected at their rear ends to the heels of their respective type bars and at their front ends pivoted to their corresponding anchor posts and adjusting lock screws applied to the respective anchor posts above and below said axis.

11. In a front strike writing machine, the combination of a segmental member having its front face formed with vertical channels a cover plate closing the front faces of the channels, type bar actuating anchor posts located in the respective channels each having a high point on its rear edge upon which it may rock on the bottom of the channel and adjusting lock screws passing through the cover plate and applied to the front edge of the post respectively above and below said high point.

12. In a front strike writing machine, the combination of a segmental member having its front face formed with vertical channels, a cover plate closing the front faces of the channels, type bar actuating anchor posts located in the respective channels and each having a high point on its rear edge upon which it may rock on the bottom of the channel, adjusting lock screws passing through the cover plate and applied to the front edge of the post respectively above and below said high point and a stepped positioning plate, the steps or shoulders of which lie below the open lower ends of the channels and determine the positions vertically of the several anchor posts.

In testimony whereof, I have hereunto subscribed my name.

EDWARD B. HESS.

Witnesses:

W. H. READ,  
F. C. JUTRAS.