

E. S. McALL.  
TYPE WRITING MACHINE.  
APPLICATION FILED NOV. 21, 1907.

997,632.

Patented July 11, 1911.

2 SHEETS-SHEET 1.

Fig. 1

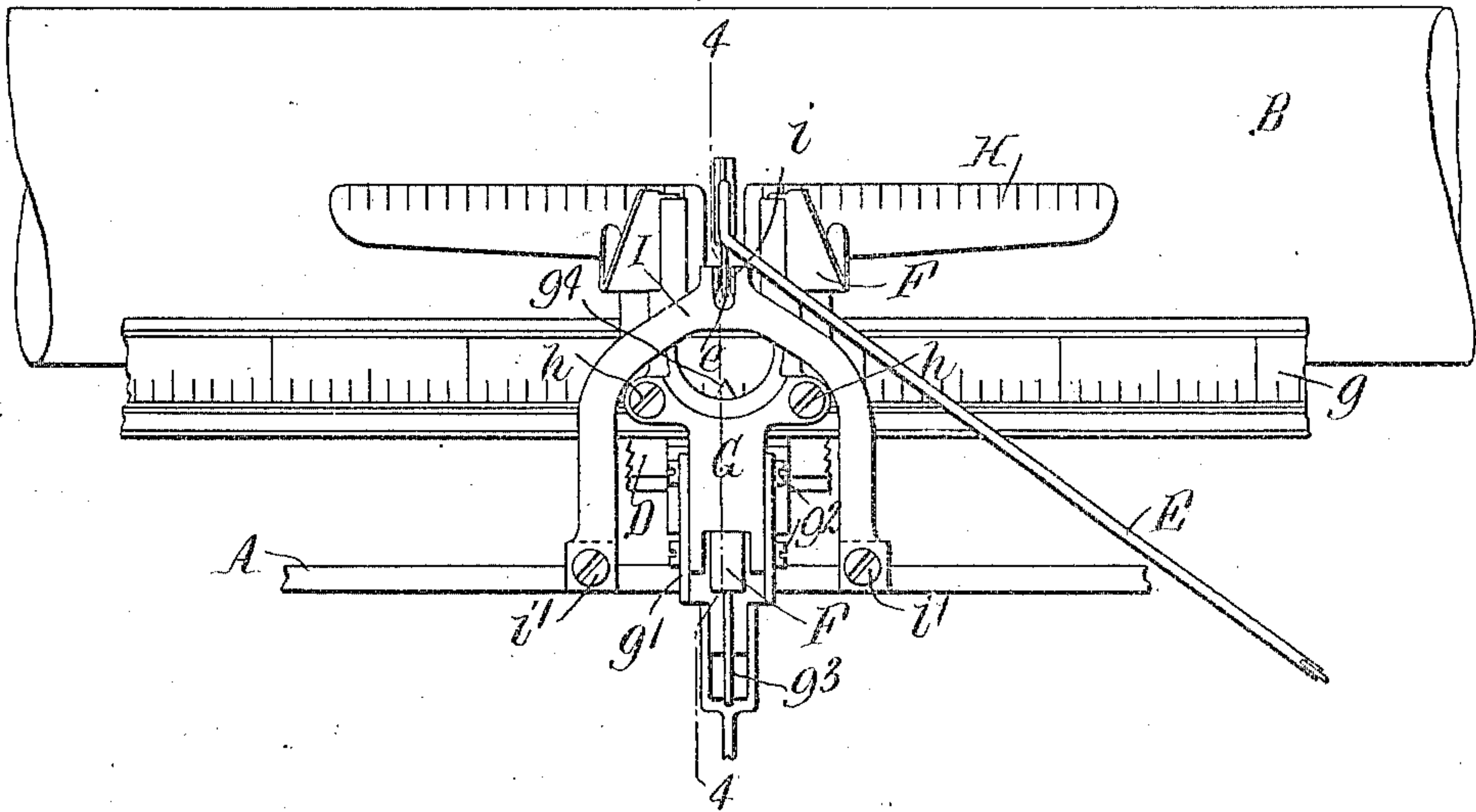


Fig. 2.

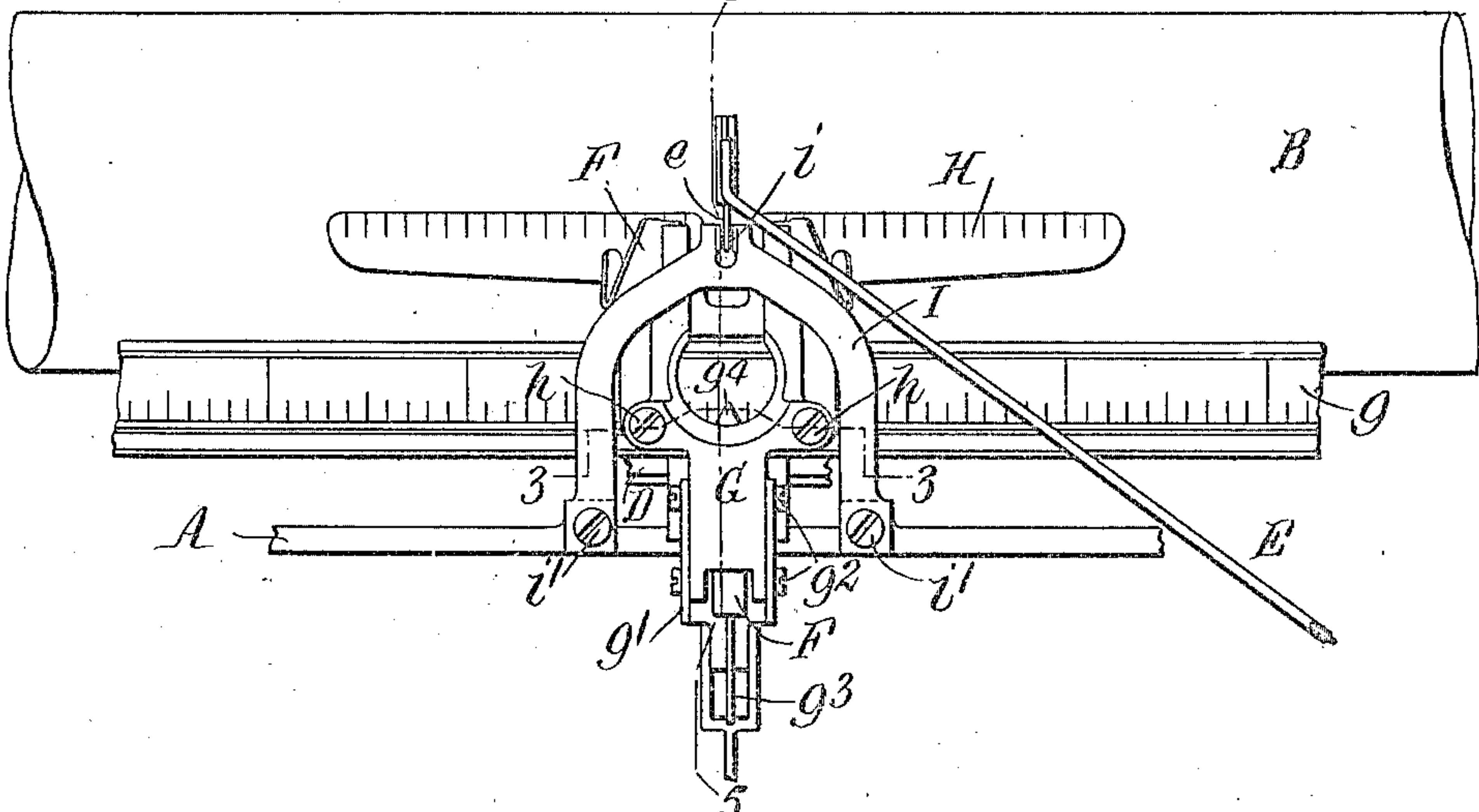
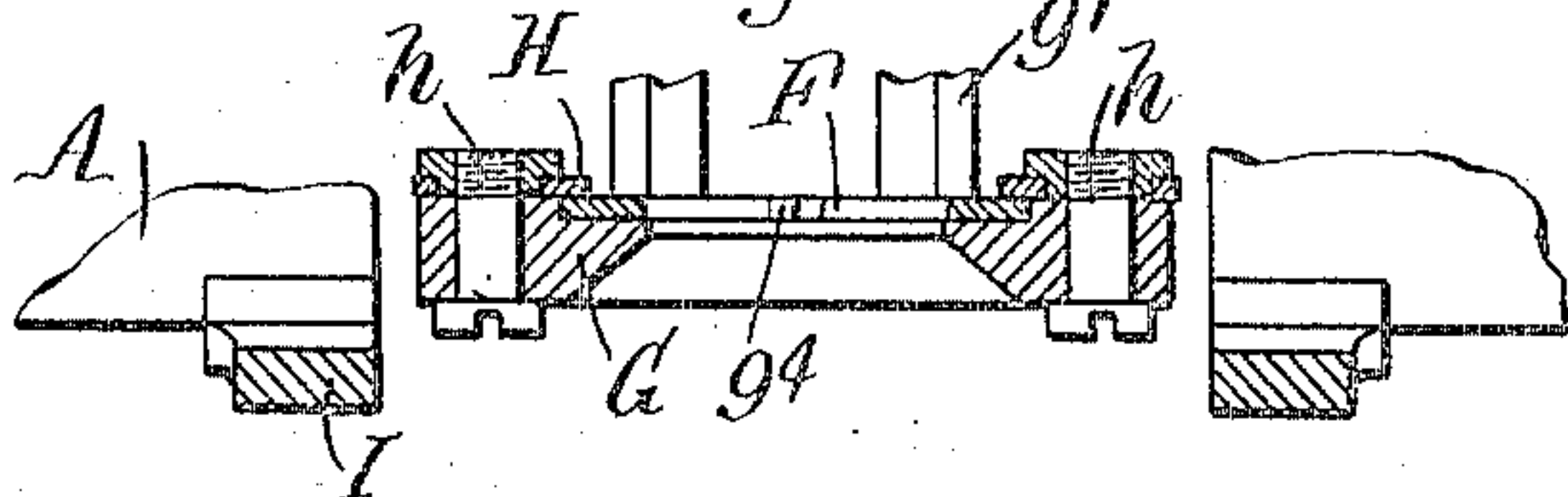


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

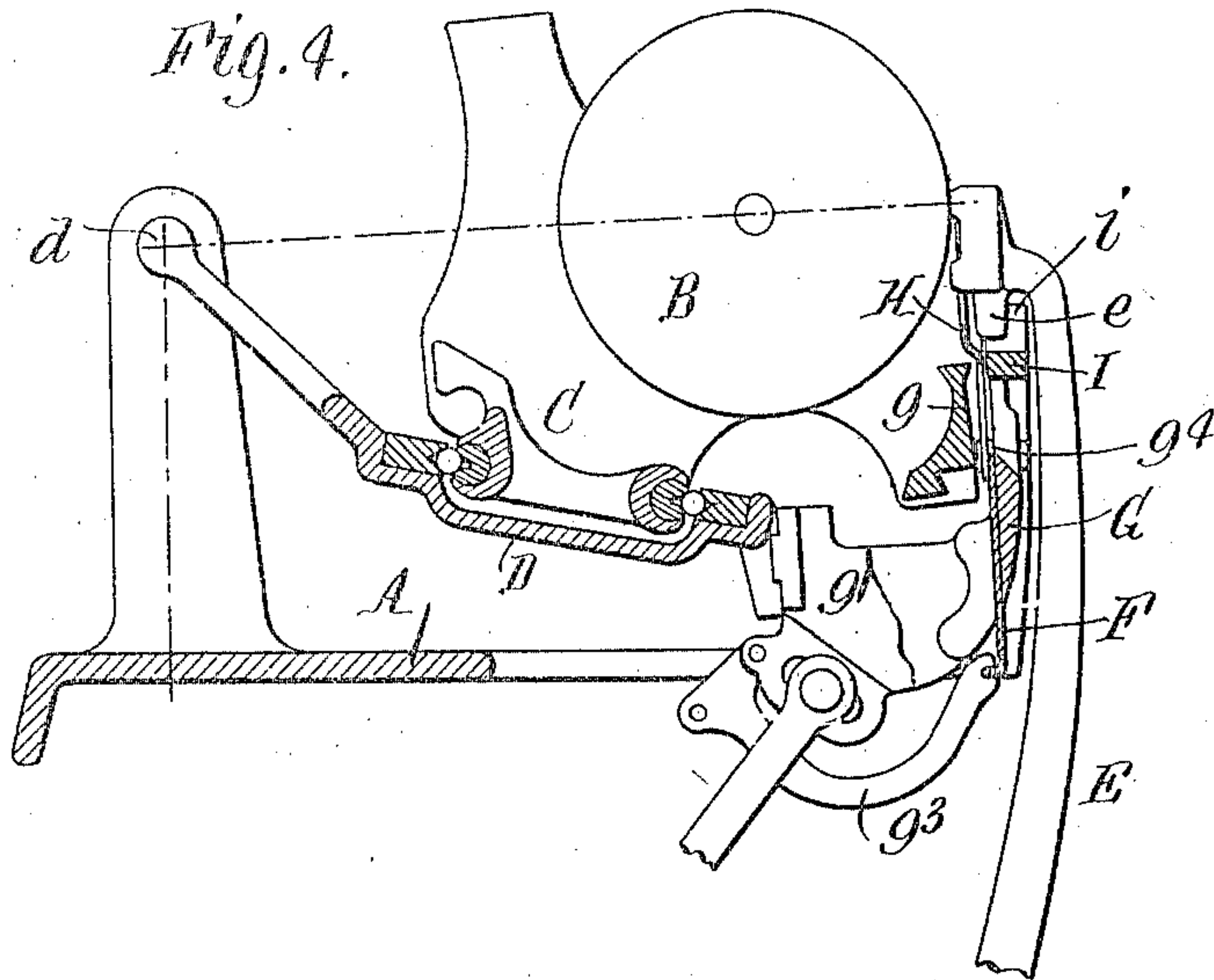
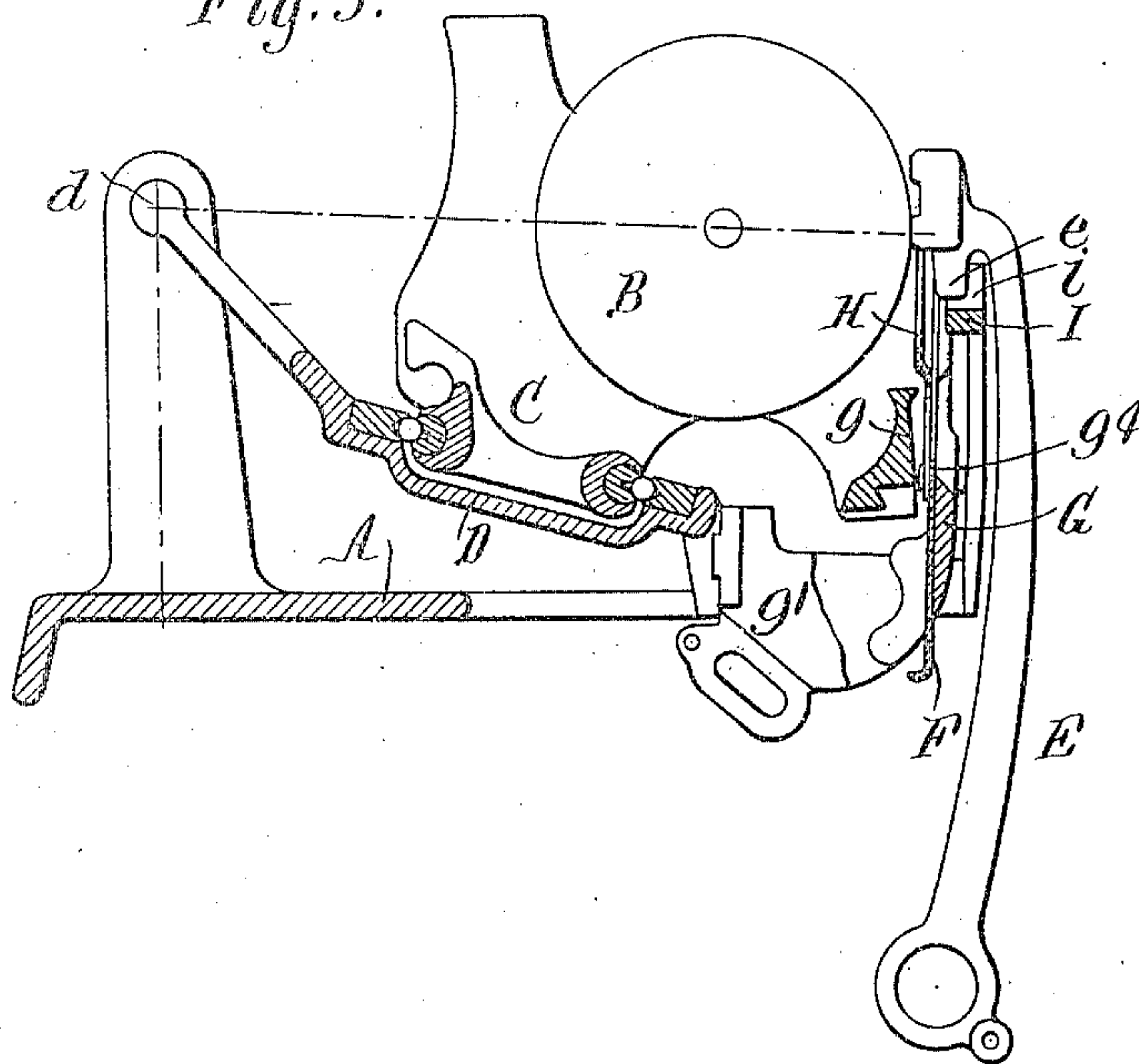


Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## TYPE-WRITING MACHINE.

997,632.

Specification of Letters Patent.

Patented July 11, 1911.

Application filed November 21, 1907. Serial No. 403,120.

*To all whom it may concern:*

Be it known that I, EDWARD S. McALL, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Type-Writing Machines, of which the following is a specification.

This invention relates more particularly to center guides for the type-bars of front-strike typewriting machines in which the platen is shifted to place it in printing relation with one or another of different sets of type on the type-bars, and the ribbon vibrator and its support or guide are shifted with the platen.

The center guide should retain a fixed relation to the type-bars, and the principal object of the invention is to provide an efficient center guide of exceedingly simple and inexpensive construction and arrangement, such that it can be fixed to the stationary frame of the machine close to the platen and ribbon vibrator without interference with the latter and its support or guide, and without obstructing the operator's view of the work or the letter scale on the carriage in rear of the center guide.

In the accompanying drawings: Figure 1 is a front elevation of portions of a typewriting machine provided with a center guide embodying the invention, showing the position of the parts when the platen is shifted for upper case work. Fig. 2 is a similar view thereof, showing the normal position of the parts. Fig. 3 is a cross-section thereof, on an enlarged scale, in line 3-3, Fig. 2. Figs. 4 and 5 are sectional elevations thereof in lines 4-4 and 5-5, Figs. 1 and 2, respectively, but showing a different type-bar.

Like letters of reference refer to like parts in the several figures.

A represents the top plate of the main frame, B the platen, C the platen carriage, D the carriage shift frame, and E one of the type-bars of a front-strike typewriting machine. The shift frame D, upon which the carriage is supported and travels horizontally, is suitably pivoted at the upper rear portion of the main frame to swing up and down about an axis indicated at *d*, and is shifted by means (not shown) for placing the platen in printing relation to one or another set of type on the type-bars.

The type-bars E are pivoted in any suitable manner below the shift frame to swing upwardly and rearwardly to strike the front side of the platen, and are preferably, though not necessarily, provided with guide lugs or extensions *e*, Figs. 1 and 2, which depend from the type-heads in line therewith so as to enter the center guide when the type-bars near the platen. Otherwise the parts referred to may be of any usual or suitable construction and arrangement.

F represents a vibrating ribbon guide or vibrator of ordinary construction, having ribbon guide loops at its upper end which is forked or slotted for the passage of the type-bars, and G represents an upright support or guide for the vibrator rising from the front central part of the shift frame in front of the letter space scale *g* which is secured to the front part of the carriage C. The support preferably has rearwardly extending legs secured in a slotted front extension or bracket *g'* of the shift frame by screws *g''*, and also has a slotted or open upper portion for the passage of the type-bars. The vibrator slides vertically in a suitable guide-way on the rear of the support G and its lower end is connected to the operating means, consisting preferably of a lever *g'''* pivoted on the shift frame extension and vibrated by connections not shown. By thus mounting the vibrator guide to shift with the platen, a better support for the vibrator is obtained than by the usual fixed guide, and the printing point indicator *g''''* on the vibrator is retained in the same position over the lower portion of the scale *g* except at the instant when the vibrator is moving.

H represents a line or paper gage, which, in the construction shown, is secured centrally by screws *h* on the back of the vibrator support G and has horizontal arms which project to opposite sides of the support close to the platen and have straight upper edges for facilitating the proper adjustment of the paper on the platen. The line gage thus serves to confine the vibrator in its guide-way on the support G. The vibrator, its support and the line gage are all slotted or provided with registering openings at their upper central portions through which the type heads pass in making the impressions, and the openings of the vibrator and support expose to view the letter space scale *g* in rear thereof.



I represents the center guide for the type-bars. The center guide is located in front of the vibrator support and has a vertical beveled guide slot *i* in line with the printing point on the platen, and supporting legs which straddle the vibrator support and are secured at opposite sides thereof by screws *i'*, or otherwise, to the top plate A. The guide is preferably formed of a single piece of hardened steel, the upper slotted portion thereof being thicker than the supporting legs and extending into the opening in the upper part of the vibrator support close to the platen.

As the shift frame is pivoted and the vibrator and its support are mounted on the shift frame, they move with the same in an arc concentric with the pivotal axis *d* of the shift frame, instead of vertically, so that when the shift frame is raised the support moves upwardly and forwardly toward the center guide, but as the support can enter between the legs of the guide and the opening in its upper portion receives the upper thick part of the guide, the center guide can be arranged very close to the vibrator support without interfering with the movement of the vibrator support when the platen is shifted, and without necessitating the offset of the type-bars to be increased. The straddling legs of the center guide also constitute a very rigid support therefor.

I claim as my invention:

1. In a typewriting machine, the combination of a shiftable platen, a ribbon vibrator, a guide on which the vibrator reciprocates and which shifts with the platen, a stationary center guide for the type-bars having the part thereof which the type-bars enter arranged in front of the vibrator and a series of type-bars arranged to swing into the center guide, substantially as set forth.

2. In a typewriting machine, the combination of a platen, a pivoted shift frame therefor, a ribbon vibrator, a guide on which the vibrator reciprocates and which is mounted on said shift frame to shift with the platen, a series of type bars, and a stationary center guide for the type-bars mounted in front of the shift frame substantially in the plane of said vibrator guide and independently thereof, substantially as set forth.

3. In a typewriting machine, the combination of a platen and shiftable carriage for the same, a main frame, a ribbon vibrator, a guide therefor which shifts with the carriage, a center guide fixed on the main frame and arranged in front of the carriage and substantially in the plane of the vibrator guide, and a series of type-bars arranged to swing into the center guide, substantially as set forth.

4. In a typewriting machine, the combination of a platen and shiftable carriage for the same, a stationary top plate, a ribbon vi-

brator, a guide therefor which shifts with the carriage, a series of type-bars, and a center guide for the type-bars fixed on the top plate and arranged in front of the vibrator and independently of the vibrator guide, substantially as set forth.

5. In a typewriting machine, the combination of a platen and shiftable carriage for the same, a main frame, a ribbon vibrator, a guide therefor which shifts with the carriage, a series of type-bars, and a stationary center guide for the type-bars having two separate connections with the main frame by which it is rigidly supported in front of the vibrator and substantially in the plane of the vibrator guide, substantially as set forth.

6. In a typewriting machine, the combination of a platen and shiftable carriage for the same, a ribbon vibrator, a guide therefor which shifts with the carriage, a series of type-bars, and a one-part center guide for the type-bars supported in a fixed position in front of the vibrator and substantially in the plane of the vibrator guide, substantially as set forth.

7. In a typewriting machine, the combination of a platen and shiftable carriage for the same, a main frame, a ribbon vibrator, a guide therefor which shifts with the carriage, a series of type-bars, and a center guide for the type-bars arranged in front of the vibrator and having supporting legs which straddle the vibrator guide and extend laterally and downwardly and are secured to the main frame, substantially as set forth.

8. In a typewriting machine, the combination of a platen, an oscillatory shift frame for the same, a ribbon vibrator, a guide therefor which shifts with the shift frame, a series of type-bars, and a stationary center guide for the type-bars having an opening into which the vibrator guide swings when the shift frame is shifted, substantially as set forth.

9. In a typewriting machine, the combination of a platen and an oscillatory shift frame for the same, a main frame supporting the shift frame, a series of type-bars, a center guide for the type-bars having separated legs rigidly connected to the main frame, a ribbon vibrator, and a guide, therefor arranged to shift with the shift frame and to swing between the legs of the center guide when the platen is shifted, substantially as set forth.

10. In a typewriting machine, the combination of a platen and a shiftable carriage for the same, a main frame, a series of type-bars, a center guide for the type-bars supported by the main frame, a ribbon vibrator and guide therefor in rear of the center guide and both shifting with the carriage, and a scale moving with the carriage located in rear of the ribbon vibrator, said center

guide, vibrator guide and vibrator each having an opening in front of the scale through which the scale can be seen, substantially as set forth.

5 11. In a typewriting machine, the combination of a platen and a shiftable carriage for the same, a main frame, a series of type-bars, a center guide for the type-bars supported by the main frame, a ribbon vibrator  
10 guide which is separate from and is located in rear of the center guide, a ribbon vibrator in rear of and guided by the vibrator guide, and a line gage in rear of the vibrator, said line gage, vibrator and vibrator support being  
15 arranged to shift with the carriage, substantially as set forth.

12. In a typewriting machine, the combi-

nation of a platen, a pivoted shift frame therefor, a ribbon vibrator, a guide therefor which is mounted on and shifts with said 20 shift frame and has an opening in its upper portion, a series of type-bars, and a stationary center guide for the type-bars which extends into the opening of said vibrator guide and has supporting legs which straddle 25 said vibrator guide, substantially as set forth.

Witness my hand, this 18th day of November, 1907.

EDWARD S. McALL.

Witnesses:

CHESTER W. REID,  
OTTO A. SCHILLY.