

(No Model.)

2 Sheets—Sheet 1.

J. H. OSGOOD.
TYPE WRITING MACHINE.

No. 447,789.

Patented Mar. 10, 1891.

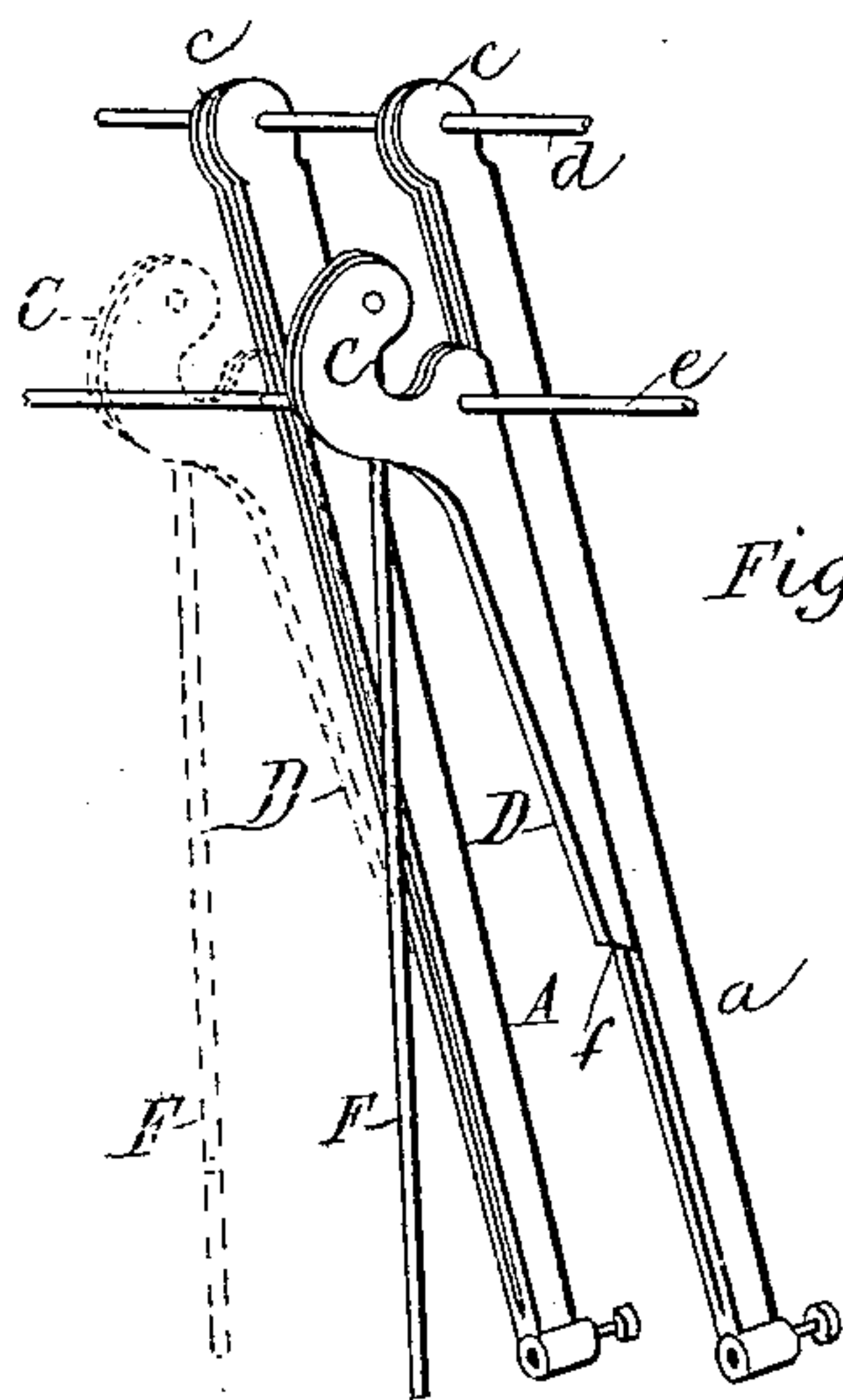


Fig. 1.

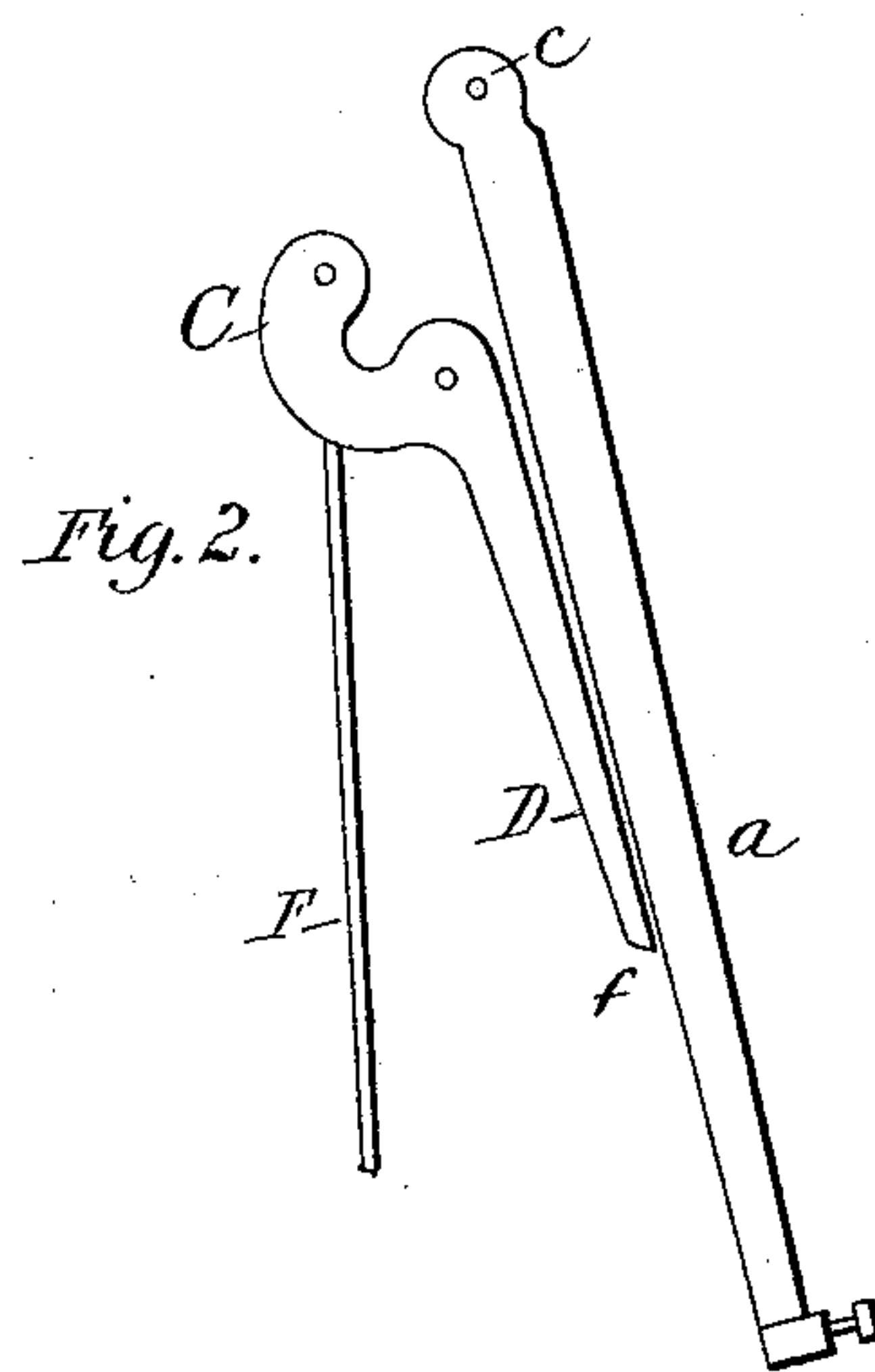


Fig. 2.

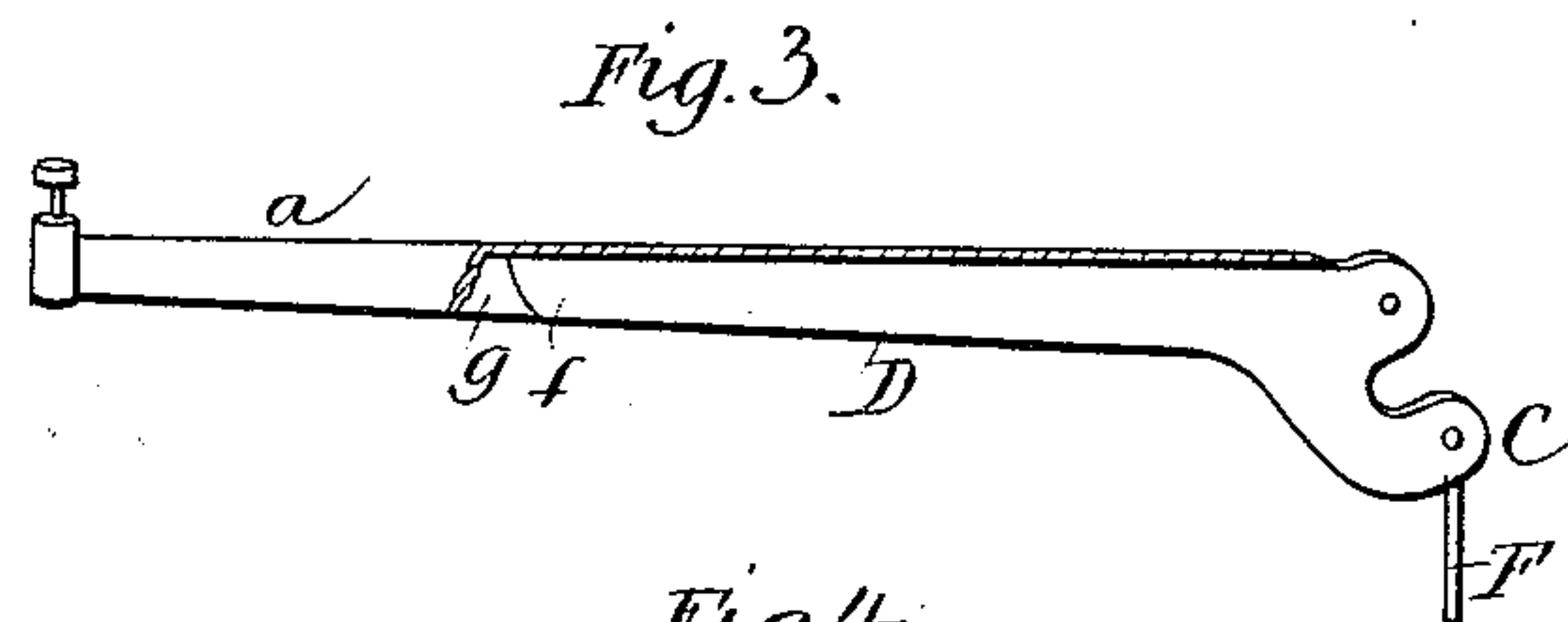


Fig. 3.

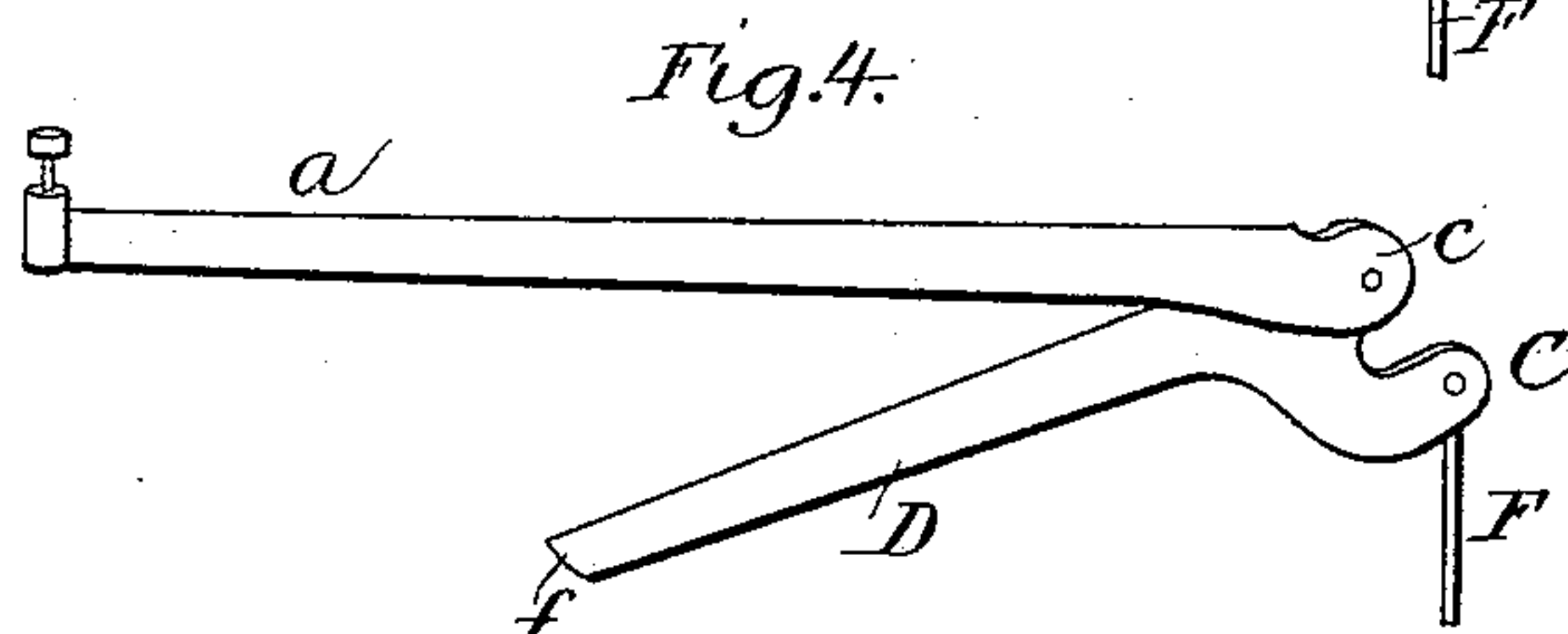


Fig. 4.

Witnesses

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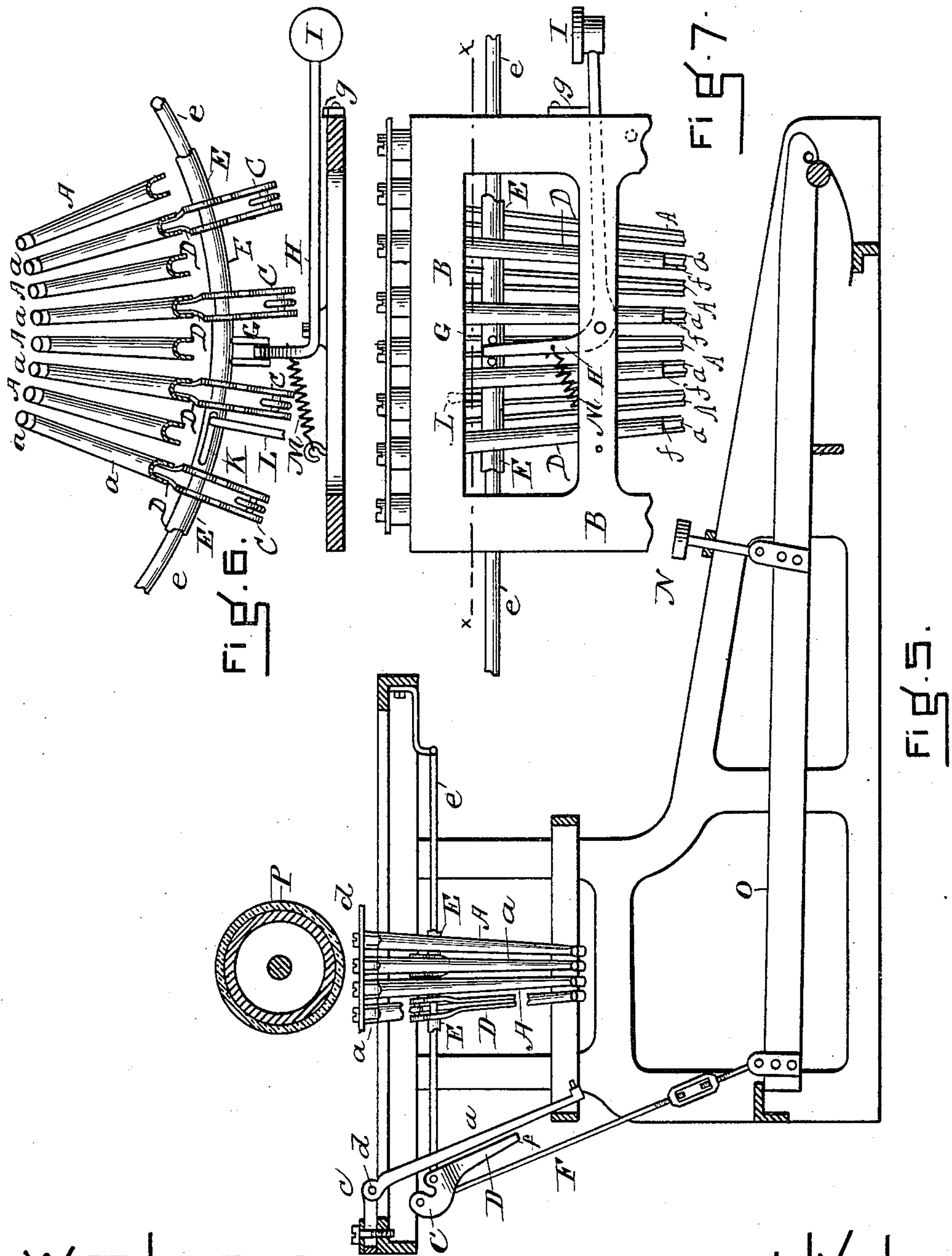
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2 Sheets—Sheet 2.

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WITNESSES.
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UNITED STATES PATENT OFFICE.

JOSEPH H. OSGOOD, OF PEABODY, MASSACHUSETTS.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 447,789, dated March 10, 1891.

Application filed March 1, 1889. Serial No. 301,621. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. OSGOOD, of Peabody, in the county of Essex and State of Massachusetts, have invented certain new and
5 useful Improvements in Type-Writing Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to
10 make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to type-writing machines; and my improvements consist, generally, in having two or more sets of type-bars alternately disposed and a series of lifting-levers pivoted upon a sliding ring below the type-bars and with the distance between
20 each two adjacent levers equal to the distance between the type-bars of one of said sets, whereby said levers may be slid under the type-bars of any one set and operated to lift said type-bars.

25 My improvements also consist of certain features and details of construction, all as more particularly hereinafter described.

In the accompanying drawings, Figure 1 illustrates in perspective two type-bars and their lifter after the latter has been shifted to the right type-bar, the dotted lines showing the position of the lifter before it has been so shifted. Fig. 2 illustrates a side elevation showing the relative positions of one
30 of the type-bars, its lifter, and their bearings. Fig. 3 illustrates a slightly-different form of my improved type-bar and its lifter, both in a raised position and with the type-bar partly broken away to show the position of the end
35 of the lifter. Fig. 4 is another view of the same type-bar and its lifter, showing more clearly the connection between the two parts. Fig. 5 is a longitudinal section from front to back of the frame and part of the mechanism of a caligraph machine with my invention applied thereto. Fig. 6 is a longitudinal
40 section through the line xx of Fig. 7 or taken transversely through the type-bars. Fig. 7 is a partial side elevation of the machine, showing the positions of the type-bars and
50 lifters and the means for shifting the lifters.

The type-bars are divided into two sets, which are arranged alternately with each other on the usual suspending frame. One of these sets is provided with the type of the capital letters, and of one-half of the characters that are not letters, and the type-bars of this set I have indicated by the letter A. The other set is provided with the type of the small letters and of the remaining half of the characters that are not letters, and the type-bars of this second set I have indicated by the letter a . The type-bars will therefore be arranged in the following order. Starting with the type-bar supporting the type A, the
55 next bar to the right will support that of a , the next one B, the next b , the next C, the next c , and so on, with the bars supporting the capital type and those supporting the small letter type arranged alternately on the supporting frame. The upper end of each type-bar is provided with a journal-bearing c , where it is hung upon its pivot d on the supporting frame B.

Instead of the curved short arm C forming part of the type-bar, as is now the case in the caligraph and Remington machines, said arm C forms part of the lifter. The longer arm D of said lifter is preferably straight, and extends under the type-bar. A ring e is suspended below the frame B and concentric therewith, and on this ring are loosely hung the type-bar lifters CD, (which are levers of the first class,) with the arm D of each lifter extending under every alternate type-bar a little outside and opposite the same.

E E are a set of loose sleeves encircling the ring e and which connect the lifters CD together to keep them the proper distance apart and to keep them steady upon said ring. The lifters will then be always under one set of type-bars, if one of the lifters is under one type-bar of said set.

G represents a yoke, which extends laterally outward from one side of one of the sleeves E, and H is a bell-crank lever pivoted to the side of the machine-frame with one arm extending upward and within the yoke G, and the other arm of the lever extending forward in front of the machine-frame and provided with a press-button or key I for operating said lever.

K is an arched slot in the upper surface of one of the sleeves E, and L is a bent rod secured to the upper portion of the frame B and having its lower extremity entering said slot, to limit the play of the sleeves E and the lifters C D to the distance from a type-bar to its next adjacent one.

M is a tension-spring connected at one end to the upper arm of the lever G and at its other end to the frame B. This spring G will tend constantly to keep the sleeves E in such a position that the forward end of the slot K will bear against the rod L, and to keep the lifters C D under the first set of type-bars, which are provided with small-letter type. When the lever H is pressed down by the button I, all the lifters will be drawn from left to right, so as to come under the second set of type-bars, which are provided with capital type, so that the lifters may lift and operate said type-bars.

g is a notch or projection in the frame under the lever H to allow of said lever being caught and held in its lowest position to retain the lifters under the second set of type-bars, if desired.

When the lifter C D is raised by means of the key N, its lever O, and the rod F, the free end f of the arm D will press against the lower portion of the type-bar between its fulcrum d and its free or type end, and throw up said type-bar and the type against the platen P. If the lifters in their normal positions be opposite the type-bars having the small-letter type, the pressure upon the key N, having the character A, for example, will raise the lifter and the type-bar having the small character a, and if the series of lifters be moved to the right of the lever H the same key N and the same lifter as raised the small character a will now raise the type-bar having the capital type A. (See full lines, Fig. 1.) The same result will follow with the whole series of type-bars. When the lever H is released, the spring M will return the lifters to their normal positions opposite the type-bars having the small-letter type. It will thus be seen that one key may operate either the small or large type.

The type-bar I prefer to make grooved of sheet metal, as is now the practice in the caligraph and as shown in Figs. 3 and 4. In these figures I have also shown the lifting-bar hung upon the same pivot as the type-bar; but I prefer to hang the lifters on separate pivots, as shown in Figs. 1 and 2. In Fig. 3 the end of the lifter is shown in position in the groove g of the type-bar.

As the type-bar terminates near its pivotal bearing, it may have a broader bearing-surface than can be used when the curved arm forms part of the type-bar, and can thus hold the type-bar more firmly in its true position.

Although I have shown only two sets of type-bars, it will be evident that more sets may be employed and arranged alternately with the lever-lifters C D suspended at dis-

tances apart equal to the distance between the type-bars of one of said sets.

I am aware that separate lifters in the form of levers have been employed with which to raise and operate the type-bars; but this construction I do not claim; but

What I do claim, and desire to secure by Letters Patent, is —

1. The combination, with two or more sets of pivotally-hung type-bars, those of the different sets being alternately disposed upon their frame, of a series of lifting-levers pivoted upon a sliding ring below the type-bars and with the distance between each two adjacent levers equal to the distance between the type-bars of one of said sets, means for operating said levers to raise the type-bars, and means for sliding the frame supporting said levers, whereby the levers may be moved under the type-bars of any one set, all as set forth.

2. The combination, with two or more sets of type-bars pivotally hung upon a circular frame and with those of the different sets alternately disposed upon said frame, of a series of lifting-levers pivoted upon a sliding ring below the type-bars and with the distance between each two adjacent levers equal to the distance between the type-bars of one of said sets, means for operating said levers to raise the type-bars, and means for sliding the frame supporting said levers, whereby the levers may be moved under the type-bars of any one set, all as set forth.

3. The combination, with two or more sets of type-bars pivotally hung upon a circular frame and with those of the different sets alternately disposed upon said frame, of a series of lifting-levers pivoted upon a sliding ring below the type-bars and with the distance between each two adjacent levers equal to the distance between the type-bars of one of said sets, means for operating said levers to raise the type-bars, and a lever engaging with said ring for sliding the same, whereby the levers may be moved under the type-bars of any one set, all as set forth.

4. The combination, with two or more sets of type-bars pivotally hung upon a circular frame with those of the different sets alternately disposed upon said frame, of a series of lifting-levers pivoted upon a sliding ring below the type-bars and with the distance between each two adjacent levers equal to the distance between the type-bars of one of said sets, means for operating said levers to raise the type-bars, a lever engaging with said ring for sliding the same, and stops for limiting the play of the ring, all as set forth.

5. The combination, with two or more sets of type-bars pivotally hung upon their frame and with those of the different sets alternately disposed upon said frame, of the lifting-levers C D, pivoted upon a sliding ring below the type-bars and with the distance between each two adjacent levers equal to the distance between the type-bars of one of said sets, the levers O, and connecting-rods F,

and means for sliding the frame or ring which supports the levers, all as set forth.

5 6. The combination, with two or more sets of type-bars pivotally hung upon a circular frame, with those of the different sets alternately disposed upon said frame, of the ring e, loose sleeves E, levers C D, means for rais-

ing said levers, and means for sliding said sleeves with the levers upon the ring e, all as set forth.

JOSEPH H. OSGOOD.

Witnesses:

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