

(No Model.)

3 Sheets—Sheet 1.

D. H. TAYLOR.  
TYPE WRITING MACHINE.

No. 451,082.

Patented Apr. 28, 1891.

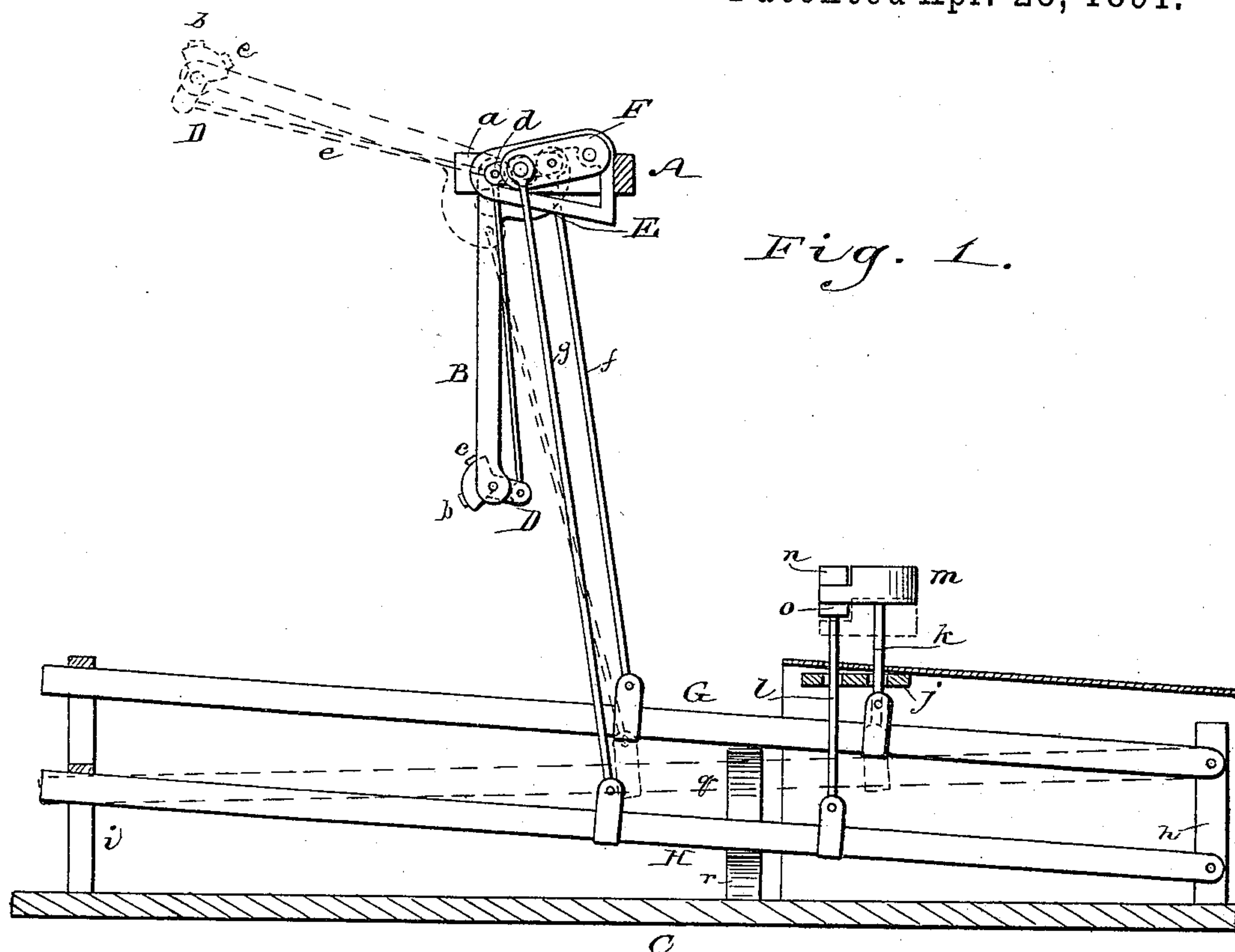


Fig. 1.

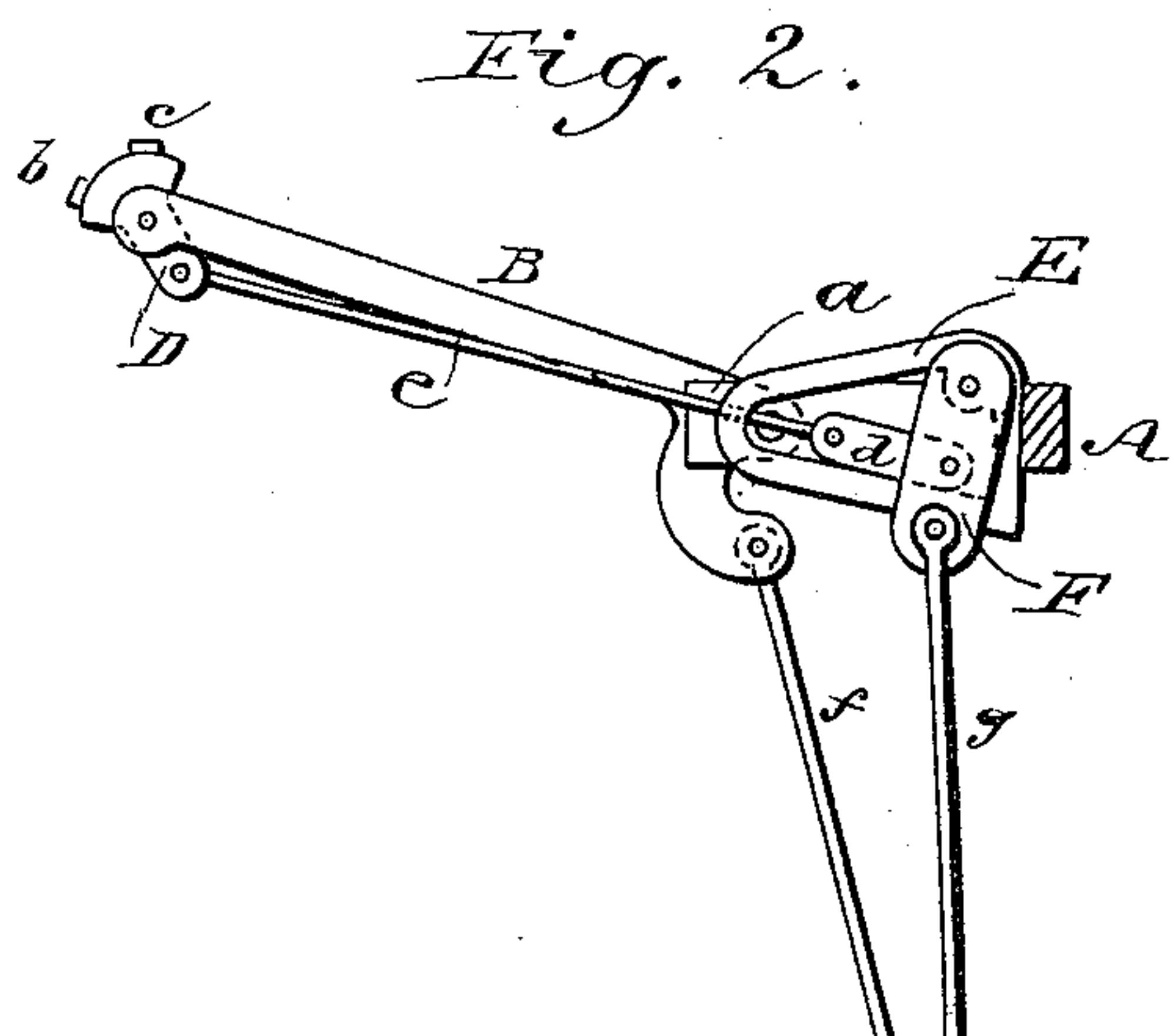
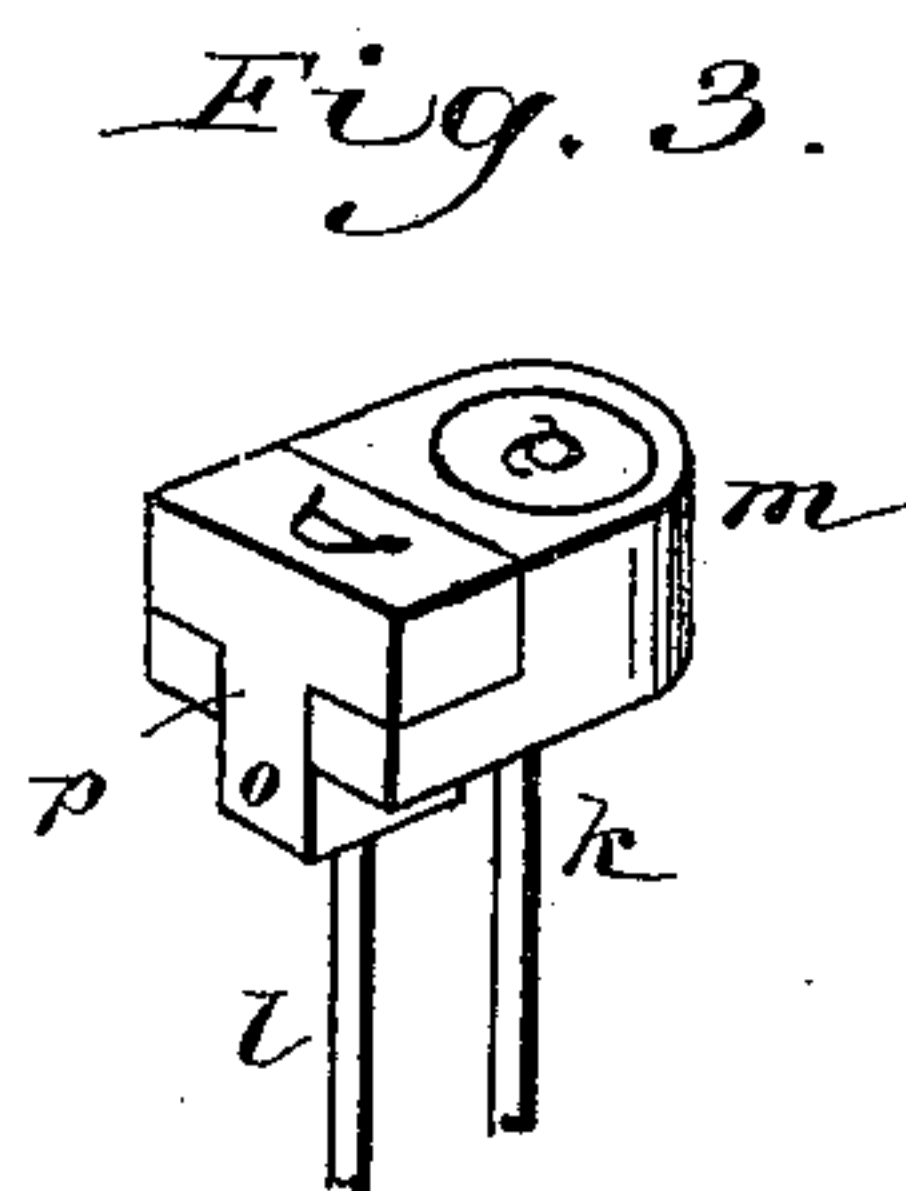


Fig. 2.



*Fig. 3.*

WITNESSES:

John M. Deemer  
C. Sedgwick

**INVENTOR:**

BY  
D. H. Taylor  
Munn & Co  
ATTORNEYS.

(No Model.)

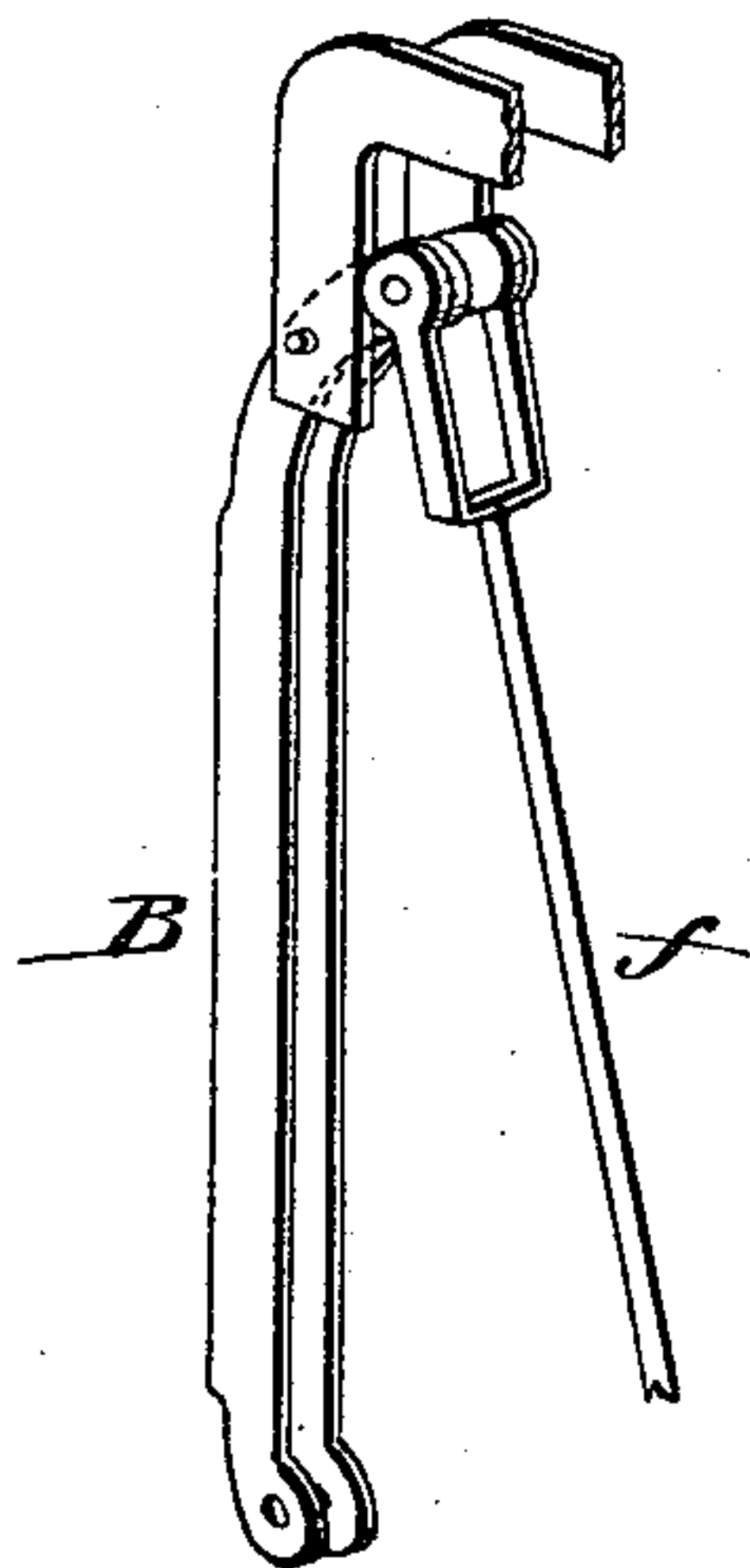
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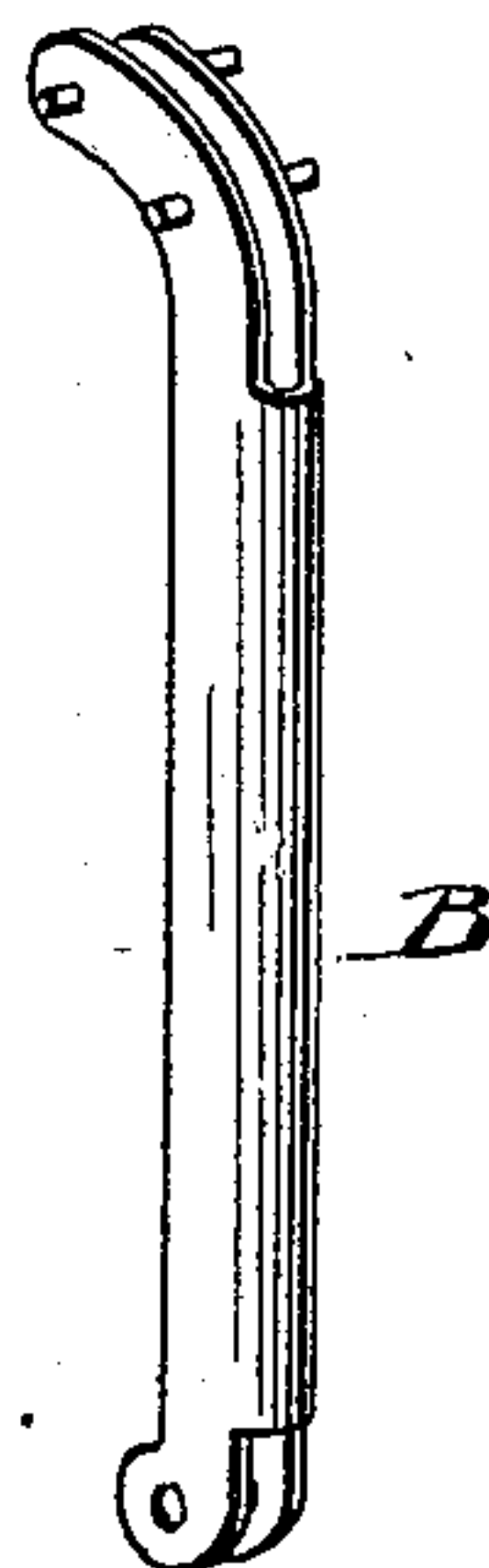
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*Fig. 4.*



*Fig. 5.*



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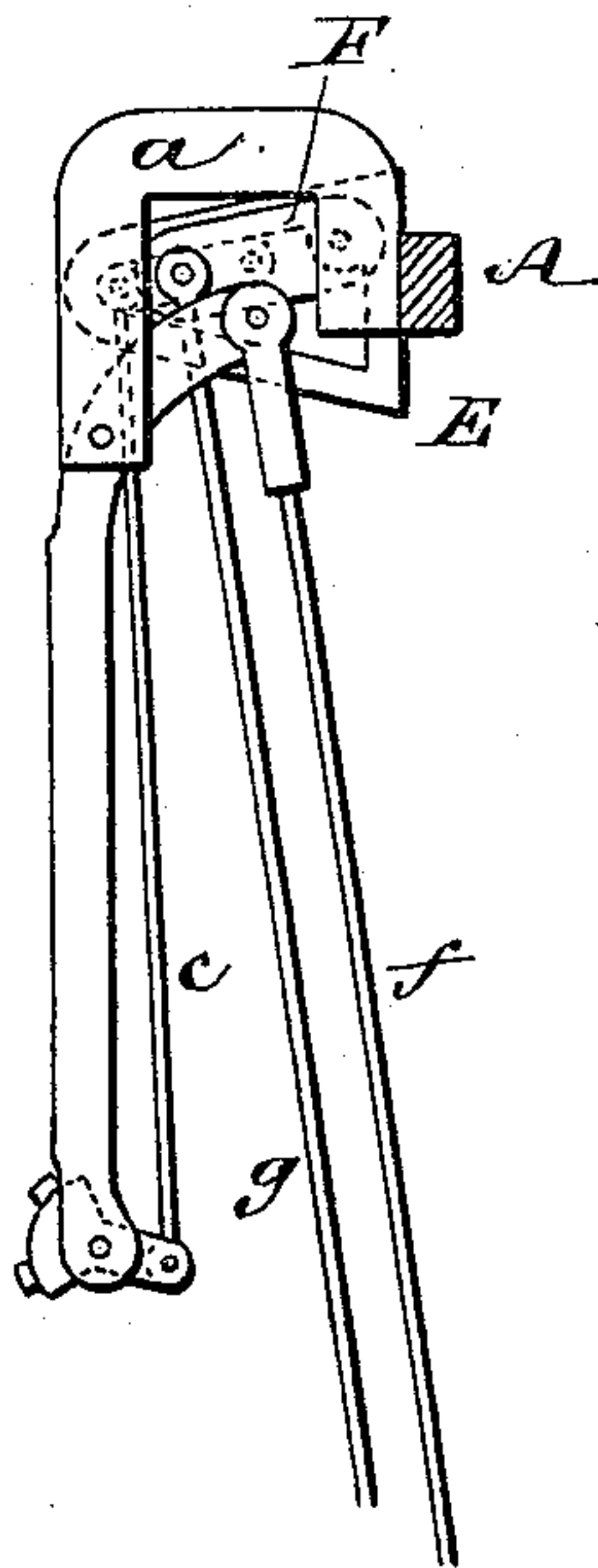
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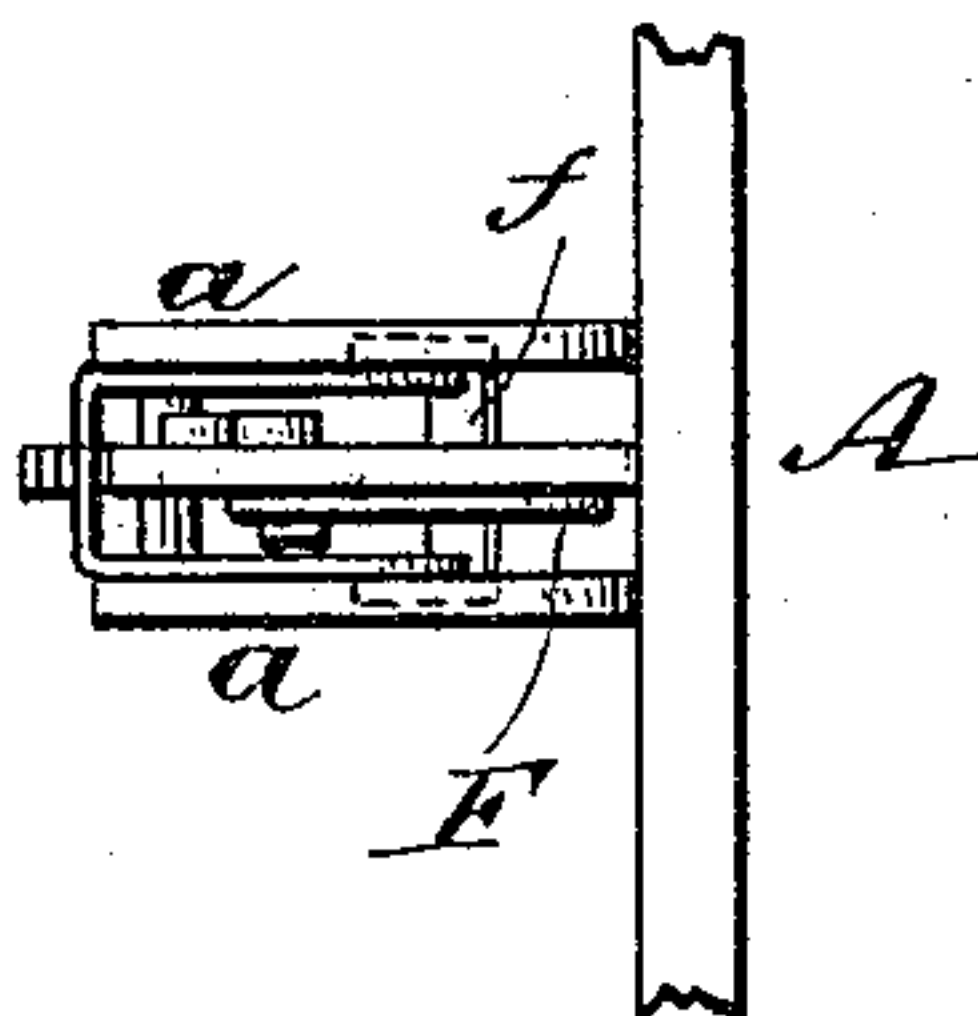
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*Fig. 6.*



*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

DAVID HADDIX TAYLOR, OF CINCINNATI, OHIO.

## TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 451,082, dated April 28, 1891.

Application filed April 15, 1889. Serial No. 307,278. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID HADDIX TAYLOR, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain  
5 new and useful Improvements in Type-Writing Machines, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

10 Figure 1 is a side sectional elevation of a portion of a type-writer embodying my invention. Fig. 2 is a side elevation of the type-shifting mechanism. Fig. 3 is a perspective view of the beveled finger-key. Figs.  
15 4 and 5 are respectively front and rear views of a modified form of type-arm, and Figs. 6 and 7 are respectively side and plan views of the same.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to construct a type-writer in which capitals or lower-case may be written by a single set of keys, so that the use of a capitalizing-key will be  
25 avoided.

The invention consists in the construction and combination of parts hereinafter described and claimed.

30 As the construction of all the type-arms and the parts connected therewith is the same, I show and describe only a single type-arm and the mechanism by which it is operated.

The ring A, which supports all of the type-arms B, rests upon columns projecting from the base C. The type-arm B is pivoted in the loop *a*, attached to the ring A, and to the free end of the said type-arm is pivoted a type-lever D, carrying the lower-case type *b* and the upper-case type *c*. To the ring A, at  
40 the side of the loop *a*, is secured a triangular loop E, to the upper and outer corner of which is pivoted a link F, and to the center of the link F is pivoted another link *d*, and the said link *d* is connected with the lower  
45 end of the type-lever D by the wire *e*. The type-arm B is extended laterally near its pivotal point and curved backward toward the ring A, and to this portion of the arm is pivoted the wire *f*, which is pivotally connected  
50 with the key-lever G in the usual way, so that whenever the key-lever G is depressed

in the manner presently to be described the type-arm B will be thrown up into the position shown in dotted lines.

To the lower end of the link F is pivoted a 55 wire *g*, which is pivotally connected with the key-lever H. In the present case the key-levers are in different planes for the sake of clearness in the drawings; but in actual practice they are arranged side by side. The key-  
60 levers G H are pivoted to a fixed support *h* at the front of the machine, and are guided by the slotted posts *i* at the rear of the machine. A cross-bar *j* extends over the key-levers G H, and is perforated to receive the rods *k l*, 65 which are attached, respectively, to the key-levers G H. The said rods *k l* are pivotally connected to the key-levers G H.

To the upper end of the rod *k* is attached a finger-piece *m*, which has a rabbet in its 70 rear edge for receiving the finger-piece *n*, the said finger-piece *n* being provided with a neck *o*, which extends down through a slot *p* in the rabbeted portion of the finger-piece *m*. The key-levers G H are returned to their normal position by the flat springs *q r*, which 75 extend underneath the said levers and tend to press them upward. When the finger-piece *m* is depressed, the key-lever G descends and the arm B is made to turn upon 80 its pivot, carrying the lower-case type upward into contact with the ink-ribbon, producing the impression of the lower-case letter on the paper, the parts at the moment of printing being in the position shown in dotted 85 lines in Fig. 1. When the finger-piece *n* is depressed by virtue of its engagement with the finger-piece *m*, both of the said finger-pieces are carried downward, moving the levers G H downwardly, thus causing the type-  
90 arm B to rise, as before; but the downward pull of the key-lever H turns the link F on its pivot, so as to draw back the link *d*, and thus through the medium of the wire *e* turn the type-lever D on its pivot, so as to bring 95 the upper-case type *c* into position for printing. When the finger is removed from the finger-piece *n*, the parts return to their normal position, and the type-lever D is in position for writing the lower-case. It will thus 100 be seen that when it is desired to write only lower-case the finger-piece *m* will be de-



pressed; but when it is desired to write capitals both finger-pieces *m n* will be depressed. It will be seen that the parts *m n* form a double or two-part finger-piece or key, the parts of which interlock for separate or simultaneous movement.

For convenience in labeling the keys a depression is made in the upper surface of the part *m*, as shown in Fig. 3. Into this recess is inserted a disk of porcelain, glass, or other suitable material, upon which is marked the appropriate letter.

When it is desirable to make the type-writer very compact, the arm B will be made hollow and the triangular loop E will be arranged opposite the center of the said arm. In this case the arm B will be operated by a forked rod connected with the key.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a type-arm provided with a pivoted type-lever carrying upper and lower case type, of key-levers connected with said type-arm and lever, respectively, and a two-part finger-piece or key, the parts of which are separately connected for simultaneous or independent movement, substantially as set forth.

2. The combination, with the type-arm B, of the type-lever D, carrying upper and lower

case type, the links F *d*, the wire *e*, the triangular loop E, and means for operating the link F simultaneously with the type-arm B, substantially as specified.

3. The combination, with a type-arm and a shifting type-lever thereon, of a double or two-part finger-piece, the parts of which interlock for simultaneous or separate movement, and connections between said parts and the type-arm and type-lever, respectively, substantially as set forth.

4. In a type-writing machine, the combination of the key-levers G H, the finger-pieces *m n*, adapted to operate the key-levers, the type-arm B, the type-lever D, carried by the said type-arm and provided with two characters, the triangular loop E, the links F *d*, and the connecting-wires *e f g*, substantially as specified.

5. In a type-writer, a two-part key formed of the finger-piece *m*, having a transverse rabbet across its inner end and a vertical slot *p* intersecting the same, and the finger-piece *n*, resting on the rabbeted end of the piece *m* and having a neck *o* extending down through the said slot, substantially as set forth.

DAVID HADDIX TAYLOR.

Witnesses:

EDWARD LEE VAUGHAN,  
JOHN E. THOMAS.