

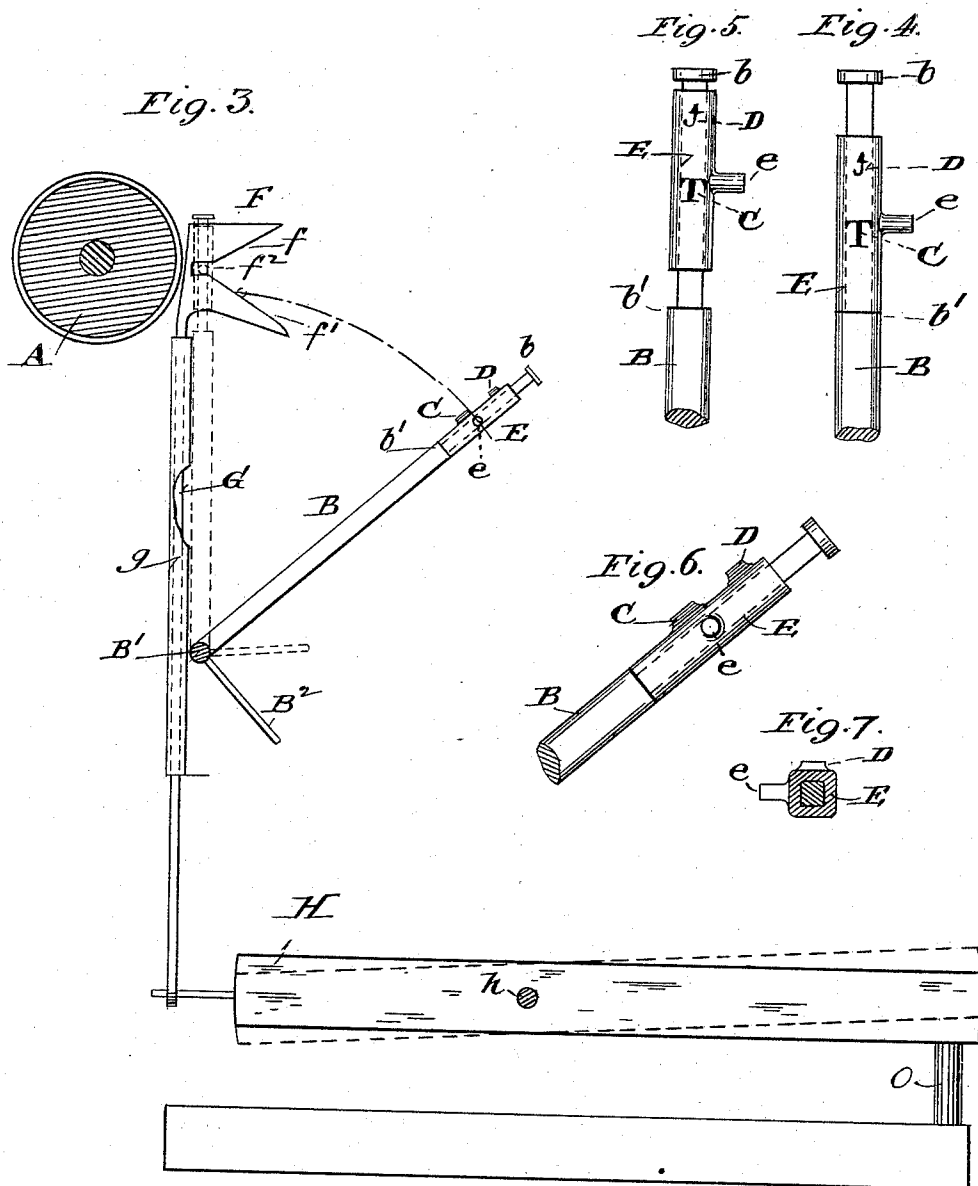
(No Model.)

2 Sheets—Sheet 2.

F. SHOLES.
TYPE WRITING MACHINE.

No. 474,533.

Patented May 10, 1892.



WITNESSES
A. Bonville,
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UNITED STATES PATENT OFFICE.

FREDERICK SHOLES, OF ST. LOUIS, MISSOURI.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 474,533, dated May 10, 1892.

Application filed October 1, 1890. Serial No. 366,774. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK SHOLES, of St. Louis, Missouri, have made a new and useful Improvement in Type-Writing Machines, of which the following is a full, clear, and exact description.

The improvement relates to that class of type-writing machines wherein the type-bars are provided with both upper and lower case types, or two or more printing surfaces or types; and it consists in the novel means whereby said types are enabled to act substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a front elevation exhibiting a sufficient portion of a type-writing machine for an understanding of the present improvement. Fig. 2 is a vertical longitudinal section on the line 2 2 of Fig. 1; Fig. 3, a view analogous to that of Fig. 2, but showing the cam in its up position and not including all of the parts shown in Fig. 3; Fig. 4, a plan of the outer end of a type-bar, the type-sleeve being slipped inward thereon; Fig. 5, a similar view of the type-bar, the type-sleeve being slipped outward thereon; Fig. 6, a side elevation of the outer end of a type-bar; the type-sleeve being slipped inward thereon; and Fig. 7 a cross-section of the type-bar and sleeve. The last four-named views are upon an enlarged scale.

The same letters of reference denote the same parts.

In carrying out this improvement I desire not to be restricted to any special form of type-writing machines, as there are several forms of such machines to which the improvement is applicable. One such form is illustrated in the accompanying drawings, and will be presently described in part. In type-writing machines of the class referred to as hitherto made the types are enabled to act, respectively, by means of an adjustable platen, the platen being in one position for the lower-case types to act and being shifted into another position for the upper-case types to act; and in other machines the type-bars are respectively provided with type-blocks having types upon opposite sides thereof and which are respectively brought into position for use by turning the type-block half-way round on the

type-bar. In the machine under consideration this construction is as follows: Each type-bar is provided with a lower and also with an upper case type or with any other types, and the types are adjustable with reference to the platen—that is, the two types upon each type-bar are movable upon the type-bar, so that either one of them at will can be brought into position to coact with the platen.

A represents an ordinary platen of a type-writing machine. Only so much of the platen and also of the machine is exhibited as is needed for an explanation of the improvement.

B represents one of the type-bars.

C and D respectively represent the upper and lower case types, with which the type-bar is provided. They are, as stated, attached to the type-bar, so that they can be adjusted thereon to bring either of them, as desired, into position to act when the type-bar is operated. To this end the two types are attached to a sleeve E, which can be slipped longitudinally upon the type-bar. The two positions of the type-sleeve are substantially indicated in Figs. 4 and 5, respectively. The type-bar is provided with suitable shoulders *b* and *b'* to limit the movement of the sleeve thereon. To enable it to be moved upon the type-bar, the sleeve is provided with a projection *e*. This projection in the present instance coacts with a cam F. The cam is adjustable with reference to the platen to enable it to guide that one of the types C D into position for use, which for the time being it is desired to use. To this end, as the most desirable shape and movement therefor, the cam has two inclined surfaces *ff'*, which converge toward each other and lead to a recess *f²* in the cam, and the cam is attached to a rod G, by means of which the cam can be raised and lowered or adjusted with reference to the platen A. The rod G is jointed to what is termed the "upper-case lever" H. This lever is adapted to be vibrated in a manner analogous to that of an ordinary type-lever of the keyboard of a type-writing machine, and so that the operator, whenever it is desired to use an upper-case type, can operate the lever and thereby suitably adjust the cam above described. In the present instance the fulcrum of the lever H is shown at *h*, and the

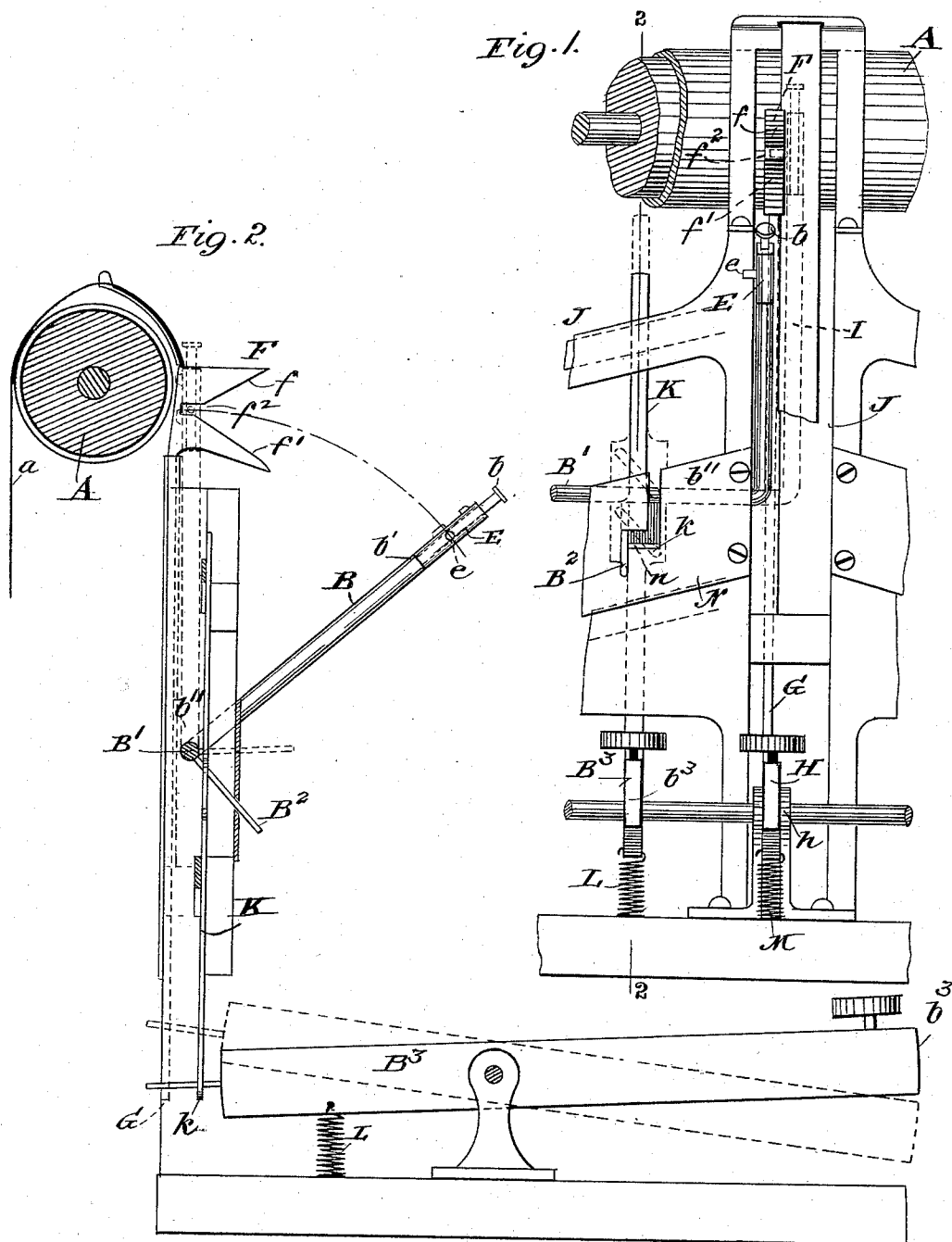
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2 Sheets—Sheet 1.

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TYPE WRITING MACHINE.

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WITNESSES
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INVENTOR
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tion of the platen, the vertically-adjustable cam, the upper-case lever, and the rod connecting said upper-case lever with said cam, substantially as described.

- 5 8. In a type-writing machine, the combination of the platen, the adjustable cam, the upper-case lever and the rod connecting it with said cam, the type-bar carrying the adjustable type-bearing sleeve and provided

with the lateral extension, the frame-work, the extension-arm, and the cam-rod, substantially as described.

Witness my hand this 27th day of September, 1890.

FREDERICK SHOLES.

Witnesses:

C. D. MOODY,
C. C. DOW.