

No. 669,355.

Patented Mar. 5, 1901.

C. F. SMITH.
TYPE WRITING MACHINE.

(Application filed Dec. 5, 1900.)

(No Model.)

2 Sheets—Sheet 1.

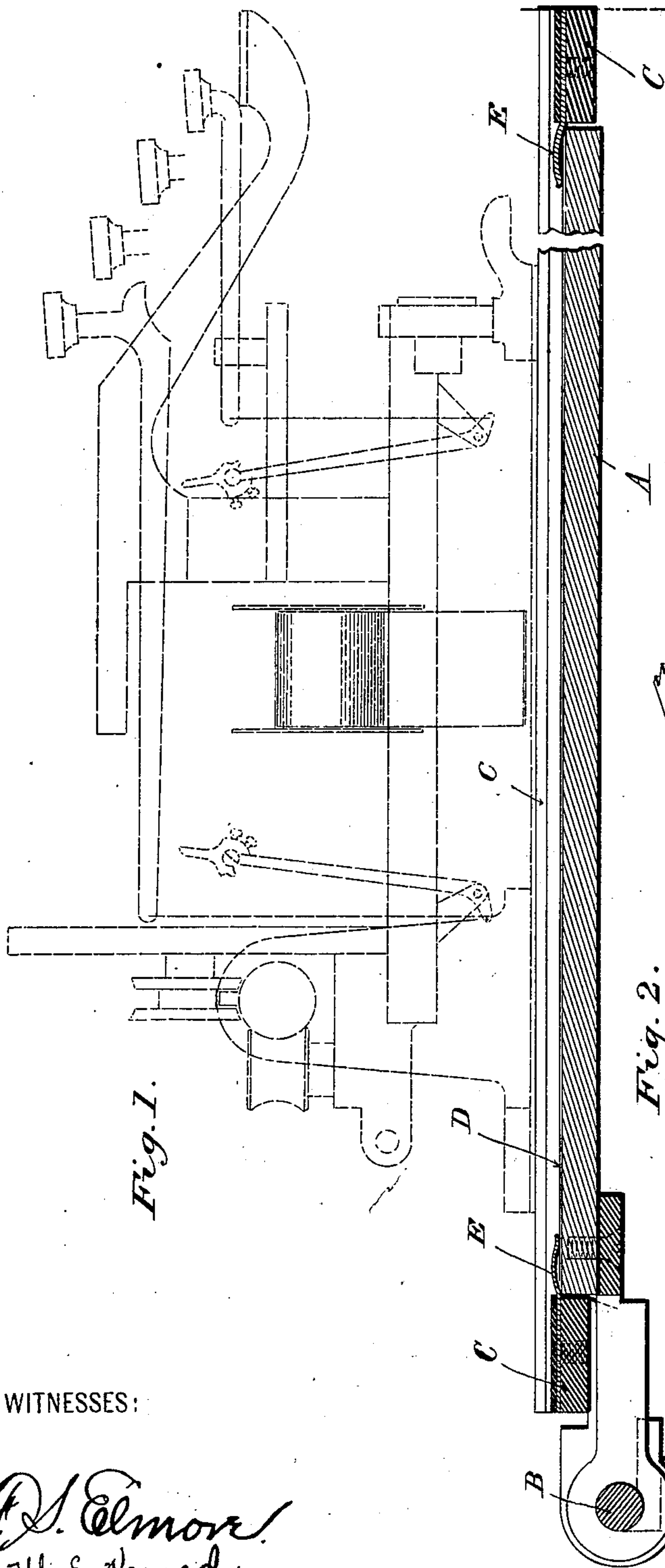


Fig. 1.

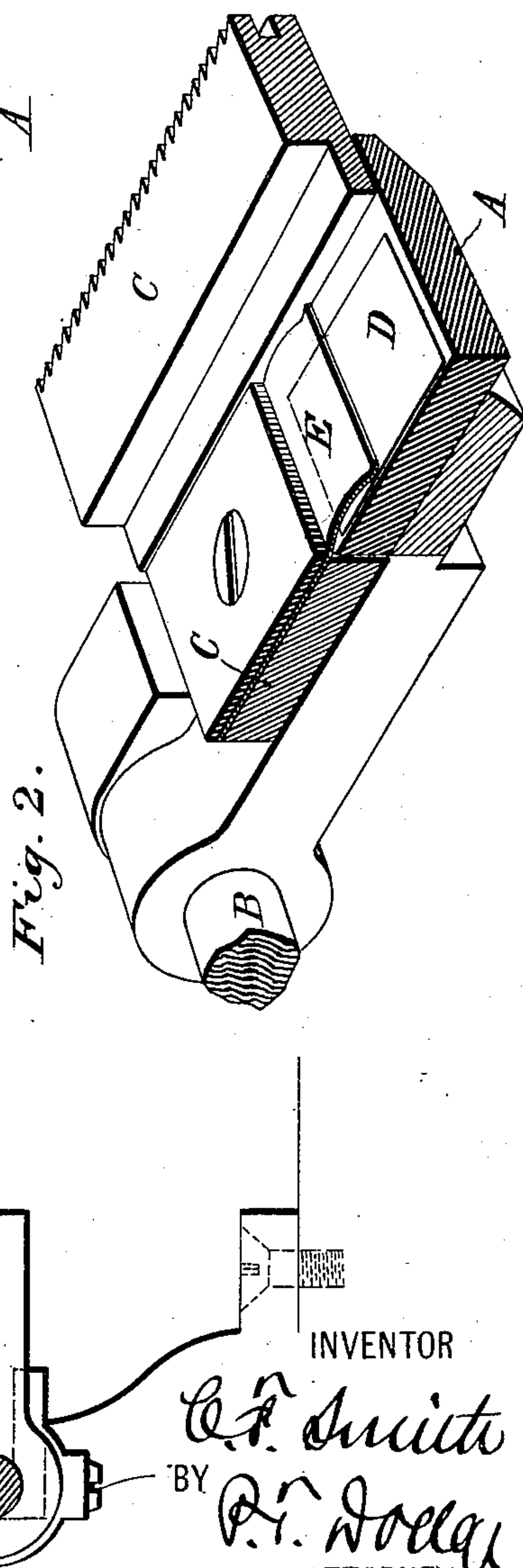


Fig. 2.

WITNESSES:

J. J. Elmore
A. W. E. Kennedy.

INVENTOR

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BY *R. T. Dole*
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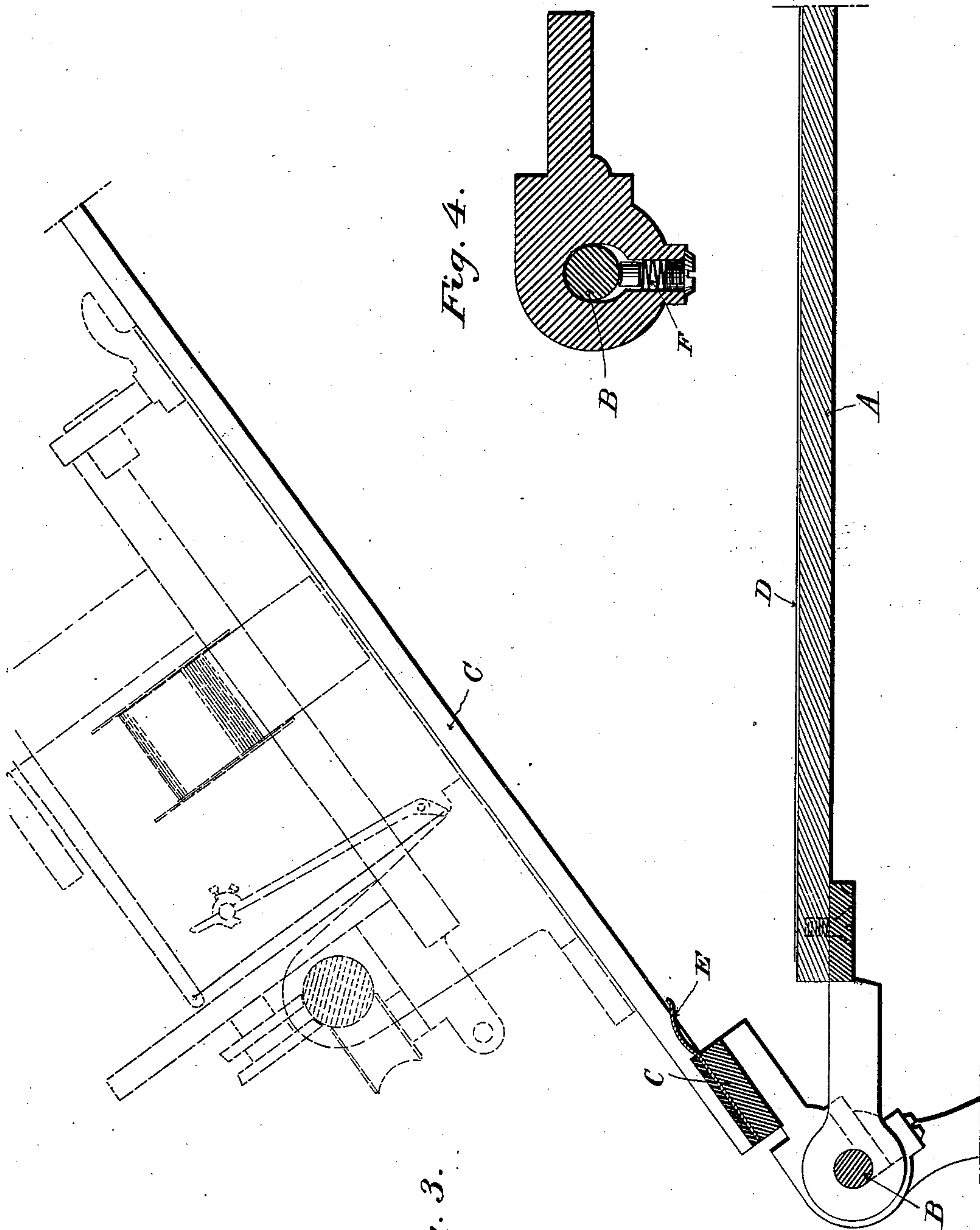
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2 Sheets—Sheet 2.



WITNESSES:

A. J. Eemore
A. M. E. Kennedy.

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

CHARLES F. SMITH, OF HARRISBURG, PENNSYLVANIA, ASSIGNOR TO THE ELLIOTT AND HATCH BOOK TYPEWRITER COMPANY, OF NEW YORK.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 669,355, dated March 5, 1901.

Application filed December 5, 1900. Serial No. 38,837. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. SMITH, of Harrisburg, county of Dauphin, and State of Pennsylvania, have invented a new and useful Improvement in Type-Writing Machines, of which the following is a specification.

This invention has reference more particularly to that class of type-writing machines in which a flat sheet or page to be printed upon is laid on the surface of a flat platen and held down in place by a hinged overlying open frame, on which the downwardly-acting writing mechanism is movably mounted, as shown, for example, in Letters Patent to Hatch and Hillard, No. 620,125, dated February 28, 1899. In these machines as heretofore constructed the sheet has been confined along its side or sides only by the rigid top frame bearing thereon.

The object of the present invention is to provide for the holding of the sheets in place on the platen when they are so narrow that they cannot be confined by the two sides by the frame; and to this end it consists, essentially, in providing the base-frame, which carries the writing mechanism, with a lip adapted to overlap the rear end of the platen, so as to automatically confine the end of the sheet when the frame is lowered to its operative relation to the platen.

It also consists in providing the frame with a paper-confining lip at the point indicated or elsewhere, the lip being elastic, so as to apply a spring-pressure and to permit the clamping of one or more sheets regardless of their thickness.

It further consists in minor details, which will be hereinafter explained.

Referring to the drawings, Figure 1 represents a longitudinal vertical section through the platen and frame of a type-writer provided with my improvement. Fig. 2 is a perspective view, on a larger scale, showing one corner of the frame and platen partly in section. Fig. 3 is a view similar to Fig. 1, with the frame of the machine elevated to permit the application or removal of the sheet. Fig. 4 is a vertical section through the hinge.

Referring to the drawings, A represents the flat platen, of metal or other suitable mate-

rial, which may be constructed and supported in any ordinary manner. If it is to be used for separate sheets only, it may remain rigidly in position; but if it is to be used for printing in books it will be mounted at one end on a horizontal hinge-pin B, as is usual in such machines.

C represents the upper frame, commonly known as the "base-frame," of open rectangular form, mounted at one end on the hinge-pin B and adapted to close down on the platen with its two longitudinal side bars overlapping the platen to confine the sides or longitudinal edges of the sheet D, on which the printing is to be effected.

The end or cross bars of the frame C are preferably arranged to close down flush with the ends of the platen in the usual manner, as shown in the drawings.

E represents the clip or blade forming the subject-matter of my invention. As shown in the drawings, it is formed of sheet-steel or other elastic metal and screwed or otherwise secured firmly to the cross-bar at the rear end of frame C, its edge being extended toward the front of the machine in such manner that when the frame C is closed down upon the platen the edge of plate or clip E will overlap the rear end of the paper sheet D and, applying a yielding but firm pressure thereto, hold it in position on the platen, as plainly shown in Figs. 1 and 2. When the frame is raised at the free end, the clip releases the sheet, and thus it will be seen that the rear end of the sheet lying on the platen is automatically clamped and released by the lowering and raising of the frame. If desired, a like clip-plate may be applied to the front bar of the frame to overlies the forward end of the platen, as indicated in Fig. 1.

It will of course be understood that while I prefer to employ a single plate presenting a continuous or uninterrupted edge it may be divided into a series of short plates or fingers. If desired, a plate for special purposes, more particularly for holding cards and other small objects, a yielding plate, or paper-gripper may be applied along one or both sides of the frame.

The essence of the invention is in provid-

ing a gripping or holding device which is operated by the frame which supports the type-writer, and, secondly, in constructing a gripper-plate which is elastic, so that it will adapt
5 itself to different numbers of sheets and to sheets of different thicknesses placed thereon.

In some cases it may be desirable to print on very thick sheets or on a number of superimposed sheets presenting a body of considerable thickness, which would tend to raise
10 the base-frame from the platen. In order, therefore, to permit the base-plate C to adjust itself vertically at the hinged end, I propose, as shown in Fig. 4, to elongate the slot
15 through which the hinge-pin B passes in a vertical direction and to employ beneath such pin a spring F, seated in the ear or arm of the frame and tending to draw the latter
20 downward over the platen. The yielding of this spring will permit the frame C to rise slightly at the hinged end if the thickness of the paper thereunder demands it.

What I claim as my invention is—

1. In a type-writing machine, the combination of a flat platen to support the sheet,
25 an upper frame supporting the writing mechanism and arranged for separation from the platen, and an elastic clip operated by said frame and arranged to automatically engage
30 and hold the sheet upon the platen.

2. In combination with the flat platen and hinged base-frame whereon the writing mechanism is mounted, the yielding plate or clip

E, attached to the movable frame and arranged to overlap the platen. 35

3. In a type-writing machine, the combination of a platen, a hinged frame arranged to overlap the sides of the platen, and a clip attached to said frame and arranged to overlap one end of the platen, substantially as described and shown. 40

4. In a type-writing machine, the combination of a flat platen, a rectangular frame having side bars arranged to overlap the platen and end bars arranged to close down
45 past the ends of the platen, in combination with a clip attached to one of said bars and arranged to overlap the platen, substantially as described and shown.

5. In a type-writing machine, the combination of the flat platen, the overlying frame having a hinged joint adapted to permit vertical motion of the frame at the joint, and a spring tending to draw the frame downward,
55 substantially as described, whereby the frame is permitted to accommodate itself to the thickness of the sheet lying between it and the platen.

In testimony whereof I hereunto set my hand, this 22d day of November, 1900, in the presence of two attesting witnesses. 60

CHARLES F. SMITH.

Witnesses:

CHAS. W. PARTRIDGE,
S. W. FLEMING.