

No. 817,302.

PATENTED APR. 10, 1906.

A. S. DENNIS.
COMBINED TYPE WRITER AND ADDING MACHINE.

APPLICATION FILED JUNE 29, 1903.

2 SHEETS—SHEET 1.

FIG. 1.

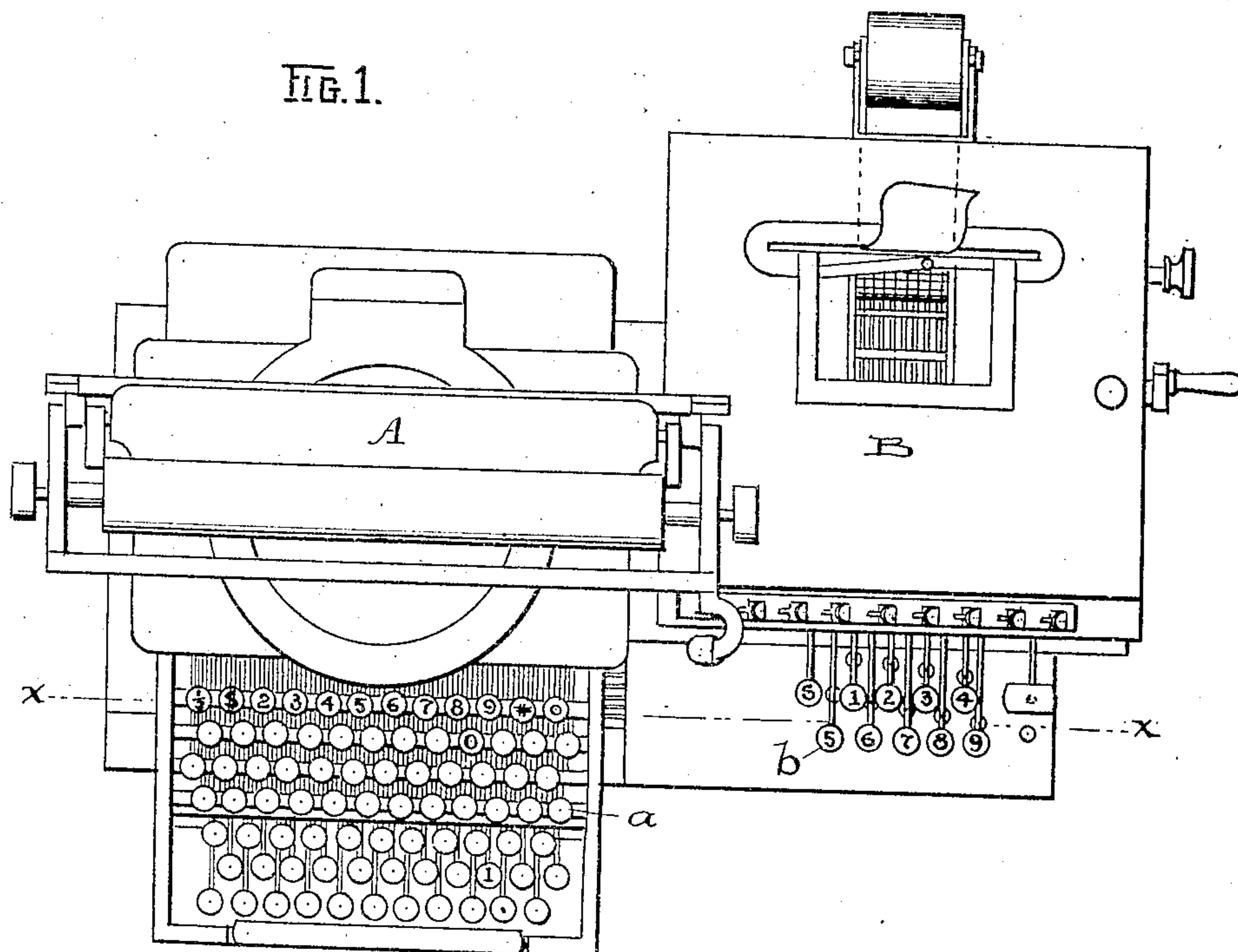
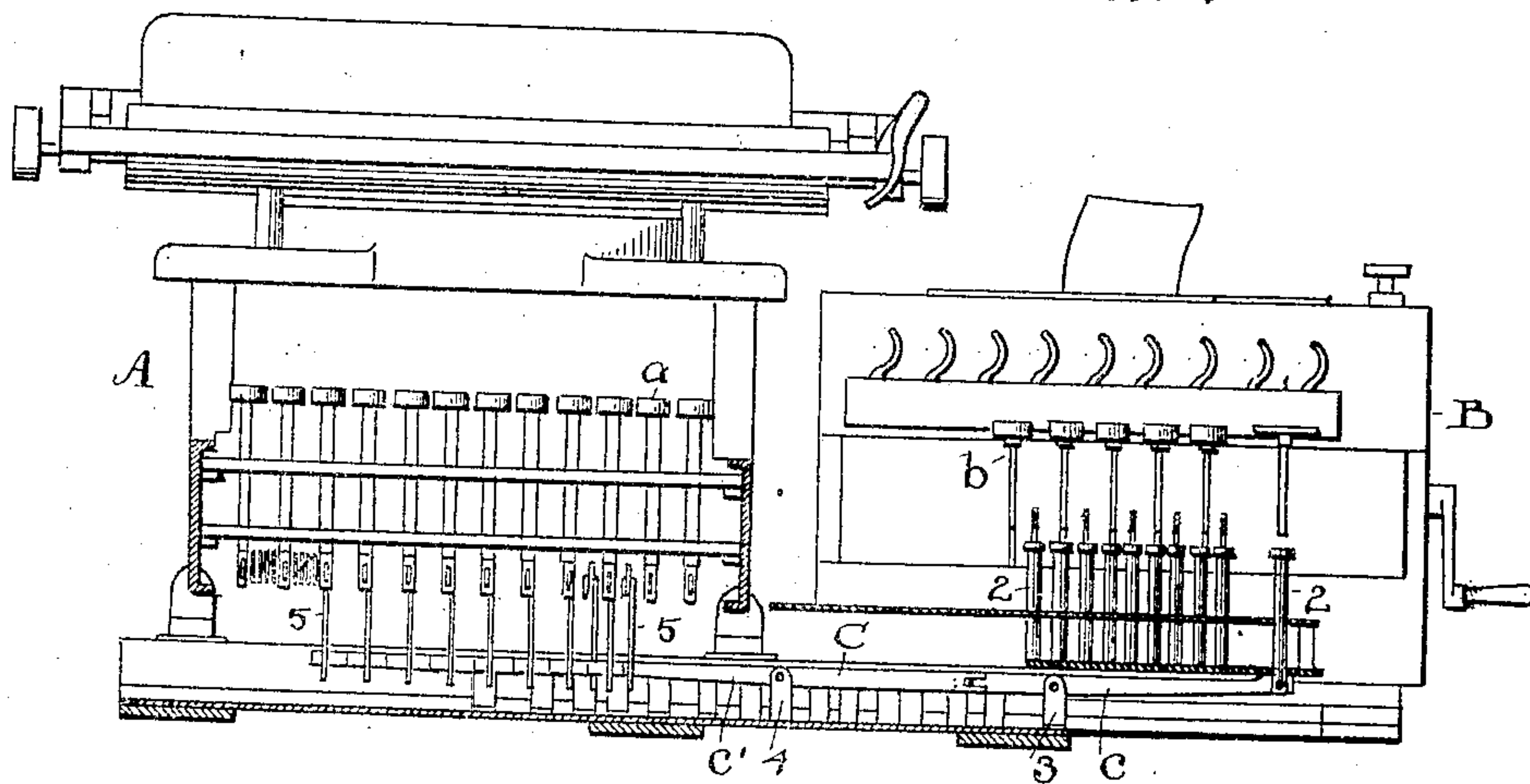


FIG. 2.



ATTEST.

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INVENTOR.

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By *H. J. Fisher*

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2 SHEETS—SHEET 2.

FIG. 3.

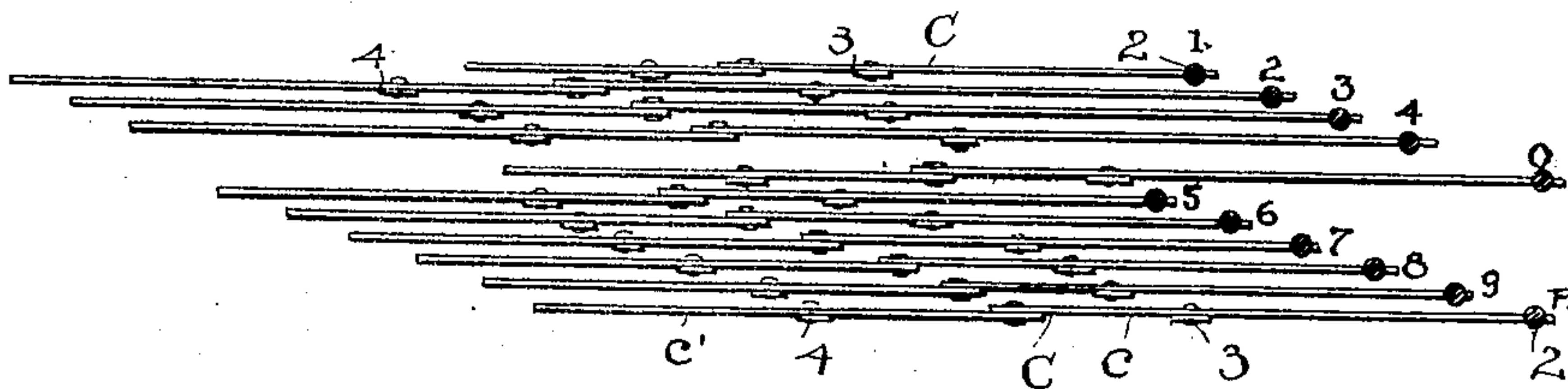
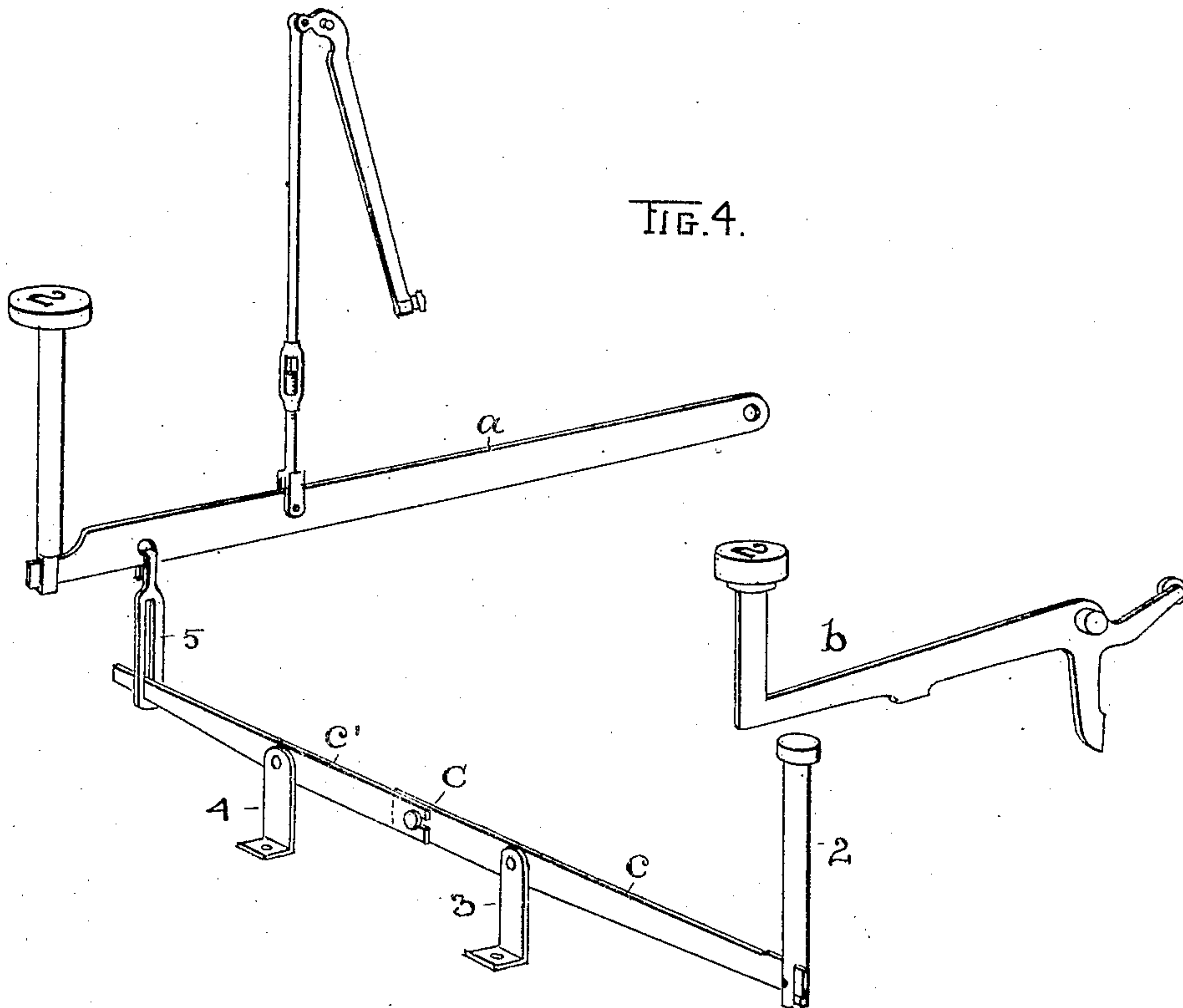


FIG. 4.



ATTEST

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UNITED STATES PATENT OFFICE.

ADOLPHUS S. DENNIS, OF CLEVELAND, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE NATIONAL ADDING MACHINE COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

COMBINED TYPE-WRITER AND ADDING-MACHINE.

No. 817,302.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed June 29, 1903. Serial No. 163,487.

To all whom it may concern:

Be it known that I, ADOLPHUS S. DENNIS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in a Combined Type-Writer and Adding-Machine; and I do 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 make and use the same.

This invention relates to a combined type-writer and adding-machine.

In the accompanying drawings, Figure 1 is a plan view of the two machines operatively connected as contemplated in this invention. Fig. 2 is a front sectional elevation of the two machines and the connecting mechanism on line *x x*, Fig. 1. Fig. 3 is a plan view of the operating connections between the respective key-levers of the two machines, as hereinafter more fully described. Fig. 4 is an enlarged perspective view of one key-lever in each machine and the operating mechanism connecting them and which represents one of the several lines of connections shown in Fig. 3.

The idea of this invention is to couple an adding-machine with a type-writing machine, and both machines may be of any of the several types or kinds which are now in the market or which may be made hereinafter and which employ key-levers whereby when it is desired to write and add up a series of items in a letter or a bill which is being written on the type-writing machine the adding-machine can be operated and by its connections with the type-writer at the same time and in the same manner operate the corresponding keys in the type-writer and write said items in columns therein and furnish the total to be written down, thus reproducing in the type-writer the items that the adding-machine has added and furnished the total of. Finally, when all the items have been added in the adding-machine and a corresponding column has been written in the type-writer the total can be ascertained from the adding-machine and recorded at the foot of the column in the type-writer by depressing the appropriate keys therein, as usual in this machine, and without operating the adding-ma-

chine when this is done. By these means any number of items may be summarized in the adding-machine, and by the same operation the said items can be and are reproduced in column in relation to each other on the paper in the type-writer the same as if they were written by the type-writer itself, and this is followed with the further advantage of having the additions of the items correctly made when the last item has been recorded and ready to set down, so that it becomes the work of but a moment to make the transfer of the total upon the page in the type-writing machine and without going to the trouble of mentally summing up the items therein. All this will appear in the further description of the invention.

Now referring to Fig. 1, A represents the type-writer or type-writing machine of any approved pattern or style, and B represents an adding-machine of the style in this instance known as the "Dennis" machine and which is of my own invention. These machines are placed side by side upon a table or other suitable support and are operatively connected between their respective key-levers *a* and *b* by means of the compound lever C, consisting of parts *c* and *c'*. This connecting mechanism in this instance is of such character and construction that the key-lever *a* can be operated from the key-lever *b*, but the depression of key-lever *a* will not move or affect the lever *b*. Hence the type-writer can be operated independently and is not at all affected by the presence and mechanical connection of the adding-machine, while the adding-machine cannot be operated without affecting and operating the type-writer when the connections between them are made for joint operation, as herein shown. To these ends I arrange a suitable stem 2 with a somewhat enlarged head beneath each key-lever *b* of the adding-machine and in such relation to such lever at its head that the said stem will be depressed when a lever *b* is depressed, and the said stem is provided with suitable guides or supports, as seen in Fig. 2. Each stem 2 has pivotal connection with its own initial lever *c*, pivoted on its own post 3, and said lever has pivotal connection with the other-lever, *c'*, which rests upon its own post 4. The outer end of lever *c'* projects through a long slot in

the hook or hanger 5, engaged upon key-lever *a*. It follows from this arrangement and construction of parts that when a key-lever *b* is depressed it operates also to depress the corresponding key-lever *a*, with which it is operatively connected. On the contrary, if key-lever *a* be depressed the lever *c'* is not moved, because then it simply plays in the slot in hanger 5, and so lever *b* does not respond.

As already stated, a single line of connecting mechanism between the respective key-levers *a* and *b* serves the purpose. Fig. 3 shows a plan of eleven different connections of this kind and with staggered relation on account of the different positions of the respective keys to be engaged. However, said connections are understood to be alike in all particulars, so that a full description of one serves for all. I may further add that the particular construction of said connecting mechanism herein shown and described is only one of several constructions which I have tried with more or less success, and therefore, although I show what may be considered now as my preferred construction, I desire that it be understood that I may substitute the same with any equivalent and sufficient mechanical connection and arrangement which will give the same result practi-

cally and not depart from the spirit of the invention.

It has been noticed that the two connected keys descend simultaneously when the key *b* is pressed upon; but both keys are free to rise under their own spring-pressure.

What I claim is—

1. A type-writer and an adding-machine, and corresponding key-levers therein, in combination with a set of compound levers connecting the key-levers of one machine with the corresponding key-levers of the other machine.

2. A type-writer and an adding-machine and corresponding key-levers therein, in combination with a line of mechanism connecting the key-levers of one machine with the corresponding key-levers of the other machine, said mechanism comprising a set of pivoted levers operatively connected, a vertical stem engaged with the free end of one of said pivoted levers, and a link engaged with the other of said pivoted levers.

Witness my hand to the foregoing specification this 18th day of June, 1903.

ADOLPHUS S. DENNIS.

Witnesses:

R. B. MOSER,
R. ZBORNIK.