

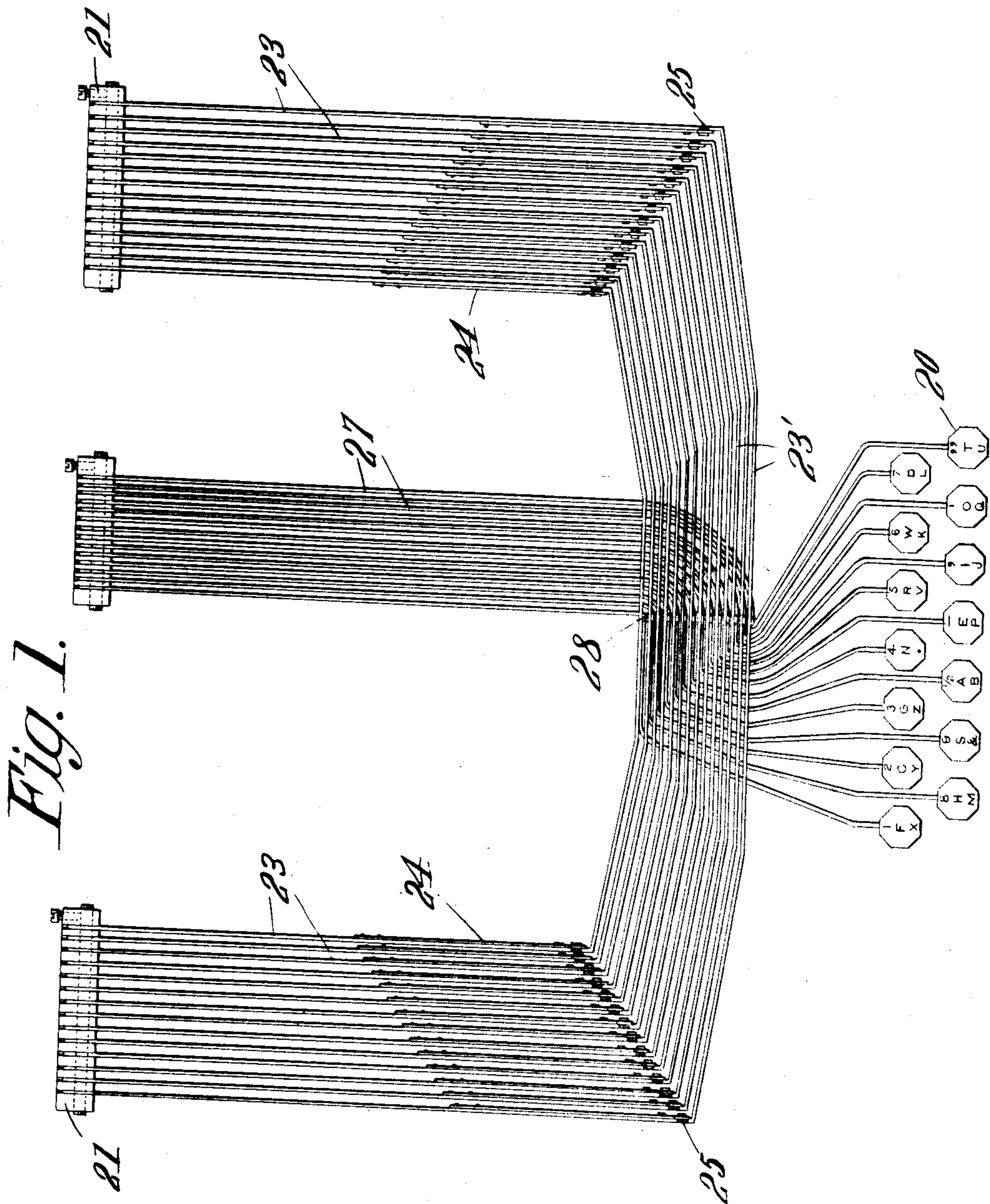
No. 871,026.

PATENTED NOV. 12, 1907.

E. D. BREWER.  
TYPE WRITER.

APPLICATION FILED OCT. 1, 1906.

4 SHEETS—SHEET 1.



WITNESSES:

*E. D. Brewer*  
*Jno E. Parker*

*Edward D. Brewer,*

INVENTOR.

By

*C. A. Snow & Co.*

ATTORNEYS

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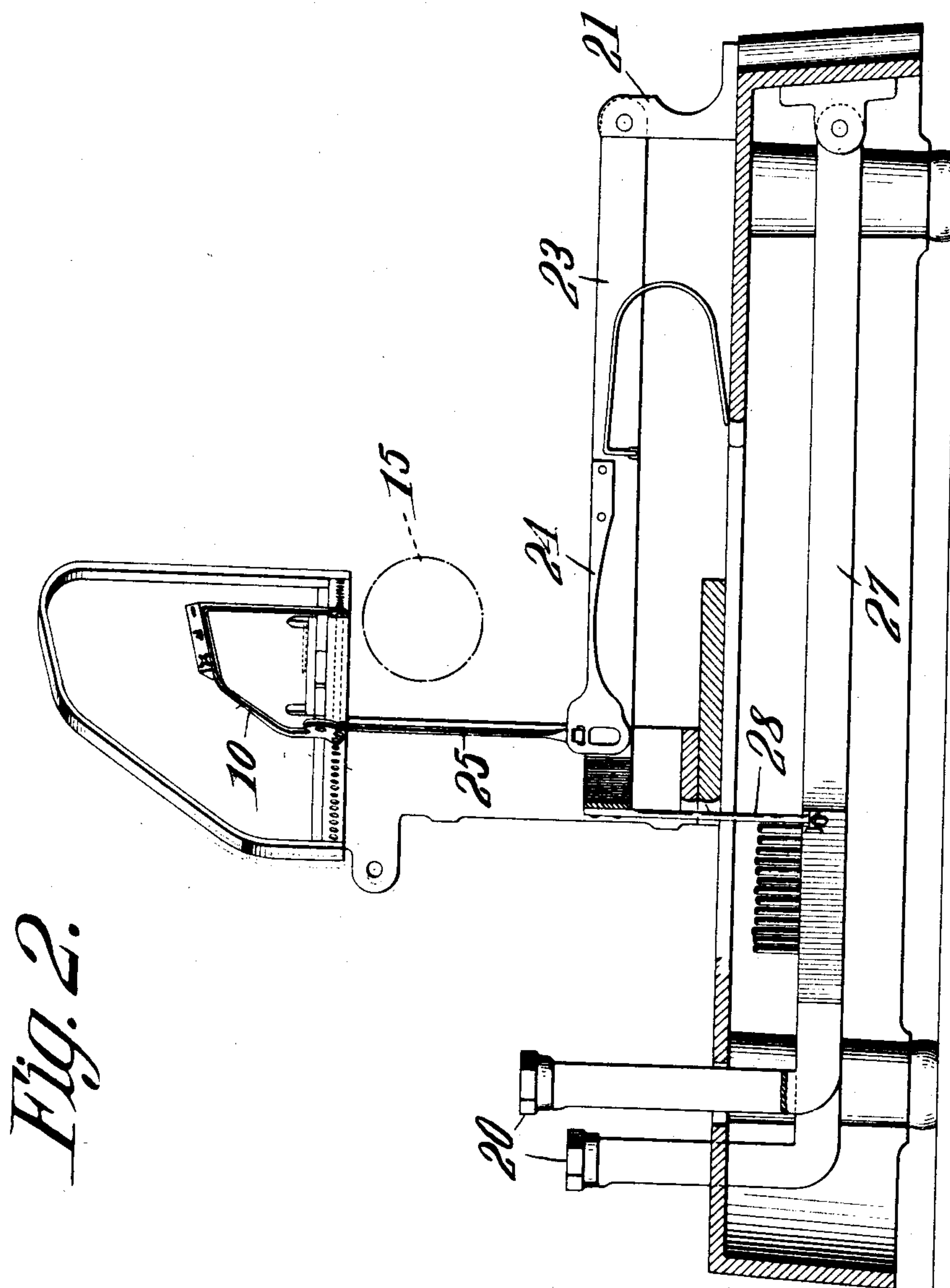


Fig. 2.

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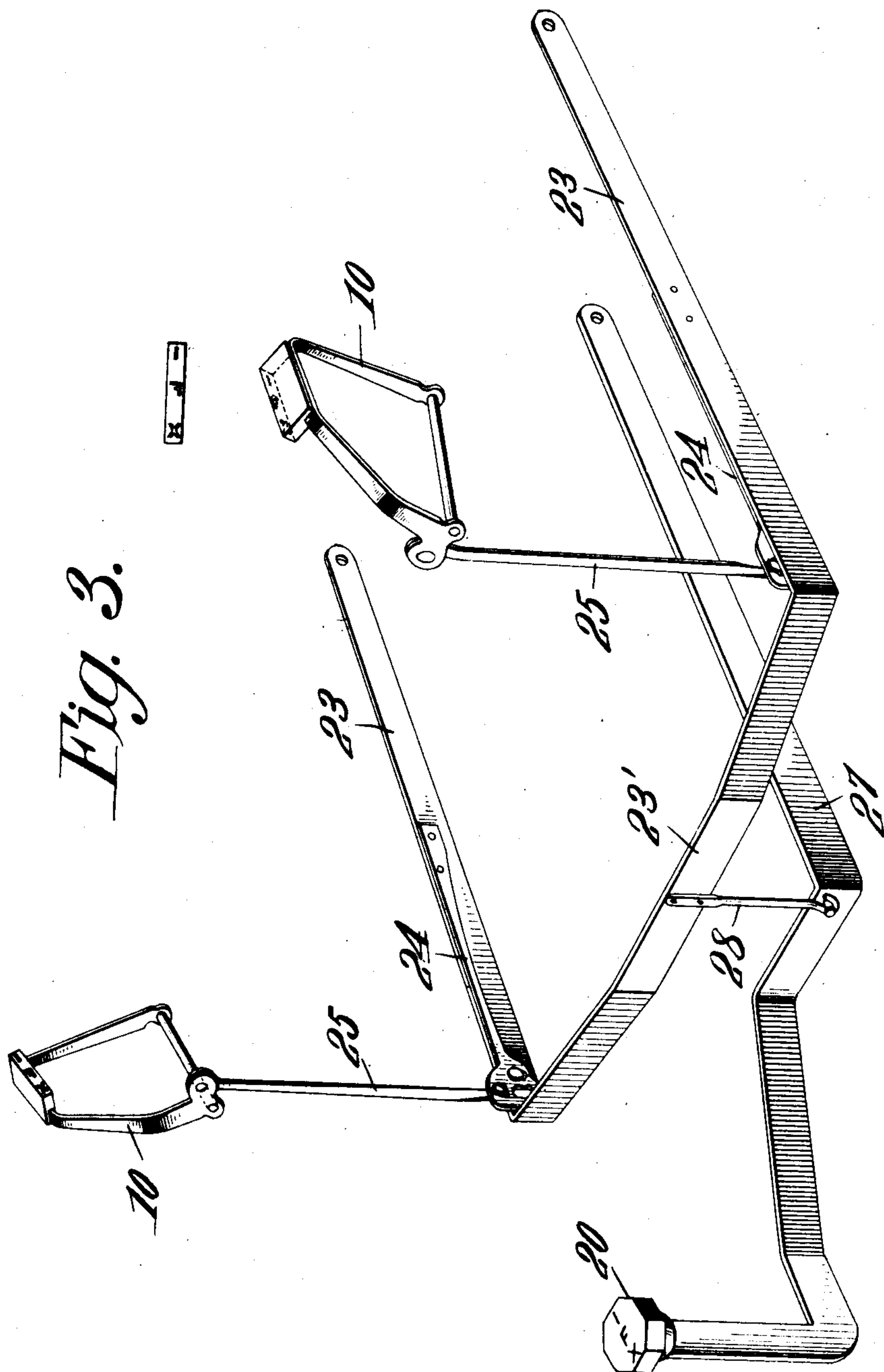
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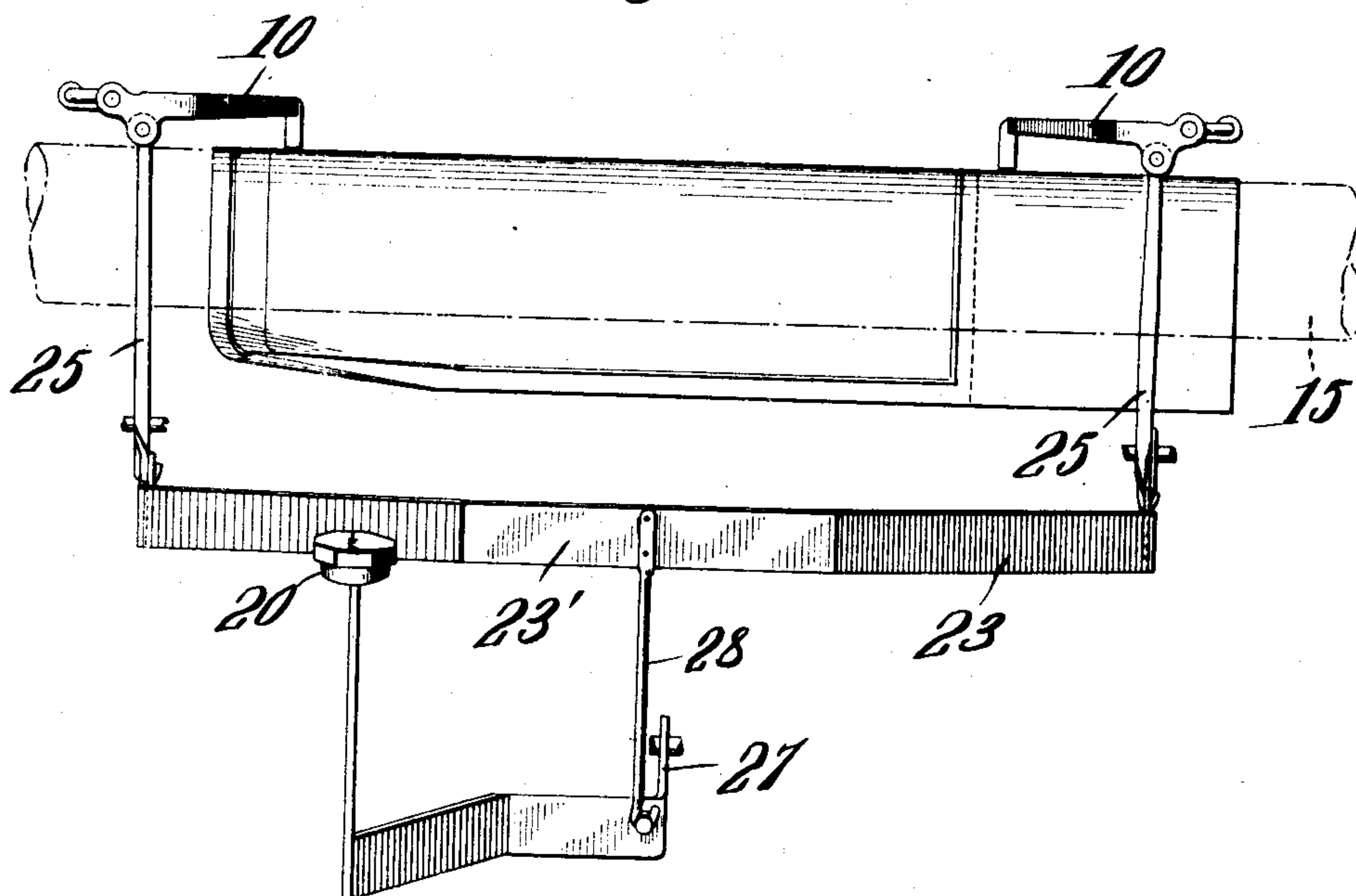
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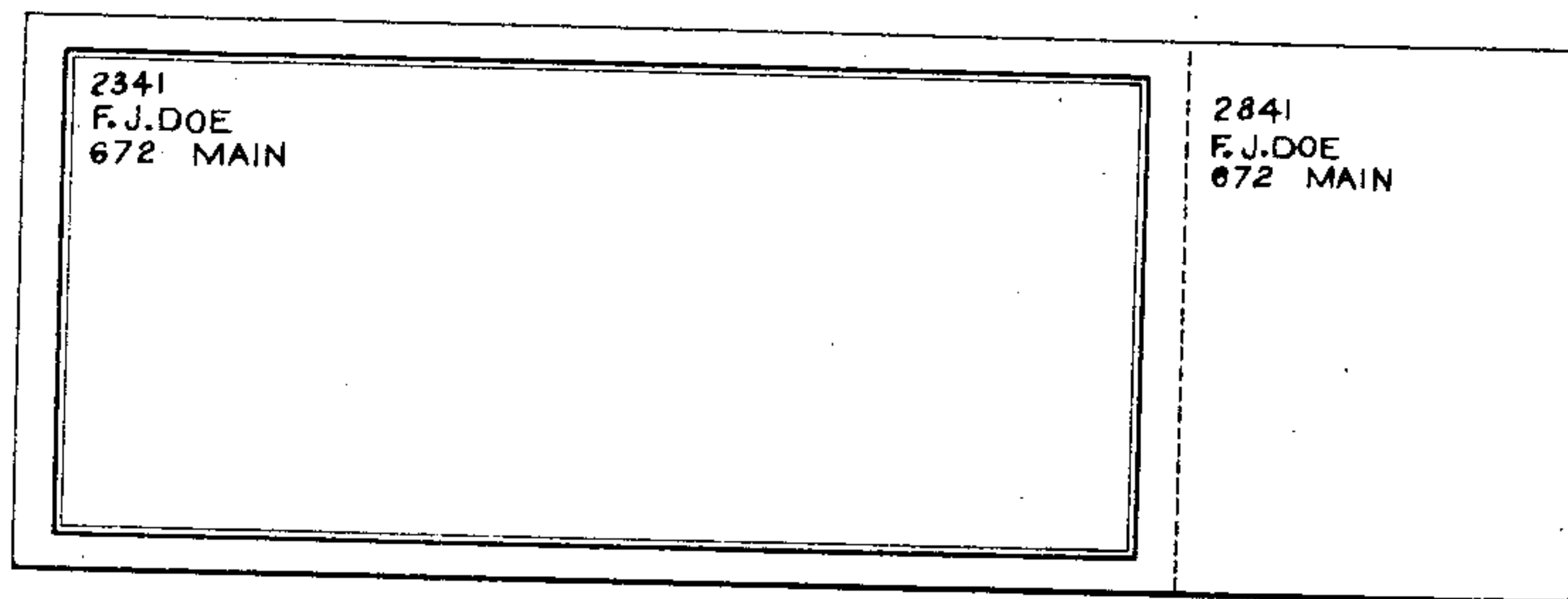
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4 SHEETS—SHEET 4.

*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

EDWARD D. BREWER, OF ATLANTA, GEORGIA.

## TYPE-WRITER.

No. 871,026.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed October 1, 1906. Serial No. 336,896.

To all whom it may concern:

Be it known that I, EDWARD D. BREWER, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented a new and useful Type-Writer, of which the following is a specification.

This invention relates to typewriting machines, and has for its principal object to provide a duplex or twin typewriter, by which two distinct, original impressions may be made at each stroke of a key, the impressions being exact duplicates of each other, and being made on either a single sheet or on two separate sheets of paper.

A further object of the invention is to construct a typewriting machine in which two distinct sets of type bars may be operated on the depression of a single key.

A still further object of the invention is to provide a typewriting machine in which two distinct sets of type bars are associated with a single key board, a single platen, spacing, inking, and similar mechanisms.

A still further object of the invention is to provide a typewriting machine in which the number of type bars is reduced to a minimum, each type bar being arranged to carry three or more characters, of which those most frequently used are in the center and are arranged to imprint while the platen is in normal position, while the others are arranged at the ends of the type bars and are arranged to imprint at either the front or rear position of the platen as the case may be.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a plan view in the nature of a diagram of the key-board mechanism, key levers, and type bars of a typewriter constructed in accordance with the invention. Fig. 2 is a vertical central section of the machine. Fig. 3 is a detail perspective view of a single key lever and the set or pair of type bars to which it is operatively connected.

Fig. 4 is an elevation, showing the platen, a pair of type bars in imprinting position, and the key lever to which said type bars are connected. Fig. 5 illustrates a specimen of the work of the machine.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

While the machine forming the subject of the pres-

ent application is applicable to machines operating on different principles, it has been illustrated in the present case on the lines of the Oliver No. 3 typewriter, a machine in ordinary commercial use, and to which reference may be had for details of construction of the shifting keys, carrier, platen, spacing mechanism, and other devices which have not been shown in the drawings in order to avoid confusion.

In the Oliver machine, each type bar 10 is approximately U shape in form, and these are arranged in two banks, one at each side of the machine, and have a common point of imprint. Each type bar carries three type, the type most frequently used being placed at the center and imprinting at the mid position of the platen and carrier, while the type at the ends are those which do not occur so frequently, and when brought into play the carriage and platen must be shifted either forward or backward by the well known shifting key mechanism.

In carrying out the present invention, the roller platen 15 is made considerably longer than usual, so that the point of imprint of the type bars of one bank will be a considerable distance from the point of imprint of the type bars of the other bank, thus, for instance, as shown in Figs. 4 and 5, the bank of keys to the left may be made to make impression on the body of a bill or blank coupon or like, while the bank of keys to the right make a similar original impression on the stub.

In order to reduce the number of working parts to a minimum, it has been found best to lessen the number of type bars, so that in the present instance there are but fourteen type bars in each bank, and these are operated by fourteen keys 20 arranged at the front of the machine. Each key bears three characters, those in most common use being arranged at the center, and those less frequently used being disposed at the top and bottom of the keys, and each of these keys has under its control a type bar of the left bank, and a type bar of the right bank, the two type bars bearing type that are duplicates of each other to correspond to the characters displayed on the key.

Pivoted at the rear portion of the machine, on bracket members 21, are flat auxiliary bars 23, that are approximately U-shape in form, their front ends being joined together by a cross bar 23'. All of these bars are arranged in the same horizontal plane, and the parallel arms of each bar are provided with springs 24 which are connected by links 25 to the U-shaped type bars 10. The key bars 27 are pivoted to the rear of the machine, and are disposed in a horizontal plane below the intermediate or auxiliary bars 23, and each type bar is connected to one of the cross bars 23' by means of a link or rod 28. In order to secure uniform



movement of connected type bars of the two banks, it is desirable that the point of connection between each type bar and each bar 23' be at the exact center of the latter, and for this purpose the several type bars are bent or curved in the manner indicated in Fig. 1, so that the several links or rods 28 may all be arranged at the median line of the cross bars 23', and this insures uniformity of movement of the two type bars, so that one cannot move to imprinting position in advance of the other.

In carrying out the invention, a slip of paper, such as shown in Fig. 5, or two separate slips of paper are placed on the roller platen, and the key bars are actuated by depressing the keys in the usual manner, the carriage being shifted forward or backward, as may be rendered necessary by the position of the type on the bars 10. At each downward stroke of a key bar, the bar 23' to which it is connected will be pulled down, and movement will be transmitted by the links 25 to the mating type bars 10, both of these simultaneously moving to the imprinting position shown in Fig. 4, and making two distinct original impressions on the one or the two sheets of paper, the impressions being made at points as distant from each other as necessary.

As before stated, the inking mechanism, carriage, platen, spacing devices, carriage shifting keys, and other mechanism common to the Oliver typewriter have not been shown in the drawing, all of these parts being well known to those skilled in the art, and not requiring detailed description for a full understanding of the present invention.

While the invention has been illustrated as adapted to a machine of the Oliver type, it is to be understood that it may, also, be successfully employed in connection with machines of any other description, where it

is possible to connect duplicate sets of type bars to a single set of key levers.

I claim:—

1. In a typewriting machine, a pair of spaced banks of type bars, the type of one bank being duplicates of those of the other, a single set of key levers, pivotally mounted U-shaped intermediate levers connected to the type bars, and means for connecting said U-shaped levers to the key levers.

2. In a typewriting machine, a pair of spaced banks of type bars bearing duplicate type, intermediate pivotally mounted U-shaped levers connected to those type bars of both banks which bear corresponding type, a single set of key levers, and means for connecting the key levers to the central portions of said U-shaped levers.

3. In a typewriting machine, a pair of banks of type bars, the type of one being duplicates of those of the other, pivotally mounted U-shaped bars arranged in a common horizontal plane, each bar being connected to the type bars bearing corresponding type in both banks, a single set of key levers arranged in a horizontal plane below the U-shaped levers, and means for connecting the key levers to the U-shaped levers.

4. In a typewriting machine, a pair of banks of type bars, the type of one being duplicates of the other, pivotally mounted U shaped bars all arranged in a common horizontal plane, each bar being connected to the type bars bearing corresponding type in both banks, a single set of key levers arranged in a horizontal plane below the U-shaped levers, each of the key-levers being bent to form a portion that is parallel with the cross bars of the U-shaped levers and links extending from such portions of the key levers to the central portions of the cross bars of the U-shaped levers to thereby secure uniformity of movement of the latter.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EDWARD D. BREWER.

Witnesses:

D. P. DURHAM,  
E. E. ATKINSON.