

No. 785,477.

PATENTED MAR. 21, 1905.

F. C. L. D'AIX.
LINOTYPE MACHINE.

APPLICATION FILED JUNE 4, 1904. RENEWED FEB. 28, 1905.

4 SHEETS—SHEET 1.

Fig. 1.

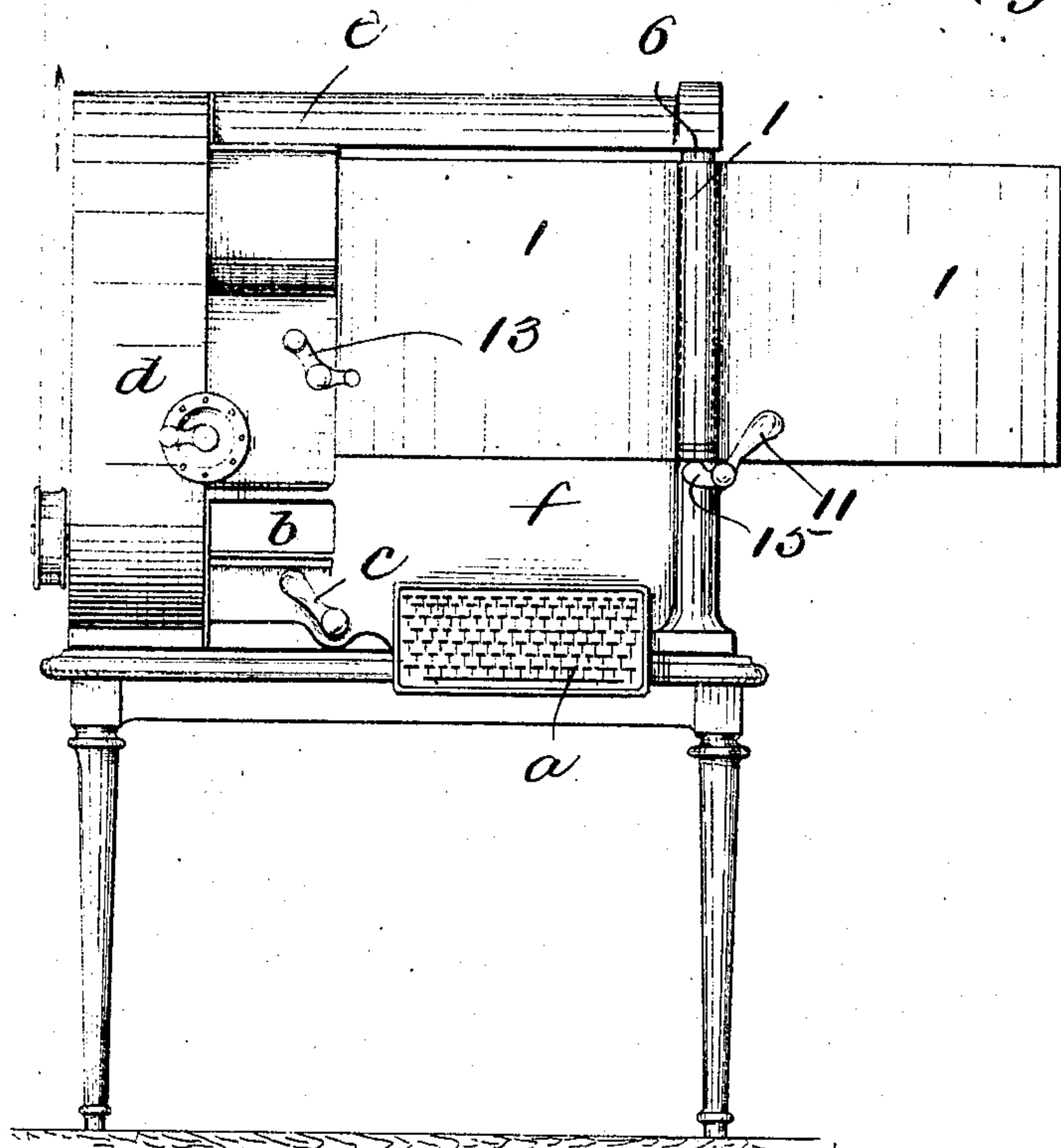
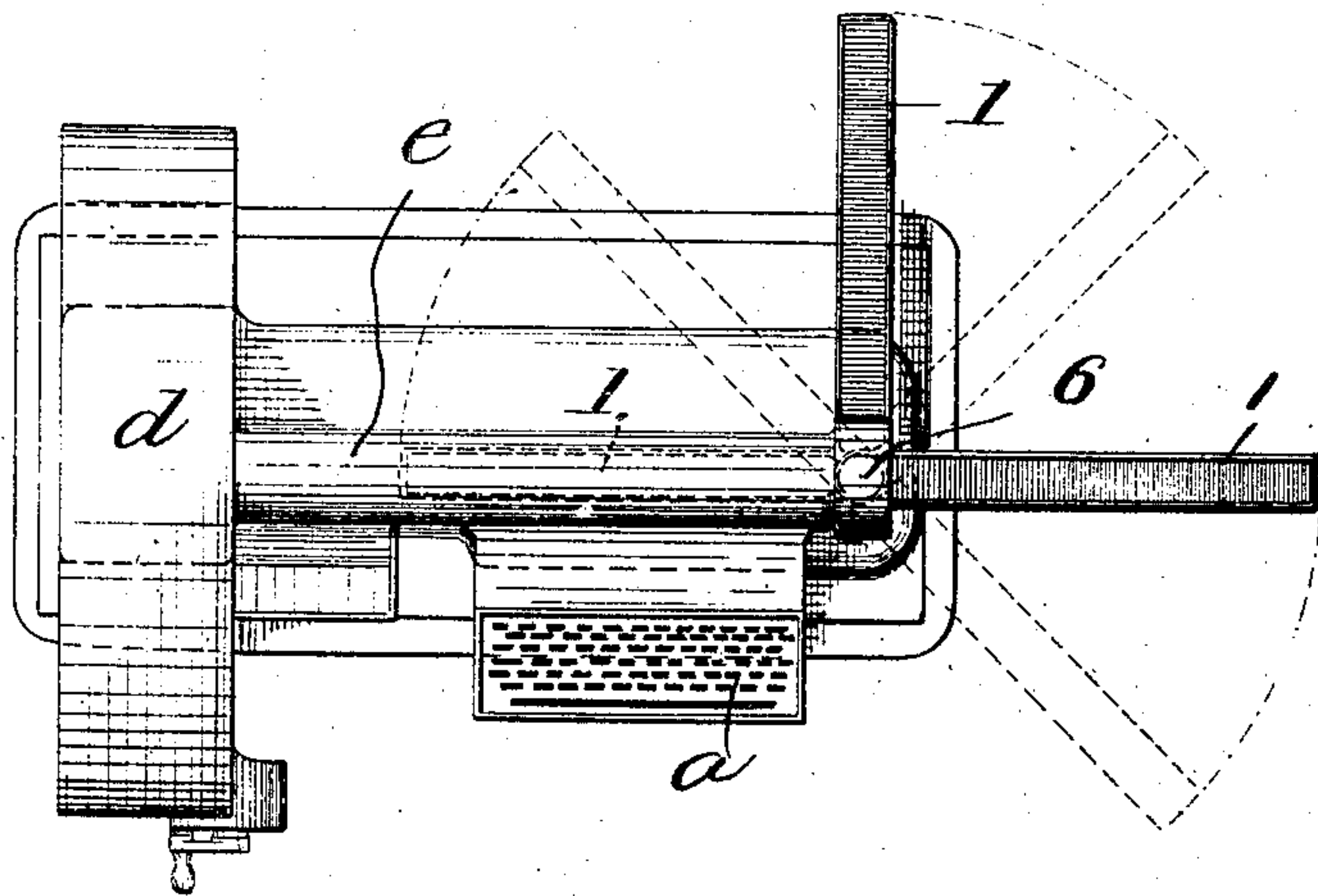


Fig. 2.



Witnesses
Wm. F. Doyle
H. Lee Helms

Inventor
Fritz C. Lucke & Co.
By Attorney
Mulliken & Davis

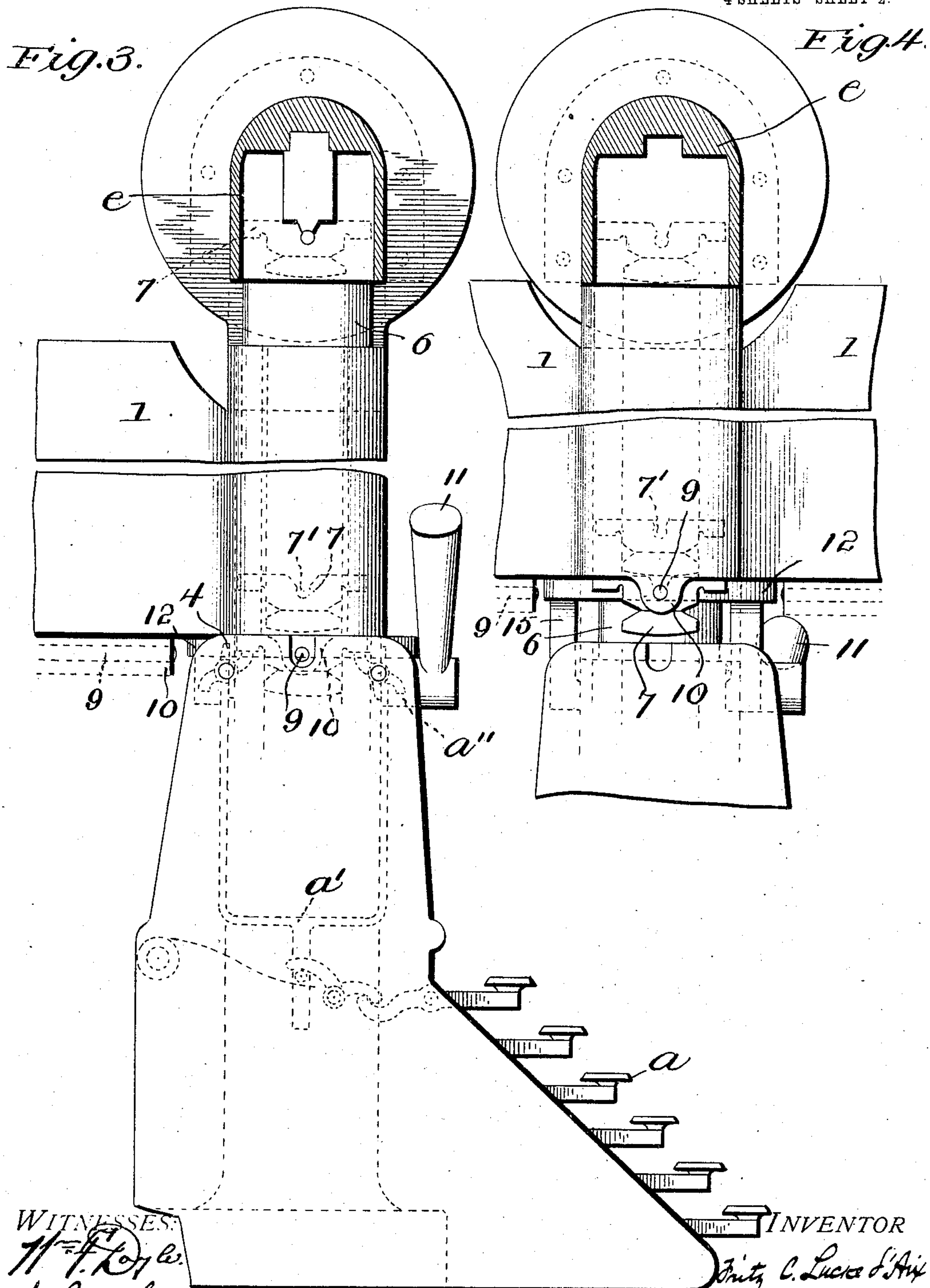
No. 785,477.

PATENTED MAR. 21, 1905.

F. C. L. D'AIX.
LINOTYPE MACHINE.

APPLICATION FILED JUNE 4, 1904. RENEWED FEB. 28, 1905.

4 SHEETS—SHEET 2.



WITNESSES:
W. F. Doyle
Th. Lee Holmes

INVENTOR
Fritz C. Lucas & Aix
BY
Manuel D. Dore
Attorney

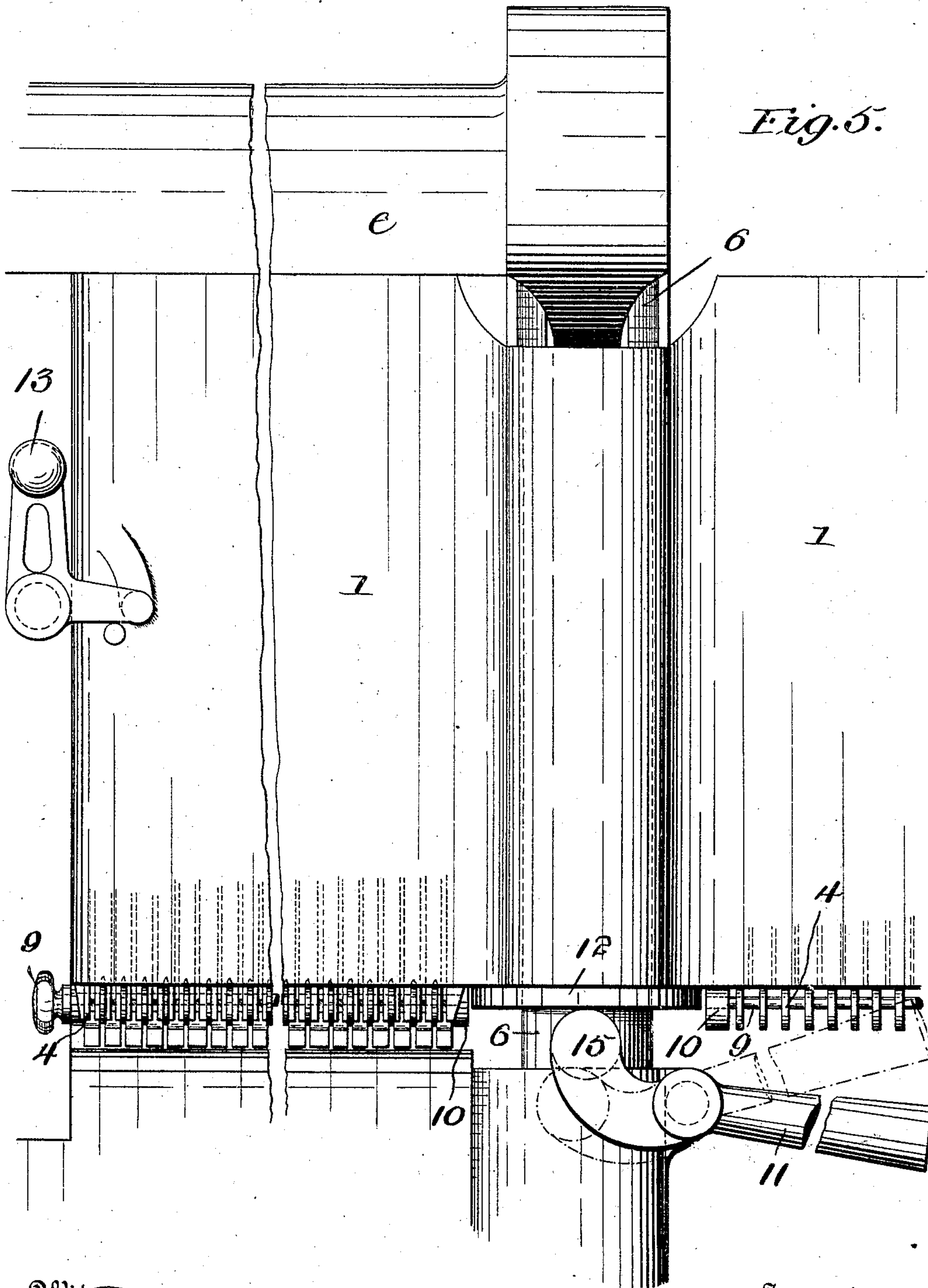
No. 785,477.

PATENTED MAR. 21, 1905.

F. C. L. D'AIX.
 LINOTYPE MACHINE.

APPLICATION FILED JUNE 4, 1904. RENEWED FEB. 28, 1905.

4 SHEETS—SHEET 3.



Witeresses
M^{rs} F. Doyle.
H. Lee Holmes.

విషయము

Inventor
Fritz C. Lucke & Aft
Attorney
Maudlin Bailey

No. 785,477.

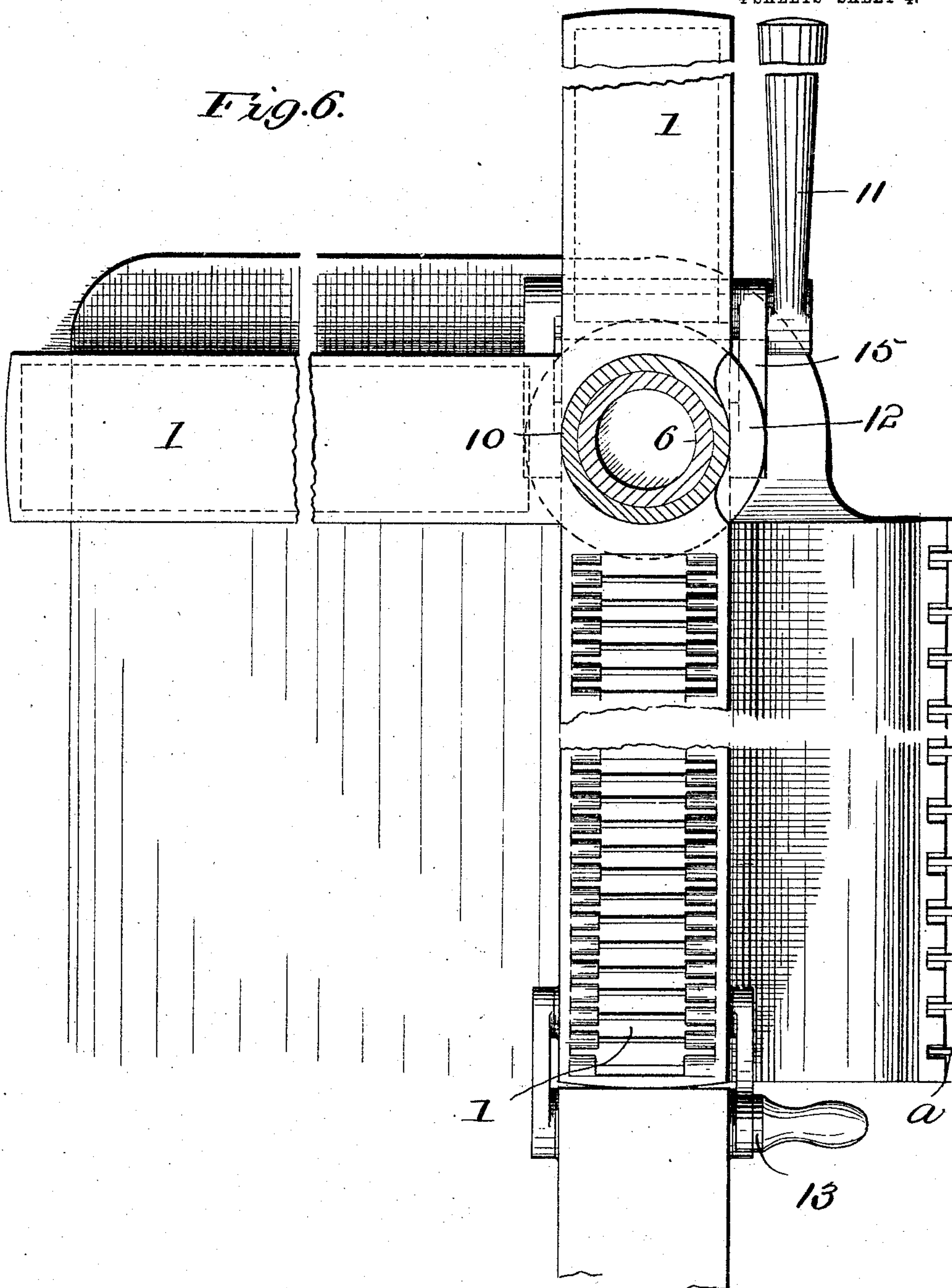
PATENTED MAR. 21, 1905.

F. C. L. D'AIX.
LINOTYPE MACHINE.

APPLICATION FILED JUNE 4, 1904. RENEWED FEB. 28, 1905.

4 SHEETS—SHEET 4.

Fig. 6.



Witnesses
W. F. Doyle
H. L. Helms

Fritz C. Lucke & Co. Inventor
By *Manuel J. Dancy* Attorney

UNITED STATES PATENT OFFICE.

FRITZ C. LUCKE D'AIX, OF NEW YORK, N. Y.

LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 785,477, dated March 21, 1905.

Application filed June 4, 1904. Renewed February 28, 1905. Serial No. 247,800.

To all whom it may concern:

Be it known that I, FRITZ C. LUCKE D'AIX, a citizen of the United States, and a resident of the city of New York, in the county and State of New York, have invented a new and useful Improvement in Linotype-Machines and Like Machines, of which the following is a specification.

This invention relates to linotype-machines employing matrices on which are formed the type characters, and has for its object to make it possible to furnish such a machine with a plurality of sets of matrices, any one of which sets may be easily and quickly brought into coöperative relation with the other parts of the mechanism. In machines of this character to which my invention belongs the matrices are stored in magazines, from which by suitable mechanism they are delivered one at a time and assembled into lines, which are then carried to the line-casting apparatus, whence they are delivered to the distributing mechanism, that returns them to the proper compartments in the magazines. In composition it is frequently desirable to change from characters of one style or font to those of another style or font, and by means of my invention this may easily be done without the necessity of removing from the machine one magazine and replacing it by another, as is necessary in making such changes in linotype-machines of the styles now in vogue.

The invention consists in providing the linotype-machine with a plurality of magazines or holders for matrices of different styles and combining therewith mechanism whereby any one of the magazines may be brought into operative relation to the linotype-machine in an expeditious manner.

In the accompanying drawings I have illustrated my invention as applied to a type-casting or linotype machine like that illustrated in United States Patent No. 697,859, dated April 15, 1902, in its general features of construction. The invention is, however, applicable to other styles of linotype-machines, the one illustrated in the drawings being merely selected for the purpose of representing one practical embodiment of my invention.

Referring to the drawings, Figure 1 is a

front view of a linotype-machine to which my invention is applied. Fig. 2 is a top plan view of the same. Fig. 3 is an elevation of the keyboard and magazine portions of the machine shown in Fig. 1, other parts being shown in section. Fig. 4 is a view similar to Fig. 3, showing the magazines in a different position. Fig. 5 is a front view, on an enlarged scale, of the magazine and some of the associated parts of the linotype-machine. Fig. 6 is a top view, parts being in section, of the parts illustrated in Fig. 5.

I have illustrated, without going at all into detail, only enough of a linotype-machine to illustrate how my invention may be applied thereto, and, as I have stated, I have chosen for such illustration a style of machine such as is fully described and illustrated in my Patent No. 697,859.

Referring to the drawings, *a* designates the keyboard of a linotype-machine. In Fig. 3 of the drawings the mechanism between the key-levers and the escapement devices *a''*, which are employed to effect the release of the matrices, is indicated in a general way by dotted lines at *a'*.

b refers to the line-receiving box or composing-alley, in which the matrices released by the manipulation of the keys are composed into lines.

c refers to a lever arranged to actuate the pusher or other mechanism, by means of which the assembled line of matrices is moved into the casing *d*, within which are arranged the carrier for the line of matrices and the mold, these parts being fully described in my aforesaid patent.

e designates the casing surrounding the distributing mechanism, by means of which the matrices are returned to their proper compartments in the magazine or holder.

In the embodiment of my invention herein illustrated I have represented the machine as being provided with three magazines containing matrices of as many different styles. These magazines or holders are designated 1 1 and are supported by and arranged about a vertically-disposed post 6. The several magazines are preferably connected, so as to move together, and are radially disposed rela-

tive to their supporting-shaft, being in the form of wings radiating from the shaft. Any one of these wing-like magazines may be brought into coöperative relation with the operative parts of the linotype-machine—that is, so as to occupy a position directly under the type-distributing mechanism and between it and the channels through which the released matrices are delivered to the line-receiving box *b*. The part of the machine last referred to is designated *f* in Fig. 1. It will be understood that the matrices are held in separate compartments in the magazines or holders in the usual way, as indicated in the several detail views of the drawings and particularly in Fig. 6.

When any one of the magazines is brought into operative position, it is there held by means of a confining-lever 13, carried by some suitable part of the machine.

Whenever it is desired to shift the magazines in order to bring-into position for use a different style of matrices, it is first necessary to lock the matrices that have just been in use within their magazine or holder, so that when the latter is moved the matrices shall not fall out. For this purpose I employ a rod 9, that is seated in bearings 10 in the magazine-casing. It might be arranged to pass under the matrices 7, and thus retain them; but I prefer that it should pass through apertures 7' in the matrices, thus securely locking them in place. After the rod has been put in place the lever 13 may be moved to release the magazine. The magazine, however, cannot be moved even after these manipulations have taken place, because the matrices as they rest upon the escapement devices *a''* extend a short distance into the channels, through which the matrices pass to the line-receiving box or alley, the walls of such channels forming abutments, as indicated at 4, Fig. 3. I therefore so mount the magazines upon their supporting-rod 6 that they shall have a limited amount of longitudinal movement thereupon, as well as movement about such rod as an axis. 11 indicates a lever mounted upon the frame of the machine and having its shorter arm 15 arranged to bear against a collar 12, that is situated at the lower end of the bearings 10 for the magazines. By depressing the longer arm or handle portion of the lever 11 the short arm 15 thereof operates against the collar 12 and lifts the several magazines bodily sufficiently far to carry the matrices clear of the channels in the part *f* of the machine, as indicated in Figs. 4 and 5. After this the set of magazines may be freely rotated about the supports 6 to bring any one of the wings or magazines into position for use. After this has taken place the lever is manipulated to allow the magazine to fall into place over the part *f* of the machine, the retaining-rod 9 is withdrawn, the locking-lever 13 is thrown into engagement with the magazine, and the

parts are in position for the new set of matrices to be used.

It will be observed that the magazines may be adjusted to bring one or another into working position by a simple rotary movement about the axis of support. While I have illustrated and prefer to construct the apparatus so that the magazines may have a limited movement longitudinally of their supporting-shaft in order that the matrices may extend slightly into the conducting-channels in the linotype-machine and still be retained in the magazine, this is not an essential feature of the invention, for it shall be observed that if the magazine were normally held in the positions indicated in the Figs. 4 and 5 the invention would be practically operative. Further, the connection of the magazines, as shown, causing them to move together, is a matter of convenience and is not essential to my invention. By mounting the magazines upon a vertically-disposed shaft, from which they extend radially, I can adjust the magazines to bring one or another into use without reversing the magazines, so that there is no tendency for the matrices to shift or move about in their compartments whenever a change of magazines is made.

It will be observed that the post or support for the magazines is directly below the outer end of the distributing mechanism, permitting it to serve as a support for steadying the outer end of such mechanism and also permitting the magazines, which extend radially from the support, to be supported at one edge, thus economizing space and making the machine compact, well balanced, and rigid.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a machine of the linotype class having a distributing mechanism for the matrices and an assembling mechanism for the matrices, these two mechanisms being separated by a space for the holder or magazine for the matrices, of a vertically-disposed post or support arranged near the outer ends of these parts of the machine, and a series of magazines mounted upon and radiating from the said support and adjustable about the same, whereby any desired one of the magazines may be moved into the space between the distributing and the collecting parts of the apparatus, substantially as set forth.

2. In combination with a machine of the linotype class, a magazine for the matrices mounted upon an axis about which it is adapted to turn and disposed in position to permit the matrices to be fed therefrom by gravity, an escapement mechanism which is engaged by the lowermost matrices when the magazine is in operative position, and a movable locking device adapted to be seated in suitable bearings in the magazine and engage

with said lowermost matrices to hold them in place in the magazine when the latter is moved away from the escapement mechanism, substantially as set forth.

- 5 3. In combination with a machine of the linotype class, a plurality of magazines for holding the matrices, a vertically-disposed shaft upon which the magazines are mounted and from which they radiate, the magazines
10 being movable about said shaft into and out of a working position with relation to a linotype-machine, the magazines being also movable longitudinally of the shaft to a limited extent, a lever by which the magazines may
15 be moved longitudinally upon their shaft, means for locking the magazines against rotation when in working position, an escape-

ment mechanism common to all the magazines which is engaged by the lowermost matrices of that magazine which is in operative position, and a movable locking device for each magazine, adapted to be seated in suitable bearings in its magazine and engage with the lowermost matrices of the same to hold them in place in the magazine when the latter is
20 moved away from the escapement mechanism, substantially as set forth. 25

In testimony whereof I affix my signature in presence of two witnesses.

FRITZ C. LUCKE D'AIX.

Witnesses:

OSCAR MUSSINAN,
THEODOR NOLTE.