

(No Model.)

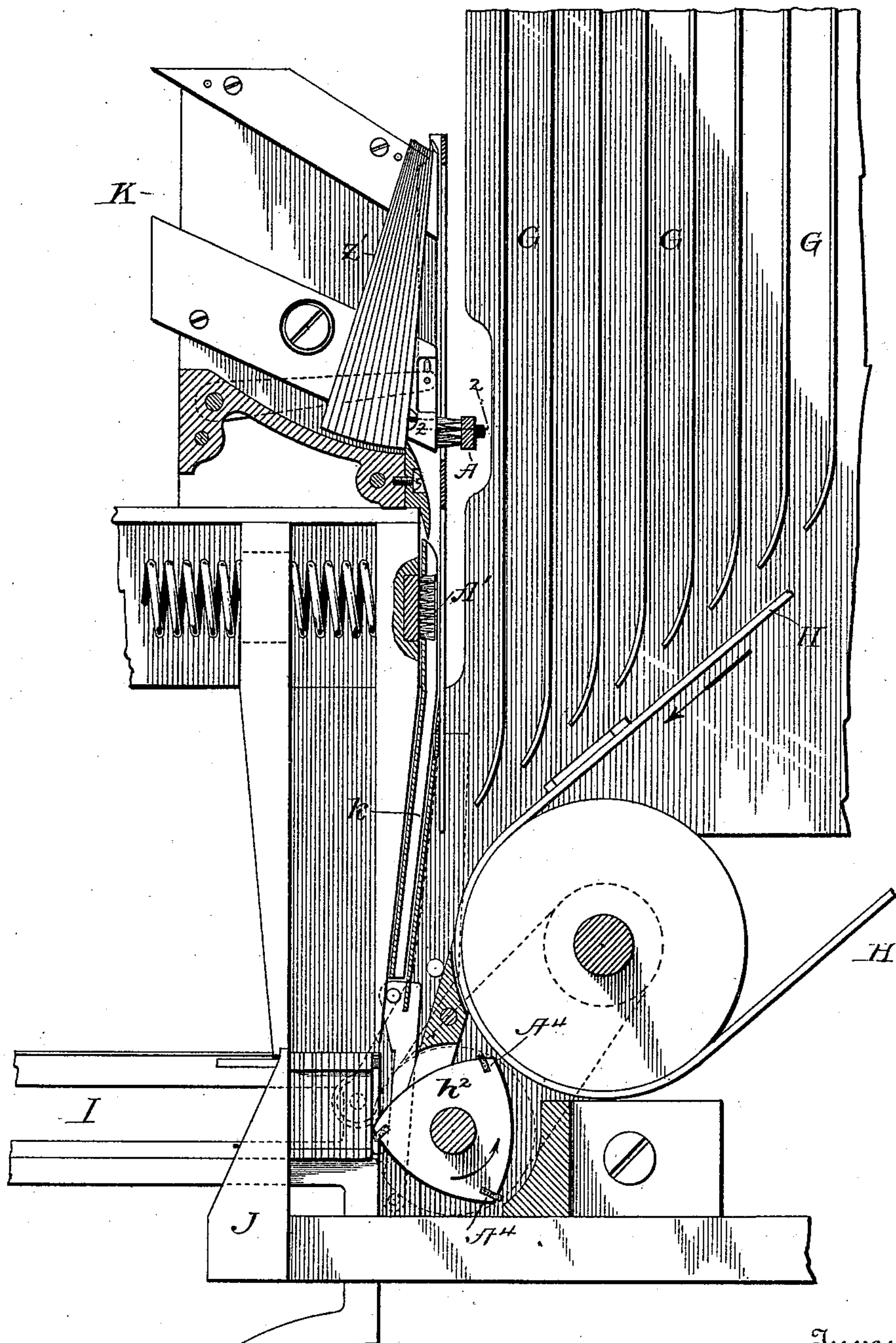
2 Sheets—Sheet 1.

O. MERGENTHALER.
LINOTYPE MACHINE.

No. 527,702.

Patented Oct. 16, 1894.

Fig. 1.



Witnesses
M. R. Kennedy
J. J. Shure

Inventor
Ottawa Mergenthaler
By his Attorney
Philip T. Dooley

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.
on line 2-2

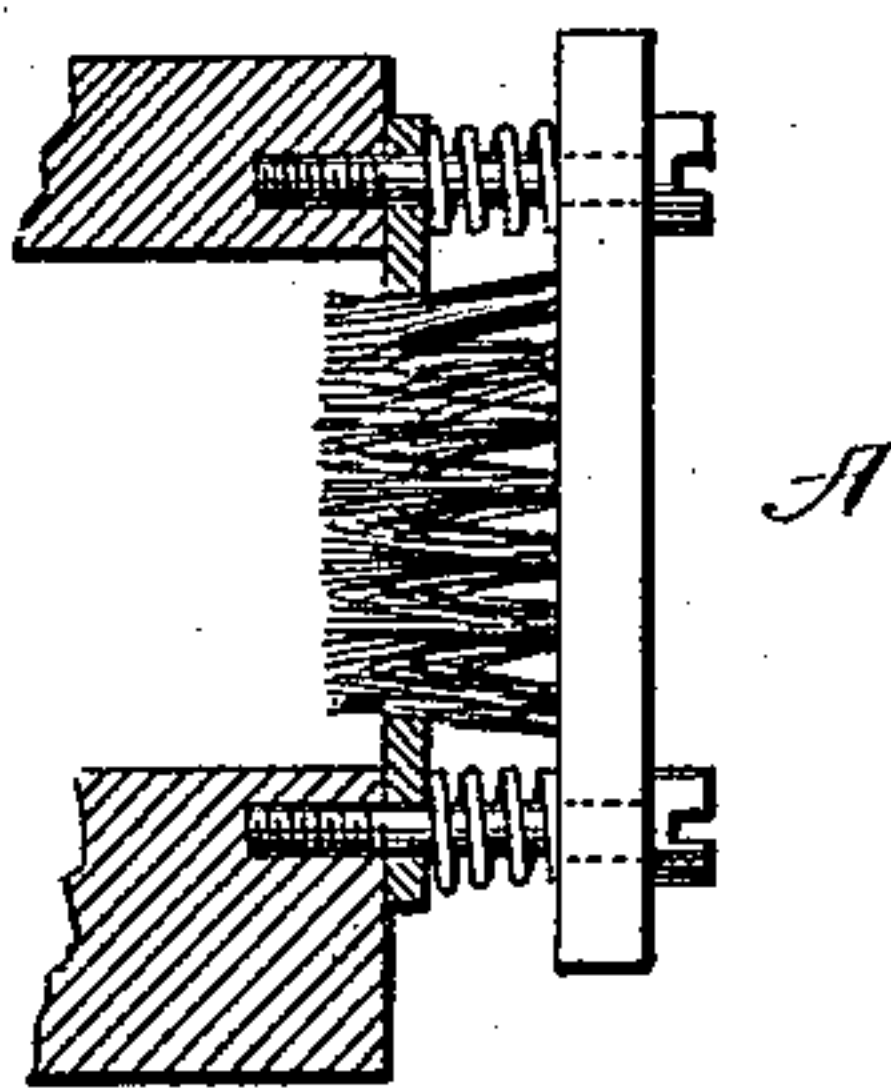
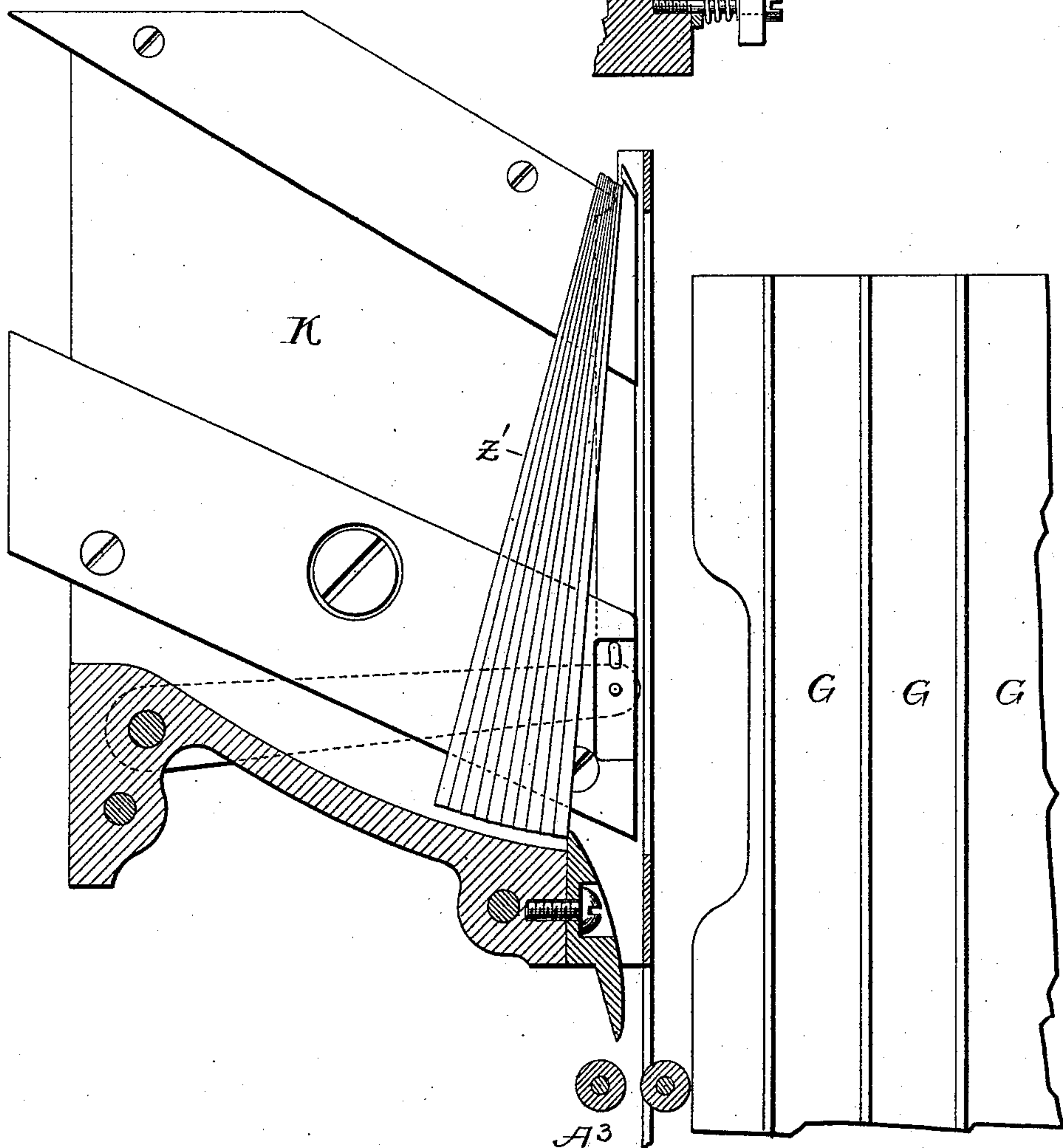


Fig. 3.



Inventor

Witnesses
N. Q. Kennedy.
J. S. Elmore.

Ottmar Mergenthaler
By his Attorney
Philip T. Dodge.

UNITED STATES PATENT OFFICE.

OTTMAR MERGENTHALER, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE
MERGENTHALER LINOTYPE COMPANY, OF NEW JERSEY.

LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 527,702, dated October 16, 1894.

Application filed April 26, 1892. Serial No. 430,765. (No model.)

To all whom it may concern:

Be it known that I, OTTMAR MERGENTHALER, of Baltimore, State of Maryland, have invented a new and useful Improvement in Linotype-Machines, of which the following is a specification.

My invention has reference to that class of machines in which a series of metallic letter matrices and spaces are assembled temporarily in line against the open side of a mold into which type metal is cast against them for the purpose of producing linotypes or type bars bearing a number of characters. In operating this class of machines it is found that under certain conditions there is a tendency of the molten metal to adhere to the exposed sides of the spaces in such a manner that when the spaces are inserted in the lines of matrices the adhering protuberant type metal has a tendency to indent or break in the side walls of the matrices adjacent thereto. I find that this difficulty can be overcome by lubricating those portions of the spaces or space bars which are subjected to the action of the molten metal, the result being most satisfactorily obtained by the employment of a dry lubricant such as graphite, soap or like material, the finely powdered graphite being preferred.

The present invention comprehends devices for applying the lubricant to the spaces or to the spaces and matrices during their movements within the machine.

It is to be understood that I may employ mechanism of any suitable character adapted to apply the lubricant to the spaces or the matrices and that this mechanism may be located at any suitable point in the machine.

I have represented my improvement in a simple form in connection with the well known Mergenthaler linotype machine, such as is represented in Letters-Patent of the United States, dated September 16, 1890, No. 436,532.

I have represented only so much of the assembling mechanism as is necessary to an understanding of the improvement.

Figure 1, is a front elevation of the assembling or composing mechanism; Fig. 2, a cross section on the line 2—2 of Fig. 1. Fig. 3, is a modified form of the mechanism.

In the drawings the leading parts are indicated by the same letters by which they are indicated in the patent above referred to.

G G, represent a series of ordinary channels through which the matrices descend to an inclined constantly traveling belt, H, whereon they descend into a channel in an assembling block, I, against a horizontal yielding resistant, J. As the matrices are added to the rear end of the line they pass in front of the triangular assembling wheel, h^2 , by which the line is pushed forward step by step, in order to afford room at its end for the admission of the successive matrices.

K, represents a mechanism in which the tapered space bars or wedges, z' , are suspended in series, and from which they are delivered by a finger key mechanism one at a time as demanded through a channel, k , to the rear end of the line, so that the spaces and matrices are assembled or composed in line preparatory to their being transferred to the mold or casting mechanism.

The foregoing parts are all constructed and operated in the same manner as in the patent above referred to, and all the other parts in the machine may also be constructed in accordance with said patent.

A, represents a stationary brush or wiper arranged in the path of the descending space bars, and charged with finely pulverized graphite, soap, or other lubricant, so that as each space descends thereby on its way into the line, it is coated on one side with the lubricant.

When the machine is provided with the compound wedge spaces, such as described in the patent, it is sufficient to lubricate them on one side; that is to say, to lubricate that member which is locked fast in the line.

When deemed advisable a second brush A' may be arranged in opposition to the brush A, to lubricate the opposite side of the spaces. Such a brush is shown at A' in Fig. 1.

Instead of stationary brushes such as above described, I may employ rollers covered with felt, leather or other soft material, as shown at A^3 , Fig. 3, in such position that the spaces will pass between them. These rollers may be turned by the friction of the descending spaces, or they may be driven positively by

mechanical connections of any suitable character.

While I have represented the lubricating device as located between the magazine which contains the spaces and the assembling point, it will of course be understood that it may be located in any other convenient point, the location depending upon the character of the machine in which the parts are used.

If it be desired to coat the matrices as well as the spaces, the assembling wheel, H², may be provided as shown with small pads or wipers, A⁴, to be charged with graphite, these wipers to act upon the matrices on one side as they enter the line. The same device will also serve as a means of lubricating the space bars at the points where they rest in the line.

Having thus described my invention, what I claim is—

1. In a linotype machine a lubricating device arranged to act upon the spacing device, substantially as described.

2. In a linotype machine and in combination with a composing mechanism, a series of matrices and a series of spaces a lubricating device arranged to act upon the spaces during their passage to the line.

3. In a linotype machine, means for applying graphite to the spacing device.

4. In a linotype machine a brush or wiper charged with graphite or its equivalent arranged to act upon the passing matrices or spaces.

5. In a linotype machine a rotary wiper charged with a lubricant arranged to act on the successive matrices, substantially as described and shown.

In testimony whereof I hereunto set my hand, this 18th day of April, 1892, in the presence of two attesting witnesses.

OTT. MERGENTHALER.

Witnesses:

J. H. WHITAKER,
W. F. CRUSSELLE.