

No. 619,875.

Patented Feb. 21, 1899.

P. T. DODGE.  
LINOTYPE MACHINE.

(Application filed Dec. 9, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 2.  
ON LINE 2-2.

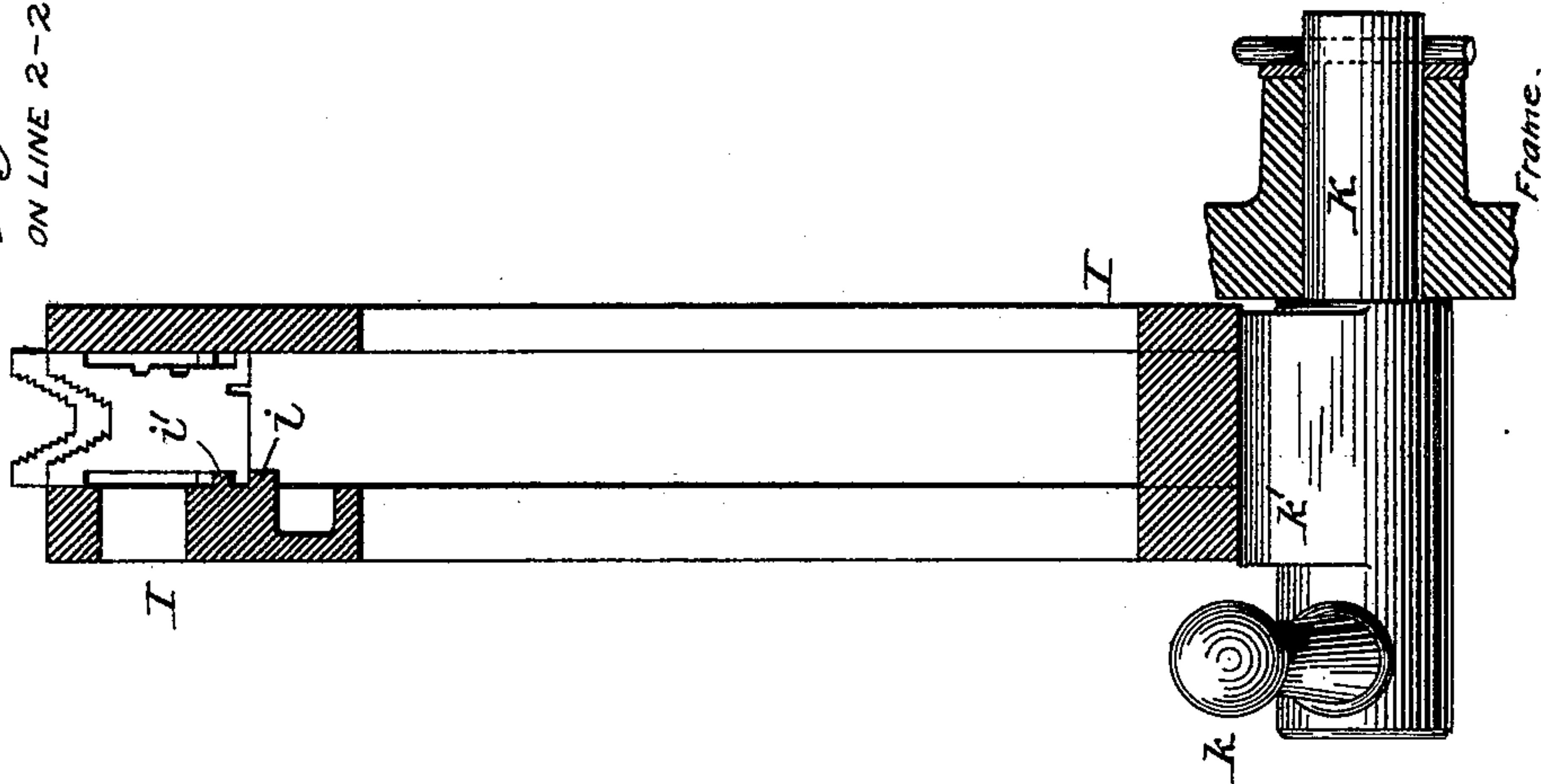
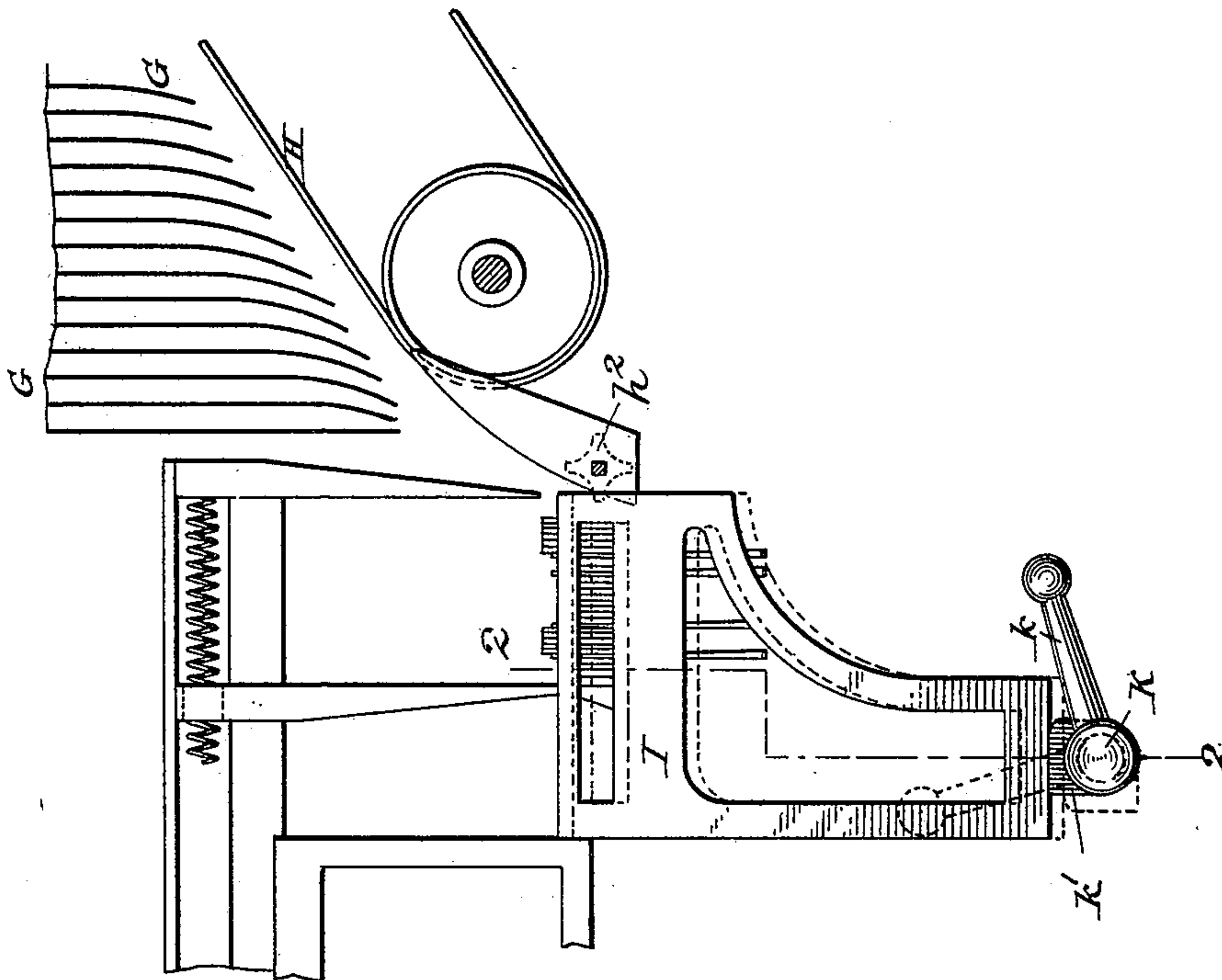


Fig. 1.



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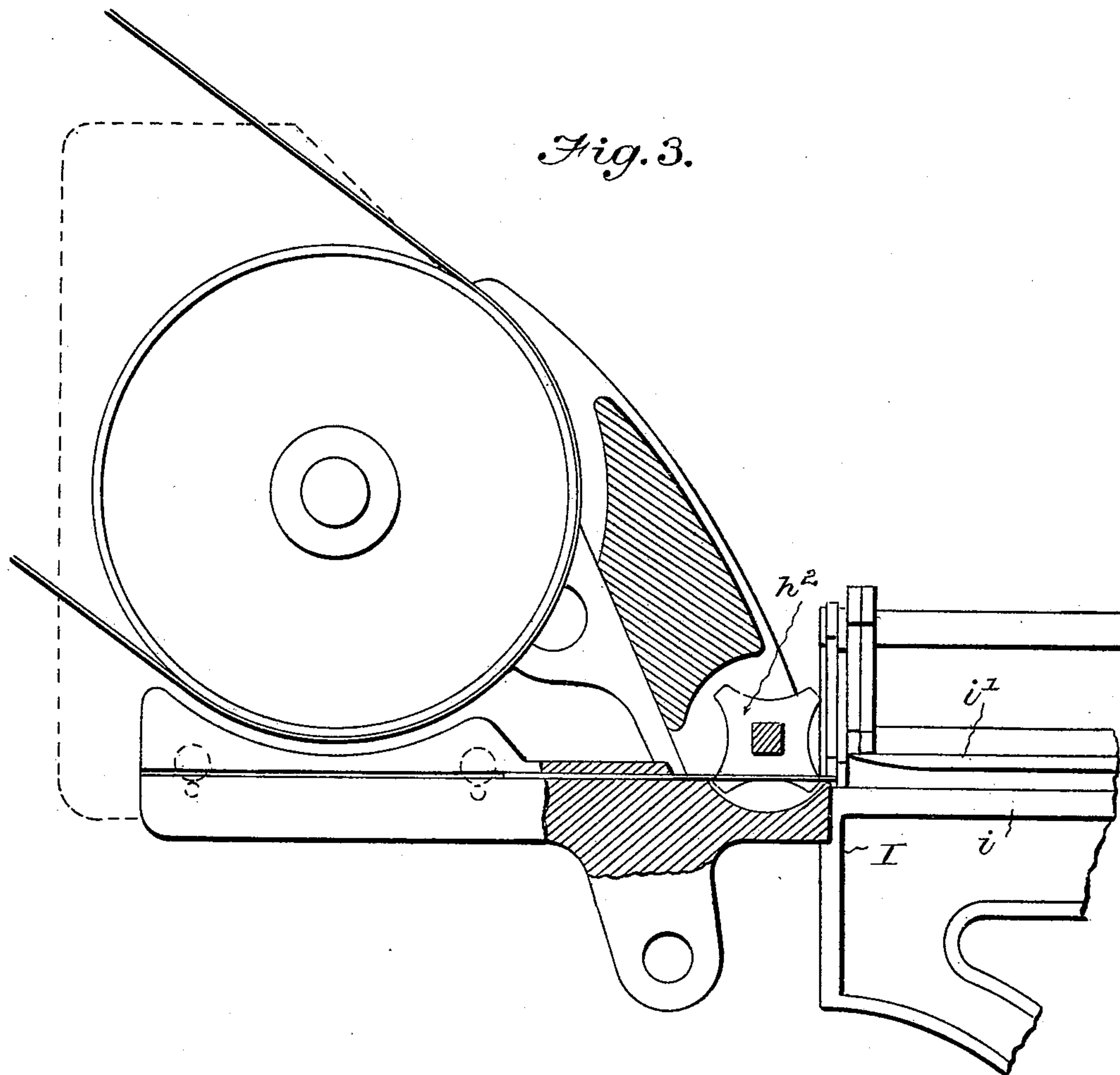
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# UNITED STATES PATENT OFFICE.

PHILIP TELL DODGE, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR  
TO THE MERGENTHALER LINOTYPE COMPANY, OF NEW YORK.

## LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 619,875, dated February 21, 1899.

Application filed December 9, 1898. Serial No. 698,796. (No model.)

*To all whom it may concern:*

Be it known that I, PHILIP TELL DODGE, of Washington, District of Columbia, have invented a new and useful Improvement in Linotype-Machines, of which the following is a specification.

In Letters Patent of the United States No. 547,633 for linotype-machines, issued to me on the 8th of October, 1895, is shown a machine containing matrices each with two letters, one above the other, and a composing mechanism provided with a movable switch, by means of which the individual matrices may be delivered to the line in the assembling-elevator at higher or lower levels, as demanded, so as to bring the upper or the lower characters into position for use.

The object of the present invention is to provide for the delivery of the matrices into the line in the higher or lower position, as demanded, without making use of the switching mechanism. It is the special object of the present invention to secure the desired delivery of the matrices in the commercial Mergenthaler machine of the present day and without making substantial change therein.

To this end the present invention consists in combining with the assembling-elevator adapted to maintain matrices at different levels therein means by which the elevator may be quickly raised or lowered to a limited extent in relation to the devices which deliver the matrices thereto, so that the matrices will enter the elevator in a higher or lower relation thereto, as may be demanded.

In the accompanying drawings I have shown only such parts of the machine as are necessary to an understanding of my invention, and it is to be understood that in all other respects the machine may be of any ordinary or approved construction.

Figure 1 is a front elevation of the assembling mechanism with my improvement incorporated therein. Fig. 2 is a vertical cross-section on the line 2 2 of Fig. 1. Fig. 3 is a vertical section looking from the rear toward the front through the assembling devices on a larger scale.

Referring to the drawings, G G represent the channels through which the matrices de-

scend successively to an inclined traveling belt H, by which they are directed downward over guiding-surfaces in front of the rotary assembling-wheel or star-wheel  $h^2$ , by which they are driven forward, one after another, into the top of the assembling-elevator I, in which they are assembled or composed in line. After the composition of the line in this elevator is completed the elevator is raised and the line transferred to the casting mechanism and thereafter to the distributor at the top of the machine.

The foregoing parts are constructed and operated in the ordinary manner except that the assembling-elevator I is constructed, as shown in cross-section in Fig. 2, with the lower horizontal shoulder  $i$  to sustain the matrices at the lower or normal level therein and with a second rib or shoulder  $i'$ , at a higher level, extending horizontally and immovably across the assembler from one end to the other. With the elevator thus constructed it follows that when it is in its normal position the matrices will be delivered from the star-wheel onto the lower shoulders, so that the upper characters in the matrices will stand at the alining-level. When, however, the elevator is lowered to the proper extent, the incoming matrices will be delivered upon the upper shoulder  $i'$ , and thus sustained above the normal position, so that their lower characters stand at the alining-level. By controlling the height of the elevator all of the matrices may be delivered at the lower or all at the higher level or in one line different matrices may stand at different levels, and in this way the italic or other secondary characters which usually occupy the lower positions on the matrices may be brought into operative position in the composed line at will.

The height of the elevator during the composition may be regulated by any suitable means adapted for instantaneous and easy adjustment by the operator at the keyboard. A simple contrivance for the purpose is that shown in Fig. 1, consisting of a horizontal rock-shaft K, mounted in the frame below the elevator, with a finger-key  $k$  and with a projection  $k'$ , acting beneath and giving support to the elevator. When the parts stand



in the position shown by full lines in Fig. 1, the elevator stands in its higher and normal position. When, however, the finger-key is raised, as shown in dotted lines, the elevator  
5 will be lowered, so as to receive the matrices in the upper position therein.

It will be manifest to the skilled mechanic that there are a great variety of devices which may be used as movable supports for the ele-  
10 vator and which may be quickly operated to raise or lower the same.

After the line has been composed in the elevator it will be transferred and handled in the machine in the ordinary manner, the ma-  
15 chine being provided, as shown in the Dodge patent and in the pending application of J. R. Rogers, Serial No. 675,109, with means for maintaining the proper vertical adjustment of the matrices in their course to the mold  
20 and when presented thereto and for subsequently restoring all the matrices in the line to a given level for presentation to the distributing devices, these features forming no part of the present invention.

25 I believe the present to be the first instance in which the assembling-elevator, adapted to sustain matrices at different levels therein, has been combined with means for raising or lowering it instantly, so that the matrices de-  
30 livered always at one level by the assembling

mechanism may be received into the elevator at different elevations in relation thereto.

What I claim as my invention is—

1. In a linotype-machine, mechanism de-  
livering matrices at a fixed level, an assem- 35  
bling-elevator provided with means for sus-  
taining matrices at different levels therein,  
and means for instantly adjusting said ele-  
vator to different fixed heights in relation to  
the matrix-delivering devices, whereby the 40  
matrices may be assembled in higher or lower  
relations to the elevator at will.

2. In a linotype-machine, in combination  
with the star-wheel, the assembling-elevator  
provided with matrix-supporting shoulders 45  
at different levels, and means for instantly  
adjusting said elevator to receive the mat-  
rices on the upper or the lower shoulder.

3. In a linotype-machine, an assembling-  
elevator adapted and arranged to receive and 50  
support matrices at different heights therein,  
in combination with a finger-key device for  
raising and lowering said elevator.

In testimony whereof I hereunto set my  
hand, this 25th day of November, 1898, in the 55  
presence of two attesting witnesses.

PHILIP TELL DODGE.

Witnesses:

JOHN F. GEORGE,  
WILLIAM H. GRUBER.