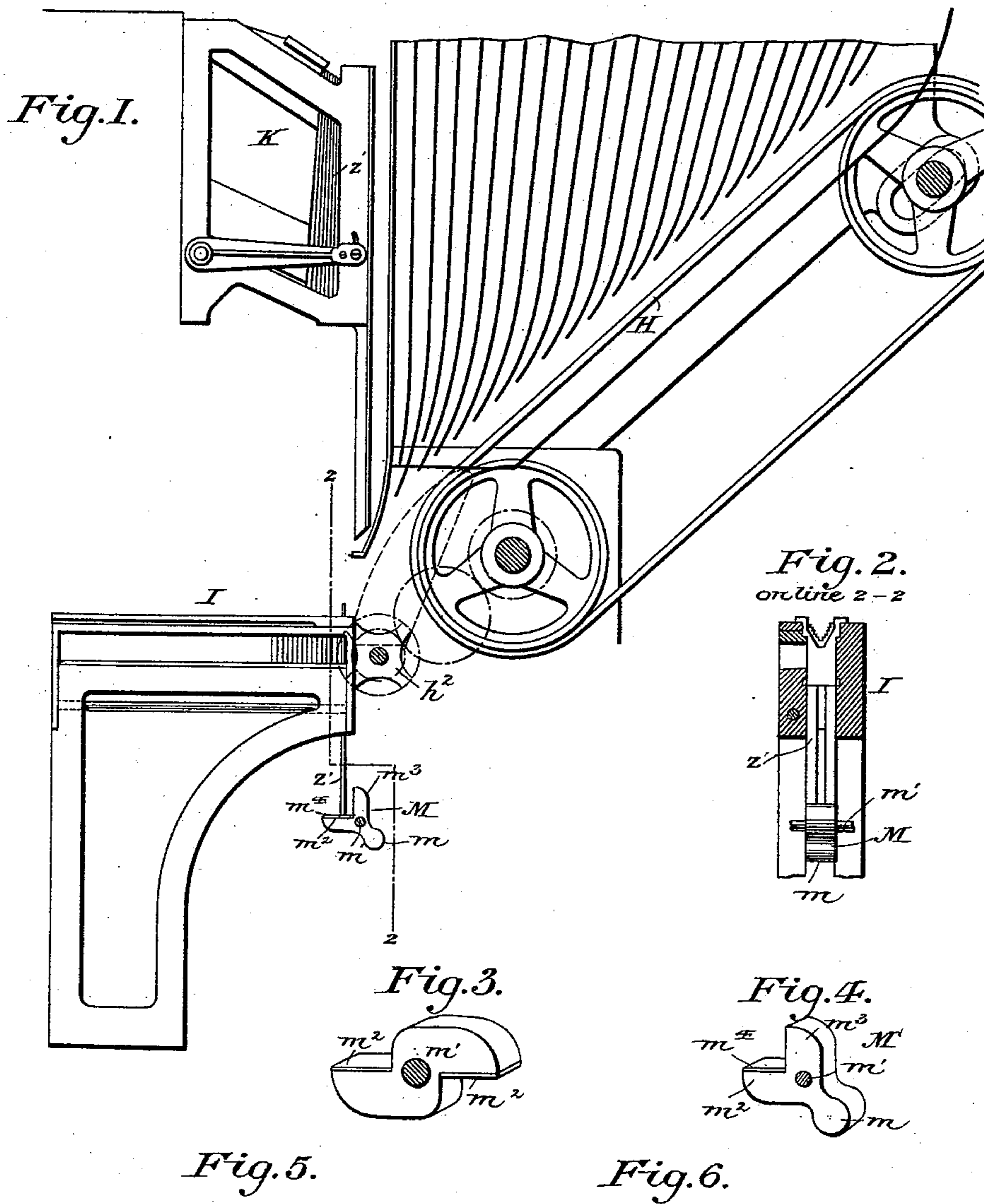


(No Model.)

P. L. RIPSOM.
LINOTYPE MACHINE.

No. 538,123.

Patented Apr. 23, 1895.



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PHILIP L. RIPSOM, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE MERGENTHALER LINOTYPE COMPANY, OF NEW JERSEY.

LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 538,123, dated April 23, 1895.

Application filed November 29, 1892. Serial No. 453,478. (No model.)

To all whom it may concern:

Be it known that I, PHILIP L. RIPSOM, of Rochester, county of Monroe, and State of New York, have invented a new and useful Improvement in Linotype-Machines, of which the following is a specification.

My invention refers to the Mergenthaler linotype machine and other machines of its class, in which type matrices are assembled or composed temporarily in line, together with intervening spaces of elongated form, the matrices and spaces being added successively at the end of the line. In this class of machine the spaces having considerable weight, are dropped into place at the end of the line from a magazine or holder. The spaces are much longer than the matrices and of greater thickness at the lower than at the upper ends, and when in position in the line they extend downward a considerable distance below the matrix line. Owing to their weight and the distance through which they fall they acquire considerable velocity and momentum, and it is found that owing to this fact, there is a liability of the sustaining ears at their upper ends striking the sustaining device with such force as to fracture them, and also that they are liable to chatter and descend slowly to their places at the end of the line whenever matrices are delivered against them before they have completed their descent.

Now it is the object of my invention to overcome these difficulties, and to this end it consists of a checking or retarding device to arrest the motion of the spaces as they settle to their places in the line, and also if desired to carry their lower ends forward in order to permit the more ready entrance of the succeeding matrices to the line.

In the accompanying drawings I have shown my device as applied to the well known Mergenthaler linotype machine, such as represented in Letters Patent of the United States, issued on the 16th day of September, 1890, No. 436,532. It is to be distinctly understood, however, that the device may be varied in form and arrangement in many respects without departing from the scope of my invention, and that it may be used in connection with any mechanism in which elongated spaces are set into a line with matrices.

Figure 1 is a front elevation of my device applied to the Mergenthaler machine, the view being limited to the lower portion of the assembling mechanism, which is necessary to the understanding of the invention. Fig. 2 is a cross-section on the line 2—2 of Fig. 1. Figs. 3 and 4 are perspective views of the device in different forms. Figs. 5 and 6 are diagrams illustrating the action of the device.

In order to facilitate the understanding of the invention I have designated the customary parts of the machine herein by the same letters which designate them in the patent above referred to.

Referring to Fig. 1, H represents the inclined traveling belt by which the character matrices from the magazine are carried downward and forward and delivered side by side into the upper part of the channeled assembling block (I), into which the line is advanced by a rotary wheel (h^2) which maintains an opening at the rear end of the line for the admission of the successive spaces and matrices. The tapered, or wedge-shaped spaces (z'), which may be of the same construction as those described in the patent, or of any other suitable construction, are stored in the magazine (K) from which they are delivered by a finger-key mechanism one at a time, so that they fall by gravity into their places in the assembling block at the end of the composed line, each to be followed in turn by the succeeding matrices and spaces.

The spaces and matrices are constructed as heretofore with shoulders at their upper ends by which they are sustained in the assembling block as shown in Fig. 2. The foregoing parts are constructed and operated in the ordinary manner.

In applying my improvement I provide a checking or retarding device (M) and locate the same at such point that the lower end of the space entering the line will rest upon the device just before the space reaches its lowest position or position of rest in the line.

In the form shown in Figs. 1 and 4 the device consists of a block of hard rubber, or other suitable material, sustained by a horizontal pivot (m'), the main frame being provided with a weight (m) to maintain it in its normal position, and with an upper lip or sur-

face (m^2) upon which the descending space strikes at the left of the pivot. I commonly adjust the device so that this surface (m^2) is about one quarter of an inch above the point to which the end of the space-band descends. As the weight of the band is received upon this surface the device swings backward around its center, allowing the space-band to slide off and fall to its place. The inertia of the parts is such that although the velocity of the spaces is checked easily and in practically an instantaneous manner, the striking of the sustaining ears of the spaces upon the top of the assembling block is prevented. As soon as the space slides forward from the stop the latter, by reason of the weight assumes its original position to receive the next space, and so on repeatedly. It will be observed that the stop has a shoulder (m^3) rising therefrom in position to act against the right hand side of the space so that as the stop rocks over to the left under the influence of the band this shoulder tends to crowd and hold the band to the left, thus leaving a free or open space behind the space for the entrance of the next matrix or space to the line.

The stop device may be made of any suitable material. If of hard material I propose to provide it with a surfacing of rubber, leather or other soft material (m^4) to prevent wear and noise and to assist in cushioning the blow of the falling spaces.

If desired the stop device may be provided with a series of receiving surfaces (m^2) to be brought into action successively one after another as worn away. A stop of this character having two faces is shown in Fig. 3.

The essence of my invention lies in the provision of a yielding buffer or stop to decrease the speed of the space as it settles to its place in the line, and it will be manifest to a skilled mechanic that the device may be made in a great variety of forms with either counterbalances or friction devices as resistants.

Having thus described my invention, what I claim is—

1. In combination with a mechanism for

assembling in line matrices and elongated spaces which extend below the line of matrices, a yielding stop arranged to gradually resist and check the motion of the spaces as they descend to their final positions in the line, without acting upon the matrices whereby the spaces are prevented from chattering and their descent facilitated.

2. In combination with means for assembling matrices in line, and for introducing into the line spaces elongated to extend below the line, a yielding stop arranged in position to be encountered by the ends of the spaces only as the latter assume their final positions in the line whereby the chattering of the spaces is prevented and their descent facilitated.

3. In combination with a mechanism for assembling matrices and elongated spaces in line, a pivoted weighted stop arranged below the level of the matrix line and in position to receive only the ends of the descending spaces substantially as described.

4. In combination with a mechanism for composing matrices and elongated spaces in line a yielding stop to check the descending spaces, provided with a surface to receive the end of the spaces, and with a shoulder to carry the spaces sidewise.

5. In combination with mechanism for assembling matrices in line and introducing elongated spaces into the line, a yielding device actuated by the descending spaces, and adapted to carry the latter sidewise as they assume their final positions, in the line, substantially as described and shown.

6. In combination with an assembling block and rotary wheel (h^2) and means for delivering matrices and elongated spaces to the assembling block a pivoted stop device, provided with a surface (m^2) and shoulder (m^3).

In testimony whereof I hereunto set my hand, this 14th day of November, 1892, in the presence of two attesting witnesses.

PHILIP L. RIPSOM.

Witnesses:

R. F. OSGOOD,
P. A. COSTICH.