

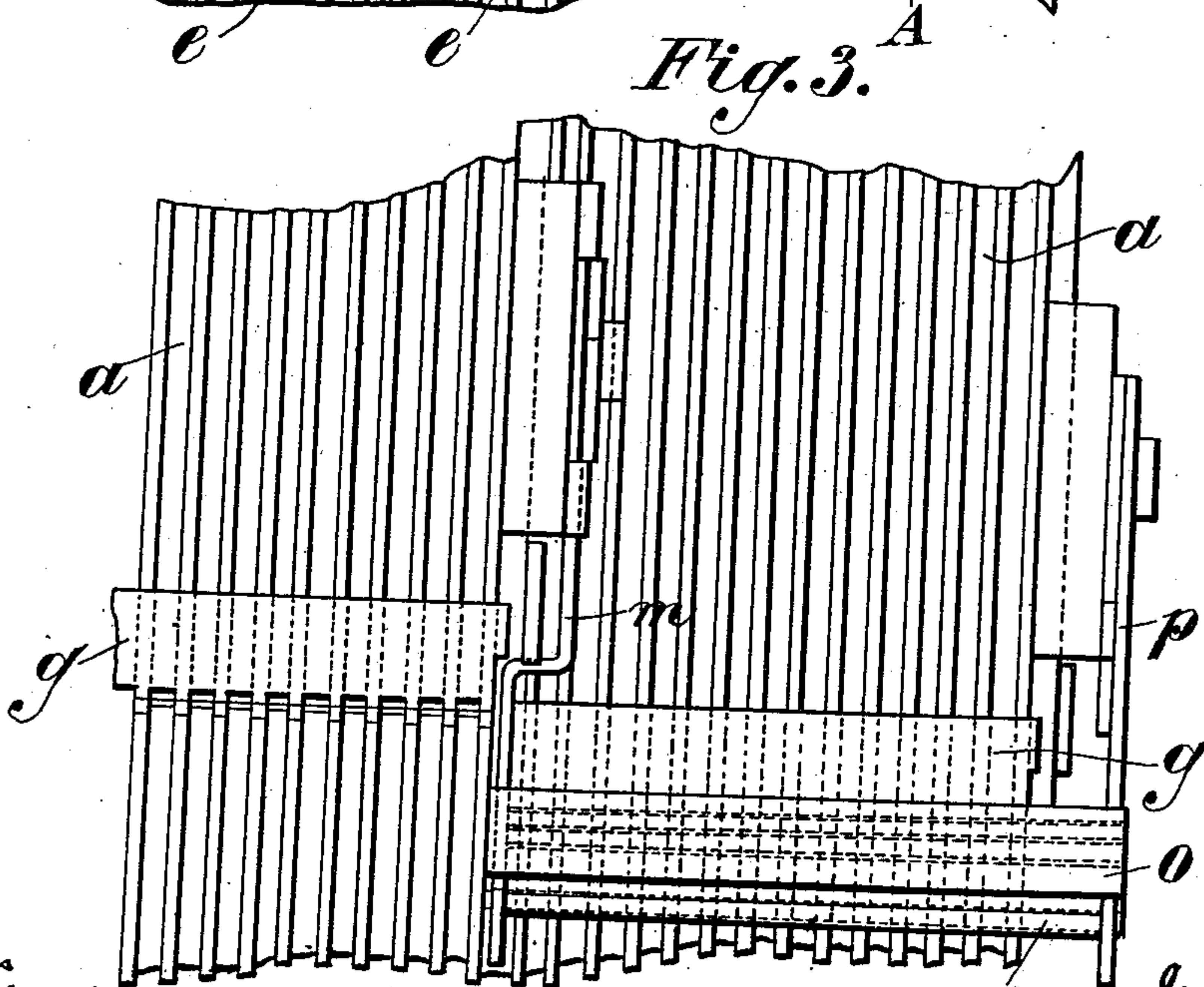
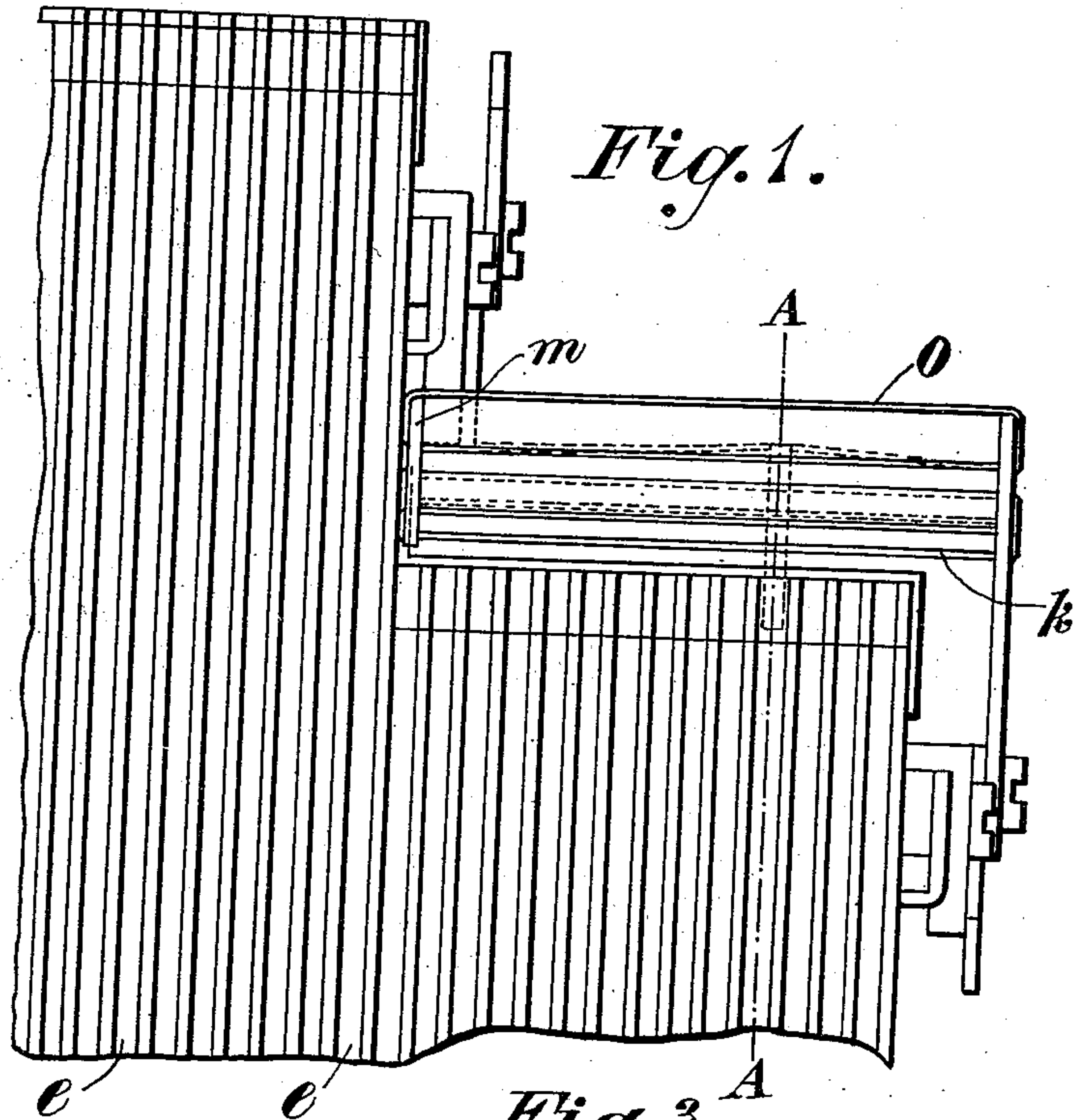
No. 742,671.

PATENTED OCT. 27, 1903.

G. E. KENNEY.
TYPE SETTING MACHINE.
APPLICATION FILED JAN. 26, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 2.

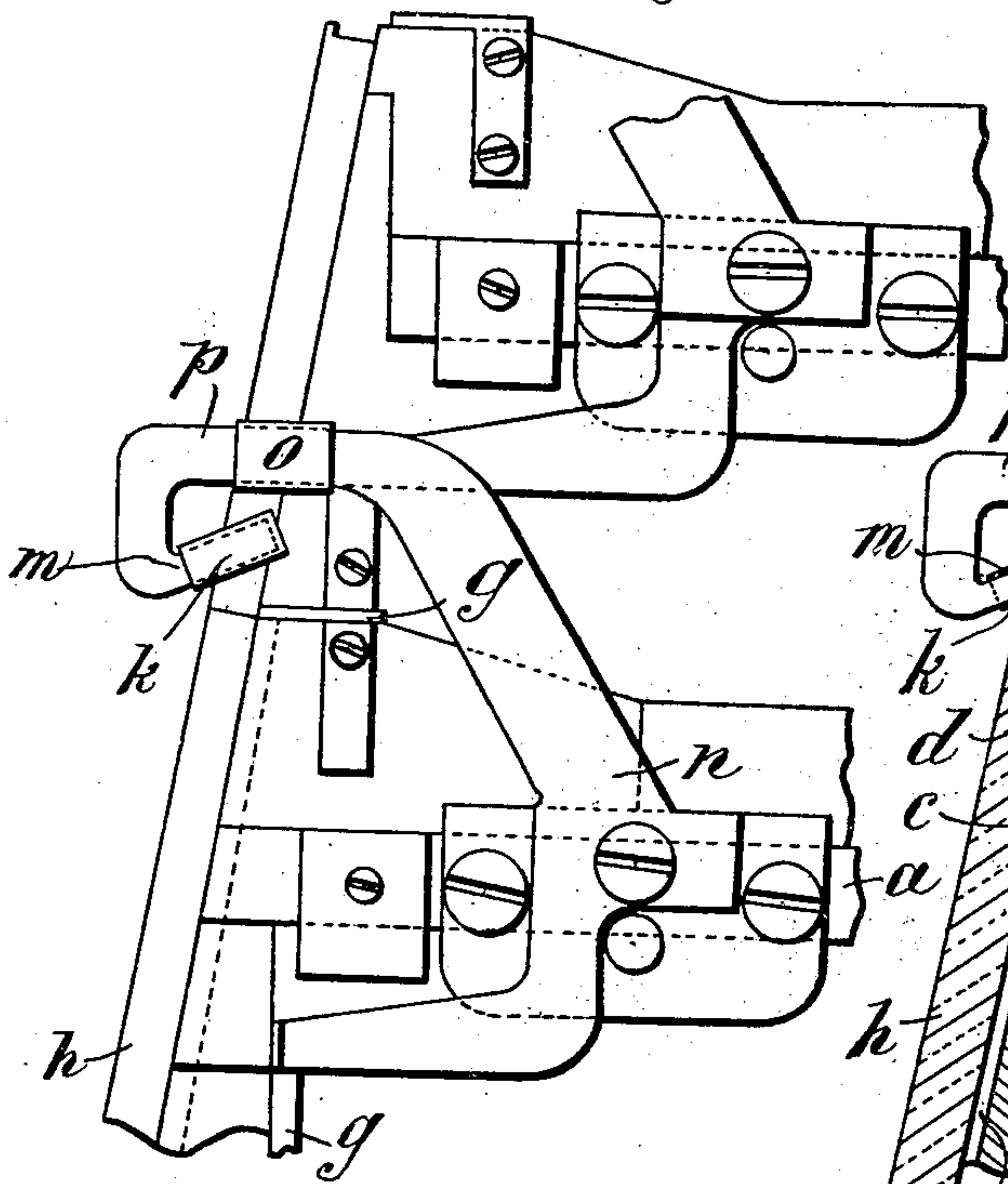
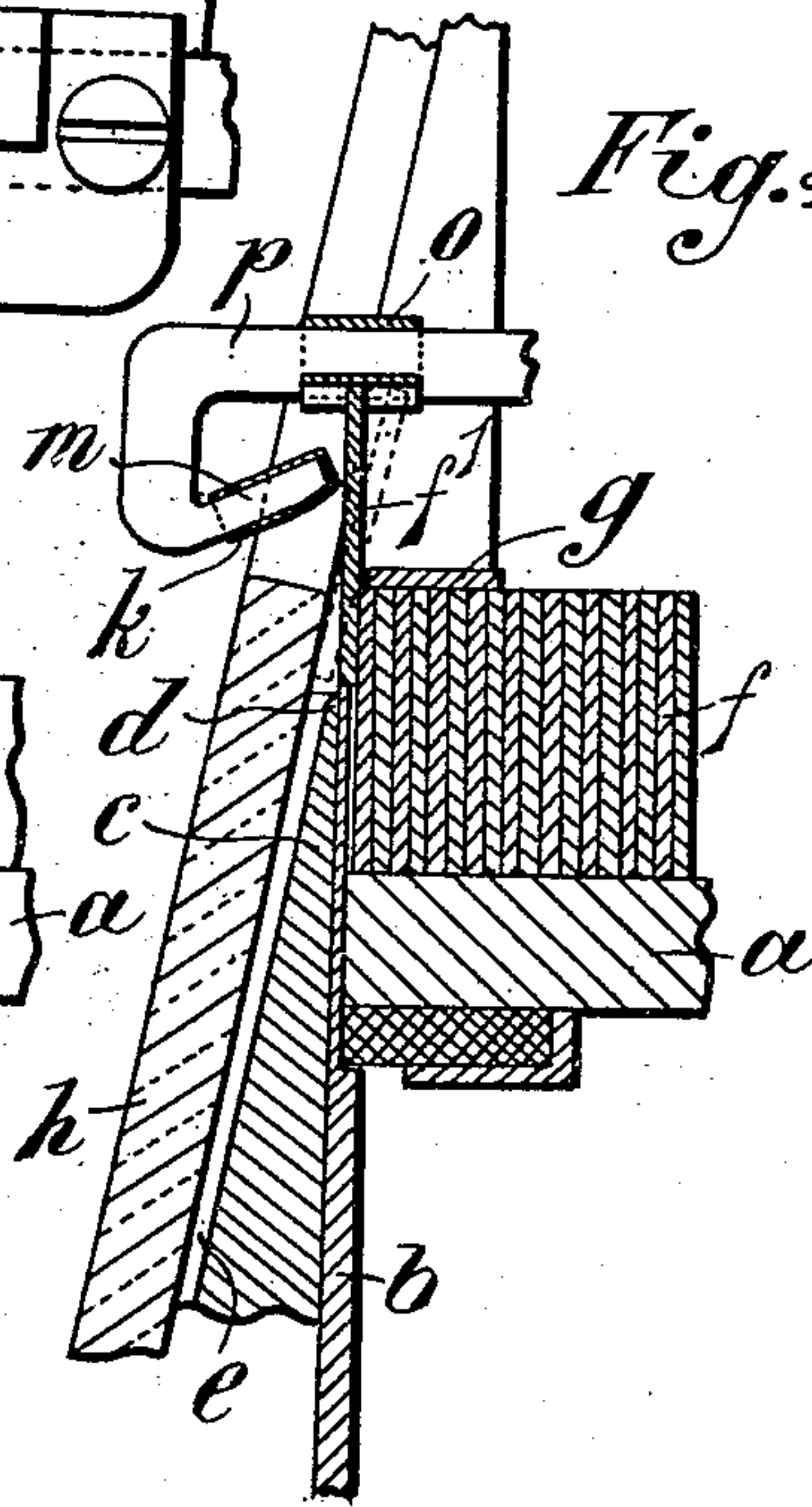


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE ENOS KENNEY, OF READING, ENGLAND, ASSIGNOR TO THE PULSOMETER ENGINEERING COMPANY, LIMITED, OF READING, ENGLAND.

TYPE-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 742,671, dated October 27, 1903.

Application filed January 26, 1903. Serial No. 140,586. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ENOS KENNEY, a subject of the King of Great Britain and Ireland, residing at Reading, in the county of Berks, England, have invented Improvements in Type-Setting Machines, of which the following is a specification.

In the specification of former Letters Patent No. 602,327, granted to Stanley H. Hodgkin and Philip E. Hodgkin, there is described a construction of type-setting machine wherein each type-pusher is arranged to work vertically through an opening in the front end of the corresponding type-trough, the passage through which the displaced type falls is located in front of a fixed stop terminating in a knife-edge at the top, and there is provided above the said passage a deflecting device, the arrangement being such that when the pusher is raised it will act against the lower side of the foremost type in the corresponding trough and force the same upward above the top edge of the stop, whereupon the displaced type will cant backward either automatically or under the action of the deflecting device and will fall into the discharge-passage with its face end uppermost.

Now the present invention has reference to improvements in type-setting machines of the kind above referred to; and it has for its object to simplify and improve the construction and operation of the deflecting device used for insuring the canting backward of each displaced type and the falling of such type through the discharge-passage.

It also has for its object to provide simple and effective means for limiting the upward movement of the displaced type when the same is raised quickly—as, for example, may be the case when the type-pushers are operated by mechanical power—and for afterward causing the displaced type to fall through the corresponding discharge-passage.

The invention consists for these purposes in an elastic or yielding type-deflecting device and in an elastic or yielding type stop or buffer.

It also consists in various novel features of construction and in combinations and arrangements of parts, all as hereinafter described, and pointed out in the claims.

In the accompanying illustrative drawings, Figure 1 is a front elevation, Fig. 2 a side elevation, and Fig. 3 a plan showing part of a type-setting machine of the kind referred to provided with type deflecting and stopping or buffing devices according to the present invention. Fig. 4 is a section on the line A A of Fig. 1.

a represents stationary type-troughs arranged horizontally side by side and each provided at its front end with a vertical pusher *b*, there being in the example shown two groups of such troughs arranged at different levels.

c is a stationary plate forming a stop arranged at the front end of and common to all the troughs in a group, its upper edge *d* forming a knife-edge and its front side being formed with a number of straight inclined channels or passages *e*, corresponding in position to the type-troughs *a* and through which the type *f* are successively discharged.

g is a cross-piece fixed directly above each group of troughs immediately in rear of the foremost types therein, and *h* is a glass plate fixed over the type-passages *e*, all as heretofore usual.

According to the present invention for canting a displaced type *f* in a backward direction there is supported above the discharge-passages *e* at the front end of the group of type-troughs *a* or, as in the example, above each group of type-troughs a deflecting device *k*, that is arranged transversely to and is common to all the type-troughs in the group and is formed of elastic or yielding material that will not injure the face of the type and which is arranged in an inclined plane above the discharge-passages *e*, corresponding to the group of troughs, the arrangement being such that should a displaced type *f'* not automatically cant backward when raised by its pusher *g* its upper end will, as indicated in full lines in Fig. 4, abut against the said deflecting device *k*, which will be thereby compressed and will then react and force the upper end of the displaced type backward, as indicated in dotted lines, so as to insure the type passing over the knife-edge *d*, and descending the corresponding discharge-passage *e* face uppermost. In the examples shown the elastic or yielding deflecting de-

vice k consists of a flat band of india-rubber that is stretched around and carried by a pair of arms m on a pair of stationary plates n , arranged at the outer sides of the outermost troughs in the group of type-troughs a , the said arms m being inclined upward and backward, so as to support the rear or lower length of the band in the proper inclined position above the discharge-passages e , and it may be partly over the foremost type f' in each trough.

For limiting the upward movement of the displaced type f' there is supported transversely across and above the front ends of the group of type-troughs a or above each group of type-troughs, as in the example, so as to be common to the group of troughs, a horizontal or approximately horizontal stop or buffer o , formed of or comprising elastic or yielding material, such as india-rubber, that will act to limit the ascent of a displaced type f' without injuring the face thereof and which after compression by the type will react to cause the type to quickly descend the corresponding discharge-passage e . In the example shown the elastic or yielding stop or buffer o consists of a flat band of india-rubber stretched around and carried by a pair of horizontal or approximately horizontal arms p , carried by the same pair of stationary plates n as are used for supporting the india-rubber band that serves as the deflecting device k .

What I claim is—

1. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop arranged above the ends of said type-trough, and a type-discharge passage in front of said stop, of a type-deflecting device comprising elastic or yielding material arranged transversely across and common to the type-troughs and discharge-passages and adapted to act against and tilt the upper ends of vertically-displaced types and bring the lower ends thereof over the corresponding discharge-passages.

2. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop arranged above the ends of said type-troughs, and a type-discharge passage in front of said stop, of a type-deflecting device consisting of flexible material stretched transversely across and common to said type-troughs and discharge-passages and adapted to tilt the upper ends of vertically-displaced types in a backward direction.

3. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop, and a type-discharge passage in front of said stop, of a type-deflecting device comprising a length of india-rubber supported at each end transversely above and common to said type-troughs and

discharge-passages and adapted to tilt the upper ends of vertically-displaced types in a backward direction.

4. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop, and a type-discharge passage in front of said stop, of a type-deflecting device consisting of an india-rubber band, and supports fixed at the opposite sides of the type-troughs and around which said band is stretched so as to be supported thereby transversely above the said type-troughs and discharge-passages with its rear portion in the path of vertically-displaced types.

5. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop, and a discharge-passage in front of said stop, of a type-deflecting device consisting of an india-rubber band, and supports fixed at the opposite sides of the group of type-troughs and provided with upwardly and backwardly inclined arms around which said band is stretched so as to be supported thereby transversely above the said type-troughs and discharge-passages.

6. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop arranged above the ends of said type-troughs, and a type-discharge passage in front of said stop, of an elastic or yielding type stop or buffer arranged transversely above the forward ends of said type-troughs.

7. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop, and a type-discharge passage in front of said stop, of a type stop or buffer consisting of flexible material supported at each end and stretched transversely above said type-troughs and adapted to direct a vertically-displaced type abutting against it, downward through the corresponding discharge-passage.

8. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop, and a type-discharge passage in front of said stop, of an elastic or yielding type stop or buffer comprising a length of india-rubber supported at each end transversely above and common to the forward ends of all the type-troughs.

9. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop, and a type-discharge passage in front of said stop, of an elastic or yielding type stop or buffer consisting of an india-rubber band, and supports fixed at the opposite sides of the type-troughs and around which the same is stretched and supported in a horizontal direction above the forward ends of said type-troughs.

10. In a type-setting machine, the combination with a number of type-troughs each provided at its front end with a vertically-movable pusher, a fixed stop, and a type-discharge passage in front of said stop, of a type stop or buffer consisting of an india-rubber band, and supports fixed at the opposite sides of the group of type-troughs and provided with horizontal portions around which said band

is stretched and by which it is supported to above the forward ends of said troughs.

Signed at 75, 76, and 77 Cornhill, London,
E. C., this 5th day of January, 1903.

GEORGE ENOS KENNEY.

Witnesses:

WM. O. BROWN,
FRED. C. SMITH.