R. M. BEDELL.

MATRIX FOR LINE CASTING MACHINES.

APPLICATION FILED DEC. 12, 1908.

958,076.

Patented May 17, 1910.

Fig. 1.

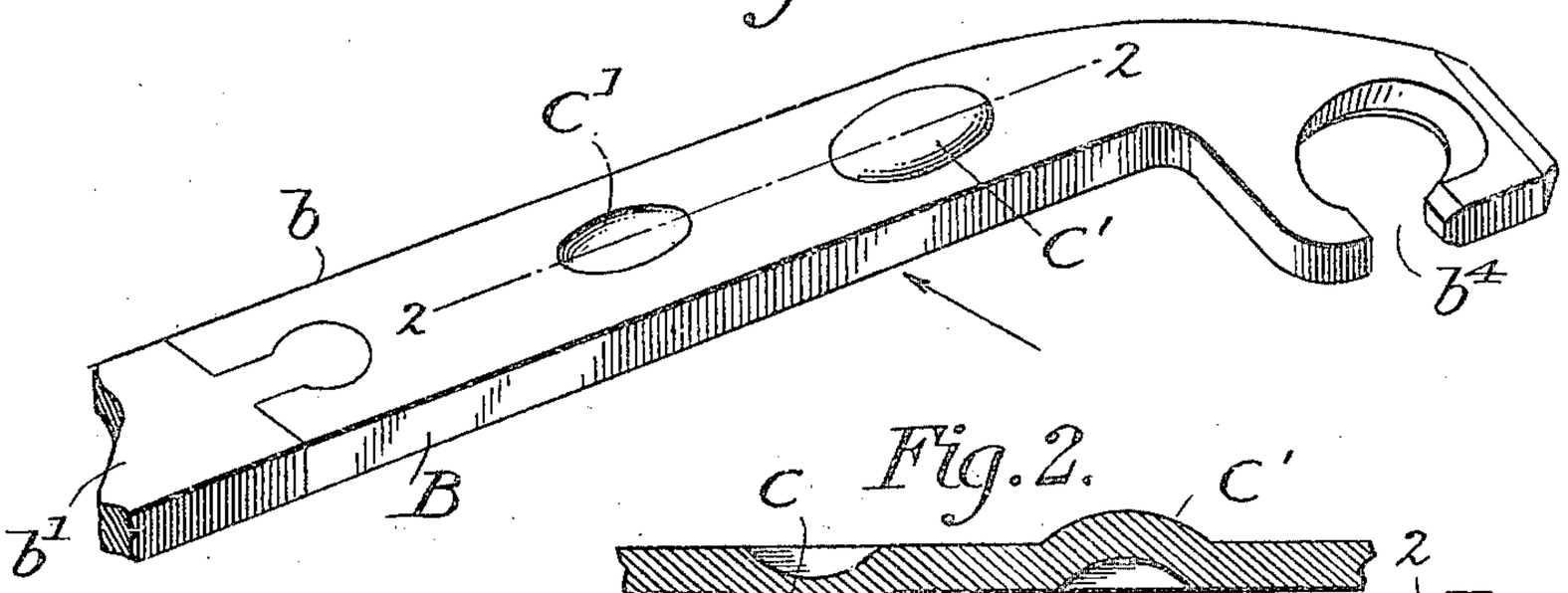


Fig. 2.

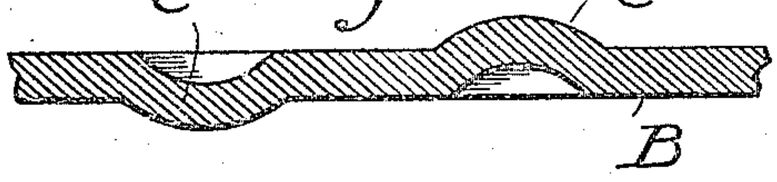


Fig. 3.

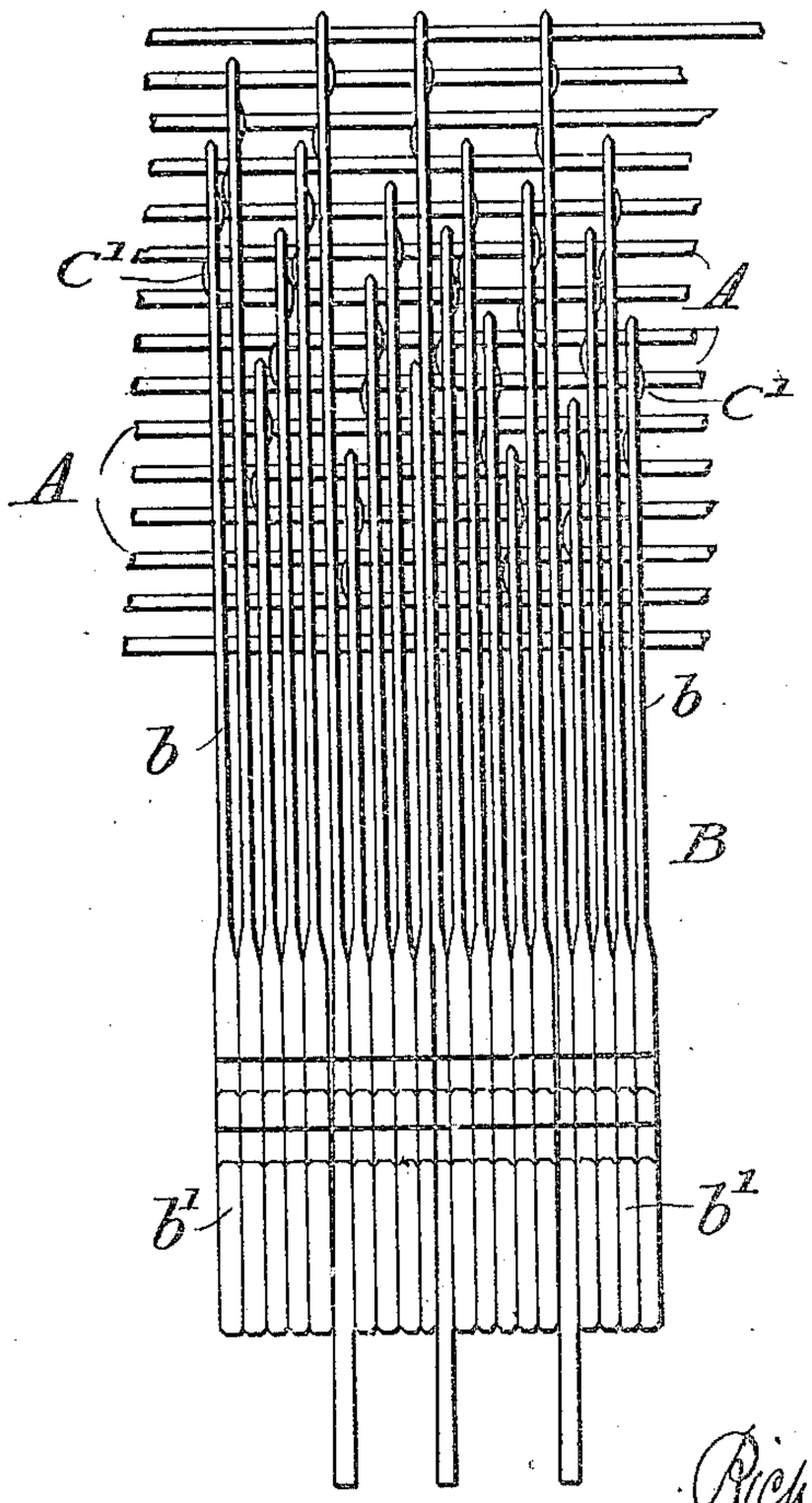
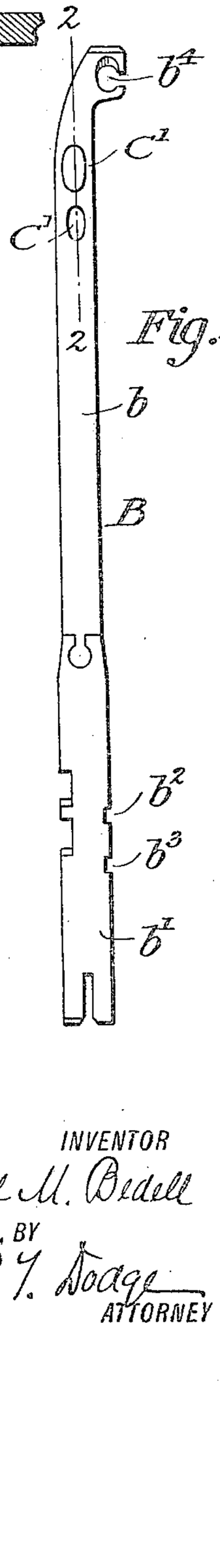


Fig. 4.



WITNESSES:

Raymond T. Barnes.

Luther E. Morrison

INVENTOR

Richard M. Bedell

BY

P. J. Doage

ATTORNEY

ANDREW B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

RICHARD M. BEDELL, OF BROOKLYN, NEW YORK, ASSIGNOR TO MERGENTHALER LINOTYPE COMPANY, A CORPORATION OF NEW YORK.

MATRIX FOR LINE-CASTING MACHINES.

958,076. Specification of Letters Patent. Patented May 17, 1910.

Application filed December 12, 1908. Serial No. 467,318.

To all whom it may concern:

Be it known that I, RICHARD M. BEDELL, of the borough of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Matrices for Line-Casting Machines, of which the following is a specification.

This invention has reference to a matrix, such as are employed in the machine represented in Letters Patent of the United States No. 679,481 and kindred machines. In these machines, the matrices, made of various lengths, are suspended from parallel guide wires lying at different heights. They are compelled to travel along these wires in composed lines, the lower ends of all the matrices standing at a common level, in order to bring the characters, or matrices proper, in alinement.

For reasons unnecessary to detail, the upper ends, or shanks, of the matrices are thinner than the lower ends. It follows therefore, that when the matrices are assembled side by side with their lower ends in contact, the upper ends or shanks will be out of contact.

When the line is advanced along the guides, the frictional resistance tends to retard the upper ends and cause the shanks to close together at the upper ends, so that they are no longer parallel. This is attained by an increase in the frictional resistance and other serious evils unnecessary to enumerate.

The object of my invention is to avoid this difficulty by so constructing the matrices that they will be kept parallel, or practically so, in their upper and lower ends when assembled in close order. This result is accomplished by thickening or widening each shank in the direction of the length of the composed line at or near its upper end, so that the protruding portion will bear against the side of the adjacent matrix on the line.

I preferably provide each matrix with two projections on opposite sides and out of line with each other, so that when the matrices are assembled the projection on one matrix will stand out of line with the projection on the next.

The advantage of having the two projections out of line lies in the fact that undue separation of the matrices at the upper end when assembled side by side is prevented.

I prefer to form the projections by indenting the shank, or stem, from opposite sides.

Figure 1 is a perspective view of the upper end of a matrix shank provided with my improvement. Fig. 2 is a section of the same on the line 2—2 of Figs. 1 and 4. Fig. 3 is a view illustrating a composed line of matrices suspended from the guide wires such as are used in the machine. Fig. 4 is a side view of one of the matrices.

Referring to the drawings, A A represents a series of wires or guides from which the matrices are suspended, and along which they are required to travel. This is fully described in the patent above referred to.

B B are the matrices, each consisting of a long, flexible shank b, usually of steel, and a lower portion b^1, commonly made of brass, the two parts being rigidly connected. The lower, or operative portion, b^1, has parallel side faces, and is provided in one edge with one or more female characters, or matrices proper, b^2 and b^3, as usual. The shank b, which is thinner than the lower, or body portion, is provided at the upper end with the usual eye, b^4, by which the matrix is suspended from its supporting guide.

So far as described, the matrix is or may be in all respects of ordinary construction.

In applying my improvement, I provide the shank near the upper end on one or both sides with projections, C^1. They may be formed integrally with the shank or applied thereto in any suitable manner. The preferred construction is that shown in the drawing, in which the projections are formed by means of a suitable die or other tool adapted to indent the metal on one side and drive it downward beyond the surface of the shank on the opposite side. The projections should be such as to keep the shanks of the matrices parallel, or practically so, as the composed line is driven forward along the guides.

While I have shown my improvement as applied to the shanks of the matrices only, it will be understood that it is applicable in like manner to the shanks of the wedge spacers or justifiers commonly used in these machines.

Having described my invention, what I claim is:

1. A matrix of the class described, having a body portion and an upwardly extending shank, the latter having its upper end pro-

vided with a suspending eye and with an adjacent lateral projection, the projections adapted to hold the shanks of the matrices apart when assembled in line.

2. A matrix of the class described, having a body portion and a shank with a suspending eye at its upper end, said shank indented in one side to form a protrusion on the opposite side.

3. A matrix of the class described, having a shank provided with a suspending eye, and with lateral projections on opposite sides, out of line with each other.

4. A matrix of the class described, having a body portion, a shank of a thickness less than that of the body portion, a suspending eye at the upper end, and a side projection at the upper end below the eye.

5. A matrix of the class described, having a thick body portion, a shank thinner than the body throughout its length with a suspending eye at the upper end, and lateral projections on the shank below the eye.

In testimony whereof I hereunto set my hand in the presence of two attesting witnesses.

RICHARD M. BEDELL.

Witnesses:

JOHN R. ROGERS,

ROBERT G. CLARK.