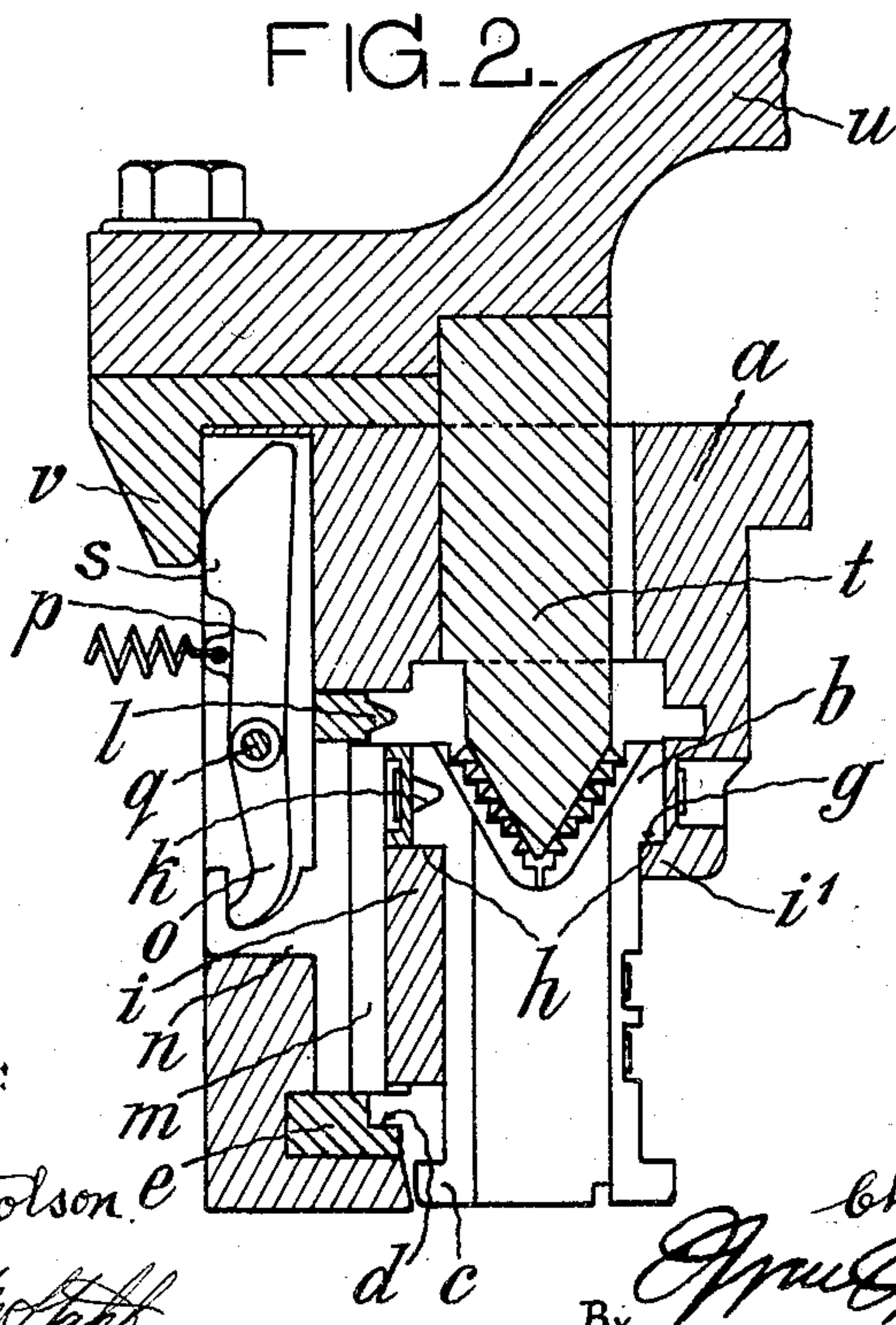
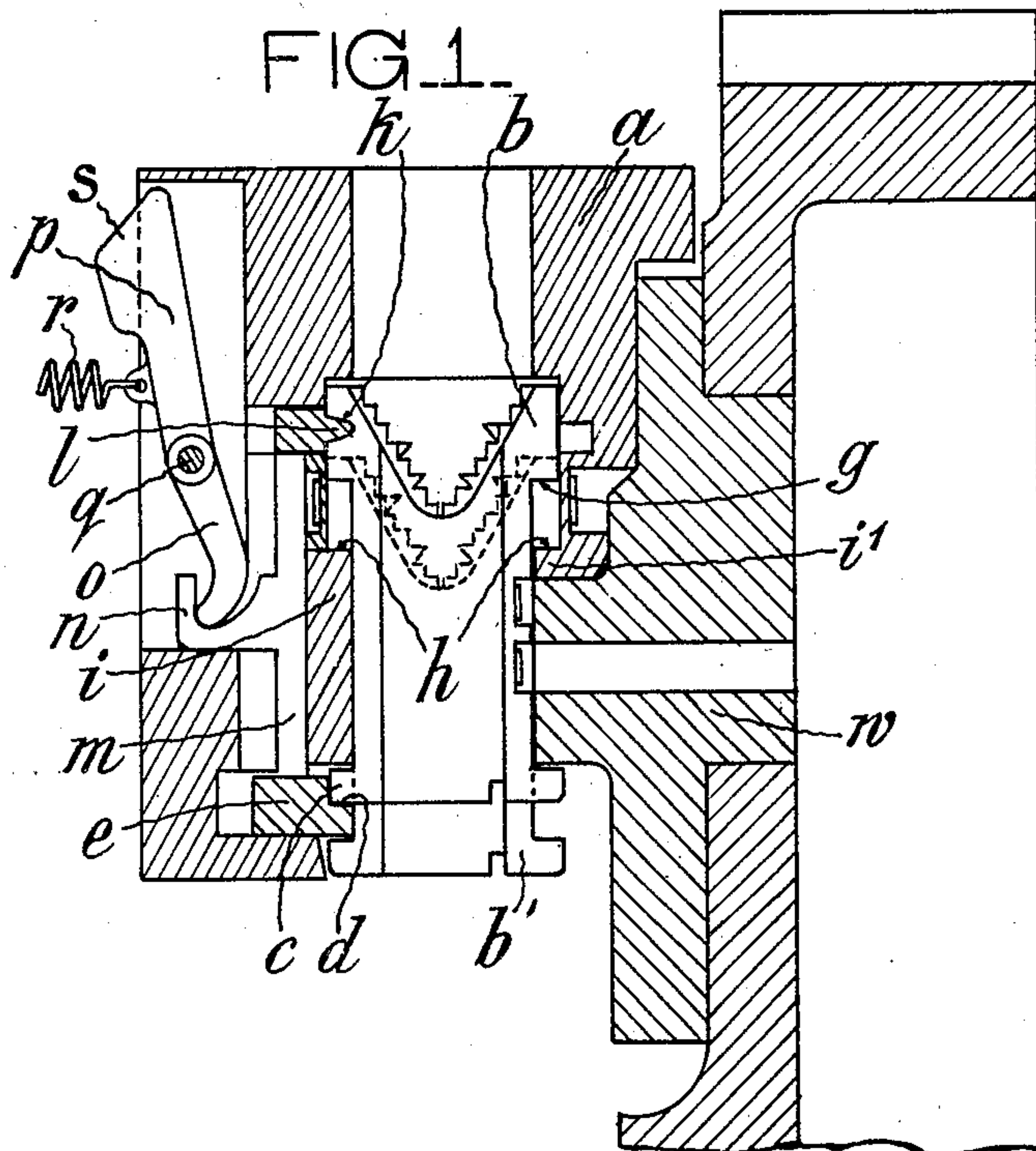


No. 880,264.

PATENTED FEB. 25, 1908.

C. A. ALBRECHT.
LINOTYPE AND OTHER TYPE CASTING MACHINE.
APPLICATION FILED NOV. 27, 1907.



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UNITED STATES PATENT OFFICE.

CHRISTIAN A. ALBRECHT, OF BALTIMORE, MARYLAND.

LINOTYPE AND OTHER TYPE-CASTING MACHINE.

No. 880,264.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed November 27, 1907. Serial No. 404,125.

To all whom it may concern:

Be it known that I, CHRISTIAN A. ALBRECHT, a citizen of the United States, and resident of Baltimore, in the State of Maryland, (whose post-office address is 677 Columbia avenue, Baltimore, Maryland, to time: 23 Chausseestrasse, Berlin N. 4, Germany,) have invented new and useful Improvements in Linotype and other Type-Casting Machines, of which the following is a specification.

As is well known, the matrices with two or more superposed intaglio letters for linotype or other type-casting machines are vertically adjusted, before they together with the space bars are pushed into the known vertically movable yoke, which then lowers and presents the meanwhile clamped line of matrices and space-bars to the mold or mold-wheel for the casting of the linotype. Afterwards the yoke rises and applies the loosened line of matrices and space-bars to the known rail or other machine part into which the line is pushed, so that the matrices may be separated from the space-bars by means of the movable distributor or the like and transferred to the top of the machine to be there distributed to the magazine or magazines. The yoke is usually provided with a laterally movable part having one or several horizontal ledges, on which the respective matrices, if raised, are made to rest with their lower rear ears or lugs and to slide. When the yoke is raised, some means is provided on the machine for withdrawing the said movable part, so that the raised matrices are released and permitted to drop, until they rest with their upper ears or lugs on stationary ledges or shoulders in the yoke. Then all the various matrices in the yoke will be on the same level, so that they can be pushed into the said rail or other machine part for engaging the teeth of the movable rail. However, as the matrices constantly and repeatedly drop and strike various machine parts, their lower ears or lugs are rapidly worn away, more particularly on the external points, so that the correct position of the several raised matrices for the casting operation is no longer insured. To remedy this defect, it has been proposed to provide the matrices on the rear edge with a nose, so that they in their raised position may be supported on two places, viz. on the said nose and on the lower rear

ear or lug. However, the said noses are objectionable for two reasons. The one reason is, that they would require the various channels in the machine parts, through which they pass, to be altered; and the other reason is, that in linotype-machines they would not pass through the ordinary matrix-delivering mechanisms in the magazines.

My invention relates to improvements in matrices with two or more intaglio letters and in the vertically movable yoke, whereby the wear and tear of the lower ears or lugs of the matrices is reduced. The objects of my improvement are, first, to provide each matrix with a recess on the rear edge, preferably in the rear upper ear or lug; second, to provide in the yoke a second laterally movable rail; and, third, to provide means for simultaneously withdrawing the two rails on the yoke reaching its uppermost position.

I will now proceed to describe my invention with reference to the accompanying drawing, in which—

Figure 1 is a vertical cross section through a vertically movable yoke applied with the matrices to the mold on a mold-wheel, the matrices being each provided with two intaglio letters and two of them being shown in different positions, and Fig. 2 is a vertical cross section through the same yoke in its uppermost position, in which it is applied to the known rail or other machine part, so that all the matrices occupy their lower position and can engage the teeth of the movable rail.

Similar letters of reference refer to similar parts throughout the several views.

The matrices b b^1 are each provided with a recess k (see Fig. 1) in the upper rear ear or lug, as shown. In the vertically movable yoke a I provide besides the known rail e a second rail l , which is adapted to engage in the recesses k of the matrices, so that each raised matrix b is guided on two places, viz. with the lower rear ear or lug c on the shoulder d of the lower rail e and with its upper rear ear or lug on the ledge on the upper rail l . I combine the two rails e and l together by means of a vertical part m which is provided with a hook n . Suitable recesses are provided in the yoke a for guiding the two rails e and l in the cross direction. A two-armed lever o p rocking on a pin q is provided in a recess of the yoke a , and its lower arm o is made to engage in the hook n , while

its upper arm p is normally pressed outwards (see Fig. 1) by a helical spring r , which is attached to some projection (not shown) on the yoke, so that the two rails e and l normally project into the path of the matrices b b^1 .

During the operation of the machine some of the matrices (denoted by b) are in any known manner shifted into the upper position, while the other matrices b^1 may occupy their normal position. When after the assembling the line of matrices and space-bars is pushed into the yoke a , and the latter lowers and applies the meanwhile clamped line to the mold w (Fig. 1) on the mold-wheel, the upper intaglio letters of the not raised matrices b^1 and the lower intaglio letters of the raised matrices b will be opposite to the slot of the mold w , so that the linotype can be cast.

The upper end of the arm p is so shaped as to form a cam s , which is beveled off, so that on the yoke a reaching its uppermost position the cam s striking a suitable ledge v on a slide u or the like will be depressed and thereby the two rails e and l will be withdrawn to release the raised matrices b , which will then drop and be on the same level as the other matrices b^1 , all of them resting with their upper ears or lugs on the two shoulders h of the parts i and i^1 of the yoke a . In this position the matrices are ready to engage the teeth of the movable rail t in order to be separated from the space-bars during their transfer to the top of the machine.

I do not bind myself to the construction shown of the parts u , v and t in Fig. 2, as they may be replaced by parts of some other known linotype or other type-casting machine of a different construction. The essential point is, that the cam s on the lever o p be arranged to be depressed for simultaneously withdrawing the two rails e and l . The recess k in each matrix is shown as made triangular, but it may also be made square or rectangular or semicircular or otherwise shaped, and the ledge on the upper rail l will require to have a corresponding cross section.

The device shown may be varied without departing from the spirit of my invention.

I claim:

1. In a linotype or other type-casting machine, the combination with matrices each with two or more superposed intaglio letters and having a recess in the rear edge, of a vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, and means for withdrawing said lower rail and said upper rail to release the raised matrices,

substantially as described and for the purpose set forth.

2. In a linotype or other type-casting machine, the combination with matrices each with two or more superposed intaglio letters and having a recess in the rear edge, of a vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, and means for simultaneously withdrawing said lower rail and said upper rail to release the raised matrices, substantially as described and for the purpose set forth.

3. In a linotype or other type-casting machine, the combination with matrices each with two or more superposed intaglio letters and having a recess in the rear edge, of a vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, and means for rigidly connecting said lower rail with said upper rail, substantially as described and for the purpose set forth.

4. In a linotype or other type-casting machine, the combination with matrices with two or more superposed intaglio letters and having a recess in the rear edge, of a vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, springs pressing said lower rail and said upper rail into the path of said matrices, and means for withdrawing said lower rail and said upper rail to release the raised matrices, substantially as described and for the purpose set forth.

5. In a linotype or other type-casting machine, the combination with matrices each with two or more superposed intaglio letters and having a recess in the rear edge, of a vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, parts rigidly connecting said lower rail with said upper rail, a lever mounted in said yoke to rock and pivotally connected with said parts, a spring pressing on said lever and thereby pushing said lower rail and said up-

per rail into the path of said matrices, and means on the machine frame for shifting said lever and thereby withdrawing said lower rail and said upper rail on said yoke reaching
5 its uppermost position, substantially as described and for the purpose set forth.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

CHRISTIAN A. ALBRECHT.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.