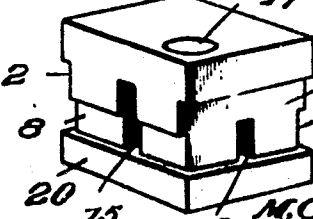
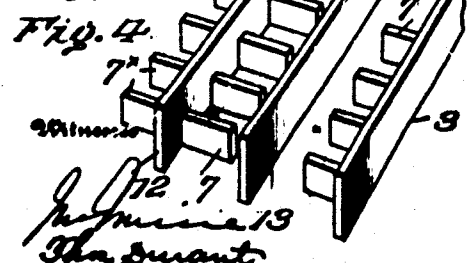
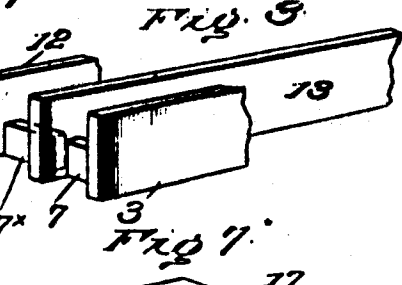
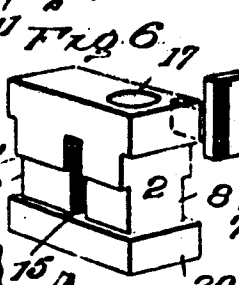
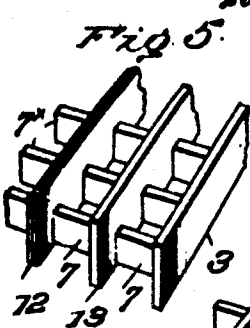
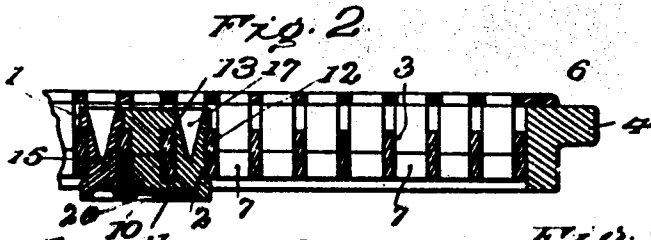
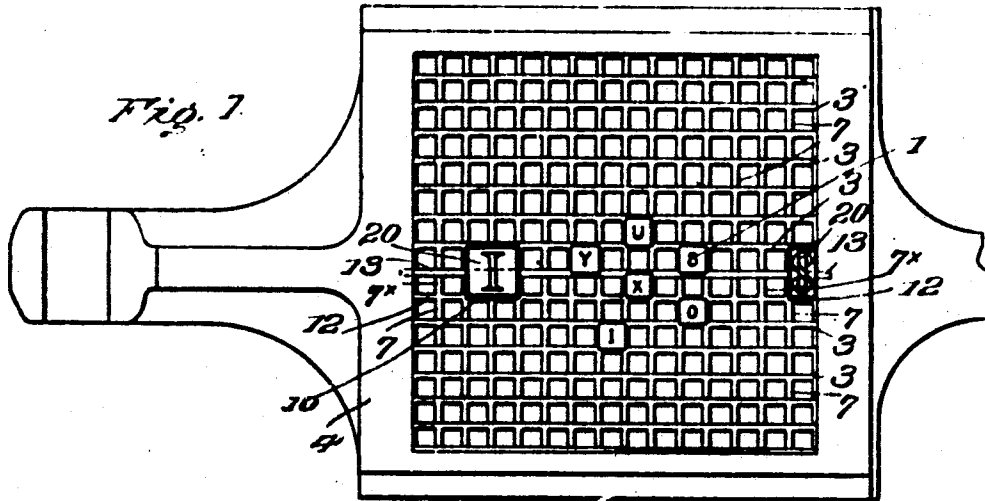


M. C. INDAHL & W. E. CHALFANT.
DIE CASE EQUIPMENT FOR TYPE MACHINES.
APPLICATION FILED JUN 1, 1900.

980,959.

Patented Jan. 10, 1911.



Inventors

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UNITED STATES PATENT OFFICE.

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DIE-CASE EQUIPMENT FOR TYPE-MACHINES.

DE 959.

Specification of Letters Patent. Patented Jan. 10, 1911.

Application filed June 7, 1906. Serial No. 800,557.

To all whom it may concern:

Be it known that we, MAURITZ C. INDAHL and WILLIAM E. CHALFANT, of Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented a certain new and useful Improvement in Die-Case Equipments for Type-Machines; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

The present invention relates to improvements upon what is known as the cellular die case, illustrated in Patent No. 781,215, of March 7, 1905, and it has for its principal object to provide for the accommodation of matrices of abnormal dimensions, either alone or in conjunction with the standard matrices and without injuriously affecting the action of the latter, to which end the invention consists in the novel constructions and arrangements of parts hereinafter fully described and pointed out in the appended claims.

In the accompanying drawings illustrating a preferred form of embodiment Figure 1 is a front elevation of a die case with the improvements applied thereto. Fig. 2 is a transverse section through a section of the die case. Figs. 3 and 4 are detail views showing the suspension bars in perspective. Fig. 5 is a detail perspective view of a modification of the double or reversed suspension bar. Fig. 6 is a perspective view of a double or two cell matrix block. Fig. 7 is a perspective of a quadruple or four cell matrix block.

Similar numerals indicate like parts in the several figures.

The die case equipment with which the improvements are shown associated is that of Patent No. 781,215, and includes an open supporting frame 1, perforated guard plate 6 and suspension bars 3 each provided with a series of lateral projections or fingers 7 forming cells for the reception of side-grooved matrix blocks 1.

The aforesaid die case is specially designed and adapted to receive matrix blocks whose cross sectional area does not exceed that of the cells plus one half or less the thickness of the suspension bars and fingers

forming each cell, so that any matrix block of standard dimension may be confined in any one of the several cells. It sometimes happens, however, that it is necessary or desirable to equip the die case with matrix blocks of much larger dimensions, applied singly, in multiple or in combination with others of normal or standard dimension, as when type with laterally extended heads, bearing characters larger than the type body are produced. For this purpose the end of the matrix block which contacts with the face of the mold and forms the cover for the mold cavity is provided with an enlarged cavity or recess 10, Fig. 2, for the head of the type, in addition to the character depression 11, so that when molten metal is injected into the mold cavity it will fill the lateral extension furnished by recess 10, resulting in the production of a type with a head wider than its shank or body and containing the character. Usually this lateral extension of the head is located on the side opposite the neck, but it may include either or all sides, and in setting up such type the overhang is supported upon the end of a quid or space cast in the same mold to the level of the face thereof. The matrix blocks for these extended type being larger than the cells for standard matrix blocks cannot be accommodated in the standard die case without material change in the latter, such as would interfere with the subsequent use of standard matrix blocks, and it is the purpose of the present invention to render the equipment competent to receive either or both forms of matrix blocks without in any way interfering with the performance of its normal functions. To this end one or more of the suspension bars forming the division between adjacent rows of cells is deprived of its lateral projections or fingers 7, and the latter are transferred to the rear face of the next succeeding suspension bar. Thus, in the preferred form of embodiment illustrated, the suspension bar 12 in addition to the usual lateral projections or fingers 7 is provided on the opposite face with a corresponding series of fingers 7*, and between the latter and the fingers 7 of the adjacent suspension bar 3 is interposed a straight suspension bar 13; or, in place of applying the reversed fingers 7* to bar 12 the latter may be formed in two longitudinal sections as

shown in Fig. 5. It will be seen that this construction permits the suspension bars 3 and 12, each forming three sides of one of the two rows of cells, to be assembled for application to die case frame 4 prior to the insertion of suspension bar 13, forming the fourth side of each of the two series of cells, and, further, that being without lateral extensions said suspension bar 13 can be inserted by a longitudinal movement after the smaller or standard matrix blocks have been deposited in the cells.

The extended type matrix blocks 20 are each provided with the usual side grooves 2 and 8 for the reception of the suspension bars and fingers, and, in addition thereto, each is furnished with a transverse slot or opening 15, for the reception or passage of bar 13. The four cell matrix blocks, Fig. 7, are also provided with a slot or passage 16 at right angles to opening 15 for the accommodation of the fingers 7, 7*, forming dividing walls of adjacent cells in the same row occupied by said matrix blocks. The extended type matrix blocks 20 are also provided with the usual coned centering hole 17, which latter, instead of being located centrally of the matrix block as in the standard matrix blocks, is located centrally of the section occupying one of the cells, thus obviating the necessity of any change in the location of the centering pin of the casting machine, the adjusting devices pertaining to the cell thus designated being utilized, if desired, for positioning the matrix opposite the mold.

When standard matrix blocks alone are used, they are assembled as usual in rows between fingers 7 or 7* and suspension bar 13 is located between the proximate ends of the two adjacent series of fingers 7 and 7*, after which the assembled series of suspension bars is applied to the die frame and secured therein in the usual manner. When, however, it is desired to insert one or more of the extended type matrices adjacent suspension bars 3 and 12 are separated to permit the insertion of the matrix block, the latter, if of the two cell variety, Fig. 6, being received between adjacent fingers 7 or 7* on the suspension bars, and if of the four cell variety, Fig. 7, being threaded upon complementary fingers 7 and 7*, and prior or subsequent to such assembly suspension bar 12 is passed through the slot 15.

Although but a single oppositely fingered suspension bar 13 with associated plain suspension bar 12 is shown, in the drawings and as applied to a die case equipped with the usual fingered suspension bars 3, it is obvious that any number of said couples 12,

13, within the capacity of the die case, may be employed alone or in conjunction with bars 3, it only being required that a plain bar 12 be interposed between the contiguous ends of the fingers on adjacent bars 13, or between the series of fingers on a bar 13 and the complementary series of fingers 7 on the bar 3 adjacent thereto.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. A die case equipment such as described provided with an oppositely fingered suspension bar and an associated plain suspension bar.

2. A cellular die case equipment such as described including parallel suspension bars provided with complementary series of lateral projections or fingers and an interposed plain suspension bar.

3. A cellular die case equipment such as described provided with three suspension bars disposed in succession and in parallel, the intermediate suspension bar being plain and the outer suspension bars each provided with a series of fingers bridging the interval between it and the intermediate suspension bar.

4. A cellular die case equipment such as described including a supporting frame and detachable suspension bars disposed in series of three whereof the intermediate member is plain and the outer members each provided with a series of spaced lateral projections or fingers extending therefrom toward the intermediate plain member to form a series of cells between each outer member and said intermediate member.

5. A cellular die case equipment such as described provided with a plurality of fingered suspension bars, an intermediate plain suspension bar, and a matrix block provided with side bearings for engagement with the fingered suspension bars and slotted for the passage of the intermediate suspension bar.

6. A cellular die case equipment such as described, the same including parallel suspension bars provided with complementary series of lateral projections or fingers, an interposed plain suspension bar, a transversely slotted matrix block threaded upon the plain bar and occupying a plurality of cells, and a matrix block of smaller lateral dimensions suspended in a cell between the plain and one of the fingered bars.

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