G. S. THOMPSON.

DIE AND DIE CARRIER.

APPLICATION FILED APR. 24, 1920.

1,359,934. **Patented Nov. 23, 1920.**

FIG. I.

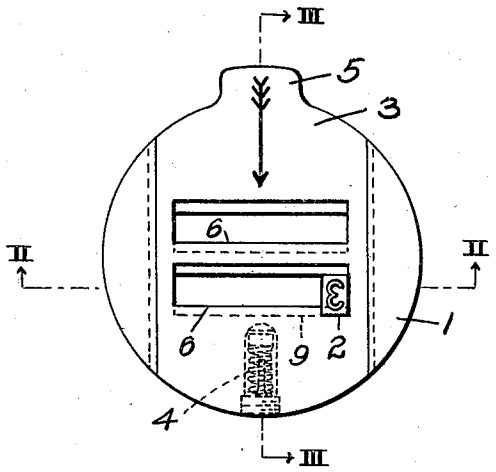


FIG. II.

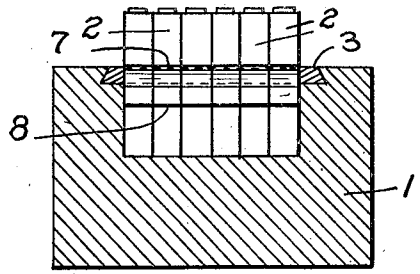
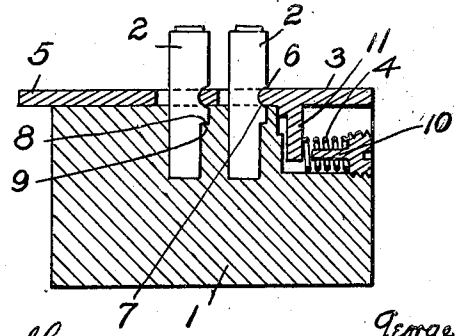


FIG. III.



WITNESSES

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DIE AND DIE-CARRIER.

1,359,934. Specification of Letters Patent. Patented Nov. 23, 1920.

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To all whom it may concern:

Be it known that I, GEORGE S. THOMPSON, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Dies and Die-Carriers, of which improvements the following is a specification.

My invention relates to improvements in dies and die carriers, such as are used in stamping legible characters in the surface of articles made of sheet metal—baggage checks, and the like. Manifestly the invention is in no wise limited to stamping upon articles of any particular character I state a specific use, merely by way of example.

In the accompanying drawings Figure I is a view in plan of a die block or carrier of my invention, having a single die set in place within it; Fig. II is a view in vertical section, on the plane indicated by the line II—II, Fig. I; Fig. III is a view in vertical section also, the plane of section, indicated by the line III—III, Fig. I, being at right angles to that of Fig. II. In Figs. II and III the carrier is shown to be equipped with its complement of dies.

The carrier consists essentially of a block 1, in which are recesses for dies 2, and means for securing the dies when in place, and for releasing them for removal and replacement at will. The means for securing and releasing the dies consist of a slide 3, held normally by the tension of a spring 4 to die-engaging position, and movable to release position by means of pressure conveniently exerted through an extension 5, slide and die being provided with the coöperating tongue-and-groove engagement indicated at 6, 7, Fig. III. These are general characteristics, of common knowledge.

My invention consists in such particular configuration of parts as will prevent the possibility of accidental insertion of a die in inverted position. To this end die and recess are stepped, as indicated at 8, 9; the shank of the die is of diminished thickness at the end remote from the stamping face; and the step which effects this diminution of thickness is so arranged that the die may be introduced into the recess formed in the block 1 to receive it, when and only when the die is in proper position, right side up. As shown in the drawings there is a single step 8, formed on one side of the die; the opposite side is plain; the coöperating step 9 in the recess in the die block is arranged at a lower level than slide 5; and the tongue and groove engagement 6, 7 of slide and die is in the thicker portion of the shank of die 2. Suitable means are preferably provided for limiting the range of movement of slide 5, so that when the tongue 6 is withdrawn from the groove 7 in die 2 it will recede practically no farther than necessity requires, and the extreme end of tongue 6 will then be flush with the face of the die recess in block 1. Such means may conveniently take the form of a post 10, about which spring 4 may be coiled. The width of the opening through the slide 3 equals the thickness of the shank of the die in its thicker part; it exceeds the thickness of the shank where it is grooved by just so much as the interval of slide movement. The slide when retracted then forms a continuation of the recess in the block and of equal width with that recess in its wider outer portion.

Consideration of Fig. III will reveal the essential fact that when slide 3 is moved to the right until the opposite edges of the openings through it come flush with the adjacent vertical surfaces of the recesses in block 1 in which dies 2 are shown to stand (abutment of projection 11 of slide 3 upon post 10 limiting the movement of the slide to that range). The dies 2, while they may then be withdrawn and replaced, may be replaced only when in the position shown. If one of them be turned around, so that it is upside down, abutment of step 8 against the rim of the recess will prevent seating; nor can the die be locked by slide 3 while in such position.

The invention then resides in the asymmetry of the opposite sides of the die and recess in the die block and the diminshed size of the remote end of the shank of the die and of the recess. And, coöperating to the same end, the range of movement of slide 3 is limited.

The die carrier shown in the drawings is designed to carry a plurality of dies arranged side by side, in line. To this end the shanks of the dies shaped above and below (*cf.* Fig. I) as described, and as particularly shown in Fig. III, are otherwise plane-

sided, to fit closely together, as indicated in Fig. II. Each recess in the die block is of proper length to hold exactly a given number of dies (Fig. II shows a recess holding six dies), and in the specimen chosen for purposes of illustration there are two such recesses, to hold two lines of dies. Manifestly in these particulars the structure may be varied at will.

I claim as my invention:

1. A die and die block having shank and recess of complementary shape, opposite sides of die shank and block recess being asymmetrical, and die shank and block recess being of diminished width at the remote end, substantially as described.

2. A die and die block having shank and recess of complementary shape, one side of die shank and block recess being stepped and the opposite side asymmetrical with respect to it, die shank and block recess being of diminished width at the remote end, substantially as described.

3. A die and die block having shank and recess of complementary shape, one side of die shank and block recess being stepped and the opposite side asymmetrical with respect thereto, said die block being provided with a die-locking slide, said slide and die shank being formed with complementary tongue and groove configuration, substantially as described.

4. A die and die block having shank and recess of complementary shape, opposite sides of die shank and block recess being asymmetrical, and shank and recess being of diminished width at the remote end, and a slotted die-locking slide, said slide and die formed with complementary tongue and groove configuration, said slide being movable under spring pressure through a range equal to the depth of such tongue and groove configuration and when retracted standing with slot in alinement with the recess in the die block, substantially as described.

In testimony whereof I have hereunto set my hand.

GEORGE S. THOMPSON.

Witnesses:
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HENRY G. LEFFERTS.