

G. W. MCGILL.
METALLIC FASTENING.
APPLICATION FILED JUNE 27, 1908.

985,825.

Patented Mar. 7, 1911.

Fig. 1.

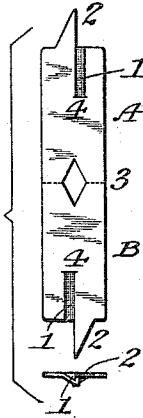


Fig. 2.

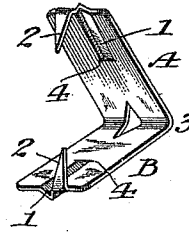


Fig. 3.

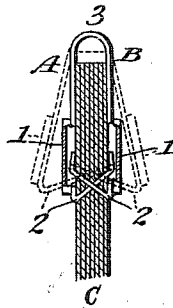
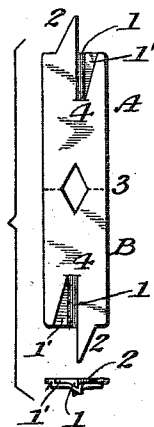


Fig. 4.



Witnesses:-

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METALLIC FASTENING.

985,825.

Specification of Letters Patent.

Patented Mar. 7, 1911.

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To all whom it may concern:

Be it known that I, GEORGE W. MCGILL, a citizen of the United States, and a resident of the borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Metallic Fastenings, of which the following is a specification.

My invention provides a metallic fastener having for its object the fastening together of sheets of paper and like material, and consists of a body-portion fashioned from a single piece of sheet metal bent substantially at acute angles comprising two clamping members occupying adjacent planes and adapted to be folded, or brought together, one upon the other, and to hold and clamp between them the papers or other material being bound, the free end of each member being provided with a penetrating tang; or spur, and with a tang-receiving groove or channel, the tang of one member being in longitudinal alinement with the groove of the other member, and the groove of one member being sunk in its facing surface to one side of the root of the tang of such member, so that the tang and groove of one member will register respectively with the groove and tang of the other, or opposite member on the free end of both members being brought toward each other; the tangs being pointed and relatively long in comparison with the depth of their receiving grooves which preferably have a depth only sufficient to receive the pointed ends of the tangs below the facing-surface of the members and admit of their being shunted therein beneath or beyond the opposite surface of the material clamped between the members, and toward the connecting fold of such members during the closing of the free ends of the latter on said material in binding it, and being finally seated lengthwise beneath such material, and in some instances flush with the inner surface of the respective members.

In the accompanying drawing forming a part of this specification, and in which similar reference letters and numerals indicate corresponding parts, Figure 1, represents a plan and end view of the metal blank from which the fastener is fashioned. Fig. 2, shows in perspective the fastener blank Fig. 1, folded into the completed fastener. Fig. 3, presents an edge view of the applied fastener,

partly in section, and showing in dotted lines successive positions of its tang or spur points and of the material being fastened during the application of the fastener. Fig. 4, is a view of the fastener blank similar to Fig. 1 modified to the extent of having right angled triangular shaped depressions sunk therein adjoining one side of each of its grooves and having a depth less than that of the latter.

In the drawing, the fastener-blank is shown rectangular in configuration, the dotted line 3, indicating a transverse fold which transposes the blank into the two clamping members A, B, of the completed fastener. The blank, as shown in Fig. 1, has sunk in its inner surface at its opposite ends grooves 1, 1, located on opposite sides of the longitudinal axis of the blank and parallel therewith, and is also provided with tangs, or spurs 2, 2, extending from its opposite ends, and on the reverse sides of such axis. These tangs are flat and of angular shape having sharp pointed tips as shown in the drawing. The grooves, 1, 1, have parallel sides and at their inner ends may preferably terminate in slits, 4, cut in the fastener blank, which will prevent buckling of the metal thereat and leave them open at both ends, and in transverse section preferably correspond in angular shape with the transverse shape of the pointed tip of the tangs or spurs 2, 2. The flat surface of these tangs 2, 2, describe right angle triangles, the lines forming their altitude being in alinement with each other and with the line representing the inner side of the grooves 1, 1, respectively, whereby the tang fastening of the clamped material is brought to the middle of the free ends of the clamping members with the tips of the tangs seated longitudinally thereat in said grooves 1, 1. The blank so fashioned is folded transversely at 3, where it may be weakened by a diamond or other shaped aperture as shown in the drawings, to facilitate the members being readily pressed together between the finger and thumb of the party applying the fastener to use as intended. The tangs 2, 2, respectively, are set over the facing surface of the respective members A, B, at angles having a degree of acuteness that, on the members being brought toward each other, will cause the tangs to cross each other on oblique lines pointing inwardly, and their

tips, on similar lines, to register in the opposite grooves 1, 1, of the respective members, as is shown in Fig. 3.

The fastener so constructed is applied by placing the papers, or other material being fastened, between its clamping members and closing them upon it, which operation forces the tangs 2, 2, through the material from its opposite sides and brings their pointed ends into the grooves 1, 1, which provide them free way therein beneath, or beyond the opposite surfaces of the material during such closing of the members, as is also illustrated in Fig. 3, wherein dotted lines indicate the position of the members A, B; of the material C, being fastened between them, and of the tangs 2, 2, after the latter have pierced the material and before the free ends of the members have been fully brought toward each other against the opposite surfaces of the material; the full lines of the figure showing the position of these parts on the final closure of the fastener on the material.

The spaces provided by the grooves 1, 1, on the facing surfaces of the members A, B, and which spaces open against the opposite surfaces of the material being fastened, prevent the turning or crushing of the points of the tangs in such material and admit of their free and complete passage through the material and of their free exit from the opposite surfaces of such material, and their after movement outside such surfaces, and their final lodgment in bearing contact with such surfaces, as is shown in Fig. 3.

The perspective view of the completed fastener shown in Fig. 2, illustrates the position of the clamping members A, B, in relation to each other, and of the angular set of the tangs 2, 2, with the facing surfaces of such members, respectively.

The modification in the fastener presented in Fig. 4, consists in having a portion of the clamping surfaces of its blank adjoining the outer edge of each of the grooves 1, 1, depressed to a depth corresponding with the thickness of the metal in the tangs to form receptacles 1' 1' in which the body part of the tangs may finally be seated flush with the undepressed portion of such surfaces, by the bringing together of the clamping members in applying the fasteners as intended.

These fastenings are intended principally for attaching together papers for filing, from two to a dozen sheets, and for attaching letters and their inclosures, and such like light temporary binding, and are, in consequence, generally small and of light metal, with their tangs small and sharp-pointed, and their grooves narrow, straight

and shallow and generally provided by scoring them in the facing surface of their clamping members. They may, however, as is obvious, be made large and of corresponding thickness of metal for use in binding material of considerable bulk.

Having thus fully described the nature, construction and operation of my invention, what I claim therein as new and desire to secure by Letters Patent, is:—

1. A paper fastener comprising a unitary body-portion transversely folded at its center into two facing members each one of which is provided with a groove sunk lengthwise in its facing surface, and with a penetrating tang springing from its free end and rooted thereat on one side of such groove, the inner edges of the tangs of both members being substantially in alinement with each other and with the inner edges of the grooves of both members, with the tang and groove of one member registering with the groove and tang of the other member on the facing surfaces of both members being brought toward each other.

2. A fastener such as described comprising a unitary body-part transversely folded at its center into two facing members provided at their free ends with penetrating tangs and with grooves and adjoining depressions sunk in their facing surfaces to one side of the roots of such tangs to receive therein the pointed ends and body-parts of said tangs.

3. A fastener such as described comprising a unitary body-part transversely folded at its center into two facing members provided at their free ends with penetrating tangs, and with grooves open at both ends sunk in the facing surfaces of such members to one side of the roots of said tangs.

4. A fastener such as described comprising a unitary body-part transversely folded at its center into two facing members provided at their free ends with penetrating tangs, and with grooves and adjoining depressions sunk in their facing surfaces to one side of the roots of such tangs, the flat surfaces of such tangs being of right angled triangular shape, and said grooves having a depth greater than that of the adjoining depressions and the plane of the latter having the shape of a right angled triangle and opening into the groove adjoining it on the line of altitude of its angle.

Signed at New York city in the county of New York and State of New York this 26th day of June A. D. 1908.

GEORGE W. MCGILL.

Witnesses:

HERBERT F. BATES,
ELVA D. FOLLETT.