G. W. McGILL.

METALLIC FASTENER.

APPLICATION FILED JUNE 3, 1907.

974,805.

Patented Nov. 8, 1910.

Fig. 1.

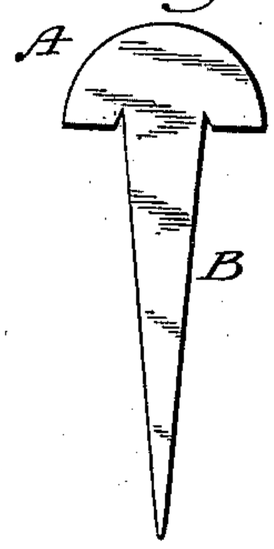


Fig. 2.

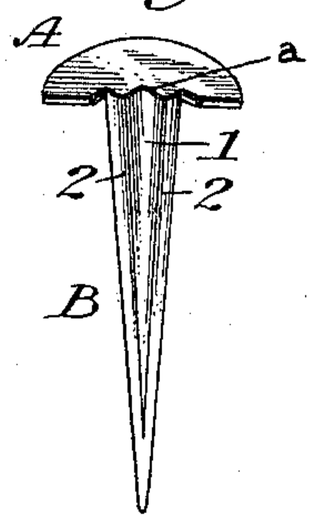


Fig. 3.

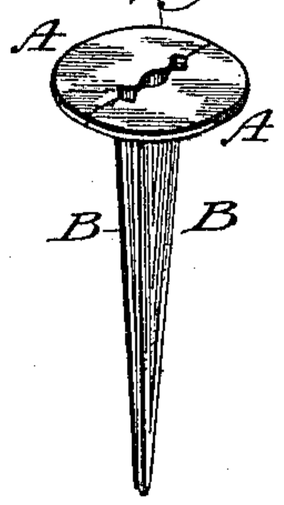


Fig. 4.

Fig. 5.

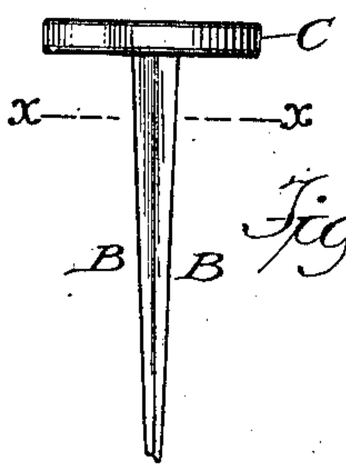


Fig. 6.

Fig. 7.

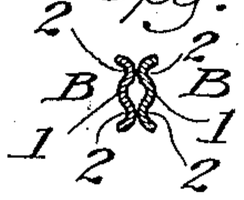


Fig. 8.

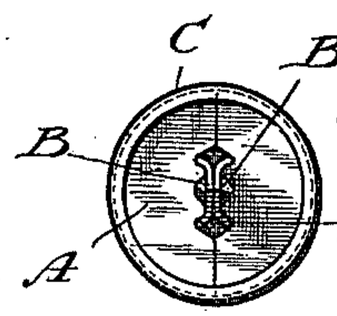


Fig. 9.

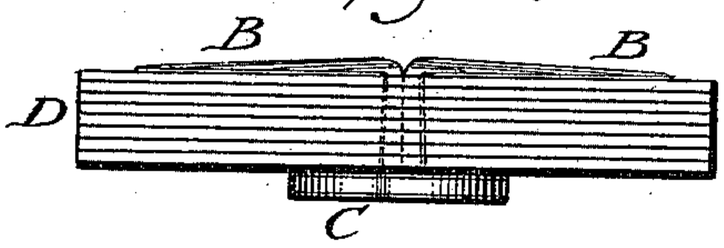


Fig. 10.

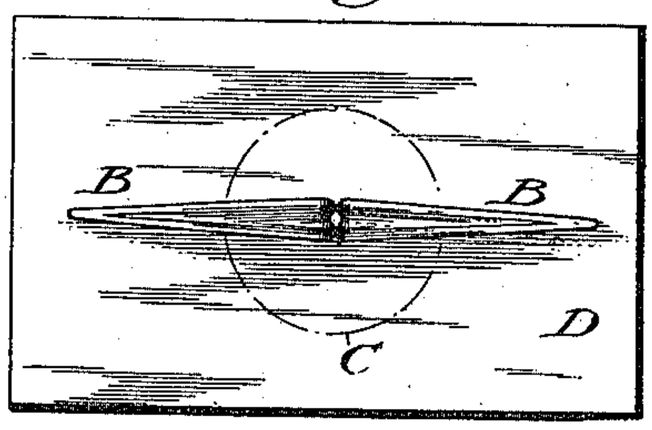


Fig. 11.

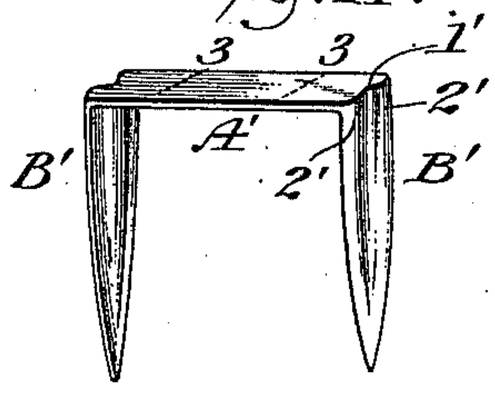
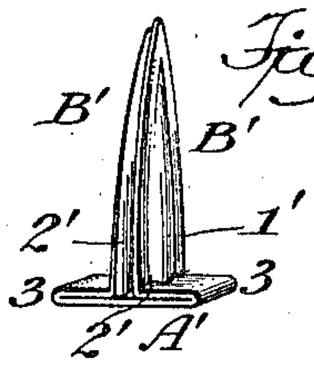


Fig. 12.



WITNESSES

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METALLIC FASTENER.

974,805. Specification of Letters Patent. Patented Nov. 8, 1910.

Application filed June 3, 1907. Serial No. 376,990.

To all whom it may concern:

Be it known that I, GEORGE W. McGILL, a citizen of the United States, and a resident of Riverdale-on-Hudson, in the county of New York and State of New York, have invented certain new and useful Improvements in Metallic Fasteners, of which the following is a specification.

My invention relates to that class of metallic fastenings, having a penetrating shank composed of two blades normally seated in contact with each other lengthwise, and which make but one hole in the papers or other articles in which the shank is inserted, the blades of the shank opening from each other after passing through such papers and confining the latter between their folded over surfaces and the cap or head of the fastener.

In the improved fastener constructed as hereinafter described the two blades providing the fastener shank may be made with parallel edges, but are preferably provided with edges which taper from the transverse fold providing their heading or capping parts to the terminals of their free ends, and are folded longitudinally in manner to provide one surface of each blade with a groove seated along the longitudinal center of such surface, and the opposite surface of such blade with two grooves seated one along each edge of the blade, to the end that when the fastener shank is inserted through papers or other material being fastened and its blades are folded apart and down upon such material, the edges of the blades will bear upon the latter throughout the entire length of their folded over portion and will present above such material outwardly smooth rounded surfaces decreasing in width and in height of convexity from the line of such fold to their free terminals.

In the accompanying drawing forming part of this specification, and in which similar reference characters indicate corresponding parts, Figure 1, is a plan view of a blade of the fastener shank, Fig. 2, is a similar view in perspective showing the heading part of the blade folded to a right angle with the blade proper and the latter provided with its longitudinal grooves. Fig. 3, is a perspective view of both blades fashioned as shown in Fig. 2, and placed together in position for capping. Fig. 4, is a plan view of the fastener cap, and Fig. 5, represents a cross section of such cap. Fig. 6, is an edge view of the completed fastener. Fig. 7, is a cross section of the shank taken on the line *x*, *x*, of Fig. 6. Fig. 8, is a view of Fig. 6, looking from its shank point. Fig. 9, is an edge view of the fastener applied in fastening together several sheets of material. Fig. 10, is a view of the upper surface of Fig. 9, and Figs. 11 and 12, show modifications in the configuration of the fastener.

In the fastener form shown in Figs. 1 to 10, inclusive, the shank of the fastener is composed of two metal blanks shaped as shown in Fig. 1, consisting of a heading or capping part A, having a semi-circular form, and a blade B, tapering from its connection with such capping part to its free end. The blade B, is by means of suitable dies folded or drawn on the transversely curving line *a* to a right angle with the capping part A, such process of drawing or folding providing the blade longitudinally on one surface with the grooves 2, 2, seated along its edges and its opposite surface with the groove 1, seated along its longitudinal center or axis. Two such blades are set together with their grooves 1, 1, facing each other as in Fig. 3, and a metal cap such as shown in Figs. 4, 5, is placed over their capping parts A, A, and is upset or closed thereon as shown in Figs. 6, 8, completing the fastener, which may now be put to use as intended by inserting its shank in the material to be fastened and folding the projecting portion of its blades apart and down upon such material, as shown in Figs. 9, 10, and wherein the material fastened is marked C.

The grooves 1, 2, 2, drawn longitudinally in the opposite surfaces of the blades have for their object the stiffening of the blades through the transverse curvatures they impart to them; the bringing of the edges of the respective blades, and the convex surfaces of their longitudinally grooved centers into the same plane so that they will simultaneously bear upon the surface of the material they fasten; and to impart to the blades a maximum of strength with a minimum of concavo-convexity of their surfaces.

In the construction shown in Figs. 11 and 12, the fastener is made from a single strip of sheet metal having tapering end portions which are bent down from a center part A′ on transversely curving lines providing the

shank-blades B′, B′, of this construction and which are provided longitudinally with the grooves 1′, 2′, 2′, as in the other figures. The central portion A′ is then bent over upon itself on the dotted lines 3, 3, Fig. 11, bringing the backs of the shank blades together with their edges projecting in directions extending away from the longitudinal axis of the shank as shown in Fig. 12, and other figures of the drawing, completing this construction of the fastener, which, if desired, may be furnished with a metal cap upset upon its head part as in the other figures.

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

1. A metallic fastener having two blades composing its penetrating shank each blade being folded longitudinally in manner to provide one surface of each blade with a groove seated along its longitudinal center and the opposite surface of such blade with two grooves seated one along each edge of such blade.

2. A metallic fastener having two blades composing its penetrating shank each blade being folded longitudinally in manner to provide one surface of each blade with a groove seated along its longitudinal center and the opposite surface of such blade with two grooves seated one along each edge of such blade, with the centrally located grooves of both blades normally opening toward each other in the fastener shank and having the two edges of one blade facing in one direction and the two edges of the other blade facing in an opposite direction.

3. A metallic fastener having two blades composing its penetrating shank with each one of such blades provided with a capping-end folded at right angles from the blade proper, and having the blades proper folded longitudinally in manner to provide the inner surface of each blade with a groove seated along its longitudinal center and the outer surface of such blade with two grooves seated one along each edge of such blade, and having the centrally grooved surfaces of both blades normally facing each other in the fastener shank and having both blades secured together in such position by a metal cap closed upon their capping ends.

4. A metallic fastener having blades composing its shank folded longitudinally in manner to cause the convex surface of the longitudinal axis of each blade and both edges of such blade to face in the same direction.

5. A metallic fastener having blades composing its shank folded longitudinally in manner to cause the convex surface of the longitudinal axis of each blade and both edges of such blade to face in the same direction and to occupy the same plane.

Signed at New York city in the county of New York and State of New York this 31st day of May A. D. 1907.

GEORGE W. McGILL.

Witnesses:
W. Harry McGill,
Jacob N. Haight.