J. W. McGILL.

METALLIC ENDLESS PAPER FASTENER.

No. 170,009. Patented Nov. 16, 1875.

fig. 13.

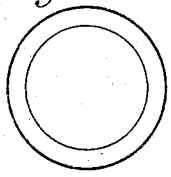


fig. 1.

fig. 14.

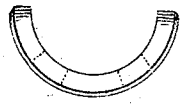


fig. 15.

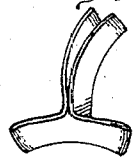
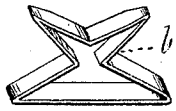
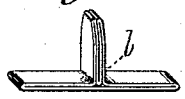


fig. 2.



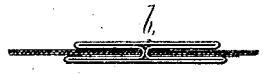
B

fig. 3.



B

fig. 4.



B

fig. 5.

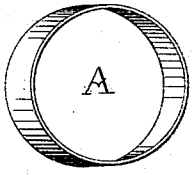


fig. 6.

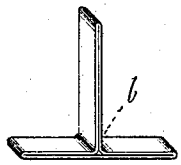


fig. 7.

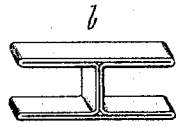


fig. 8.

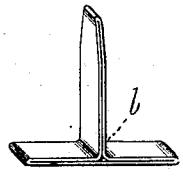


fig. 9.

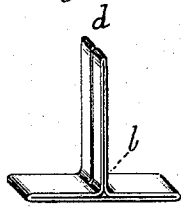
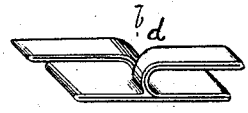


fig. 10.

fig. 11.



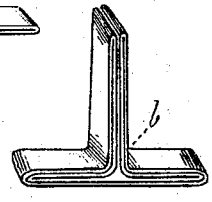


fig. 12.

WITNESSES:

Gustave Dietrich

John A. Sweeney

INVENTOR:

John W. McGill

UNITED STATES PATENT OFFICE.

JOHN W. McGILL, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN METALLIC ENDLESS PAPER-FASTENERS.

Specification forming part of Letters Patent No. **170,009**, dated November 16, 1875; application filed October 13, 1875.

To all whom it may concern:

Be it known that I, JOHN W. McGILL, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Fastener or Binder for Binding or Fastening together Paper, Cloth, or other materials; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawing making part of this specification, and to the figures and letters of reference marked thereon.

Figures 1 and 5 represent a front and side view of the endless blank from which my improved fastener or binder is made, before it is bent into shape. Fig. 2 represents the bendings of my endless fastener. Fig. 3 represents my endless fastener or binder perfected. Fig. 4 represents my endless fastener applied to the article so desired to be bound. Figs. 6, 7, 8, and 11 are perspective views of the blank bent into a modified shape. Figs. 9 and 10 are perspective views of the endless blank, shown in modified form as bent, and having split shanks or tongues, and applied to the paper.

My invention has reference to that class of metallic fastenings for paper and other articles in which folded or bent strips of sheet metal are passed through slits in the article desired to be bound, and then bent over the same to bind or fasten it; and consists of a fastener for papers or other articles, made of an endless blank of sheet metal cut from a sheet-metal tube, said tube to be drawn out to the required thickness, to be then bent or folded into an inverted T shape, and applied to the paper, having a double shank or tongue, B, as shown in Figs. 2, 3, and 4, or with single tongue, as shown in Figs. 6 and 8, to be applied to the paper or other article desired to be fastened or bound by passing the tongue or tongues through the slit punched therein, and then bending them in opposite directions until they come down on the object to be fastened or bound parallel to the base part of the fastener. I make my fastener or binder out of cylindrical metal, and also from strips of metal after said strips are united into cylindrical form.

In making my endless fastener or binder I cut off from a metal seamless drawn tube, at suitable widths, a ring of said metal, which I bend into the required form, as shown in the drawings.

A A in the drawing represent the endless cylindrical blank of which my fastener or binder is made, and may be of any desired diameter and thickness of metal required for different sizes of fasteners or binders. The ring so cut off is then bent or folded into shape, as shown at *b b b b b b b b b b*, either with a double vertical shank or tongue, as shown in Figs. 2, 3, and 4 in the drawing.

To make my fastener, as shown in Fig. 3, I take a circular piece, as shown in Figs. 1 and 5, (which we will say is four inches in circumference,) and bend it so that one-fourth of it (one inch) will form the base of the fastener. Then let the vertical portion (three inches) be divided or bent into two equal portions, one and one-half inch in each, now standing vertically together in parallel contact at right angles to each other and the base, as shown in Fig. 2. Then bend down and inward each of these vertical tongues at midway—say, three-fourths of an inch each—and then, when pressed closely together, and being in close parallel contact, they are held together snugly at their base, and my fastener is made as shown in Fig. 3, ready to be passed through the slit made in the papers or other article desired to be fastened or bound together.

The other modifications of my fastener are made, also, of an endless ring, Figs. 1 and 5, and bent or folded and treated much in the same way as at Fig. 2.

Fig. 11 represents my endless fastener modified, and is constructed of a circular or endless piece of metal, as shown at Figs. 1 and 5, cut off the desired width from a cylindrical tube—say, two inches in circumference—and bent, as at Fig. 11, so that one-third of it will form the base of the fastener. The remaining two-thirds divide or bend into two equal portions, meeting at the center of the base, and made to stand vertically together and close to the base at right angles to each other, as shown in Fig. 11, thus forming two double shanks or tongues for passing through the slit made in the paper or other article desired to be bound or connected, then separated on the

other side of same, pressed down, and binding the articles required to be bound, as shown in Fig. 12.

The tongue B of my fastener may also be made tapering, or nearly pointed, so as to assist its passage through the papers or other articles to be fastened or bound, or divided by a central longitudinal slit, *d d*, into halves, which, when bent in opposite directions, and pressed down on the article to be bound, fasten it securely.

I also make and construct my endless fastener out of sheet-metal washers of the necessary required thickness by cutting or punching the blanks out of a circular piece of the required circumference—say, five inches—as at Fig. 13, to suit size of fastener required, and of proper width, and folding it down at the diameter in equal extent, so as to form two semicircles in close proximity to each other, as at Fig. 14. This I then bend, as at Fig. 15, which forms two double legs to enter the paper. Said legs or shanks are then folded down, binding tight the papers or other material required to be bound.

This fastener, from its peculiar construction, being double throughout, cannot stick in the fingers, nor in the accompanying papers, and its continuity renders it stronger throughout, imparting a greater resistance to strain, while the blanks may be made of lighter metal, thereby saving in the cost without any decrease in the effectiveness of the fastener.

I do not claim to so arrange the tongues or shanks of my endless fastener that they will make but one hole in the papers or other articles it is designed to connect; nor do I claim fastening the papers or other articles by turning the shanks or tongues of the fastener down from each other in opposite directions after passing through the papers or other articles to be bound, and confining the same between said ends and the base of the fastener, for all these points are shown and specified and claimed by me in the United States Patent No. 67,895, issued to me on my "Excelsior Paper-Fastener" on the 20th day of August, 1867; but

What I do claim now as new and as my invention, and desire to secure by Letters Patent, is—

As an improved article of manufacture, my said endless fastener or binder, constructed out of cylindrical metal or any other suitable material, bent and formed substantially as herein represented, the same to be applied for the purposes herein set forth and described.

JOHN W. McGILL.

Witnesses:
S. B. HUTCHINGS,
A. B. HUTCHINGS.