W. P. GERLACH.

BALE-TIE.

No. 185,519. Patented Dec. 19, 1876.

Fig. 1

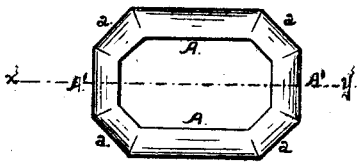
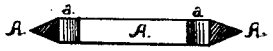


Fig. 2.



Section through x. y. Fig. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM P. GERLACH, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO JOHN T. KNOX, OF SAME PLACE.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **185,519**, dated December 19, 1876; application filed October 20, 1876.

To all whom it may concern:

Be it known that I, WILLIAM P. GERLACH, of the city and county of San Francisco, in the State of California, have invented an Improved Bale-Tie Buckle, of which the following is a specification:

My invention relates to an improved buckle or link for connecting and holding together the ends of bale-ties. It consists in the construction of a metallic buckle or link combining cheapness of production and great tensile strength with a small amount of metal, as will be more fully described hereinafter, whereby I am enabled to furnish an inexpensive buckle or link, possessing the capacity of resisting the strain thrown upon it, and of holding the tie without slipping.

The following description of the nature of my invention, and the manner of making and using the same, are sufficiently full and exact to enable any person skilled in the art to construct and apply the same, reference being had to the accompanying drawing, and the figures and letters of reference thereon, forming part of this specification.

Various kinds of links and buckles for bale-ties have been made heretofore; but, from the great strain thrown upon them, they were liable to breakage, except when made of some metal having great tensile strength, as wrought-iron or steel, and this rendered them too expensive for general use.

The form, also, of these buckles rendered them the more liable to breakage, for they were made in the form of a rectangular parallelogram, and the tension or strain of the tie caused them to break and separate at their weakest points—in the angles at the corners. The inner edges of the buckle, around the rectangular opening, being usually made of a rounded or convex shape, they were liable to slip when the bales received a shock or jar in handling, and thus their office was imperfectly performed.

These objections and imperfections I overcome by the construction of a buckle or link in the form illustrated by the plan view, Figure 1, and the longitudinal view, Fig. 2, of the drawing.

The buckle has the form of an octagon, with two long sides, A A, and two short ends, A′ A′, connected by the diagonal pieces *a a*. The frame is made of a suitable thickness of metal, but is beveled both upon the top and bottom faces toward the outer edges, as shown in Fig. 2. This leaves the greatest amount of metal around the inner edges and angles, where it is required the most, and also reduces the weight of metal in the buckle.

The inner edges of the opening in the buckle are made straight and angular, so that when the bale-tie is passed through and bent around the buckle, the edges of the opening, against which the tie is pressed, will hold it from slipping in a better and more effective manner than where the buckle has rounding or convex edges.

The manner of giving greater strength to the buckle without adding to its bulk and weight by replacing the angles at the corners, where the greatest strain is given, with the diagonal bars or side pieces *a a*, enables me to reduce the cost of manufacture, and at the same time produce a stronger buckle, for the beveled edges of the buckle remove all excess of metal without affecting its strength.

I am aware that closed bale-tie buckles or links have been made having rectangular openings and rounded or convex sides or edges, also with strengthening-webs on the sides; but such buckles, unless of considerable bulk and weight, are more or less imperfect and unreliable, and, besides, are not so readily applied and manipulated as those made in accordance with my invention, which, from their form, are light, strong, and compact.

Having thus fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

As a new article of manufacture, the octagonal bale-tie buckle or link, composed of the sides A A, the ends A′ A′, and the diagonals *a a*, uniting the sides and ends, when made with straight angular inner edges and beveled outer sides or faces, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of September, 1876.

WILLIAM P. GERLACH.

Witnesses:

FRANK V. SCUDDER,

EDWARD E. OSBORN.