(No Model.) 2 Sheets—Sheet 1.

J. C. MILLIGAN.

SCRAP METAL CABLE.

No. 268,263. Patented Nov. 28, 1882.

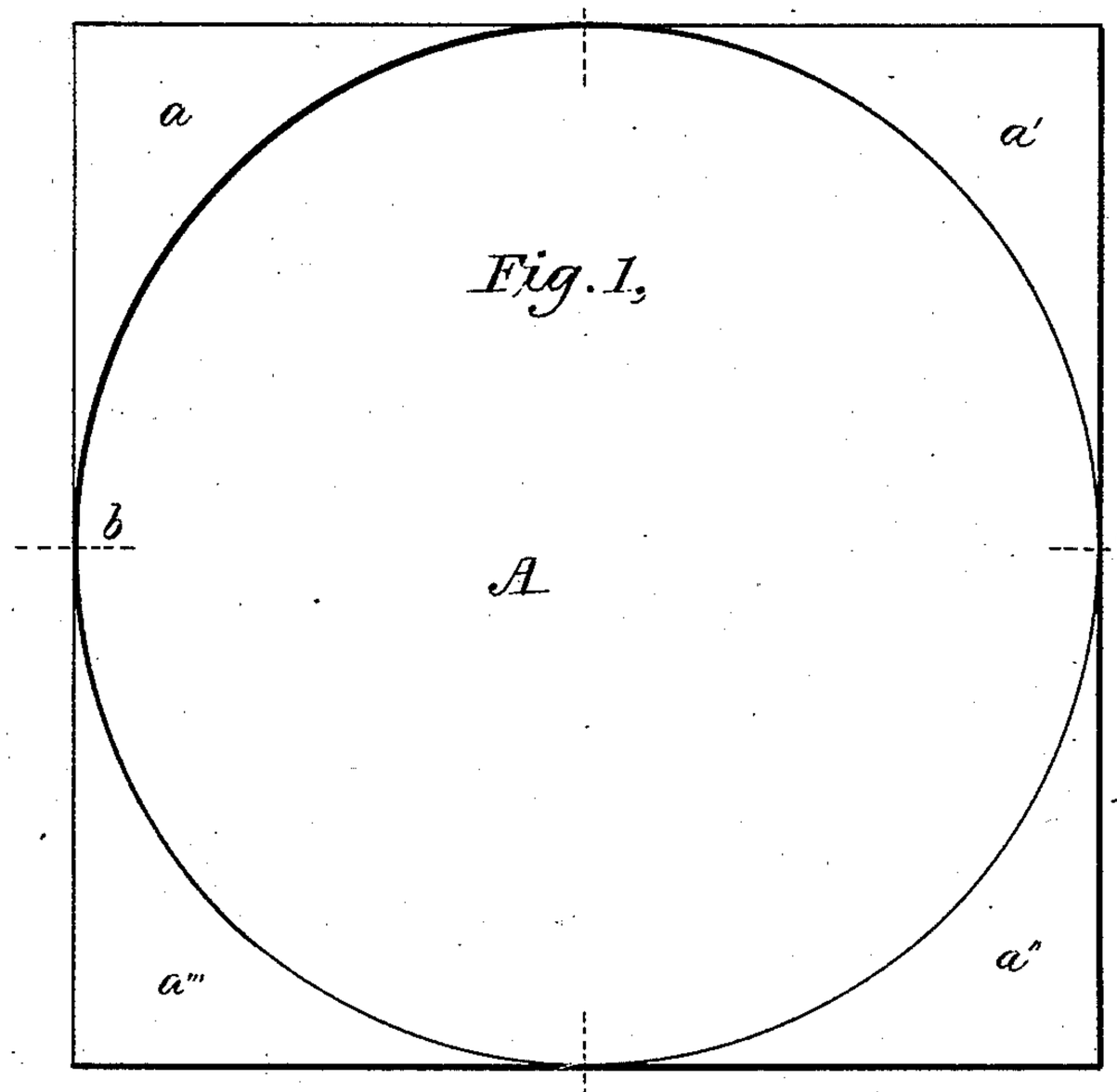


Fig. 1.

Fig. 2.

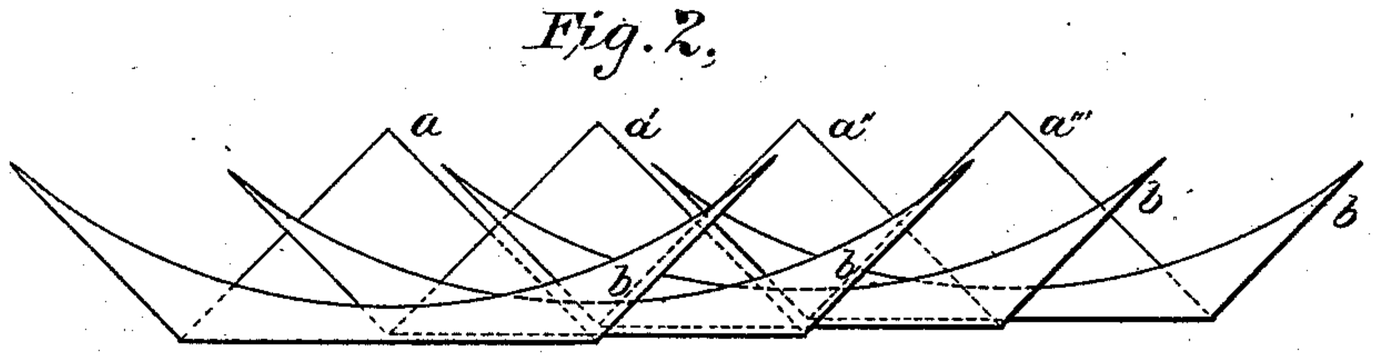
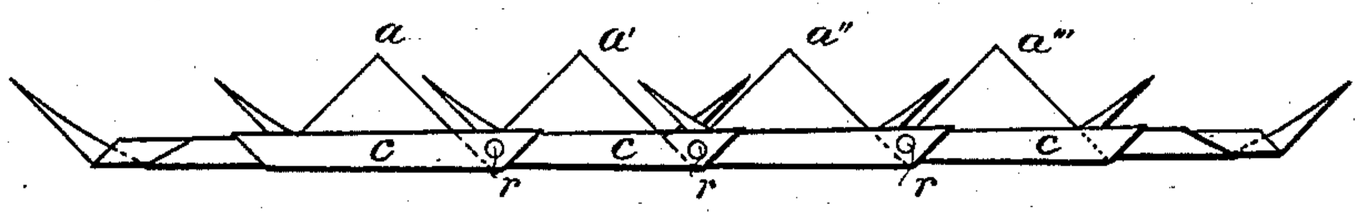


Fig. 3.



Witnesses:

Wm. A. Skinkle

Mrs. Kate M. Lockwood

Inventor:

John C. Milligan,

by his Attorneys,

Pope Edgecomb & Butler.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

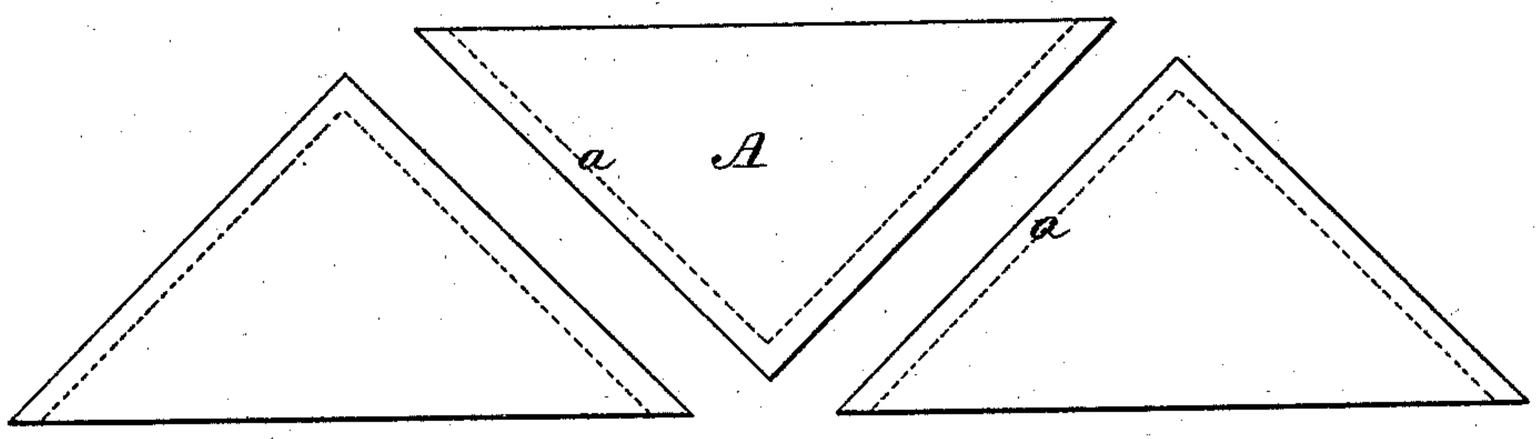


Fig. 5.

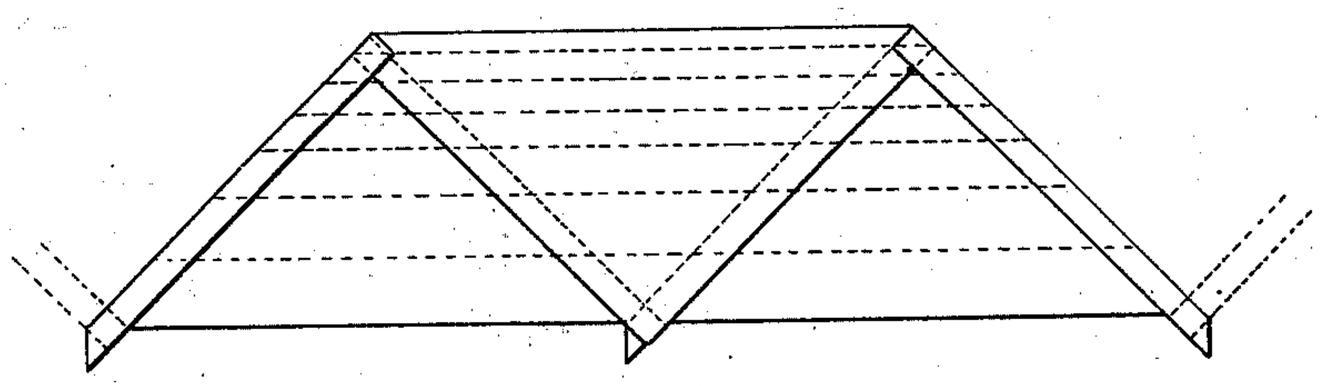
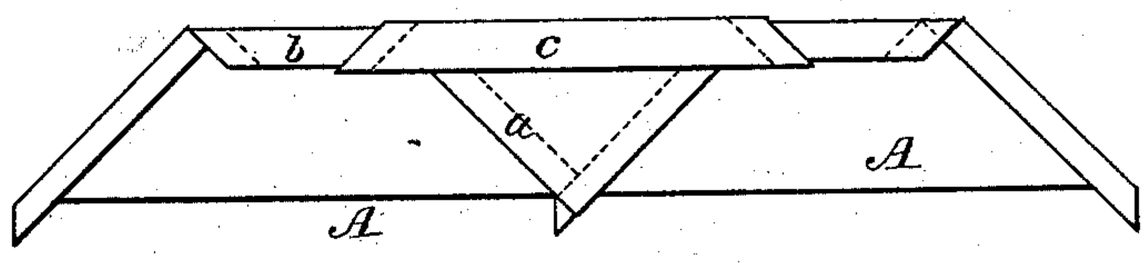


Fig. 6.



Witnesses:

Wm A Skinkle

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UNITED STATES PATENT OFFICE.

JOHN C. MILLIGAN, OF BROOKLYN, ASSIGNOR TO THE LALANCE & GROSJEAN MANUFACTURING COMPANY, OF NEW YORK, N. Y.

SCRAP-METAL CABLE.

SPECIFICATION forming part of Letters Patent No. 268,263, dated November 28, 1882.

Application filed July 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. MILLIGAN, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Scrap-Metal Cables, of which the following is a specification.

In stamping or cutting articles of sheet metal from rectangular blanks or sheets, as is usual in the arts, quite a large proportion of the sheet remains in the form of scraps, waste, or remnants. The remnants are usually thrown into a scrap-pile as useless, and by their rapid accretion soon become a nuisance and an actual source of expense to get them out of the way.

The object of my invention is to convert this cause of annoyance and expense into a source of revenue to the manufacturer, which end I attain by converting these scraps into a rope or cable which may be utilized in various ways—such, for instance, as for fencing or for binding bales.

The subject-matter claimed is specifically designated at the end of this specification.

In the accompanying drawings, Figure 1 represents a plan view of a rectangular plate of metal from which a disk has been cut. Fig. 2 represents a series of scraps thus formed overlapping one another and folded longitudinally once. Fig. 3 shows the completed cable made by forming another longitudinal fold in the scraps united and folded once, as in Fig. 2, and riveted. Fig. 4 represents a series of triangular scraps in juxtaposition, the dotted lines representing the lines of flexure or folding. Fig. 5 shows the diagonally-folded sections as interlocked to form a strip. Fig. 6 shows a complete cable formed by making two longitudinal folds in this strip.

In Fig. 1, *a a' a'' a'''* represent the form of the scraps or sections left after cutting a disk, A, from a rectangular sheet, B. To utilize these scraps I sever them transversely at their narrowest point, as at *b*, thus forming four sections of nearly triangular shape. These are placed one over the other in series, with their points in line, each section preferably overlapping the adjacent one about one-third of its length. A longitudinal fold is then formed in all the sections, so that all the points lie in the same direction, (see Fig. 2,) these turned-up portions being marked *b*. A second longitudinal fold, *c*, is then made in the sections. (See Fig. 3.) The parts are securely united or clamped together by pressing, hammering, indenting, or riveting them together in well-known ways. The last-named method is preferable as giving greater strength, and is therefore shown in the figure. (See *r r r*.) A strong cable is thus secured with a solid core or body, from which barbs or points project laterally, thus adapting it admirably for fencing. These barbs may be caused to project radially in all directions by twisting the cable. For some purposes a good cable might be formed from comparatively long scraps by simply overlapping and twisting them, and such a cable might be materially strengthened by riveting or brazing the sections together.

The form of cable shown in Figs. 1, 2, and 3 might be made stronger by punching or perforating the central portions of the sections and passing the points of the other sections through them and clinching them securely together.

Figs. 4, 5, and 6 show another form of cable, made by uniting the triangular sections by interlocking diagonal folds or lap-joints *b*, and then forming a core or body therein by one or more longitudinal folds, *b c*. This form of cable might also be twisted, if desired. I have shown a cable composed of three or four sections only, which is enough for illustration, as a cable of any length desired obviously may be made by duplicating the portion shown. Sheet-metal scraps of almost any form may thus be utilized, those shown, however, being sufficient for purposes of illustration.

In another application filed simultaneously herewith I have shown and claimed a special form of cable and a mode of utilizing a special form of scraps. I make no claim herein to anything claimed in that application.

I claim as of my own invention—

1. The combination, substantially as here-

inbefore set forth, of a series of sheet-metal scraps united with each other by transverse folds, and formed into a strip or cable, with or without barbs or points, by longitudinal folding.

2. A cable formed of a series of longitudinally-folded sheet-metal scraps with transverse uniting-connections, substantially as described.

In testimony whereof I have hereunto subscribed my name this 24th day of July, A. D. 1882.

JOHN C. MILLIGAN.

Witnesses:
JAMES COCHRAN,
THEODORE A. PERHAM.