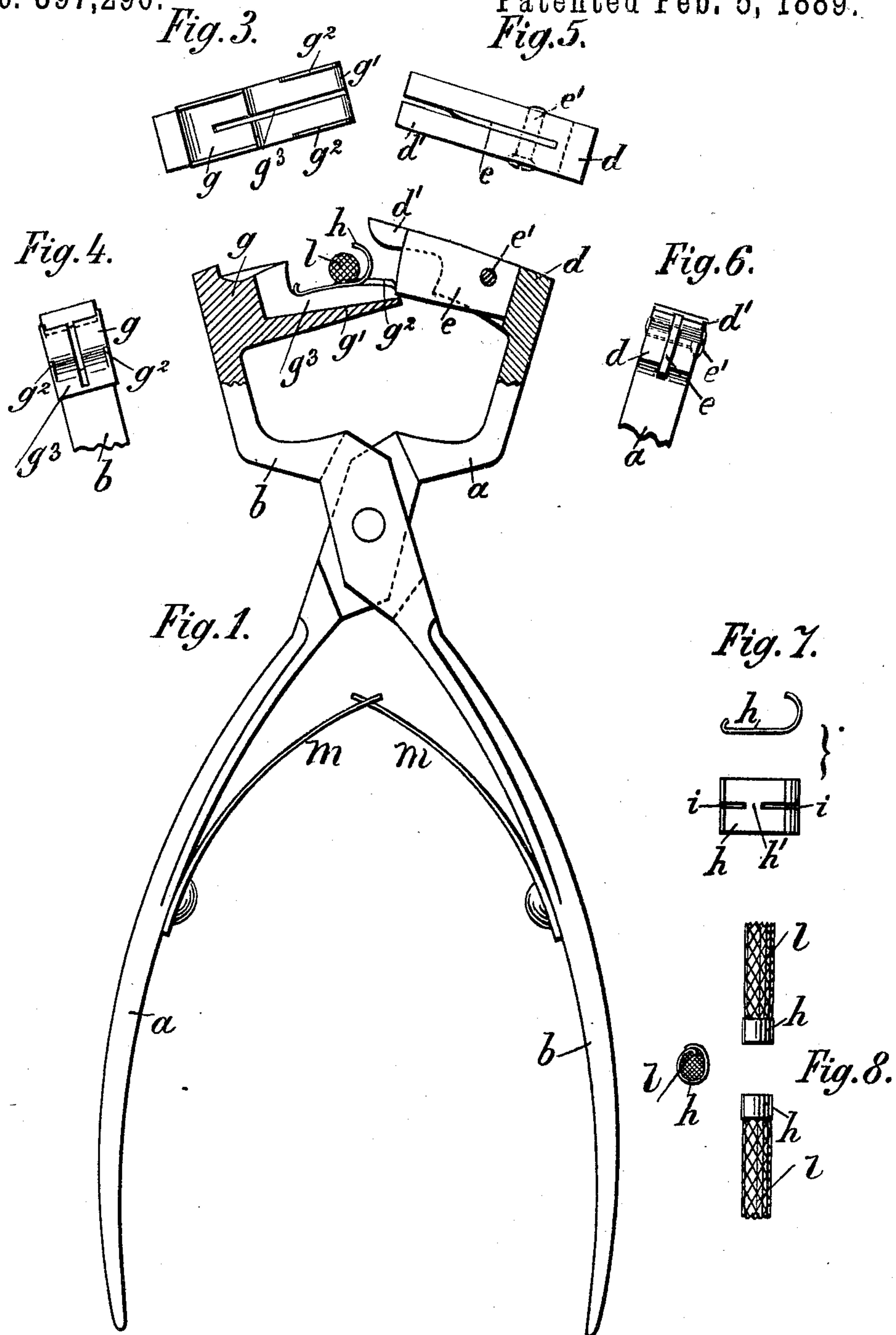


G. HILLER.
TOOL OR INSTRUMENT FOR CUTTING CORDS AND TYING STRIPS OF
SHEET METAL.

No. 397,290.

Patented Feb. 5, 1889.
Fig. 5.



Witnesses:
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(No Model.)

2 Sheets—Sheet 2.

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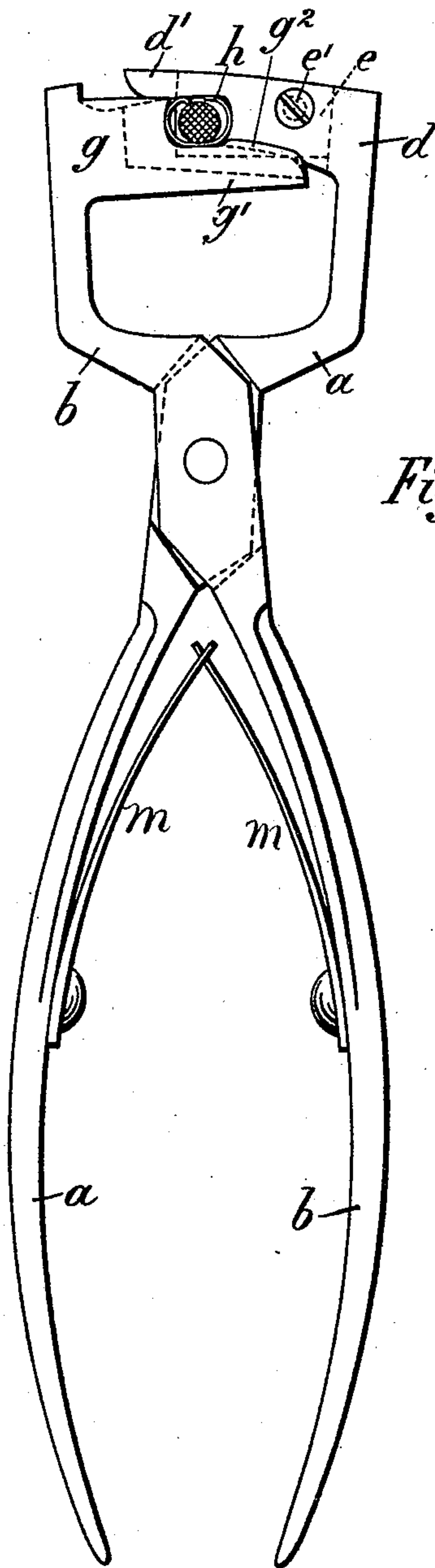


Fig. 2.

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UNITED STATES PATENT OFFICE.

GUSTAV HILLER, OF ZITTAU, SAXONY, GERMANY.

TOOL OR INSTRUMENT FOR CUTTING CORDS AND TYING STRIPS OF SHEET METAL.

SPECIFICATION forming part of Letters Patent No. 397,290, dated February 5, 1889.

Application filed April 9, 1888. Serial No. 270,046. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV HILLER, a subject of the King of Saxony, German Empire, residing at the city of Zittau, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Tools or Instruments for Cutting Cords and Tying Strips of Sheet Metal Round the Ends of Same, of which the following is a specification.

My invention relates to an instrument for cutting cord, braid, ribbon, and similar fabrics and securing the severed ends to prevent raveling or untwisting of the same. Examples of such fabric and means for securing the severed ends are shown and described in Letters Patent No. 391,050, granted to me under date of October 16, 1888.

The nature of the invention is described in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 is a view of the instrument partly open and in position for cutting a cord and securing the severed ends. Fig. 2 represents the instrument in position when the act of cutting the cord and securing the severed ends is nearly completed. Figs. 3, 4, 5, 6, 7, and 8 are detail views, hereinafter referred to.

It is well known that thick and heavy cords—such as are used by makers of passementerie, paper-hangers, tailors, and persons of similar occupation—must have their ends secured after being cut, in order to prevent the raveling, fraying, or untwisting of the severed ends. This has been done in various ways, such as tying knots in the severed ends or binding said ends with thread or wire wrapped around them. The binding of the ends occasions loss of time, and the knotting of the ends necessitates a waste of material, which is an important consideration in the case of expensive cords or fabrics. These disadvantages are obviated in this invention by providing for binding the severed ends of the cord with strips of metal simultaneously with the act of cutting the cord. This is accomplished by means of an instrument consisting of two arms or branches, *a b*, pivoted to each other after the manner of a hand punch or pliers.

The jaw *d* of the arm or branch *a* extends inwardly and terminates in a tongue or extension, *d'*, on the upper side of said jaw. The jaw *g* of the arm or branch *b* also extends

inwardly and terminates in a tongue or extension, *g'*, on the lower side of said jaw. The two extensions *d'* *g'* are approximately of the same shape, but arranged in opposite positions, and each jaw is provided with a recess or cavity for the reception of the extension of the opposite jaw. At the points where the extensions project from the main portions of the jaws are curved surfaces, each representing about half of a circle, so that when the jaws are closed and the extensions are in contact with each other, the space between the points of contact is approximately cylindrical. The two sides or outer edges of the lower extension, *g'*, are provided with ribs or flanges *g²*, extending upward for a width somewhat greater than the thickness of a strip of metal, *h*, which is hereinafter more particularly described.

The extension *d'* is divided into two branches by a slit, corresponding in thickness with a knife, consisting of a blade or plate, *e*, fitting in said slit and secured in place by a screw, *e'*. The extension *g'* is not completely divided into two branches, but has in its lower surface a groove, *g³*, corresponding in width and location with the slit in the upper extension, *d'*. When the jaws are closed and the extensions in contact, the knife *e* engages with the groove *g³*, as shown in Fig. 2.

Referring particularly to Fig. 7, *h* represents a strip of metal—such as sheet-tin—of a width equal to the width of the space on the lower extension, *g'*, between the two ribs or flanges, *g²*, and of a length about equal to or slightly greater than the length of the surface between the extremity of said extension and the semicircular portion thereof above referred to. This metallic strip *h* is nearly divided into two parts by two longitudinal slits, *i i*, of a width about equal to the thickness of the knife *e*, which slits extend from the ends of the strip toward the mid-length thereof, leaving a narrow bridge, *h'*, between the inner ends of the slits and in the center of the strip. The ends of this strip *h* are curved upward, as shown in Figs. 1 and 7, one end being curved only sufficiently to engage with the semi-cylindrical surface at the base of the extension *g'*, and the other end being curved somewhat more.

This device constitutes the subject-matter

of the above-mentioned Letters Patent No. 391,050, dated October 16, 1888.

The operation is as follows: When a cord is to be cut, one of the metal strips *h* is placed on the extension *g'* between the ribs or flanges *g²*, and the cord *l* is laid thereon, as shown in Fig. 1. Then, by pressing the jaws *d g* together, so that the extensions *d' g'* will engage with each other, the cord *l* is cut by the knife *e*, and simultaneously with the cutting of the cord the knife *e* also passes into the slit *i* and cuts through the bridge *h'*, so as to completely sever the strip into two separate and distinct pieces, while at the same time the continuation of the motion of the jaws toward each other rolls up the metal, as shown in Fig. 2, and clamps the two strips securely around the severed ends of the cord *l*, as shown in Fig. 8, and prevents the possibility of raveling, fraying, or untwisting of the ends.

The arms or branches *a b* are provided with springs *m*, of the usual form, for separating them when pressure is released. During the operation of cutting the cord and cutting the strip and clamping it around the severed ends the strip *h* is held in place by means of the ribs or flanges *g²*, which ribs also serve to guide the extension *d'* and prevent lateral displacement thereof. When the knife *e* becomes dull, it may be removed by loosening the screw *e'*, and may then be sharpened and again secured in place by means of said screw.

It will be seen that the tongues or extensions may be brought very close to each other, and therefore the instrument is adapted to the cutting of thin and light cords as well as thick and heavy ones.

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

1. A tool or instrument for simultaneously cutting and binding cords, consisting of two arms or branches, *a b*, pivoted to each other and having their jaws *d g* provided with

tongues or extensions *d' g'*, the tongue *d'* being divided by a slit and carrying a removable knife, *e*, and the tongue *g'* being provided with ribs or flanges *g²* and having a groove, *g³*, between said ribs, substantially as and for the purpose herein described.

2. In a tool or instrument for simultaneously cutting and binding cords or similar fabrics, the combination, with the pivoted arms or branches *a b* and the jaw *d*, having the divided tongue or extension *d'*, of the removable knife *e*, secured in place by the screw *e'*, substantially as herein described.

3. In a tool or instrument for simultaneously cutting and binding cords or similar fabrics, the combination, with the pivoted arms or branches *a b* and the divided tongue or extension *d'*, carrying the knife *e*, of the tongue or extension *g'*, provided with the longitudinal groove *g³*, for engagement with said knife, substantially as herein described.

4. In a tool or instrument for simultaneously cutting and binding cords or similar fabrics, the combination, with the tongue or extension *d'*, of the tongue or extension *g'*, having the longitudinal ribs or flanges *g²*, for guiding the extension *d'* and preventing lateral displacement thereof, substantially as herein described.

5. A tool or apparatus for simultaneously cutting and binding cords or similar fabrics, consisting of pivoted arms *a b*, having jaws *d g* and tongues or extensions *d' g'*, engaging with each other, so that they may be pressed nearer to or farther from each other, whereby provision is made for cutting and binding either thin and light or thick and heavy cords, substantially as herein described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GUSTAV HILLER.

Witnesses:

B. ROI,

GERARD VON NAWROCKI.