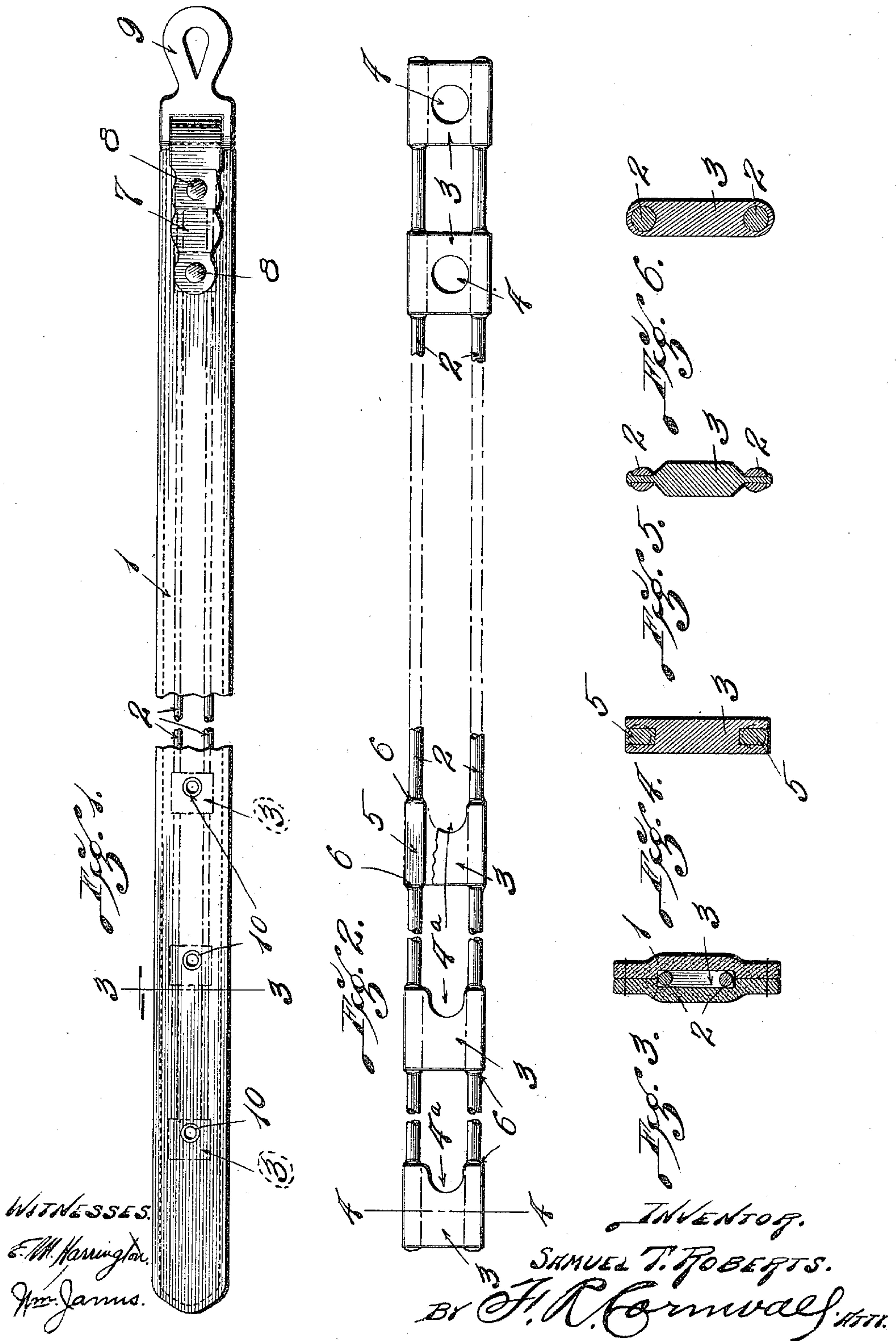


S. T. ROBERTS.
 REINFORCED STRAP.
 APPLICATION FILED JUNE 22, 1910.

993,274.

Patented May 23, 1911.



UNITED STATES PATENT OFFICE.

SAMUEL T. ROBERTS, OF ST. LOUIS, MISSOURI.

REINFORCED STRAP.

993,274.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed June 22, 1910. Serial No. 568,385.

To all whom it may concern:

Be it known that I, SAMUEL T. ROBERTS, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Reinforced Straps, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of a reinforced strap constructed in accordance with my invention. Fig. 2 is an elevation of the reinforcing member used in connection with my improved strap. Fig. 3 is an enlarged cross section taken on the line 3—3 of Fig. 1. Fig. 4 is an enlarged cross section taken on the line 4—4 of Fig. 2. Fig. 5 is a cross section similar to Fig. 4 and showing a modified form of the construction used in attaching the transverse reinforcing blocks to the longitudinally extending reinforcing wires. Fig. 6 is a section similar to Figs. 4 and 5 and illustrating a further modified form of the construction used in attaching the transverse blocks to the reinforcing wires.

This invention relates to a reinforced strap particularly intended for use as a harness tug or trace, although reinforced straps constructed in accordance with my invention may be advantageously used as trunk straps, end gate straps, pole straps, breeching, and the like.

The principal object of my invention is to produce a construction wherein great strength is combined with minimum weight, and to accomplish this end I propose to combine with an ordinary flexible strap formed of two or more strips of leather or analogous material, a metallic reinforcement in the form of a pair of wires joined by metallic clips arranged at suitable distances apart, and which clips serve as bearings for the rivets, and like fastening devices for the metal loops, cock eyes, buckles and like members, which are mounted on the strap.

To the above purposes my invention consists in certain features of novelty hereinafter described and claimed.

Referring by numerals to the accompanying drawings, which illustrate a tug or trace, 1 designates the main body of the tug or trace, which is of the usual construction,

i. e., a pair of elongated sections of leather, or analogous material, having their edges united by a row or rows of stitching. The reinforcement contemplated by my invention comprises a pair of wires 2 arranged parallel and located between the two sections of leather or material forming the strap 1. Fixed to these wires 2 at the desired points are transversely disposed clips or plates 3 of metal, and where the strap is used as a tug or trace a number of these clips are arranged at suitable distances apart upon the said portions of the wires 2. These clips may be provided with perforations 4, or their front edges may be notched as designated by 4^a, and which perforations and notches are adapted to receive the rivets and buckle tongues used in attaching parts, such as buckles and cock eyes to the strap.

To fix the clips 3 upon the wires 2 I prefer to flatten the wires 2 as designated by 5, thus forming a pair of shoulders 6 between the flattened portions and the body of the wires, and these flattened portions receive the bifurcated or split side edges of the clips 3. These bifurcated or split side edges of the clips are pressed and hammered down upon the flattened portions of the wires, thus rigidly connecting said clips and wires, and the front and rear edges of said clips bearing against the shoulders 6 prevent the clips from moving lengthwise on said wires.

In Fig. 1 I have shown a tug or trace, and fixed on the end thereof is a metal clip 7, the legs of which engage on opposite sides of the strap and rivets 8 pass through said legs and through the apertures or notches formed in the clips 3, located on the wires embedded in the strap. This clip 7 carries the usual loop and cock eye 9. The opposite end of the reinforced strap shown in Fig. 1 is to be engaged by a buckle, or the like, and to receive the tongue or stud of said buckle, a series of eyelets or tubular rivets 10 are seated in the strap and which eyelets or tubular rivets pass through the apertures or notches formed in the clips 3, located in this end of the strap. In some instances, I may find it advantageous to split or perforate the wires 2 and insert the reduced ends of the clips 3 through the slits or perforations in said wires 2, this manner of fastening being illustrated in Fig. 5.

In Fig. 6 I have shown a further modified form of fastening the clips upon the wires, and which modified construction contem-

plates the placing of the wires in suitable molds and casting the clips upon said wires.

A reinforced strap of my improved construction combines great strength with little weight, is flexible enough for all practical purposes, and can be produced much cheaper than a heavy or leather strap, inasmuch as, the heavy leather used for manufacturing tugs and traces is of a very expensive grade, and is generally sold by weight.

I am aware that reinforced straps have been made wherein chains, woven wire fabric, and cables having several strands of wire have been used as the reinforcement, but so far as I know I am the first to use a reinforcement consisting of a pair of single wires upon which are located perforated or notched clips, which receive the rivets or buckle tongues of the devices located on the strap.

It will be readily understood that various changes in the size and construction of the various parts of my improved strap can be made and substituted for those herein shown and described, without departing from the spirit of my invention.

I claim:

1. A reinforced strap, comprising a flexible member, a single pair of wires embedded in said member, which wires are spaced

apart, portions of which wires are flattened to form shoulders on said wires, and stops mounted upon said wires, the ends of which stops are slotted and engage the flattened portions of the wires.

2. The combination with a flexible strap, of a reinforcing member embedded in said strap, and which reinforcing member comprises a single pair of wires, portions of which are flattened to form shoulders on said wires, and stops having slotted ends, which latter are clamped upon the flattened portions of the wires with the front and rear edges of the flattened end portions of the stops bearing against the shoulders on the wires.

3. A reinforced strap comprising a flexible member, a single pair of wires embedded therein, which wires are spaced apart, stops having their ends rigidly fixed to said wires, and which wires are provided with shoulders against which the ends of the stops engage.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 18th day of June, 1910.

SAMUEL T. ROBERTS.

Witnesses:

M. P. SMITH,
ALMA GEBHART.