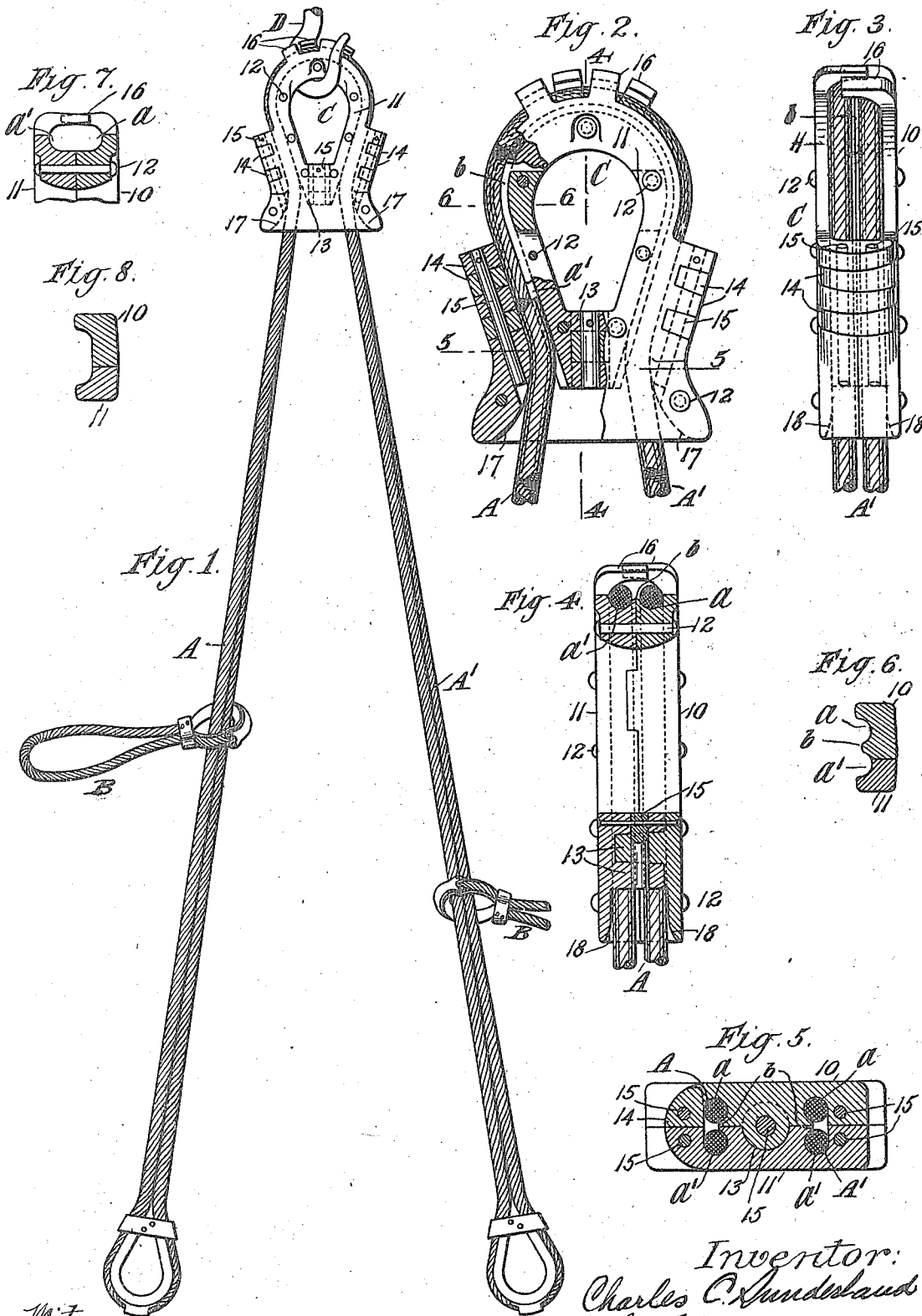


C. C. SUNDERLAND.
WIRE ROPE SLING AND THE LIKE.
APPLICATION FILED FEB. 4, 1915.

1,184,891.

Patented May 30, 1916.



Witnesses:
P. J. Wilson
J. J. Wray

Inventor:
Charles C. Sunderland
by his Atty's:
Philip J. Wray & Kennedy

UNITED STATES PATENT OFFICE.

CHARLES C. SUNDERLAND, OF TRENTON, NEW JERSEY, ASSIGNOR TO JOHN A. ROEBLING'S SONS COMPANY, A CORPORATION OF NEW JERSEY.

WIRE-ROPE SLING AND THE LIKE.

1,184,891.

Specification of Letters Patent.

Patented May 30, 1916.

Application filed February 4, 1915. Serial No. 6,082.

To all whom it may concern:

Be it known that I, CHARLES C. SUNDERLAND, a citizen of the United States, residing at Trenton, county of Mercer, and State of New Jersey, have invented certain new and useful Improvements in Wire-Rope Slings and the like, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates particularly to wire rope slings of that class having two wire rope loops combined to form a bridle sling, the especial object of the invention being to provide a construction in which the two loops shall be combined by a thimble into a single eye to receive the hoisting hook, thus avoiding the use of any hook, gromet, ring or other device, for connecting the two eyes of the loops.

In the accompanying drawings, forming a part of this specification, there is shown a bridle sling embodying all the features of the invention in preferred forms, and these constructions will now be described in detail and the features forming the invention than specifically pointed out in the claims.

In the drawings, Figure 1 is a side view of the bridle sling, with the double rope thimble. Fig. 2 is an enlarged view of the thimble portion of Fig. 1, with the thimble partly in section and one of the ropes broken away to show the construction. Fig. 3 is an edge view of Fig. 2. Figs. 4, 5 and 6 are sections on the lines 4-4, 5-5, and 6-6 of Fig. 2. Fig. 7 is a detail section corresponding to the upper part of Fig. 4, showing a modification of the thimble with the ropes omitted. Fig. 8 is a section corresponding to Fig. 6, but showing the thimble of Fig. 7.

Referring to the drawings, the bridle sling is shown as similar to that of United States Letters Patent to Ruland, No. 1,063,738, dated June 3, 1913, A, A' being the two loops or slings of the bridle, with the running gromets B thereon. The two slings or loops A, A', however, instead of having separate thimbles forming separate eyes at the load end, as shown in the Ruland patent, have one thimble C forming a single eye of the two loops or slings, which eye receives the hoisting hook D. The thimble may be of any suitable general construction, so formed as to provide grooves for the ropes

of the two loops or slings A, A', and these grooves may be entirely or partially separated or run together without any intervening wall to separate the ropes, within the broader features of the invention, but I preferably use a thimble of the form shown in Figs. 1 to 5, with the grooves for the two ropes partially separated, so as to hold the ropes apart.

The rope thimble shown is the same in construction as that of my United States Letters Patent No. 1,121,306, dated December 15th, 1914, to which reference may be had for a full description of its detail construction, 10, 11 being two sections or sides of the thimble C, divided substantially central of the rope grooves and secured together by rivets 12, the inner end of the thimble having the overlapping ribs 13 between the ends of the rope grooves and the overlapping ribs 14 outside the rope grooves and by which the ropes are held in place, and these overlapping ribs being secured together by pins 15, and the usual overlapping ears 16 at the outer end of the thimble being shown, for holding the ropes in place. The thimble differs from that of said Letters Patent No. 1,121,306, in that it is formed to provide a plurality of grooves *a, a'* for the two ropes of the loops or slings A, A', these grooves being shown as formed in the separate sections 10, 11, and, in the construction shown in Figs. 1 to 6, as partially separated by a rib *b* formed on the thimble and projecting between the ropes. This separation of the ropes will usually be found preferable but may be omitted, as shown in Figs. 7 and 8, in which the rib *b* is omitted, no provision being made for separating the ropes in the grooves *a, a'*. The thimble, also, is preferably provided with the curved bearing surfaces 17, 18, extending somewhat along the ropes from the thimble proper and curved edgewise and sideways of the thimble, so as to permit the wide separation of the two parts of each loop, and the spreading apart of the two loops without the wear which would result from bearing on the straight inner ends of the thimble.

It will be seen that by my invention the two loops or slings A, A' are combined into a single hook eye, thus avoiding the use of any hook, gromet, ring, or other device for connecting the two eyes of the loops, and

that my thimble permits slip of the ropes on the thimble independently of each other to equalize the tension of the two parts of each loop.

- 5 While the double rope thimble has been shown as applied in connection with a wire rope sling and such a construction is claimed specifically, it is to be understood that this thimble may be used also for other purpose
10 and in itself forms a part of the invention.

What I claim is:

1. A wire rope sling having two loops each formed of double wire rope with its two parts side by side, and a single eye at the
15 hoisting end consisting of a metal thimble having grooves side by side for the ropes of the two loops.

2. A wire rope sling having two loops each formed of double wire rope with its
20 two parts side by side, and a single eye at the hoisting end consisting of a metal thimble having grooves side by side for the ropes of the two loops, the thimble being formed with a wall separating the grooves to hold
25 the ropes apart.

3. A wire rope sling having two loops each formed of double wire rope with its two parts side by side, and a single eye at the
30 hoisting end consisting of a metal thimble having grooves side by side for the ropes of the two loops, said metal thimble having at its inner end outwardly curved surfaces ex-

tending along the ropes to permit wide separation of the ropes without wear on the inner edges of the thimble.

4. A rope thimble having a plurality of rope grooves side by side, and means for holding the ropes in the grooves while permitting slip to equalize the tension on the two parts of the ropes.

5. A rope thimble having a plurality of rope grooves side by side, and means for holding the ropes in the grooves while permitting slip to equalize the tension on the two parts of the ropes, the thimble being
45 formed with a wall separating the grooves to hold the ropes apart.

6. A rope thimble having a plurality of rope grooves side by side, and means for holding the ropes in the grooves while permitting slip to equalize the tension on the two parts of the ropes, said thimble having
50 at its inner end outwardly curved surfaces extending along the ropes to permit wide separation of the ropes without wear on the
55 inner edges of the thimble.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

CHARLES C. SUNDERLAND.

Witnesses:

AUSTIN C. COOLEY,
HARVEY COOLEY.