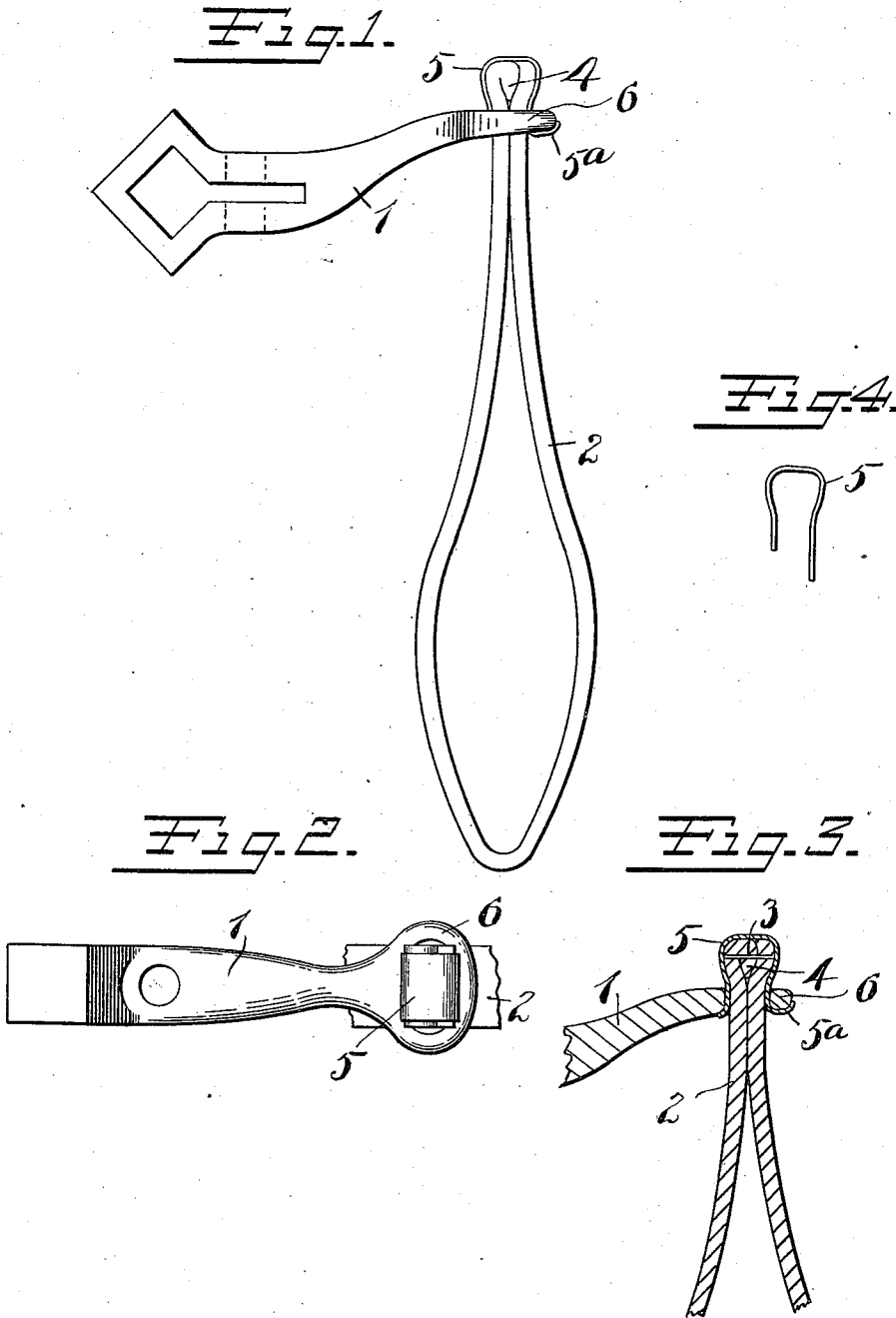


P. N. LANDINE.
PULL STRAP.
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1,014,310.

Patented Jan. 9, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

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PULL-STRAP.

1,014,310.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PETER N. LANDINE, a citizen of the United States, residing at Milford, county of New Haven, State of Connecticut, have invented certain new and useful Improvements in Pull-Straps, of which the following is a full, clear, and exact description.

My invention relates to improvements in so-called pull-straps for use in ringing up fares in trolley cars and the like.

The main object is to provide a very simple and effective arrangement whereby a looped strap may be effectively secured to a lever arm, in such a manner as to resist wear and to avoid waste.

In the drawings, Figure 1 is a side elevation of a lever arm with my improved pull-strap in place. Fig. 2 is a plan view, Fig. 3 is a longitudinal section through the said lever arm, said section intersecting the upper part of the strap. Fig. 4 is an edge view of a detail.

1 represents a lever arm of conventional form, such as applied to a rod (not shown) located in the upper part of the car and leading to a fare-registering device. By the rocking of the arm 1, the said register (not shown) is operated. This lever, being located in the upper part of a car, it is common to attach to each lever arm a depending strap to make it easy for the conductor to operate the arm. My invention relates to the construction of, and method of, assembling the said strap in connection with the lever arm.

2 represents a looped strap. The two upper ends of said looped strap are preferably held together, preparatory to assembling with the lever arm, by a pin 3. As will be seen in Figs. 1 and 3, one extreme end of the strap is rolled or curled slightly to form a head at the extreme upper end of the loop.

5 is a strip of sheet metal, preferably annealed, so as to be easily bent. This strip is shaped to fit over the headed end of the loop, the ends of the strip extending downwardly so as to rest against the forward and rear surfaces of the loop where it passes through the eye 6 of the lever.

To assemble the loop 2 with the lever arm 1, the two sides of the loop, at the lower end thereof, are brought together, and passed down through the eye 6 from above. The loop is then drawn down through the eye

until the two ends of the strip 5, which I will now term a protector and keeper strip, pass into the eye, one end of said strip at least passing through the eye, so that it may be off-set as indicated at 5^a. When the loop is in this position, it is obvious that it cannot be pulled down through the eye 3, because of the headed upper end of the loop. It is likewise obvious that the strap cannot be pushed up through the eye and detached so long as the end 5^a of the protector and keeper strip is off-set. If desired, both ends of said strip 5 may be off-set as indicated in section, Fig. 3. By off-setting said ends not only is the loop prevented from end-wise movement in the eye, but both sides thereof rest against a relatively broad, curved bearing of smooth material which serves to prevent the material from becoming chafed and broken at the connection with the lever 1, thereby adding greatly to the life of the loop. It will also be observed that there is practically no waste of material, since there is no unnecessary overlapping of the ends of the strap forming the loop, the short curled over portion 4 (which is provided to form the head aforesaid) requiring in actual practice only about a quarter of an inch of material, which, in a strap of approximately two feet in length, is of no material consequence.

It should be understood that I have described only the preferred embodiment of my improved pull strap, and that I comprehend that various changes and modifications may be made therein without departing from the spirit of the invention or the scope of the following claims.

What I claim is:

1. A pull strap for a lever arm having an eye, said device comprising a strap having its two ends brought together at one end of the loop, a protector and keeper strip bent around the upper end of said loop, the ends of said strip extending down the sides of said loop, one end being arranged to pass through the eye of said lever and be bent outwardly, the upper part of said keeper strip being offset to prevent pulling through said eye.

2. A pull strap for a lever arm having an eye, said device comprising a strap having the two ends thereof brought together side by side to form the upper end of the loop, the upper end of said loop being enlarged

to form a head, a combined protector and keeper strip overstanding the headed upper end of said loop, part of said strip being arranged to pass through the eye of said lever arm.

3. A pull strap for a lever arm having an eye, said device comprising a strap having the two ends thereof brought together side by side to form the upper end of the loop, the upper end of said loop being enlarged to form a head, and a combined protector and keeper strip overstanding the headed upper end of said loop, both ends of said strip being arranged to pass through said eye.

4. A pull strap for a lever arm having an eye, said device comprising a strap formed

into a loop, part of said loop being arranged to project through said eye, and a combined keeper and protector strip overstanding that part of the loop arranged to pass through said eye.

5. In combination, a lever arm having an eye, a pull strap therefor, part of said strap extending through said eye, and a combined protector and keeper strip overstanding that part of the loop passing through said eye, said strip being bent above and below said eye.

PETER N. LANDINE.

Witnesses:

B. G. CONNOR,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."