

(No Model.)

J. WAGNER.

ROLL FOR HARNESS LOOP TUGS.

No. 322,570.

Patented July 21, 1885.

Fig. 1.

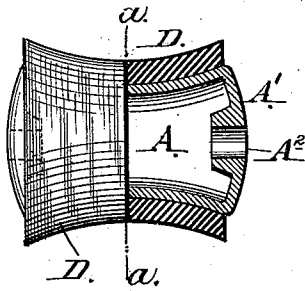


Fig. 2.

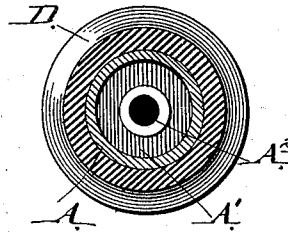


Fig. 3.

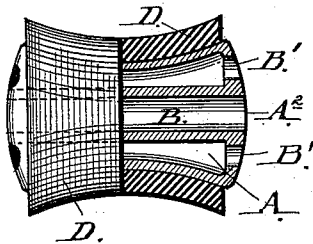


Fig. 4.

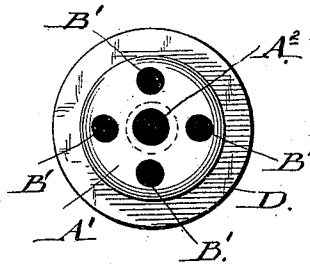
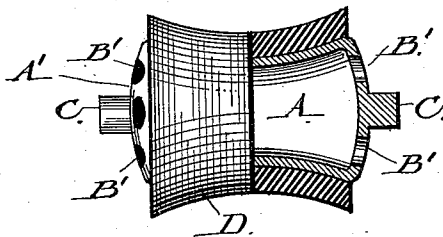


Fig. 5.



Witnesses

J. Walter Fowler
H. B. Applewhite,

Inventor:

Julius Wagner;
per Thomas A. Muesy
Atty

UNITED STATES PATENT OFFICE.

JULIUS WAGNER, OF READING, PENNSYLVANIA.

ROLL FOR HARNESS LOOP-TUGS.

SPECIFICATION forming part of Letters Patent No. 322,570, dated July 21, 1885.

Application filed May 21, 1885. (No model.)

To all whom it may concern:

Be it known that I, JULIUS WAGNER, a citizen of the United States, resident at the city of Reading, county of Berks, State of Pennsylvania, have invented a new and useful Improvement in Rollers for Harness Loop-Tugs, of which the following is a specification.

This improvement relates more particularly to rolls for thill-loops of the construction described and claimed in my patent of July 22, 1884, numbered 302,452, (shaft-loop.)

The object of the improvement is to provide a light and efficient roll for shaft-loops, &c., that may be used indifferently as cast of suitable metal, or as subsequently covered with an elastic material.

The drawings herewith show very fully the construction of the roll, like letters of reference indicating like parts.

Figure 1 represents the roll in front elevation, one-half shown in longitudinal section, with short axle-bearings in the ends. Fig. 2 is a cross-section on the line *a a* of Fig. 1. Fig. 3 represents the roll provided with a continuous bearing for the axle and end perforations for releasing the core one-half in section; Fig. 4, an end elevation of the same. Fig. 5 represents a front elevation, one-half shown in section of a roll formed with integral pivots or axles, in all of which—

A represents the shell or body of a metallic or equivalent roll; *A'*, the ends; *A²*, the bore or perforation for the axle-bearing. B represents a continuous bearing for the axle; *B'*, end perforations to lighten the roll, and permit the withdrawal of the cores subsequent to casting; C, pivots or axles cast integral with the roll; D, an elastic covering, preferably of rubber, which is applied to the roll to reduce the wear upon the thills, and also to reduce the jar upon the harness-saddle by cushioning the same upon the roll.

In attaching anti-friction rollers to thill or shaft loops of harness, it is important, while seeking for the best article for wear, not to lose sight of the equally important effect of lightness and cheapness in the completed roll. From a long series of experiments practically carried out I have discovered that a cast-iron or metallic roll gave the most satisfactory results as to wear, but was objectionable

on account of its weight. This objection is now overcome by constructing the same hollow, using the bore perforations in the ends, where a short bearing was given to the axle, or special end perforations when the roll is given a spool bearing within its body, or is provided with integral axles, by means of which the cores may be withdrawn from the casting.

Rollers, as shown and described, may be applied directly in a horizontal or vertical position within a properly-constructed shaft-loop, and will give good results as to wear, while adding very little additional weight to the harness.

For fine harness, and wherever it is desired to reduce the wear upon the thills, and do away with the noise attendant upon the use of metallic tug loops and rolls in contact with hard wood thills, I draw over the rolls, constructed as described, an elastic covering, preferably using rubber hose of a suitable interior diameter for the purpose, and subsequently cutting the same to the proper length. Leather or an equivalent material may be substituted for the rubber; but as the latter in the form of hose is procurable as a regular article of manufacture, and requires no special preparation to adapt it to the purpose, I use it in preference to any other article with which I am conversant.

The advantages connected with the use of the compound roll for tug-loop purposes, outside of its cushioning properties, is that when the covering is worn through it may be removed, a new one being substituted; or the wear may be transferred to the metallic roller itself without change, and will continue to serve the purpose of its introduction, but of course no longer a silent cushioner of the shocks transmitted from the vehicle to the thills.

The rollers having integral axles C are applicable to thill-loops, which are separable, within which the rolls are laid in place, the loops being subsequently bolted or secured to form an integral whole.

Having shown the construction of my improved roll, described its use and advantages, I desire to secure by Letters Patent the following claims thereon:

1. As an improved manufacture, a shell-

roll with central bearings covered with rubber or its equivalent, and adapted for use with a harness loop-tug, as shown, described, and for the purpose set forth.

- 5 2. As an improved roll for harness loop-tugs, a metallic shell provided with end perforations and integral pivots or axles, in com-

bination with an elastic cover, substantially as shown and for the purpose set forth.

JULIUS WAGNER.

Witnesses:

A. E. LOOMIS,
F. PIERCE HUMMEL.