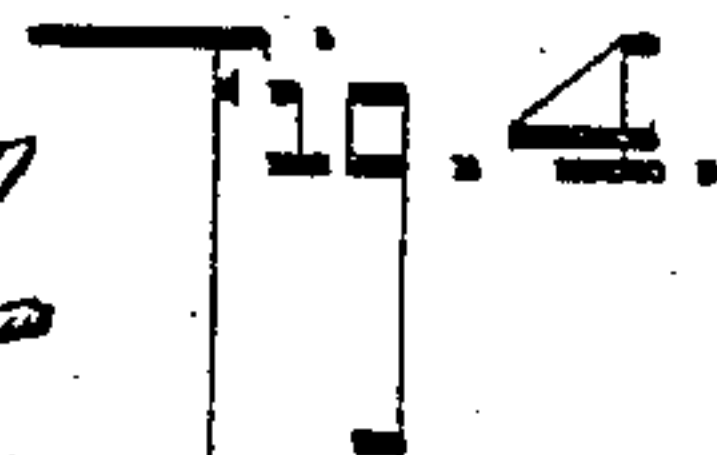
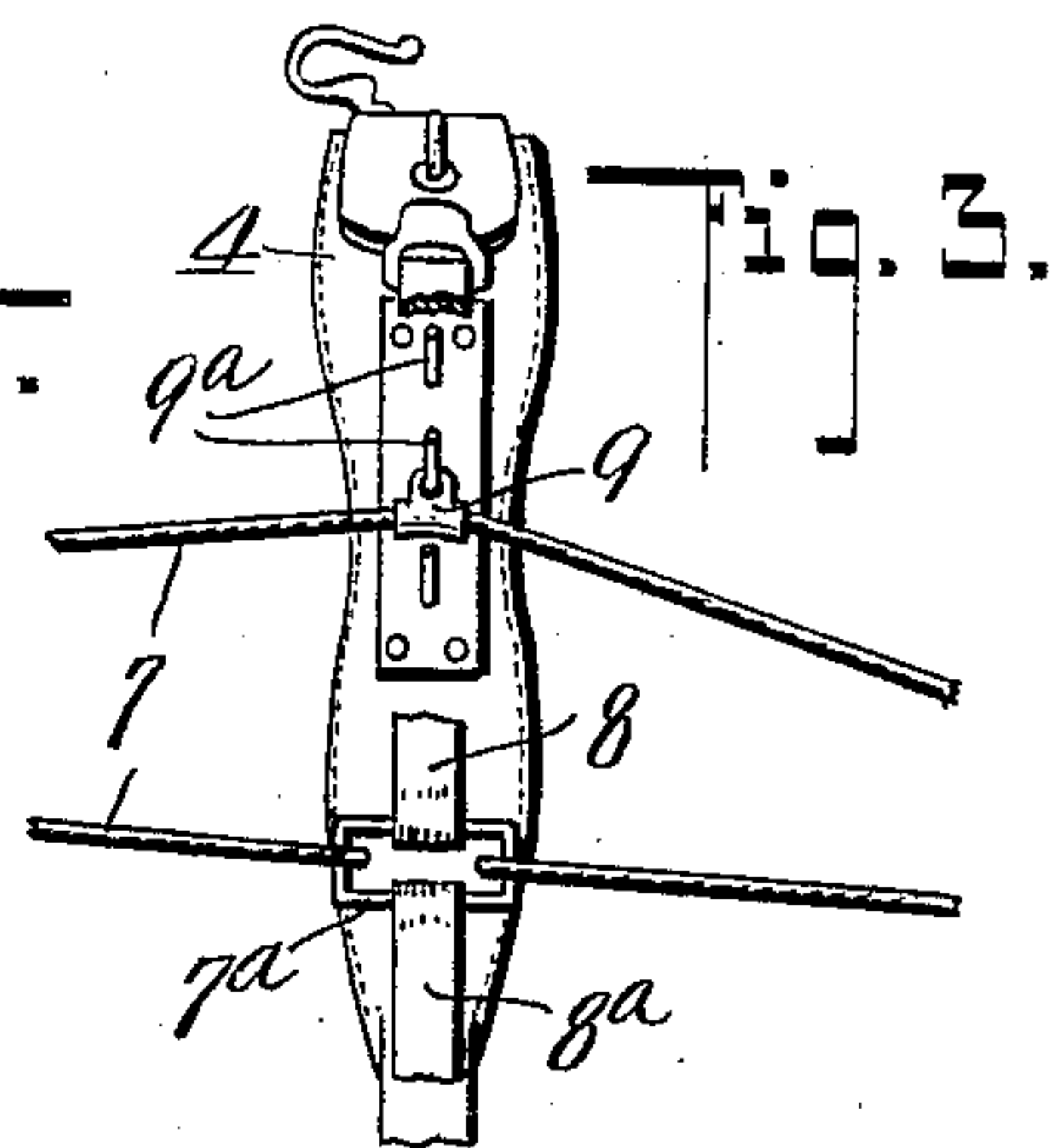
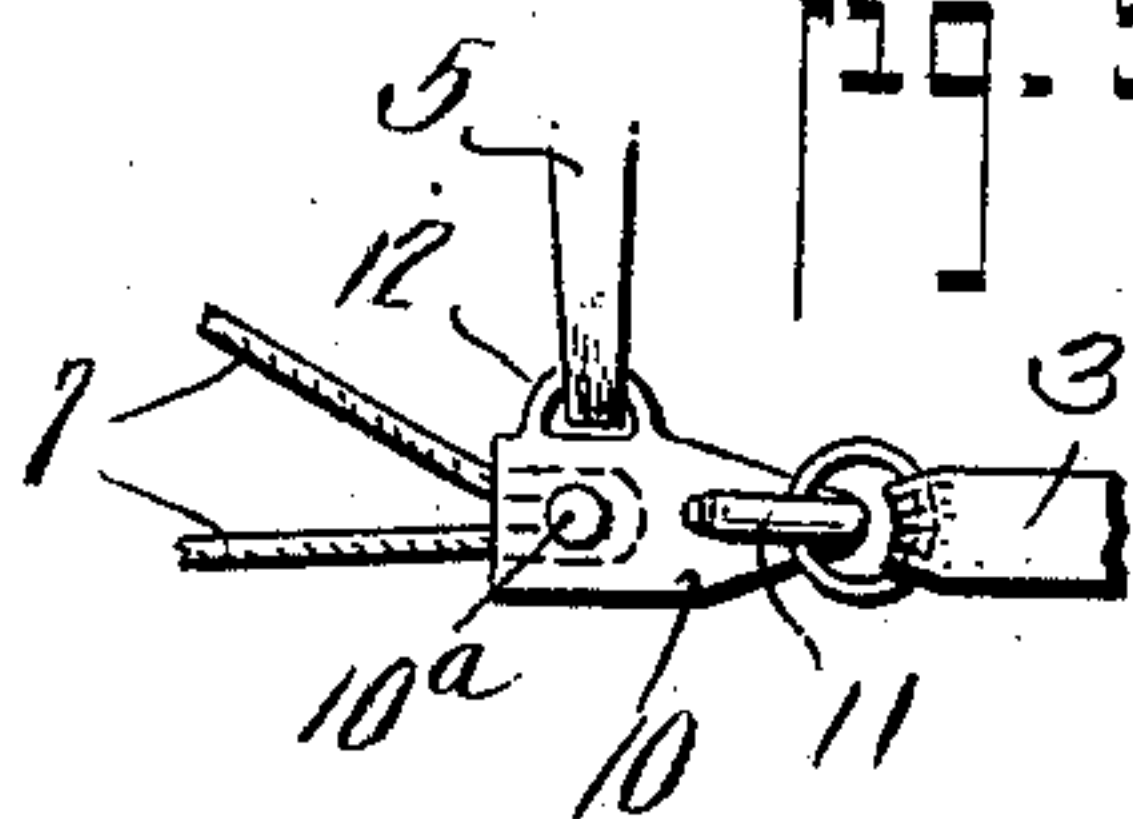
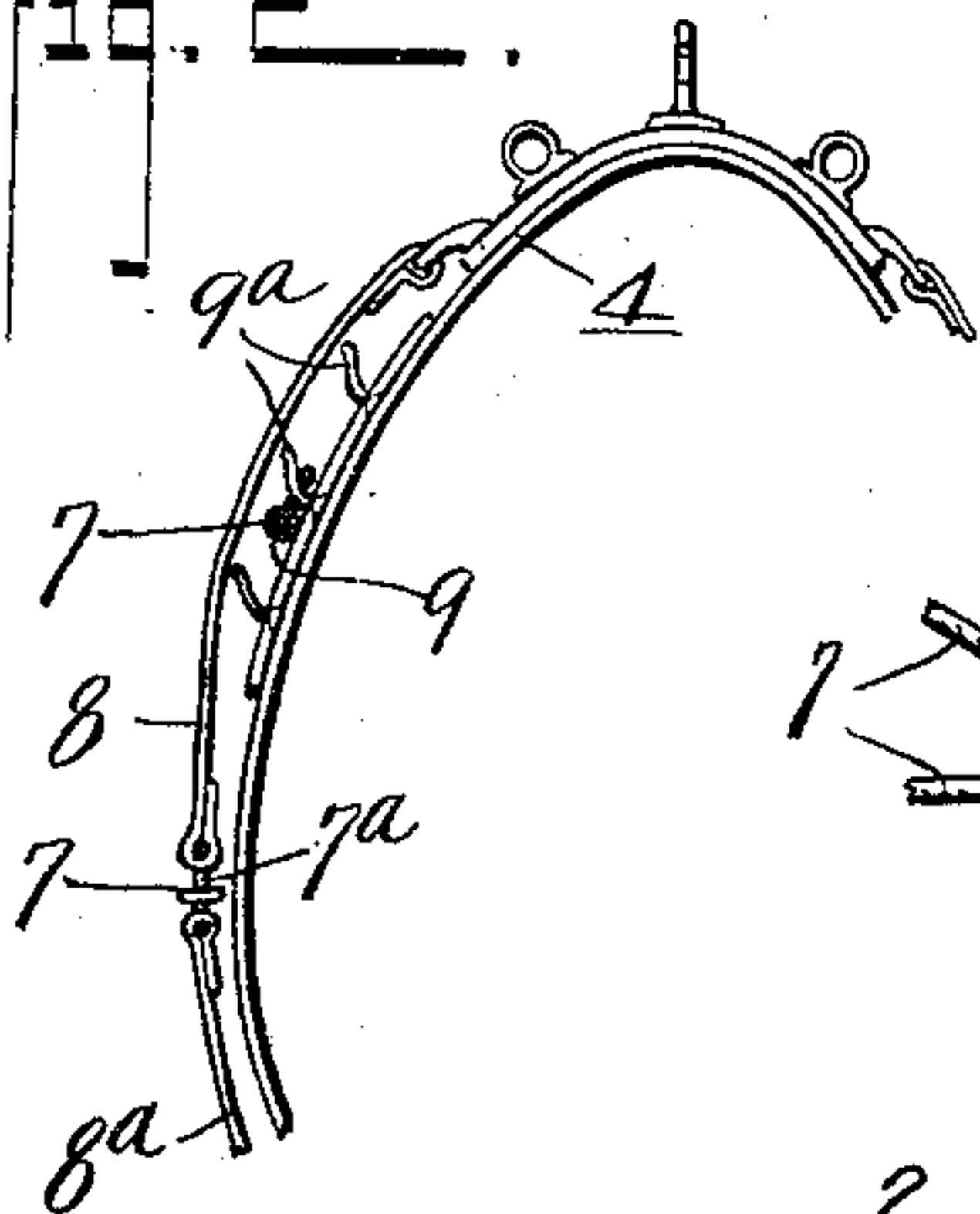
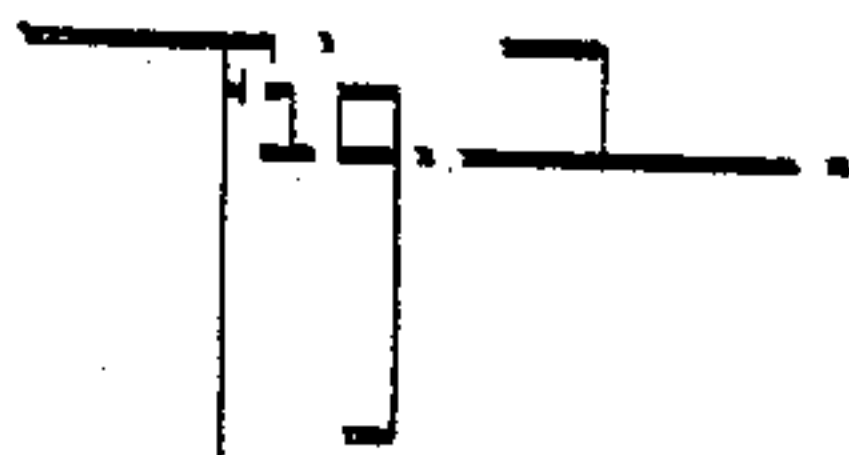


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Oliver W. Holmes
E. B. McBath

John D. Treen and
John Cummings.

Olivia Brock Attorneys

UNITED STATES PATENT OFFICE.

JOHN CUMMINGS AND JOHN D. LEEN, OF BANGOR, MAINE.

HARNESS ATTACHMENT.

No. 915,076.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed April 25, 1908. Serial No. 429,196.

To all whom it may concern:

Be it known that we, JOHN CUMMINGS and JOHN D. LEEN, citizens of the United States, residing at Bangor, in the county of Penobscot and State of Maine, have invented a new and useful Improvement in Harness Attachments, of which the following is a specification.

This invention relates to a harness attachment and is especially designed as an improvement upon the present tug trace, and has for its object the increase of the draft power by throwing the weight more or less directly upon the back of the horse.

In testing the invention it has been found that a horse which would with some difficulty draw a load of three thousand, two hundred pounds when provided with the common harness would with our attachment in place draw under the same circumstances four thousand, one hundred pounds with less apparent effort than required for the lighter load.

The invention consists of a cable having its end portions secured at the girth strap, said cable traveling over a pulley carried by the collar to a point upon the saddle, thence to the trace and back to the girth strap.

In the accompanying drawings;—Figure 1 is a side elevation of our attachment in use. Fig. 2 is an end view of a portion of a saddle with our device attached thereto and in section. Fig. 3 is a side view of the saddle portion of a harness illustrating the manner of securing our device thereto. Fig. 4 is a detail view partly in section showing the connection between our attachment and the collar. Fig. 5 is a detail side view showing the connection between our attachment and the trace and hip strap.

In these drawings 1 represents a collar, 2 a hame, 3 a trace, 4 the saddle, and 5 the hip strap of the harness now in common use. Upon the hame we pivotally swing a sheave 6 in which is mounted a pulley 6^a and over this pulley runs a cable 7 preferably of wire. The sheave 6 may be of leather or it may be of metal covered with leather or otherwise padded upon the inner face to prevent rubbing of the collar. The ends of the cable 7

are secured together by a link 7^a the end portions of which are engaged by the cable and the side members of which are secured to sections 8 and 8^a of a girth strap. The cable therefore consists of an upper and lower portion the lower portion carrying the link 7^a and the upper portion immediately above the link carries a sleeve 9 provided with a suitable hook or perforated lug adapted to engage hook members 9^a placed in vertical alinement upon the saddle 4, so that the sleeve 9 and this portion of the cable can be raised or lowered by engaging the sleeve with higher or lower hooks. The rear portion of the cable 7 is held in a sleeve 10 by means of a cross pin 10^a and this sleeve is provided with a hook or other means 11 for engagement with the forward end of the trace 3. The sleeve 10 also carries a loop 12 engaged by the hip strap 5.

The extent to which the pull or weight is drawn upon the back of the horse is regulated by engagement of the sleeve 9 with the hooks 9^a, the greatest weight of pull being drawn upon the back when the sleeve is engaged with the highest hook.

It will be obvious that the cable 7 replaces the usual tug trace and by means of the construction herein described the draft power of the animal is found to be increased from twenty-five to thirty per cent.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. The combination with a harness comprising a trace, hame, girth strap and saddle, of a cable having upper and lower members, said cable being connected respectively to the trace and the hame, the lower member of the cable being secured to the girth strap, and the upper member being adjustably connected to the saddle.

2. A harness comprising a hame, a pulley carried by the hame, a girth strap, a link carried by the girth strap, a cable running over said pulley and having its ends connected to said link, a trace, means for connecting the cable to the trace, a saddle, and a plurality of vertically arranged cable-engaging means carried by the saddle.

3. A harness comprising a girth strap, a
hip strap, a saddle, a trace, a cable having
upper and lower members, means for secur-
ing the lower member to the girth strap,
5 means for adjustably connecting the upper
member to the saddle, means for securing
the rear portion of the cable to the trace and
hip strap, and a pulley pivotally carried by

the hame and over which the forward por-
tion of said cable works.

JOHN CUMMINGS:
JOHN D. LEEN.

Witnesses:

A. H. HARDING,
JOHN H. DAVIS.