

(No Model.)

J. M. DODGE.
GRIP PULLEY.

No. 473,254.

Patented Apr. 19, 1892.

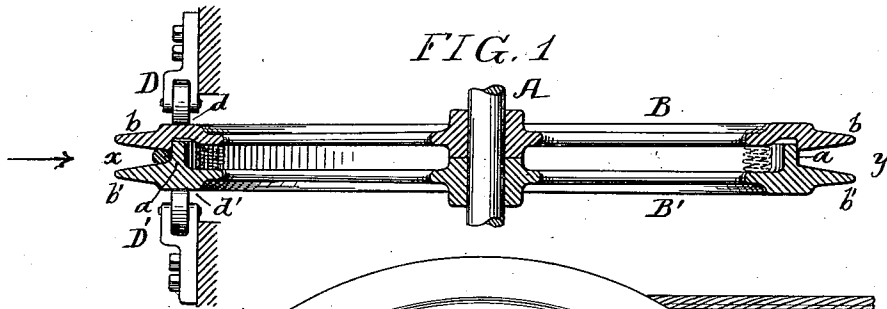
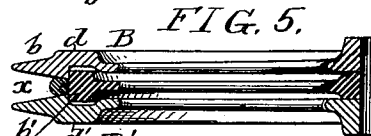
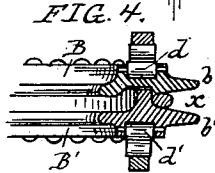
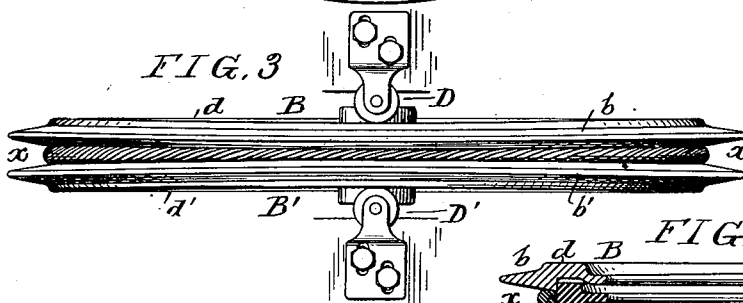
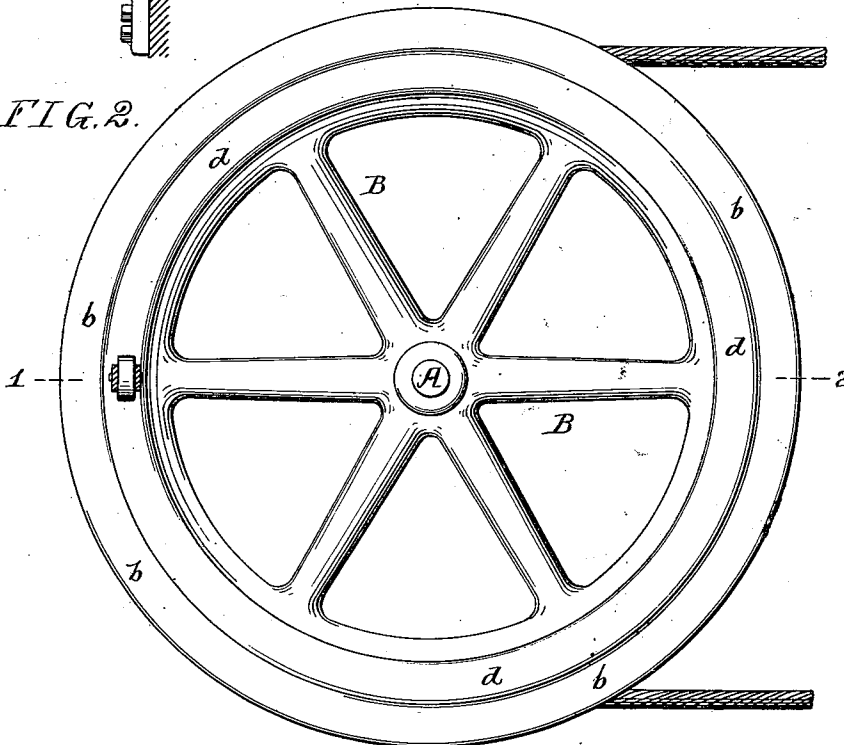


FIG. 2.



Witnesses:
Fred W. Goodwin
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UNITED STATES PATENT OFFICE.

JAMES M. DODGE, OF PHILADELPHIA, PENNSYLVANIA.

GRIP-PULLEY.

SPECIFICATION forming part of Letters Patent No. 473,254, dated April 19, 1892.

Application filed November 17, 1891. Serial No. 412,193. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. DODGE, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Grip - Pulleys, of which the following is a specification.

The object of my invention is to so construct a driving or driven wheel used in rope-driving that the two flanges of the wheel can be forced together at a given point, so as to clamp the drive-rope and prevent it from slipping within the groove of the wheel. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse sectional view on the line 1 2, Fig. 2. Fig. 2 is a plan view of Fig. 1. Fig. 3 is an end view looking in the direction of the arrow, Fig. 1. Figs. 4 and 5 are views of modifications.

A is the shaft on which are secured the two halves B B' of the rope-wheel. Each half is preferably supplied with a hub and rim and spokes, as shown in Figs. 1 and 2. The rim b of the section B forms one wall of the rope-groove x, and the rim b' of the section B' the other wall. The section B' in the present instance has an annular flange a, which forms the base of the rope-groove x, and preferably extends back of the rim b. The two sections are so adjusted in respect to each other that the rope will be perfectly free within the groove. On the outer side of the section B is a way d, and on the outer side of the section B' is a way d', and mounted on each side of the wheel are pressing-rollers D D', which bear upon the ways d d'. The journals of the rollers are mounted in suitable brackets, which can be adjusted toward or from the wheel, if necessary, so as to increase or diminish the pressure upon the sections. The rollers are mounted at a point about midway of the bight of the rope, as clearly shown in Fig. 2, so that while the rope can pass freely into or out of the groove it is clamped securely to the wheel at the point indicated. More or less pressure can be given to the sections, depending upon the drive required. As soon as the two sections are relieved from the control of the rollers the sec-

tions return to their normal positions, owing to the spring of the metal, as shown clearly at y, Fig. 1.

In some instances where the spring of the metal is not sufficient to separate the two sections springs may be inserted between the two sections to press them apart when not under the control of the rollers D D'.

By the above-described construction of rope-wheel I am enabled to make perfectly plain sections without encumbering the wheel with any complicated mechanism, the pressing devices being independent of the wheel and readily accessible for adjustment, repair, or for lubricating without stopping the rotation of the wheel.

In some instances pressing-fingers may be used in place of the anti-friction rollers, and, as shown in Fig. 4, a series of rollers may be carried by the wheel, against which will act the presser plates or fingers, and in some instances the anti-friction rollers may be dispensed with.

In some instances only one section of the wheel need be acted upon by the presser, the other section being rigid enough to withstand the pressure exerted on the opposite section, although I prefer to use a presser on each side of the wheel, and in some instances instead of the flange a on one section forming the base of the rope-groove the base may be formed by an independent section a', mounted on the shaft, as shown in Fig. 5, without departing from my invention.

I claim as my invention—

1. The combination, with a rope-wheel composed of two parts, each part rigidly arranged upon the same shaft and having flanges forming the rope-groove, of mechanism for springing one flange toward the other flange, so as to grip the rope, said mechanism being free from and independent of the wheel, substantially as described.

2. The combination, in a wheel, of the two flanged sections B B', situated side by side and rigidly arranged upon the same shaft, so that their flanges form the rope-groove, and so arranged in respect to each other that the normal width of the groove will be wider than the rope, with pressers situated on each side

of the wheel and at a point about midway of
the bight of the rope and so adjusted as to
force the two flanges together, so as to grip
the rope, the sections returning to their nor-
mal positions by the spring of the metal from
which the sections are made as soon as re-
leased, substantially as described.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

JAMES M. DODGE.

Witnesses:

HENRY HOWSON,
WILLIAM D. CONNER.