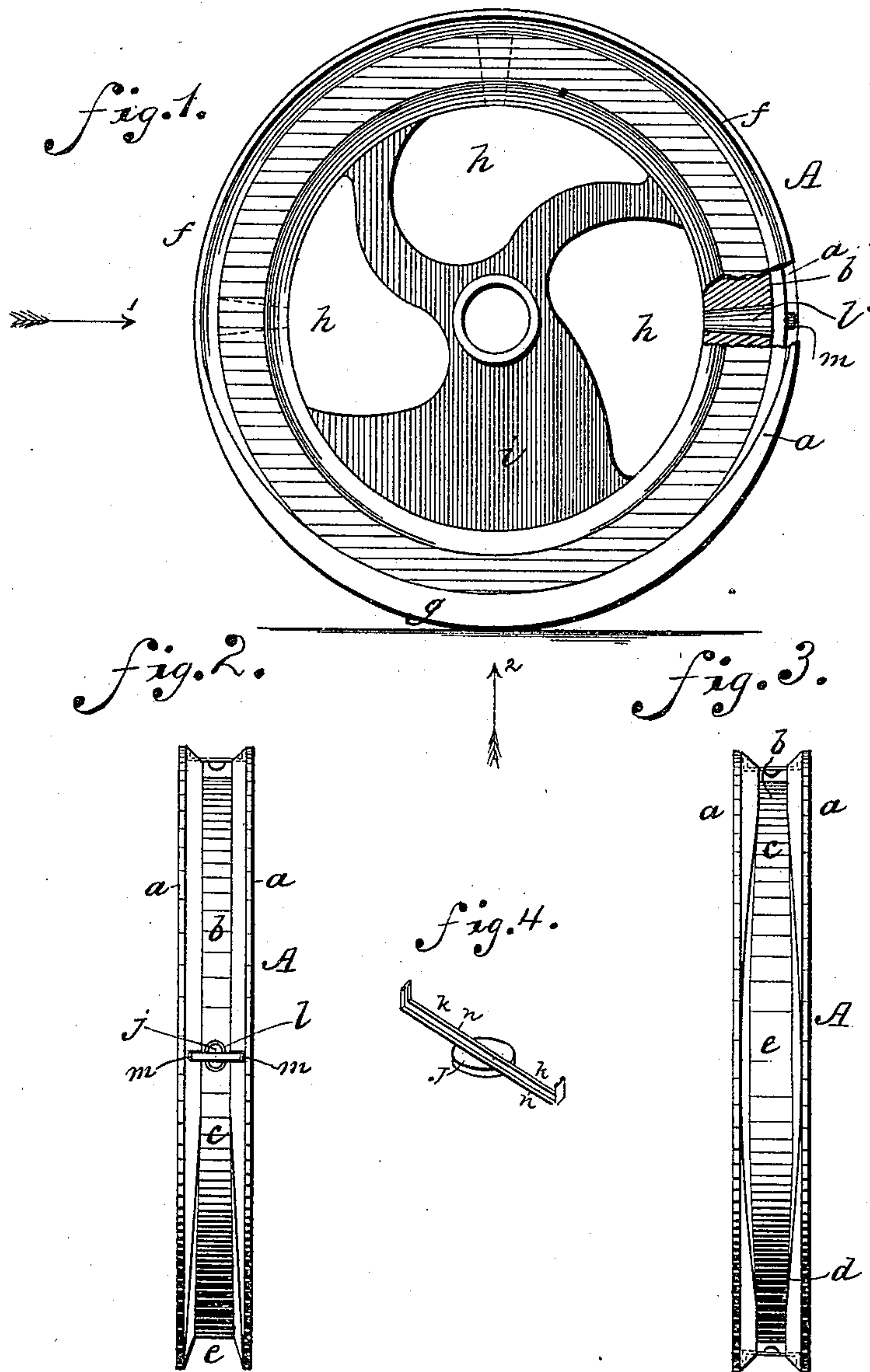


(No Model.)

G. W. METCALFE.
RAILWAY TORPEDO PLACER.

No. 292,029.

Patented Jan. 15, 1884.



WITNESSES:
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A. G. Lyne.

INVENTOR:
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UNITED STATES PATENT OFFICE.

GILSON WARNER METCALFE, OF BALTIMORE, MARYLAND.

RAILWAY TORPEDO-PLACER.

SPECIFICATION forming part of Letters Patent No. 292,029, dated January 15, 1884.

Application filed September 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, GILSON WARNER METCALFE, of Baltimore, in the State of Maryland, have invented a new and useful Improvement
5 in Railway Torpedo-Placers, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

This invention relates to an improvement
10 on the torpedo-placer shown in Patent No. 284,463, granted to G. W. Metcalfe and M. F. Haber, September 4, 1883. In said patent is shown a wheel having two flanges to overlap
15 a railway-rail, and provided between the flanges with a groove narrower than the tread, and opposite transverse recesses in the flanges, to receive the ends of the metallic arms of a torpedo, which are to be bent about the rail
20 by the rotation of the wheel in contact with the latter.

My present invention consists of certain details of construction, as hereinafter described and claimed, whereby the action of the wheel, in placing a torpedo on a rail, is rendered
25 more certain and effective.

In the drawings, Figure 1 is a side elevation of the improved wheel, partly broken away. Fig. 2 is an edge view of the same, looking in the direction of the arrow 1. Fig.
30 3 is a similar view, looking in the direction of the arrow 2; and Fig. 4 is a perspective view of the torpedo with metallic arms.

A indicates the torpedo-placing wheel, having flanges *a a* and a central tread, *b*. The
35 tread *b* is of uniform width throughout the greater part of its extent, but between the points *c d* it is made wider by spreading or recessing the flanges, to facilitate placing it in engagement with a rail when the train is running rapidly. The wider portion *e* of the
40 tread is gradually contracted at the ends to the normal width, the converging part of the flanges being adapted to serve as guides for the wheel, to bring it centrally on the rail by the time the point *c* or *d* is turned into contact
45 with the latter.

To compensate for the loss in strength which the flanges would sustain where they are recessed to widen the tread, they are to be re-en-
50 forced at the outer sides at such part. This

may be done by making the rim *f* wider at such part, as shown at *g* in Fig. 1. With this construction the wheel may be lowered to the rail on which a torpedo-signal is to be placed, with the part *e* of the tread downward, so that
55 it will be the first to touch the rail.

To insure that the part *e* shall always be downward in proper position, the wheel is recessed at *h*, and provided with a counter-weight, *i*, on the side of the hub next to the
60 part *e*.

Instead of forming a continuous groove in the center of the tread *b*, for receiving and shielding the torpedo *j* in the act of bending the arms *k* about a rail, I form openings *l* in
65 the tread, leading through to the recesses *h*, which openings are located opposite to the transverse recesses *m*, in which the arms of the torpedo are secured. These openings serve the same purpose as the continuous
70 groove shown in the above-named patent, and have the additional advantage of affording a ready escape for any foreign substance that might accidentally lodge in the tread, and by becoming wedged under the torpedo cause the
75 explosion of the same in the act of placing it upon the rail.

In Fig. 4 I have shown the torpedo *j* provided with arms *k*, formed by a bent strip of metal, preferably tin, having its edges folded
80 over at *n*, to give the required rigidity without affecting the bending and binding quality of the metal. Tin is the best metal for the purpose, because it will retain any shape into
85 which it is bent; but owing to its softness it requires to be thus stiffened to give it sufficient hold on the wheel.

Besides folding the edges of the strip of metal, the strip may be beaded longitudinally to secure the same object.
90

What I claim is—

1. The torpedo-placing wheel, having a portion of its tread between the flanges made wider than the normal width of the tread, and weighted, to cause said portion to assume
95 the lowest position when the wheel is suspended by an axle, substantially as shown and described.

2. The torpedo-placing wheel, having a tread between two annular flanges and radial
100

openings through the tread, and provided with recesses in the flanges for holding a torpedo in line with each of said openings, substantially as shown and described.

- 5 3. As an article of manufacture, the metal strip for securing a torpedo-signal to a rail, having longitudinal beads or folds *n*, substantially as shown and described, whereby the

arms formed by the strip may be firmly held by the wheel when the former is made of soft metal, as specified.

GILSON WARNER METCALFE.

Witnesses:

CHAS. H. DORSEY,
SAML. WEIL.