

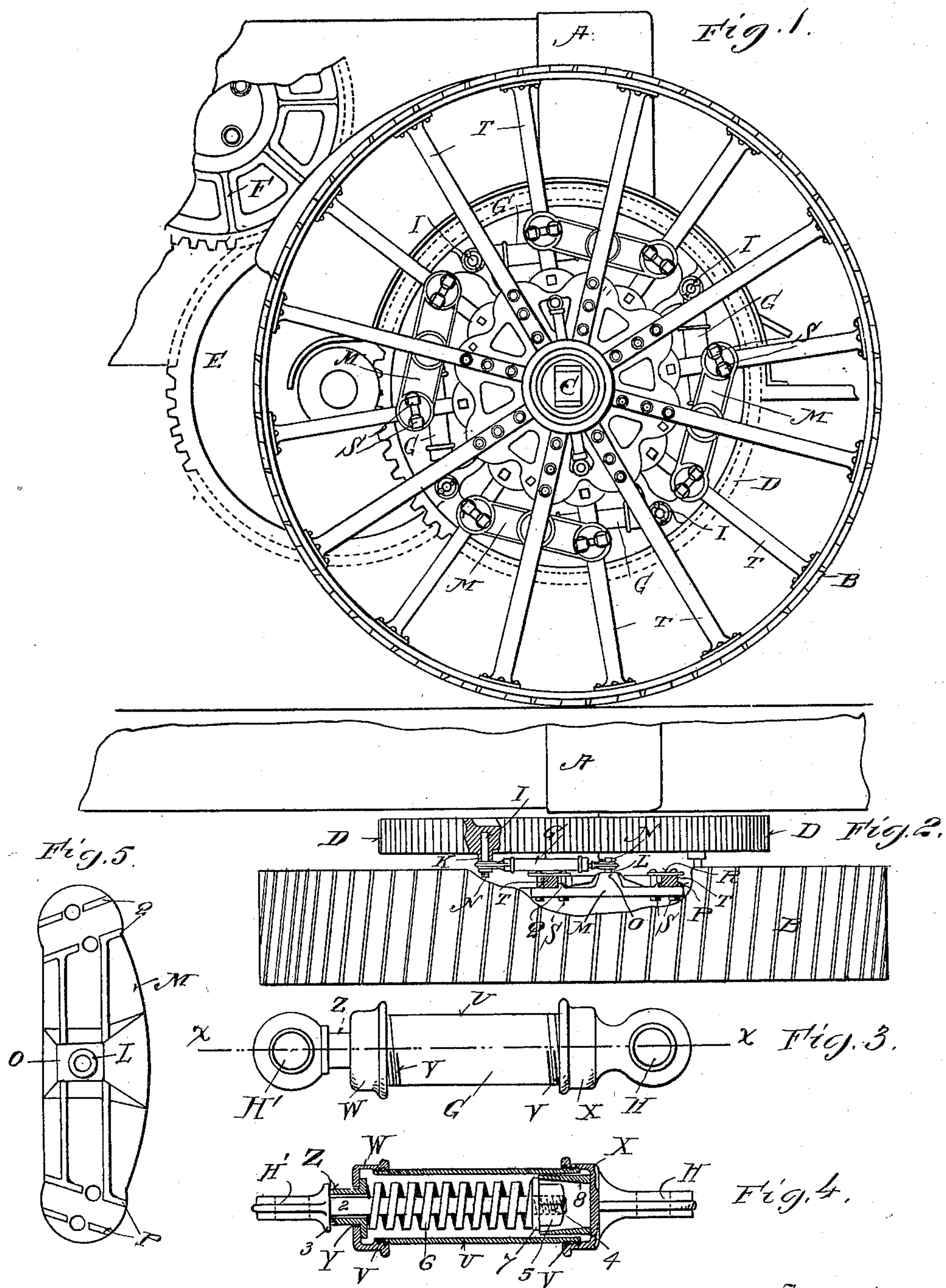
No. 627,190.

Patented June 20, 1899.

E. HUBER.
TRACTION ENGINE.

(Application filed Apr. 8, 1899.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD HUBER, OF MARION, OHIO.

TRACTION-ENGINE.

SPECIFICATION forming part of Letters Patent No. 627,190, dated June 20, 1899.

Application filed April 6, 1899. Serial No. 711,890. (No model.)

To all whom it may concern:

Be it known that I, EDWARD HUBER, a citizen of the United States, residing at Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Traction-Engines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in traction-engines.

The object of this invention is to provide improved spring-link connections between the bull-wheel and traction-wheel and also to provide an improved means for connecting said spring-link to the ground-wheel and bull-wheel.

My invention also relates to details of construction and arrangement hereinafter appearing and particularly pointed out in the claims.

In the accompanying drawings, on which like reference letters and numerals indicate corresponding parts, Figure 1 is a partial side elevation of a traction-engine, showing my improvements applied thereto; Fig. 2, a plan view of the same; Fig. 3, an enlarged detail view of the spring-link complete; Fig. 4, a longitudinal sectional view on the line $x x$ of Fig. 3, and Fig. 5 a detail view of the bracket.

The letter A represents a portion of a traction-engine boiler, which carries a traction-wheel B upon a shaft C, as also a bull-wheel D. The power from the cylinder of the engine is transmitted to this bull-wheel by means of intermediate gearing, such as shown at E and F, respectively. Such power is transmitted to the traction-wheel through my improved spring-link G in a manner presently to appear for the purpose of forming a yieldable connection between the bull-wheel and traction-wheel, so that when obstructions are met with in passing over rough or uneven ground the shock upon the traction-wheel will not act to strip the gear-teeth not only on the bull-wheel but on the intermediate gears; but such shock will be compensated for by my improved spring-link device in an improved manner. Of course I am aware that it is not new to provide spring-links between bull-wheels and traction-wheels of engines; but so far as I am aware no one has employed this special link construction and

these special means for connecting such link to said traction-wheel and to said bull-wheel, so that a most efficient spring-link connection and the full benefit of such link may be obtained without the liability of breaking away from the bull-wheel or the ground-wheel.

It will be observed that each end of the spring-link is provided with an eye H and H', respectively. The eye H' is adapted to fit upon a stud I, projecting from one face of the bull-wheel J, carried by the engine in any suitable manner. This stud I is rigidly secured to the bull-wheel and is additionally supported by means of a boss K, projecting from the bull-wheel, and which also acts to hold the spring-link out of contact with the bull-wheel itself. The other eye of the link is mounted upon a stud L, projecting from the bracket M, bolted or otherwise secured to the adjacent spokes of the traction-wheel B. In order to prevent the spring-link from slipping off of the studs L and I, respectively, I provide cotter-pins N, which pass through the outer ends of the studs. Referring now particularly to the bracket it will be seen that it has a projection O extending outward from about midway its length. From this extension projects the lug L above referred to. Near each end of said bracket is provided a pair of lugs P and Q, respectively, such lugs being adapted to fit against the spokes to which the bracket is secured. A plate R fits upon the opposite side of the spokes to that of the bracket and is held to the spokes by means of bolts S, which pass through the plate and bracket at either side of the respective spokes T. Thus by reason of these bolts and lugs the bracket is held firmly in engagement with the spokes of the traction-wheel to which it is connected. By reason of connecting the bracket to two spokes the wheel is not subjected to so much strain at any one point.

I will now describe the construction of the link itself. It will be seen that it is composed of an outer shell or casing U, which is externally screw-threaded at each end, as shown at V. Upon one of these ends is screwed a cap W, while upon the other end is screwed a shank X. The cap W is formed with a hole or opening Y, in which fits a flanged thimble Z, such flanges being adapted to engage with the interior of the cap. Through

this cap extends a pull-rod 2, which has a flange 3 near its outer end, as also an eye H', while at its inner end it is screw-threaded, as shown at 4, for the reception of a nut 5.

5 Upon this pull-rod and between the flanged thimble Z and nut 5 is interposed a spring 6, as also a washer 7, immediately adjacent to said nut. Between the washer 7 and the shank X is interposed a sleeve 8. Thus as
10 the pull comes on the shank X the thimble Z will act to depress the spring 6, while if the pull comes upon the rod 2 the washer 7 will engage with the other end of the spring and act to depress it, which will also give a yield-
15 ing or spring-like effect. Thus no matter whether the pull is transmitted through the driving-gears or whether the traction-wheel meets with some obstruction the spring-link will yield in either direction and sudden
20 strains will be compensated for, so that the teeth on the bull-wheel or on the intermediate gears will not be broken out.

Having thus fully described my invention, what I claim as new, and desire to secure by
25 Letters Patent, is—

1. In a traction-engine, the combination with a traction-wheel and a bull-wheel, of a spring-link adapted to be mounted at one end upon a stud projecting from said bull-wheel
30 and at its other end upon a stud projecting from a bracket rigidly connected to adjacent spokes of the traction-wheel, such spring-link consisting of a housing screw-threaded at each end, a cap adapted to screw upon one end of
35 said housing and a shank adapted to screw upon the other end of said housing, and a

pull-rod extending through a flanged thimble in said cap and having a spring interposed between said flanged thimble and a washer mounted on the inner end of said rod adjacent
40 to a nut screwed on said rod, and a sleeve between said shank and washer, all substantially as shown and described.

2. In a traction-engine, the combination with a traction-wheel and a bull-wheel, of a
45 stud rigidly mounted on said bull-wheel, a boss or projection extending from said bull-wheel about said stud, a bracket having a pair of holes near its outer ends, a pair of flanged projections or extensions extending
50 from said bracket, substantially in line with said hole and adapted to fit against the edges of adjacent spokes, a cap for fitting upon said spokes upon the opposite side to that of the bracket, a pair of bolts extending through the
55 holes in each end of said bracket and through said cap on each side of adjacent spokes, a raised portion substantially midway between the ends of said bracket, a stud projecting from said raised portion, a spring-link, one
60 end of which fits upon the stud projecting from said bull-wheel and the other end of which fits upon the stud projecting from said bracket, and cotter-pins adapted to hold said spring-link upon said studs.
65

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD HUBER.

Witnesses:

JOHN J. CRAWLEY,
ROSTEN CURTIS.