

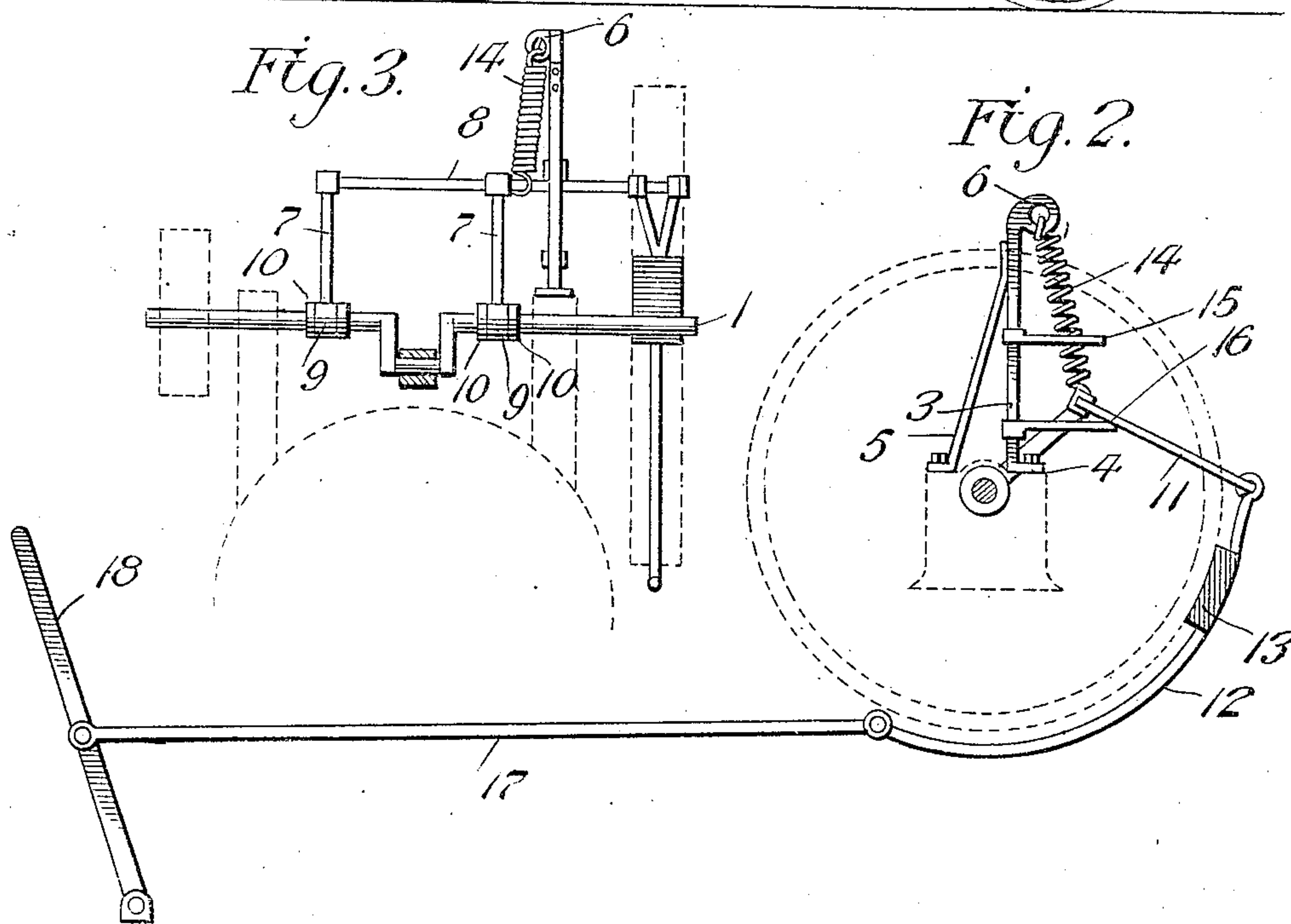
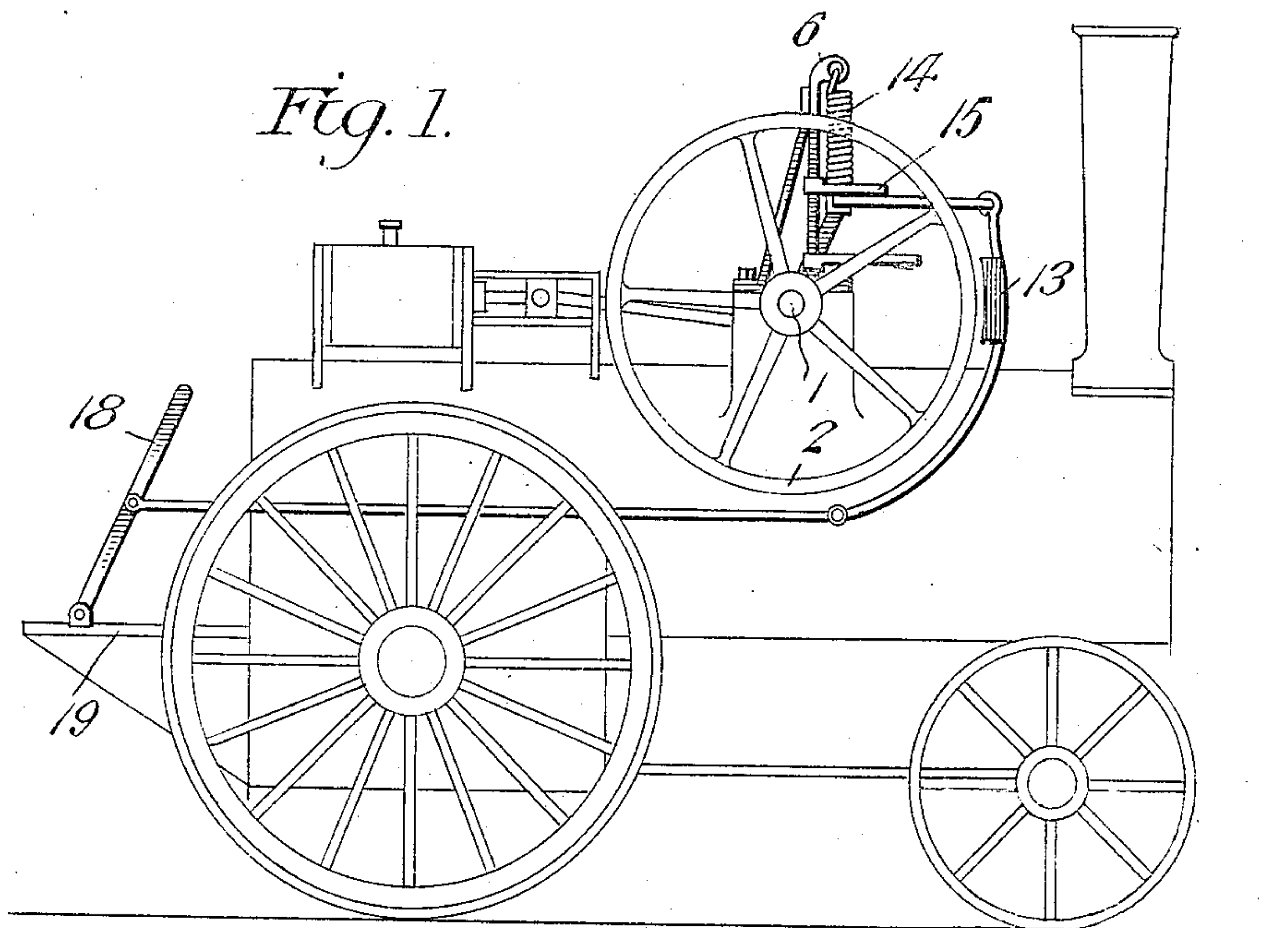
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W. L. QUICK.

DEVICE FOR THROWING TRACTION ENGINE SHAFTS OFF DEAD CENTERS.

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WILLIAM L. QUICK, OF PIPER CITY, ILLINOIS.

DEVICE FOR THROWING TRACTION-ENGINE SHAFTS OFF DEAD-CENTERS.

No. 831,992.

Specification of Letters Patent.

Patented Sept. 25, 1906.

Application filed April 4, 1906. Serial No. 309,804.

To all whom it may concern:

Be it known that I, WILLIAM L. QUICK, a citizen of the United States, residing at Piper City, in the county of Ford and State of Illinois, have invented certain new and useful Improvements in Devices for Throwing Traction-Engine Shafts Off Dead-Centers, of which the following is a specification.

This invention relates to devices for throwing traction-engine shafts off dead-centers, the object of the invention being to provide a simple device applicable to any ordinary traction-engine whereby preparatory to starting the engine the engine-shaft or crank-shaft may be turned sufficiently to throw the same off of a dead-center, thereby allowing the piston to act immediately upon the entrance of steam to the cylinder.

With the above general objects in view the invention consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a traction-engine, showing the improved mechanism applied thereto. Fig. 2 is an enlarged side elevation of the device for throwing the engine-shaft off of the dead-center, the fly-wheel of the engine being shown in dotted lines. Fig. 3 is a rear elevation of the same.

Referring to the drawings, 1 designates the engine-shaft or crank-shaft of a traction-engine, the same being provided with the usual fly-wheel 2.

In carrying out the present invention I provide a standard or bracket 3, which is bolted or otherwise secured to one of the bearing-boxes, as shown at the point 4, and suitably braced, as shown at 5, the said standard or bracket being provided at its upper end with an eye 6.

Mounted upon the shaft 1 is a hanger-frame, comprising parallel arms 7, joined by a connecting-bar 8. The arms 7 are provided at their inner ends with sleeves 9, loosely mounted on the shaft 1 and held between fixed collars 10, fast on the shaft, so as to prevent the arm 7 from sliding lengthwise of the shaft. The collars 10 are ordinarily made adjustable for the purpose of adjusting the hanger-frame lengthwise of the shaft to bring the friction-shoe hereinafter described into proper relation to the fly-wheel. The connecting-bar 8 connects the outer free ends of the arms 7 and is extended laterally be-

yond said arms and provided with a rigid outwardly-projecting arm 11, which forms a support for a strap or band 12, which extends partly around the periphery of the fly-wheel, as shown in Figs. 1 and 2, and is provided with a friction-shoe 13, adapted to be moved into and out of contact with the rim of said wheel.

The swinging end of the hanger-frame is normally upheld by means of a retracting-spring 14, one end of which is connected to the eye 6 and the other end to the connecting-bar 8 of the hanger-frame.

Mounted on the standard or bracket 3 are upper and lower stops 15 and 16, respectively, which define the limits of movement of the arm 11, said arm normally resting against the upper stop 15, as shown in Fig. 1, while the lower stop 16 limits the downward movement of said arm, as shown in Fig. 2. The stops 15 and 16 may be adjustable up and down on the standard 3, so as to regulate the throw of the arm 11.

Connected to the end of the strap or band 12 is a connecting-rod 17, which extends back to a hand-lever 18, arranged upon or adjacent to the engineer's platform 19, as shown in Fig. 1. With the parts arranged in their normal position, as shown in Fig. 1, the engineer rocks the lever 18, so as to bring the shoe 13 against the fly-wheel 2. In the further movement of the lever 18 the shoe 13 grips the rim of the fly-wheel and turns the fly-wheel and shaft 1 until the crank of said shaft is thrown off the center. Upon rocking the lever 18 in the reverse direction the friction-shoe 13 is moved out of contact with the rim of the fly-wheel, and the spring 14 lifts said shoe and swings the hanger-frame to its superimposed position, as shown in Fig. 1, wherein it holds the shoe 13 out of contact with the fly-wheel during the operation of the engine.

I claim—

1. The combination with a fly-wheel, and a spring-retracted hanger, of a friction-band supported by said hanger and embracing the rim of the fly-wheel, and hand-operated connections for moving said band into contact with the fly-wheel.

2. The combination with the crank-shaft and fly-wheel of an engine, of a hanger journaled on said shaft, a friction-band supported at one end by said hanger and embracing the fly-wheel rim, a spring for holding said band normally out of contact with the fly-wheel,

and a manually-operated device for moving said band into engagement with the fly-wheel and partially turning said fly-wheel.

3. The combination with the crank-shaft
5 and fly-wheel of a traction-engine, of a vibratory hanger journaled on said shaft, a standard or bracket provided with stops for limiting the swinging movement of the hanger in both directions, a friction-shoe carried by the
10 hanger, a manually-operated device for mov-

ing said shoe into engagement with the fly-wheel and partially turning said wheel, and a retracting-spring interposed between said hanger and upright or bracket.

In testimony whereof I affix my signature 15
in presence of two witnesses.

WILLIAM L. QUICK.

Witnesses:

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