

(No Model.)

C. M. FARRAR.
LINK FOR STEAM ENGINES.

No. 370,938.

Patented Oct. 4, 1887.

Fig. 1.

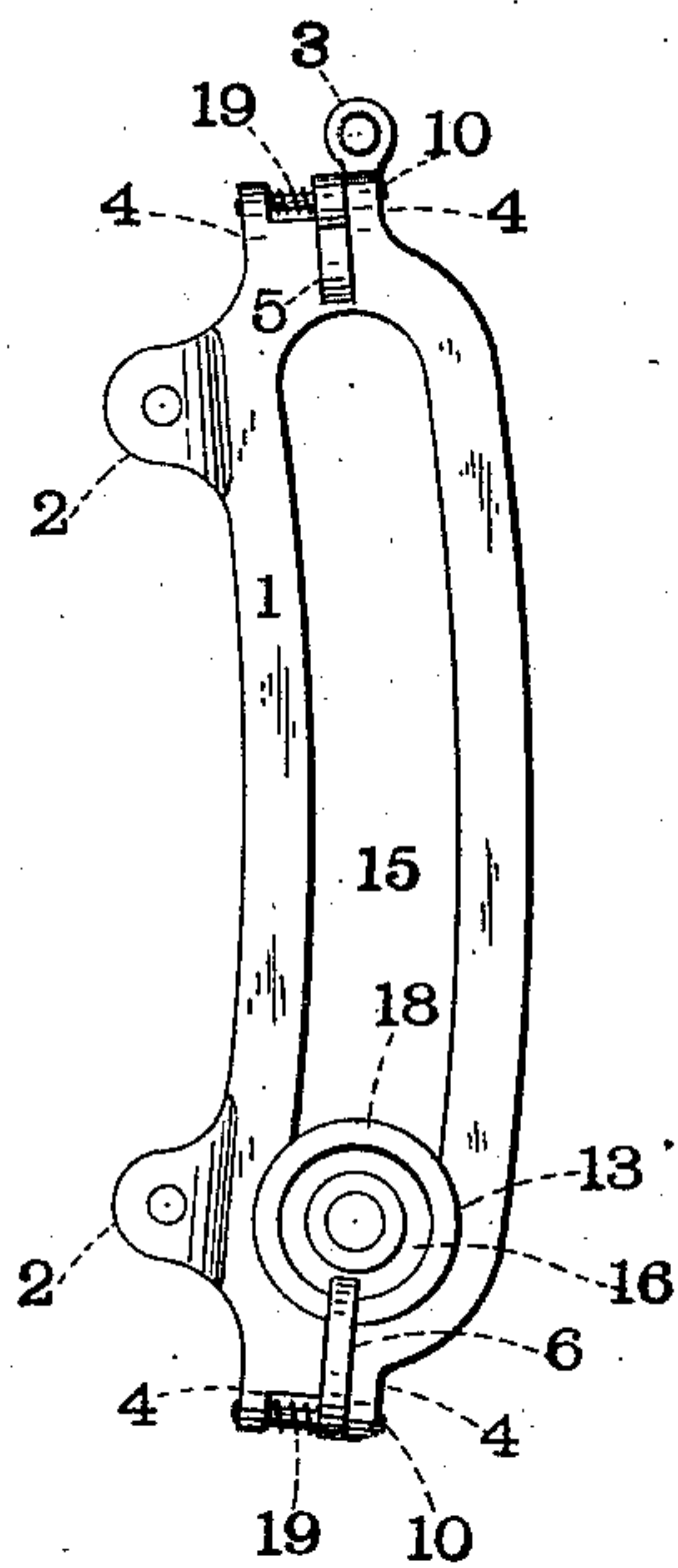


Fig. 2.

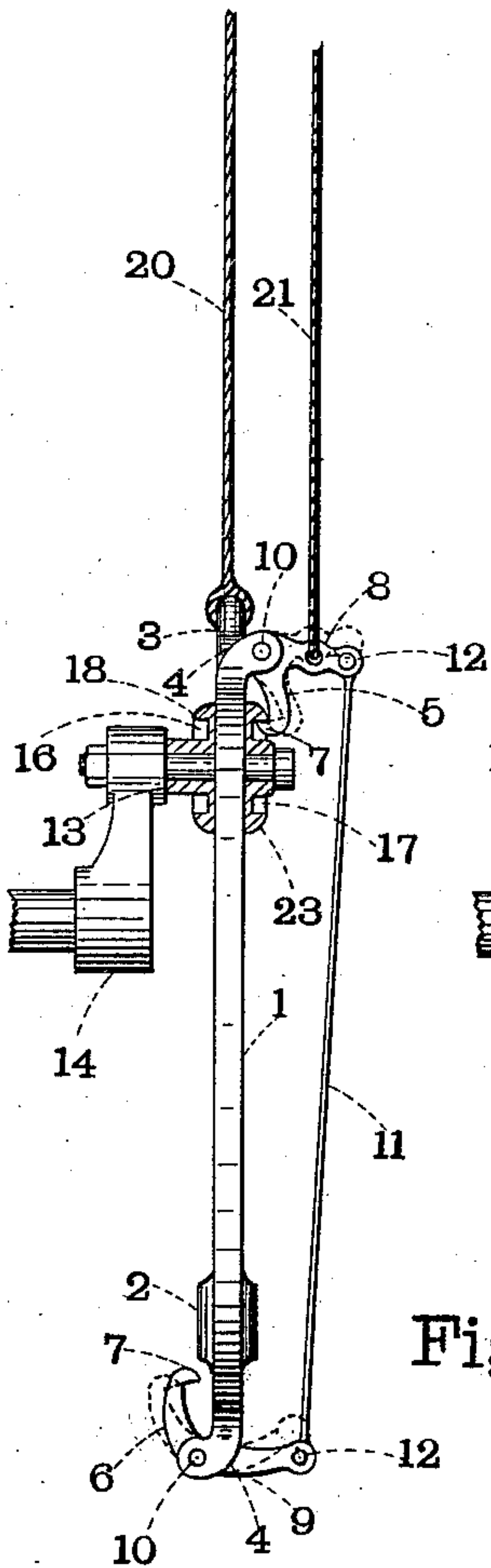


Fig. 3.

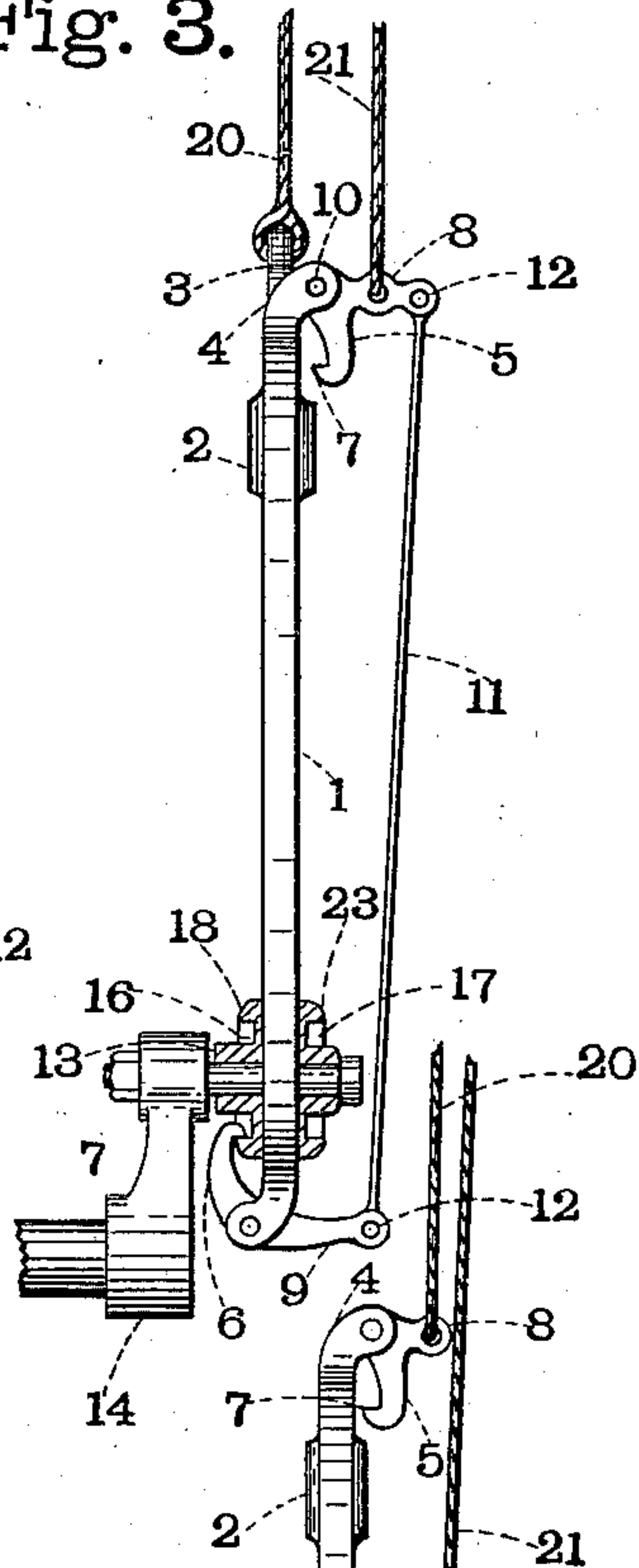


Fig. 4.

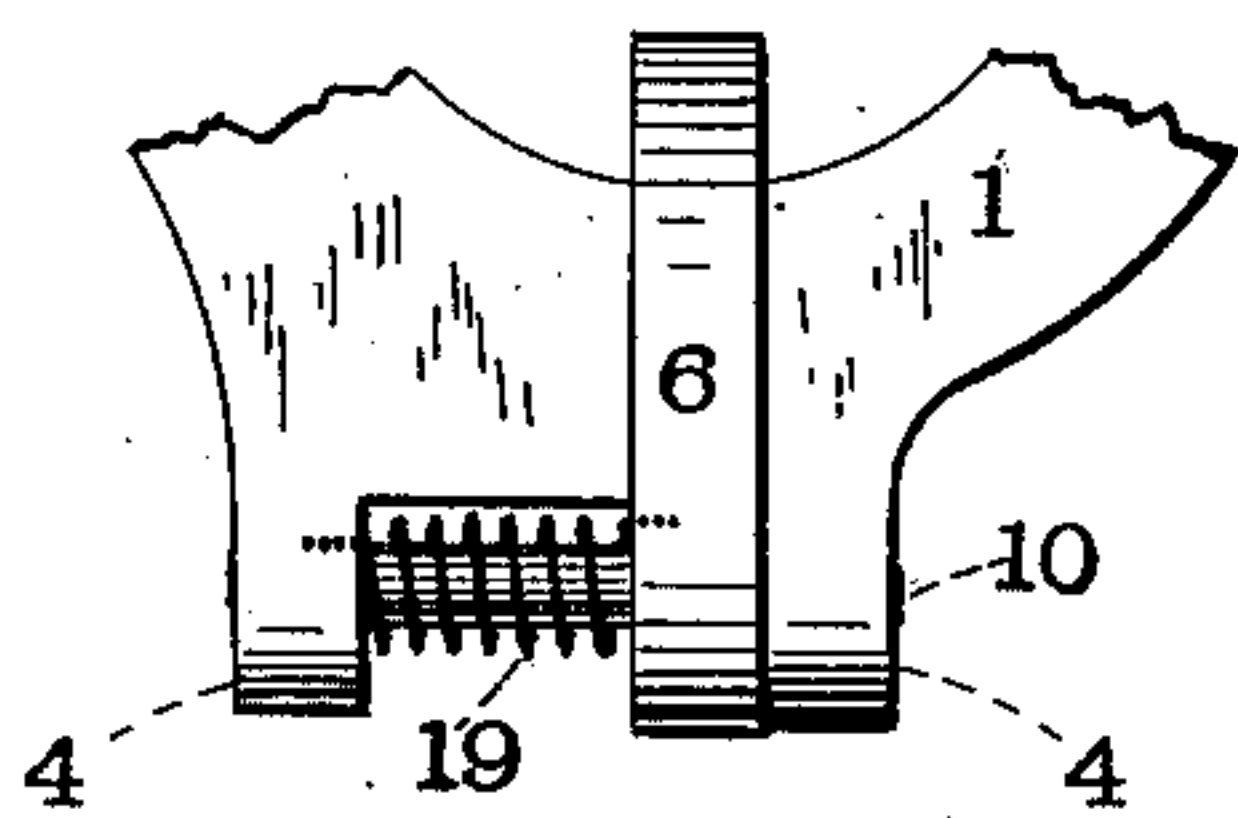
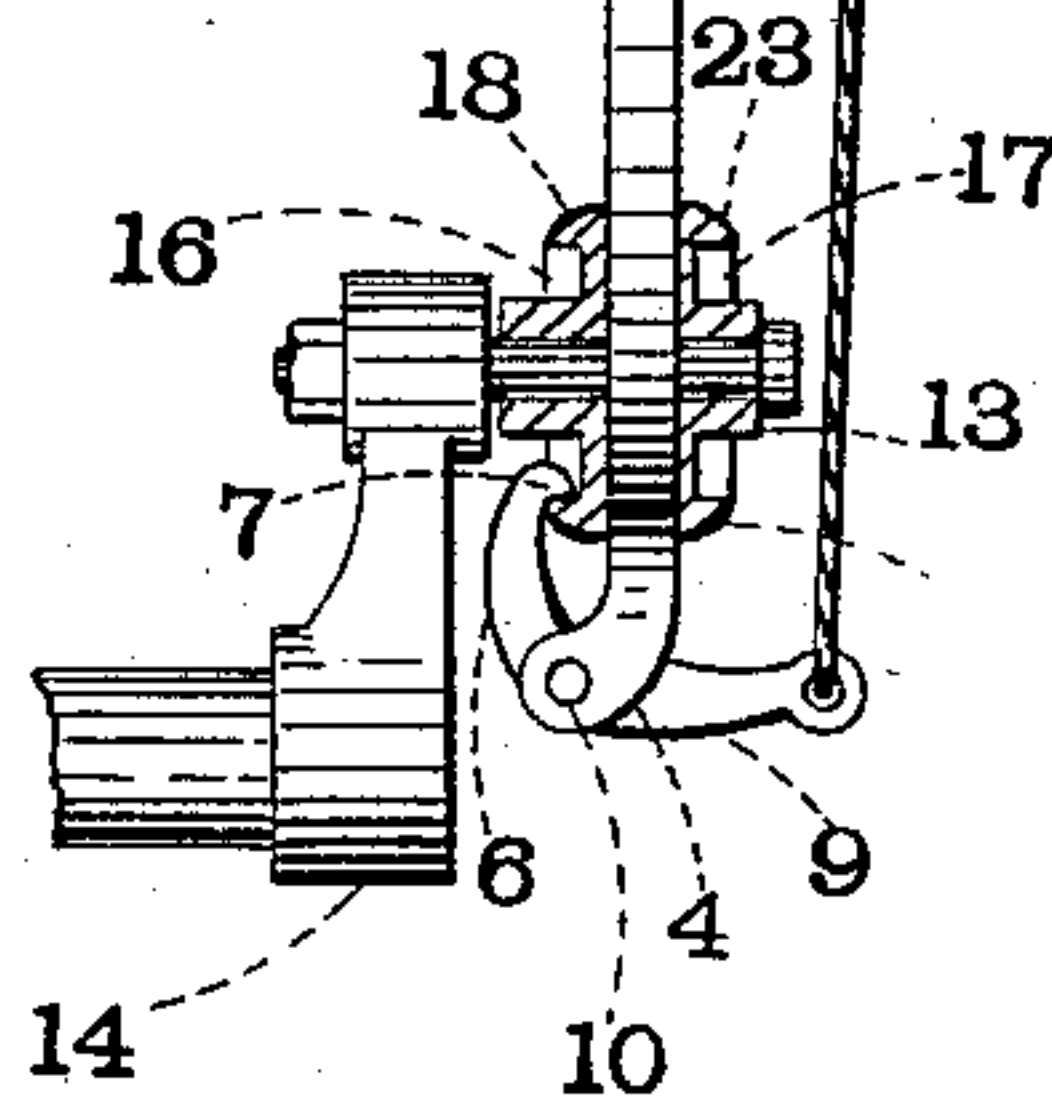


Fig. 5.



Witnesses.

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LINK FOR STEAM-ENGINES.

SPECIFICATION forming part of Letters Patent No. 370,938, dated October 4, 1887.

Application filed November 17, 1886. Serial No. 219,129. (No model.)

To all whom it may concern:

Be it known that I, CHILION M. FARRAR, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Links for Steam-Engines, of which the following is a specification.

The object of my invention is to provide the means whereby an engine-link may be operated either by hand close to the engine or at a distance therefrom, so as to run it in either direction, and whereby the link may be securely held in its proper position while running the engine either forward or backward, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the link, showing it in its upward position for running the engine backward, the connecting-rod for connecting the two pivoted latches together being left off. Fig. 2 is a front elevation of a link and the valve-arm of an engine, to which it is connected, showing the link down in its lower position for running the engine forward. Fig. 3 is a front elevation of a link and the valve-arm of an engine, showing the link in its upward position. Fig. 4 is an enlarged view of one of the latches and its bearings and a portion broken from the link, showing the spring for operating the latch, and Fig. 5 is a modification of the device.

The link 1 is an ordinary engine-link. It is provided with the usual parts, 2, for securing it to the eccentric connecting-rods. At the top is a perforated piece, 3, either made in one piece with it or secured to it in any well-known way. Its object is to receive the rope or cord, which is securely fastened to it, for the purpose of raising or lowering the link. Both ends of the link are provided with bearings 4, between which the upper latch, 5, and the lower latch, 6, are pivoted. These latches are provided with the hook-catches 7. The upper latch, 5, is placed on one side of the link and hangs downward, and is provided with an outwardly-projecting arm, 8, and the lower latch, 6, is on the opposite side of the link, and is provided with an arm, 9, projecting out in the same direction as the arm 8. These latches are pivoted in the bearings 4 by pins 10, and the arms 8

and 9 are connected by the connecting-rod 11, pivoted thereto by pivots 12.

The roller 13 is secured to the valve-arm 14 in the usual way, and is preferably constructed so as to turn easily and act as a friction-roller in the link-slot 15, and is provided (on each side) with the circular grooves 16 and 17. These grooves allow the hook-catches 7 to pass in and over the projections or rims 18 and 23, when holding the link in position.

If the usual block is used in the link instead of the roller, then the projections or rims 18 would be ordinary hooked projections adapted to receive the hook-catches 7.

The latches 5 and 6 are made to spring forward, so as to engage with the projecting portion 18 by means of spiral springs 19, having an end secured to the latch and the opposite end secured to the side of the bearing. (See Fig. 5.)

20 is the rope for lifting or lowering the link, and 21 designates the rope for operating the latches.

In the modified construction shown in Fig. 4 the projecting portion 3 and connecting-rod 11 are removed, and the rope 20, for raising or lowering the link, is connected to the arm 8, and the rope 21 is connected to the arm 9. The result of this construction is substantially the same, the only difference being that each latch is operated separately. The upper latch is opened at the same time the link is lifted. The other rope, 21, operates the lower latch, 6, so as to release the link when it is desired to lower it.

The operation of the invention is simple, and easily understood. When the link is loosened by the rope 20, as shown in Fig. 2, the latch 5 catches over the projection 18. To lift it, the rope 21 is pulled, so as to release the latch 5, and the link is raised up by the rope 20, so that the latch 6 catches in the opposite groove, 16, and over the projection 23. To lower the link, it is now necessary to release the latch 6, and the rope 21 is used.

It will be noticed that in lowering the link after it has been secured in its upper position, the rope 20 alone can not be used, as it would not operate the latch 6, and the rope 21 is required to disengage said latch, and in lifting the link and securing it in its upper position

the rope 21 alone could not be used, as the latch 6 would be held open thereby and would not engage with the projecting rim in the roller 13. To engage it, the rope 20 would have to be drawn taut, so as to hold the link up, and the rope 21 released, so as to permit the latch to spring into place.

I am aware that a link provided with a flanged friction-roller and a spring-catch for holding the link in one position, as in the patent to George Palm, No. 174,431, has heretofore been used. I therefore do not claim such construction, broadly; but

What I do claim is—

The combination of the link 1, the locking-latches 5 and 6, the pivoted connecting-rod 11, the grooved roller 13, the rope or cord for operating the latches, and the rope for lifting or lowering the link, substantially as specified.

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Witnesses:

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