

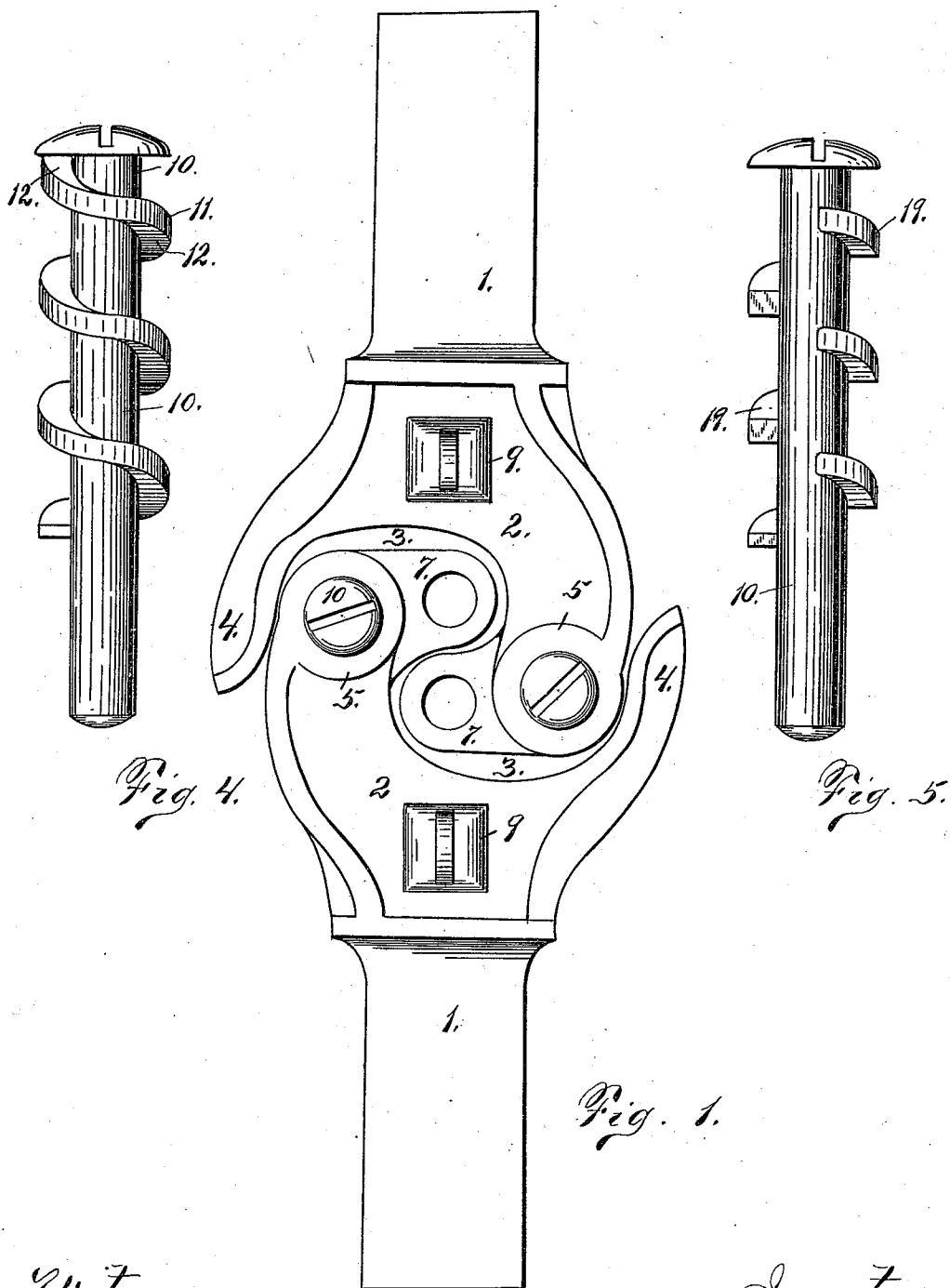
(No Model.)

2 Sheets—Sheet 1.

G. E. MANN.
CAR COUPLING.

No. 510,278.

Patented Dec. 5, 1893.



Witnesses:
R. P. Wightman,
Geo. P. Wightman

Inventor:
George E. Mann.
By Miller & Haddick.
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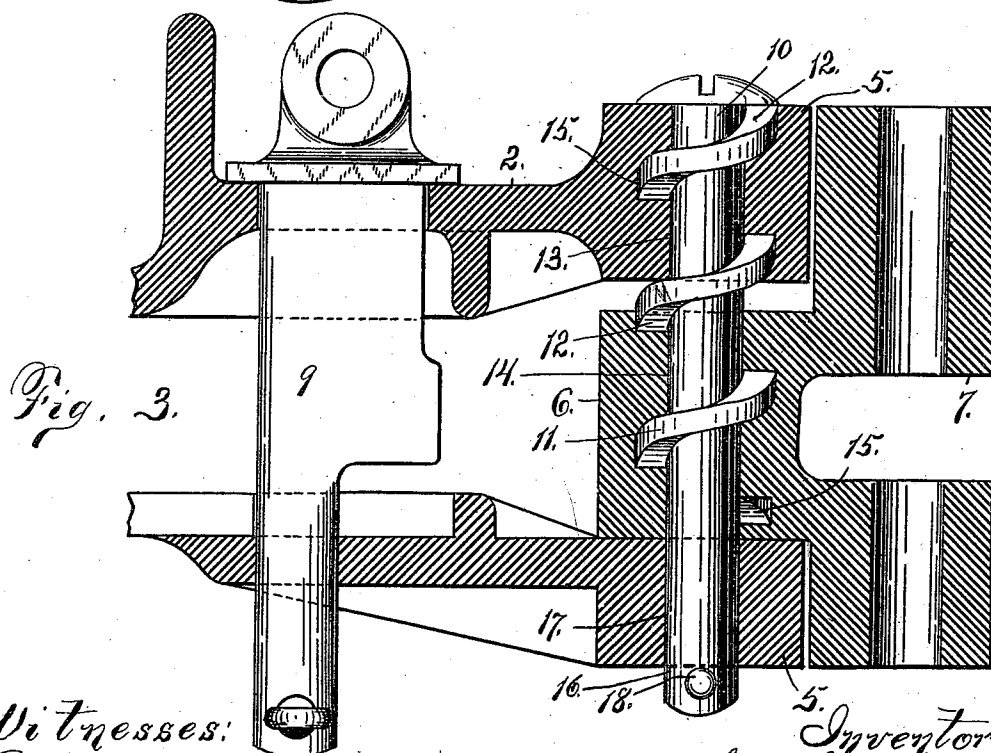
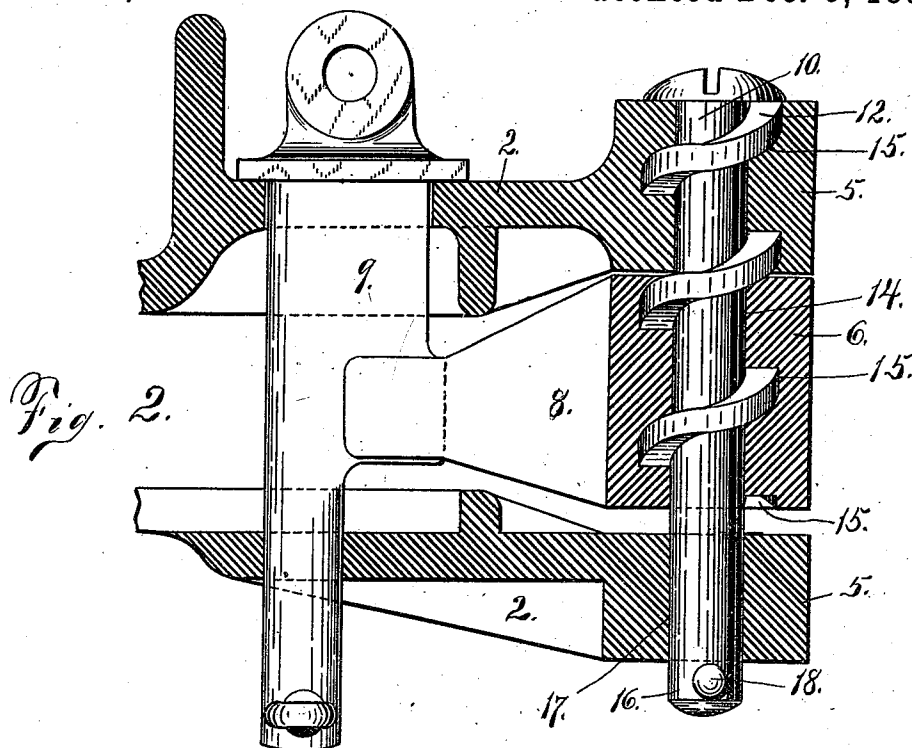
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2 Sheets—Sheet 2.

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CAR COUPLING.

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UNITED STATES PATENT OFFICE.

GEORGE E. MANN, OF BUFFALO, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 510,278, dated December 5, 1893.

Application filed June 8, 1893. Serial No. 476,995. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. MANN, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of car-couplers in which pivoted knuckles are employed which are engaged or disengaged with or from each other automatically, and in which the knuckle is caused to ride up or down upon its pivot pin to effect the object desired and it is to this particular class that my improvement is applied.

My invention consists in providing the pivot-pins of the knuckles with external inclined surfaces which operate with corresponding internal engaging surfaces which extend entirely through the knuckle sockets, the external inclined surfaces upon the pivot-pins terminating above the open bottoms of the internal engaging surfaces in the knuckle sockets thus forming a spill way into and from which all grit which may have worked down from above passes.

In the drawings, Figure 1 is a top plan view of the coupler to which my invention is applied. Fig. 2 is a partial vertical longitudinal section showing the knuckle in closed position. Fig. 3 is a similar view showing the knuckle in open position. Fig. 4 is a detached view of the pivot-pin, and Fig. 5 is a modified form of pivot-pin.

Referring to the drawings, 1. 1. are the draw-bars.

2. 2. are the draw-heads having throats, 3. 3. and guiding noses 4. 4.

In the bifurcated ends of the drawheads opposite to the guiding noses and at their outer ends 5. 5. are pivoted the knuckles 6. 6. having the engaging arms 7. 7. and the locking arms 8. 8. These locking arms 8. 8. are adapted for engagement or disengagement with a locking-pin 9 resting loosely in the draw-head in a vertical position.

The construction thus far described is of well known form and I do not deem it necessary to particularly outline any special means for engaging the knuckle with the locking pin as my present invention is intended for use with all kinds of locking mechanism which involves the vertical play of the knuckle in locking or unlocking the same.

10 is the pivot pin which adjustably secures the knuckle in position in the drawhead. This pin is preferably provided with a continuous helical thread 11 extending from its upper head about two thirds of its length and having as shown, upper and lower inclined bearing surfaces 12, the entire length of the thread. The socket in the upper jaw of the bifurcated end 5 of the drawhead and the socket 14 in the knuckle are provided with helical grooves or female threads 15 corresponding to the male thread 11. 12 upon the pin. The lower end of the female thread 15 in the knuckle extends below the lower end of the helical or male screw 11 thus forming a spill-way into and from which all grit which may have worked down from above passes, and this feature forms the subject-matter of my present invention.

The pivoted engagement is effected by screwing the pin down through the sockets 13 and 14 the lower smooth end 16 of the pin resting in the socket 17 of the lower jaw and is there rigidly held in place by the locking-pin 18. It will be seen that the portion 6 of the knuckles resting between the jaws of the bifurcated end of the drawhead is narrower than the space between the jaws thus allowing a certain amount of vertical play of the knuckle upon its pivot-pin.

In operation it will be seen that the knuckle is raised in its bearing when its end 8 is in locked engagement with the pin 9 as clearly shown in Fig. 2. When however the knuckle is freed from its locked engagement with the pin, it will automatically turn in its bearing, to its extreme open position, as shown in Fig. 3 and will there rest against displacement but will not be prevented from executing a retrograde movement in the act of coupling, as the knuckle will ride up easily against the inclined bearings upon the pin until its locked position is reached.

In Fig. 5 I have shown a modified form of

inclined bearing surface upon the pin in which
19 are segmental helical bearing surfaces by
means of which the same adjustment can be
effected as with the continuous helix 11, 12,
5 and at the same time exit is provided for grit
as before.

I claim—

A car-coupler having pivoted engaging
knuckles adapted for automatic locking and
10 unlocking with the drawhead, the pivot-pins
of the knuckles being provided with external
inclined surfaces which operate with corre-
sponding internal engaging surfaces which
extend entirely through the knuckle sockets

the external inclined surfaces upon the pivot- 15
pins terminating above the open bottoms of
the internal engaging surfaces in the knuckle
sockets, thus forming a spill way into and
from which all grit which may have worked
down from above passes, substantially as 20
shown and described.

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

GEORGE E. MANN.

Witnesses:

O. E. HODDICK,
W. T. MILLER.