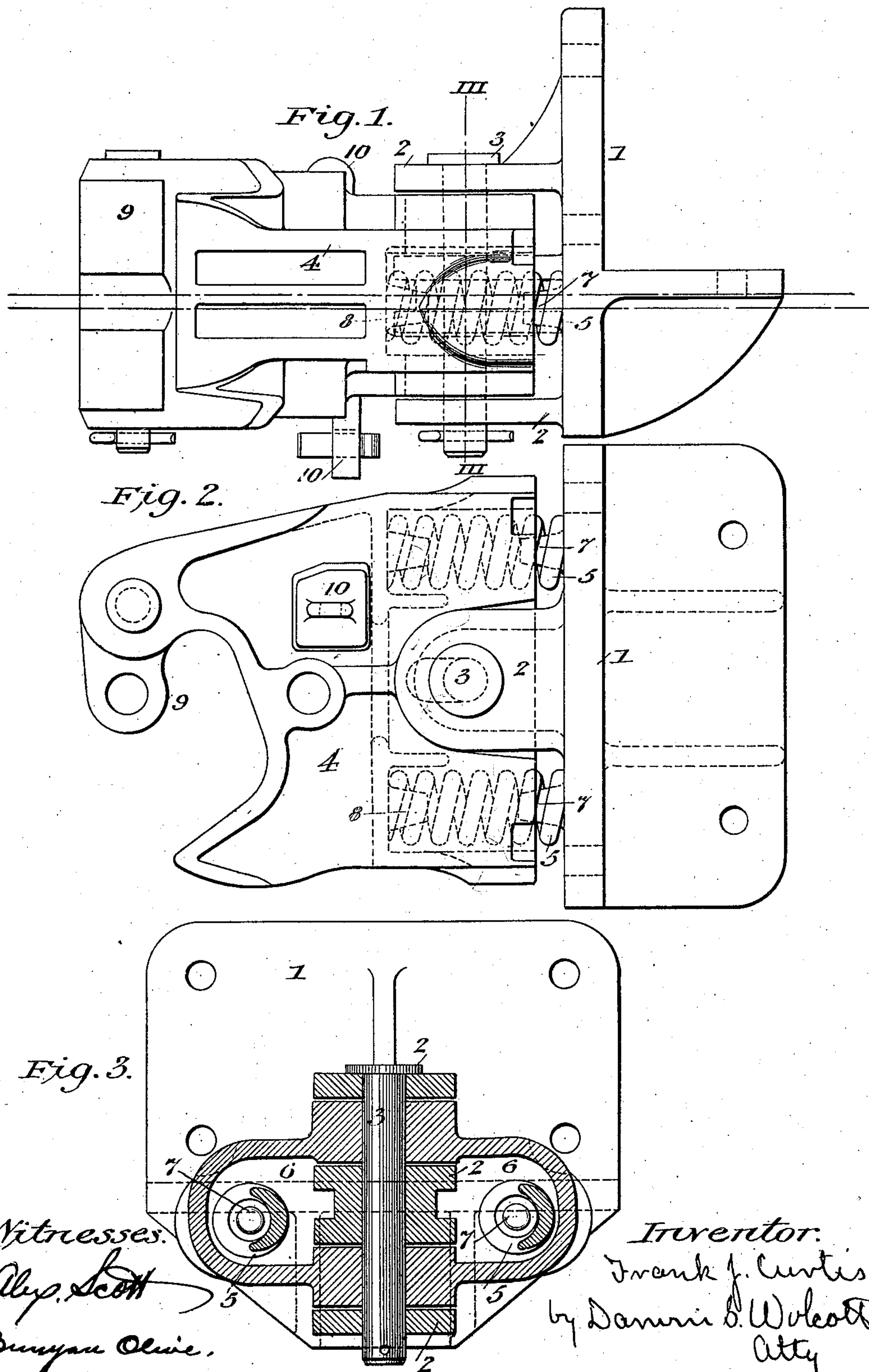


(No Model.)

F. J. CURTIS.  
TENDER COUPLING.

No. 574,603.

Patented Jan. 5, 1897.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## TENDER-COUPLING.

SPECIFICATION forming part of Letters Patent No. 574,603, dated January 5, 1897.

Application filed May 21, 1896. Serial No. 592,392. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK J. CURTIS, a citizen of the United States, residing at Ben Avon, in the county of Allegheny and State of Pennsylvania, have invented or discovered a certain new and useful Improvement in Tender-Couplers, of which improvement the following is a specification.

The present invention relates to certain improvements in automatic couplers, preferably of the Janney or swinging-hook types, for tenders, and it has for its object a construction wherein the coupler-head will have a broad bearing or butting surface on the supporting-plate on the tender; and it is a further object of the invention to prevent any sagging down of the coupler-head.

In general terms the invention consists in the construction and combination substantially as hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of my improved coupler. Fig. 2 is a top plan view of the same; and Fig. 3 is a sectional elevation, the plane of section being indicated by the line III III, Fig. 1.

On the end timber of the tender is bolted the flange-plate 1, which is provided on its front face with lugs or ears 2, having holes for the reception of the pin 3, whereby the head 4 is pivotally connected to the flange-plate, said head being provided with swinging hook or knuckle 9 and a locking-pin 10. In lieu of constructing the rear of the coupler with curved or double inclined walls with an apex in a vertical plane passing through the pivot-pin 3, as has heretofore been the practice, the rear wall is made so as to bear, when thrust back, at all points on the face of the flange-plate. Through the coupler-head are formed slots through which passes the pivot-pin 3, said slots permitting of the rearward movement of the coupler-head.

It will be observed that the ears or lugs 2 are made of such a length and the slots in the coupler-head are so located that when the pivot-pin is at the rear end of the slots the rear wall of the head is at a considerable distance from the flange-plate, as shown in Figs.

1 and 2. The coupler-head is normally held in this position relative to the flange-plate by springs 5, which at one end fit in pockets 6 in the coupler-head, while the opposite ends bear against the flange-plate, being held in position by studs 7 on the flange-plate and projecting into the springs. The outer ends of the springs are held centrally within the pockets in the coupler-head by bosses or studs 8, similar to the bosses 7. These bosses are arranged somewhat below a horizontal plane passing through the middle of the coupler-head, so that by their pressure the outer end of the coupler will be held up or prevented from sagging. These springs are made sufficiently stiff to present a considerable resistance to blows or pressure against the coupler-head; but when such pressure or blows are of such force as to overcome the resistance of the springs and the coupler-head is pushed against the flange-plate the head will take a broad bearing against the flange, thereby relieving the pivot-pin 3 from such strains or confining the shock to a narrow line, as is the case where no provision is made for any movement of the head. As the springs will under normal conditions hold the head away from the flange-plate, it is free to swing as the tender and the following cars are moved out of line with each other during the passage of a train around curves.

I claim herein as my invention—

1. The combination of a flange-plate provided with projecting ears or lugs, a coupler-head provided with slots, a pin passing through said slots and holes in the ears or lugs and springs for holding the head normally away from the flange-plate, substantially as set forth.

2. The combination of a flange-plate provided with projecting ears or lugs, a coupler-head having a straight rear wall or face, and provided with slots, a pin passing through said slots and holes in the ears or lugs and springs for holding the head normally away from the flange-plate, substantially as set forth.

3. The combination of a flange-plate provided with projecting ears or lugs, a coupler-

head provided with slots, a pin passing through  
said slots and holes in the ears or lugs, and  
springs for holding the head normally away  
from the flange-plate, said springs being ar-  
5 ranged with their axes below a horizontal  
plane passing through the middle of the coup-  
ler-head, substantially as set forth.

In testimony whereof I have hereunto set  
my hand.

FRANK J. CURTIS.

Witnesses:

H. A. WEBER,  
F. D. ECKER.