

(No Model.)

W. C. NELSON.  
CAR COUPLING.

No. 510,360.

Patented Dec. 5, 1893.

FIG. 1.

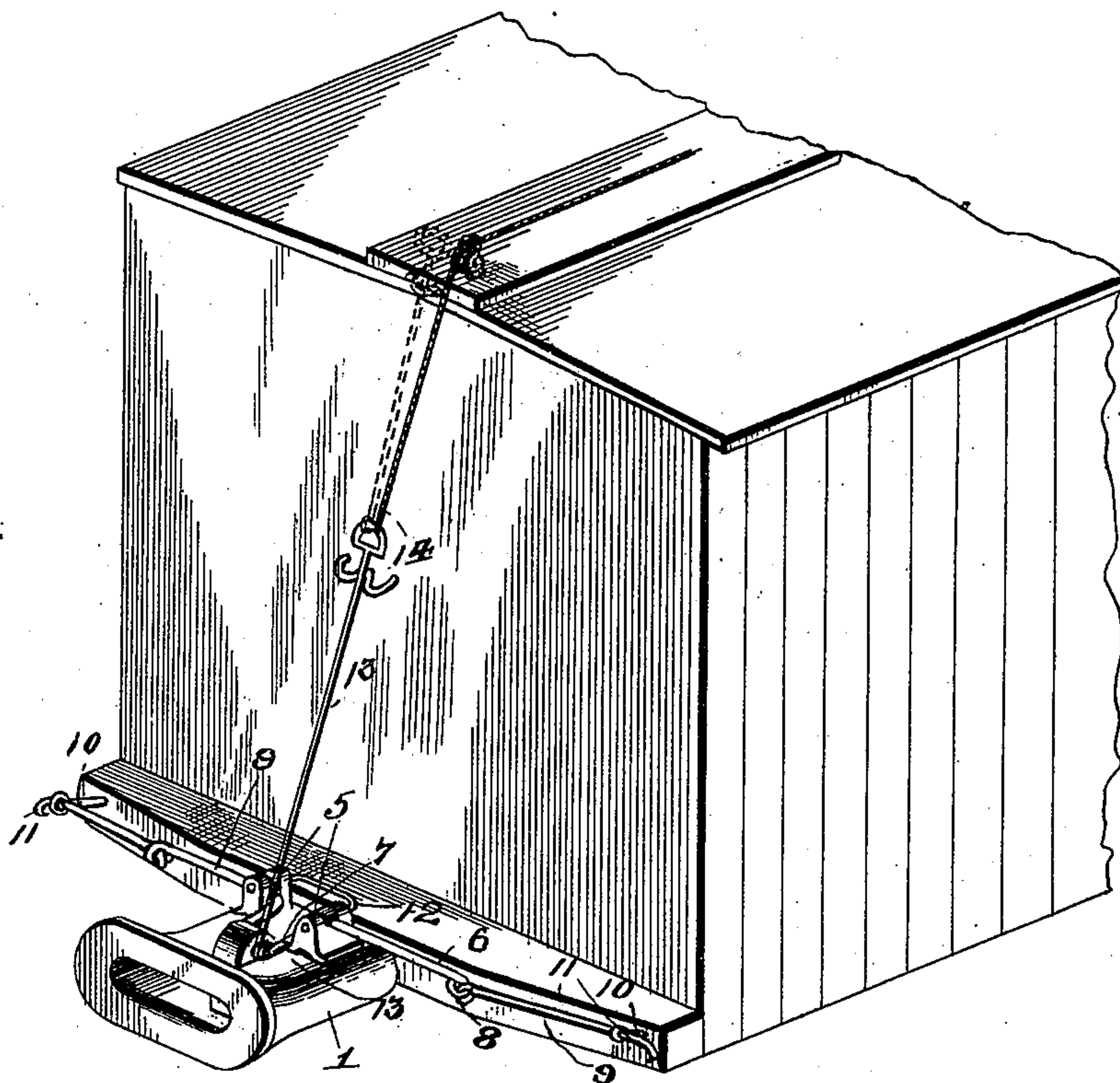
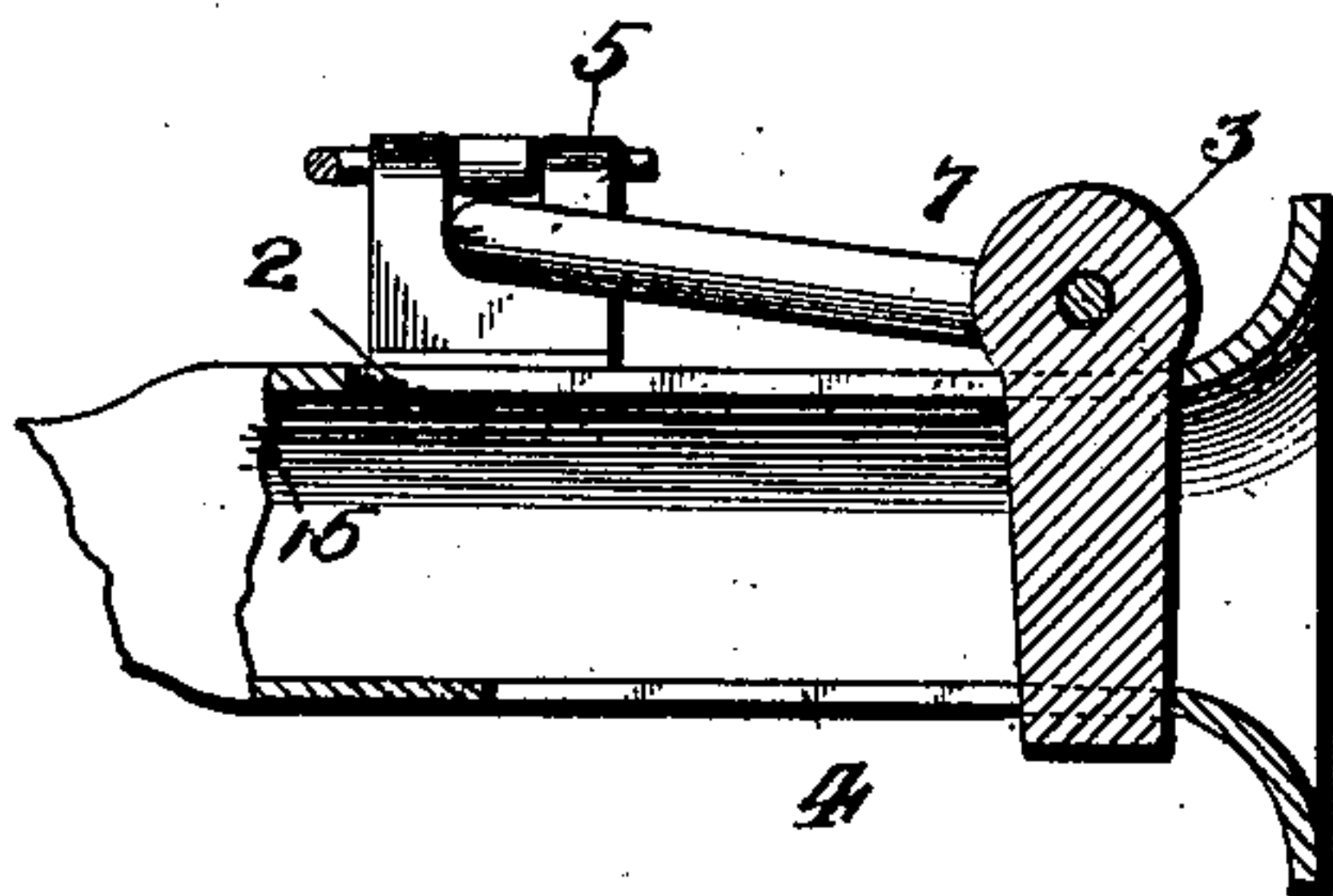


FIG. 2



## Witnesses

Johnnie  
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# UNITED STATES PATENT OFFICE.

WILLIAM CLARK NELSON, OF SANTA ROSA, CALIFORNIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 510,360, dated December 5, 1893.

Application filed September 12, 1893. Serial No. 485,344. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM CLARK NELSON, a citizen of the United States, and a resident of Santa Rosa, in the county of Sonoma and State of California, have invented certain new and useful Improvements in Car-Couplings; 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.

This invention relates to car-couplings, and has for its object to increase the facility for coupling and uncoupling cars which have heretofore been coupled by the use of a draw-head coupler, a link and a pin.

The invention consists of the construction and arrangement of the parts as will be more fully hereinafter described and claimed.

In the drawings: Figure 1 is a perspective view of a draw-head and a portion of the adjacent end of a car embodying the invention. Fig. 2 is a central, longitudinal vertical section of the draw-head.

Similar numerals of reference are employed to indicate corresponding parts in the drawings.

Referring to the drawings: the numeral 1 designates the draw-head with an opening or slot 2 in the top of the same which is wide enough for a pin 3 to play easily therethrough, and a little longer than the said pin. In the bottom of the said draw-head is formed a similar opening or slot 4 about three-fourths of the length of the top slot or opening, and opposite to the latter. The outer end of the lower slot 4 is opposite the outer end of the upper slot 2, so that when the pin 3 is dropped down through the link into both slots, it stands perpendicularly against the outer end of the upper slot, and the outer end of the lower slot. Upon the draw-head, on each side of the said upper slot or opening, and opposite to each other in alignment are ears or elevations 5, having openings therein, and in which is mounted a rod 6. These ears or elevations 5 are of sufficient height, size and strength and are permanently attached to the draw-head. The said rod 6, between the ears or elevations 5, is formed with a crank 7, which is of sufficient length to raise the pin 3, the latter having a hole or opening through

the head of the same through which the said crank is passed, and when the said crank is elevated perpendicularly, the parts are so proportioned that the lower end of the said pin will be raised a little above the inner top of the draw-head through the upper slot. The opening or hole in the top of the pin is of sufficient size to allow the said pin to play easily on the crank and to hang perpendicularly downward of its own weight. The rod 6 projects outwardly on opposite sides of the draw-head and is connected by a loose joint 8 on each end of the same with rods 9 which extend outwardly to or nearly even with the sides of the car. The said joints are formed by loops on the rod 6, which are turned on the same side of the rod upon which the crank is formed, so as to provide a movable joint parallel with the forward and backward motions and the play of the draw-head when the cars are coupled, and when the draw-head is connected with a spring or other yielding joint of connection. The rods 9 are held in position by suitable supports 10 and have loops or handles 11 at the outer ends of the same whereby they may be operated to control the position of the pin 3.

Between the ears or elevations and the body of the car, and a little back of the rear end of the upper slot or opening, is located an appropriate projection or bar 12 to hold the crank and pin at an angle of forty-five or fifty degrees, or such other angle as may be desired, when the pin is withdrawn from the coupling and not in use, the top of the pin being the highest point of the angle or incline.

Attached to the axis or most remote part of the crank, and opposite the head of the pin through which the crank passes, is a rod 13 encircling the crank axis and forming a loose joint, the said rod extending a little above the top of the car, or if desired, a little above a bar or brace elevated above the draw-head, so that by means of this rod 13, and a rope or chain 14 or analogous appliance connected thereto and extending to the locomotive, the engineer or other person on the engine may raise the crank and pin when at rest upon the projection or bar as heretofore described, and by bringing the proper leverage into play; and carrying the crank and pin into position so that the pin will drop down to form the



coupling and by this means the cars may be uncoupled or coupled by an operator on the locomotive, it being understood that the chains or analogous devices running to the locomotive are adapted to be arranged somewhat after the manner of the bell-cord as now commonly used. By means of the handles on the outer ends of the rods 9, the cars may be coupled or uncoupled by a brakeman or other person without going between the cars, thereby preventing danger to life.

The draw-heads are to be so constructed as to prevent the links from lopping or dropping below the lower rim of the same when the cars are not coupled. This is accomplished by having the links fit more closely in the space of the draw-head, the top and bottom sides of the said draw-head being made to fit even nearer to the link than is usual in such constructions and the back portion of the inside surface of the upper side of the draw-head is slightly depressed as at 15; also the rim of the draw-head is to be constructed wider than those now in common use, and the lower part of the same is formed as an incline, so as to receive and lift the links into position. In addition to this construction, care will be taken to so construct the draw-heads and links

as to maintain the links in as nearly a horizontal line as possible when the cars are not coupled.

Having thus described the invention, what is claimed as new is—

In a car-coupling, the combination of a draw-head, a pin, and a link, said draw-head having an upper slot therein, wide enough for the pin to play easily therethrough, and a little longer than the said pin; and also formed with a similar opening or slot in the bottom of less length than the top slot, and having its outer end in line with the outer end of the said top slot, a crank-rod on which said pin is mounted, other rods connected to the opposite ends of the said crank-rod, and extending outwardly toward the opposite sides of the car, and an upwardly extending rod also connected to the crank-rod, and having a chain or analogous device attached thereto, running to the locomotive, substantially as described.

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

WILLIAM CLARK NELSON.

Witnesses:

KATE P. BABCOCK,  
BERNICE A. WOOD.