

(No Model.)

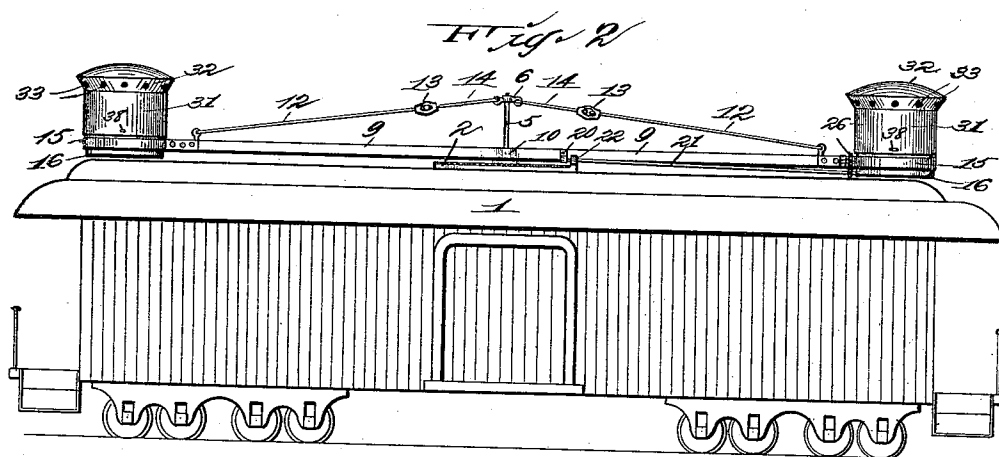
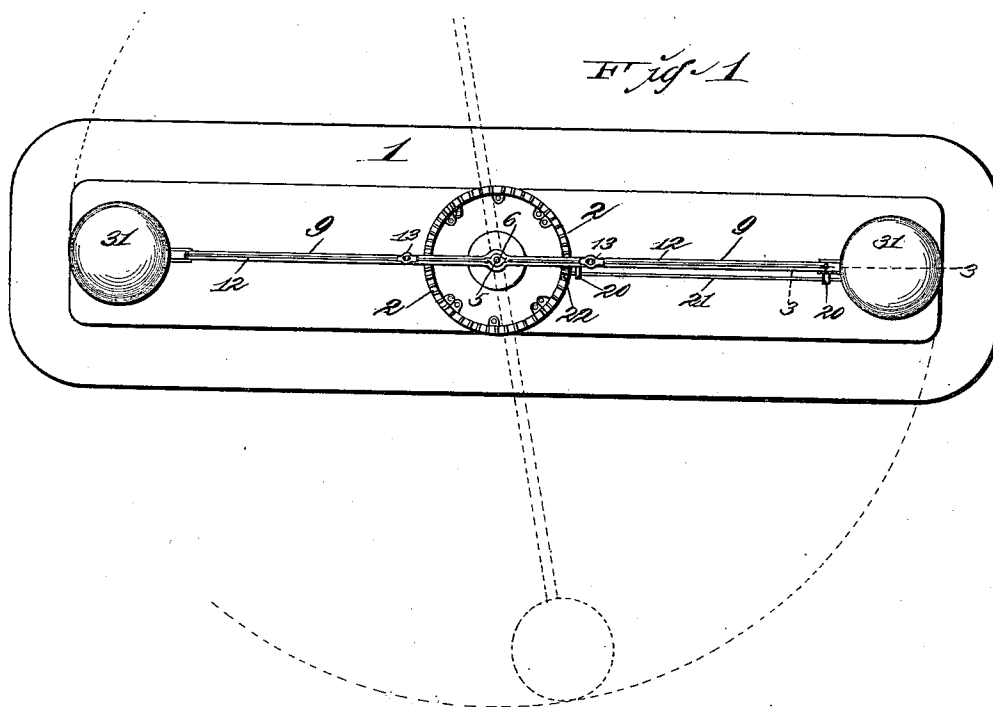
2 Sheets—Sheet 1.

R. L. WILSON.

REVOLVING STEEL DOME ATTACHMENT FOR MAIL OR EXPRESS CARS.

No. 544,338.

Patented Aug. 13, 1895.



Attest:-
M. D. Smith
J. M. A. C. H.

Inventor:-
Robert L. Wilson.
by Higdon & Higdon & Longan.
Attys

(No Model.)

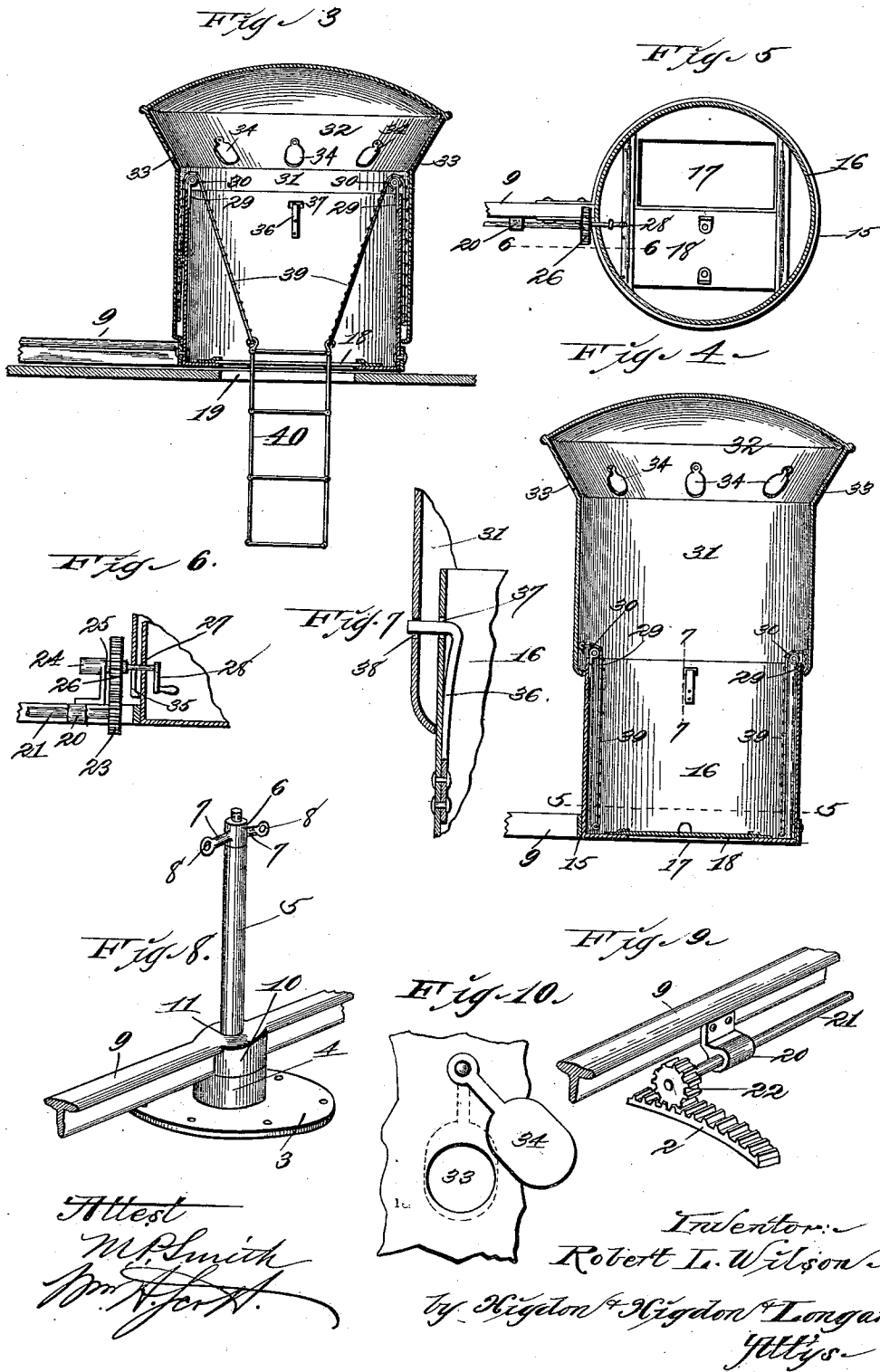
2 Sheets—Sheet 2.

R. L. WILSON.

REVOLVING STEEL DOME ATTACHMENT FOR MAIL OR EXPRESS CARS.

No. 544,338.

Patented Aug. 13, 1895.



UNITED STATES PATENT OFFICE.

ROBERT LEE WILSON, OF ST. LOUIS, MISSOURI, ASSIGNOR OF TWO-THIRDS
TO HENRY F. SCHWENKER AND MAGGIE WILSON, OF SAME PLACE.

REVOLVING STEEL-DOME ATTACHMENT FOR MAIL OR EXPRESS CARS.

SPECIFICATION forming part of Letters Patent No. 544,338, dated August 13, 1895.

Application filed November 14, 1894. Renewed June 29, 1895. Serial No. 554,504. (No model.)

To all whom it may concern:

Be it known that I, ROBERT LEE WILSON, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Reversible and Revolving Steel-Dome Bandit, Burglar, and Bullet Proof Attachments for Railway Mail or Express Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to a reversible and revolving steel-dome bandit, burglar, and bullet proof attachment for railway mail and express cars; and it consists in the novel construction, combination, and arrangement of parts hereinafter described and claimed.

The object of my invention is to mount a boom upon the top of a railway mail or express car, said boom to carry on its outer ends steel domes or compartments in which a person may locate himself, said boom to be pivoted to the top of the car in such a manner as that said boom can be moved in a horizontal plane at any angle relative to the car.

A further object of my invention is to construct an attachment of this class that is thoroughly bullet-proof and possesses superior advantages in point of simplicity, durability, and general efficiency.

In the drawings, Figure 1 is a top plan view of a railway-car having my invention applied thereto as required for practical use. Fig. 2 is a side elevation of a railway-car, and showing my attachment mounted thereon. Fig. 3 is a longitudinal sectional view on the line 3 3 of Fig. 1. Fig. 4 is a horizontal sectional view taken on the indicated line 3 3 of Fig. 1, and showing the dome in its extended or raised position. Fig. 5 is a horizontal sectional view taken approximately on the indicated line 5 5 of Fig. 4. Fig. 6 is a vertical sectional view taken approximately on the indicated line 6 6 of Fig. 5. Fig. 7 is an enlarged vertical sectional view taken approximately on the indicated line 7 7 of Fig. 4. Fig. 8 is a detail perspective view of the center bearing upon which the boom is pivoted. Fig. 9 is a view in perspective of a portion of the boom and a pinion or gear-wheel mounted upon a shaft carried by said boom. Fig. 10

is an elevation of one of the port-holes that is formed in the dome, said elevation being taken from the inside of the dome.

Referring by numerals to the accompanying drawings, 1 indicates a railway mail or express car, upon the longitudinal center of which is bolted a face-cog or gear-wheel 2, the same being formed in sections. Bolted to the top of the car and in the center of this face-wheel 2 is a plate 3, having formed integral therewith the shoulder 4, from which vertically extends a shaft 5, on the top of which is mounted a swivel 6, the same being provided with a pair of arms 7, in the outer ends of which are formed eyes 8.

The boom 9, of which I make use, is preferably a T-bar, in the center of which is formed a bearing 10, through which passes a vertical aperture 11, whereby said boom is swung or pivoted upon the vertical shaft 5. To the outer ends of the boom 9 are secured the outer ends of stay-rods 12, the same being connected by turnbuckles 13 to stay-rods 14, the meeting ends of which are hooked in the ends of the arms 7 of the swivel 6 that is mounted upon the upper end of the shaft 5. Mounted upon each end of the boom 9 by means of bands 15, the ends of which are bolted to the ends of the boom, are two cylinders 16, the same being constructed of sheet-steel or analogous material. These cylinders 16 are provided with closed bottoms, in which are located rectangular apertures 17, that are adapted to be closed by sliding doors 18. An aperture 19 is formed in the top of the car, said aperture being so located as to register with the aperture 17 in the bottom of the cylinders 16 when said cylinders occupy their normal position, or as that shown in Figs. 1 and 2.

Mounted in bearings 20 fixed to the boom 9 is a shaft 21, on the forward end of which is rigidly mounted a gear-wheel or pinion 22, that meshes with the teeth of the face gear-wheel 2, that is bolted to the top of the car. The rear end of this shaft 21, which terminates adjacent the cylinders 16, has rigidly mounted thereon a pinion 23.

Mounted for rotation in a bearing 24 fixed to one end of the boom 9 and adjacent one of the cylinders 16 is a stub-shaft 25, upon which

mounted a gear-wheel 26, that meshes with pinion 23 on the rear end of the shaft 21. The end of this stub-shaft 25 is adapted to give the end of a shaft 27 carried by an armary crank-handle 28.

formed on or fixed to the upper edges of the under 16 are bearings 29, having sprocket-wheels 30 mounted for rotation therein.

1 indicates a cylinder in the form of a dome, the same being constructed of sheet-metal or analogous material, the diameter of the dome being slightly larger than is that of the cylinder 16. The upper end 32 of this dome 31 is flared outwardly a slight distance, in this flaring portion is located a number of loop-holes 33, the same being closed by swinging doors or covers 34. The dome 31 is normally positioned and held upon the cylinder 16, as clearly shown in Fig. 3. A vertical rod 35 allows said dome to occupy this normal position as the shaft 27 passes into said dome 35. Fixed to the inside of the cylinder are spring-catches 36, the upper ends of which are bent at right angles to the body of the cylinder and are passed through apertures near the upper edge of the cylinder 16. Whenever the dome 31 is raised to the position as shown in Fig. 4 the ends of these spring-catches 36 are adapted to pass through apertures 38 formed near the lower edges of the dome 31, thereby efficiently holding said dome in a raised position.

Rigidly fixed to the interior of the dome 31 and near the lower edges thereof, are sprocket-chains 39, the same passing upwardly over the sprocket-wheels 30, and from thence downwardly to a point near the aperture 17, where they are connected to the upper end of a short ladder 40, which may be of any ordinary construction, said ladder 40 extending downwardly through the aperture 19 in the bottom of the car.

The foregoing description has been confined to one cylinder and dome, but the construction and operation of both cylinders and domes are identical.

The operation is as follows: When a train mail or express car of which is provided with an attachment is attacked by bandit robbers, the express-messenger or official in charge of the car grasps the ladder 40 and pulls downwardly on the same. This raises the dome 31 from its normal position to an upright or extended position, Fig. 4. When said dome 31 has reached the proper position the spring-catches 36 will engage in the apertures 38, thereby securely positioning the dome upon the cylinder 16. The messenger now enters the dome and cylinder through the aperture 19. The ladder 40 having been disengaged from the lower ends of the sprocket-chains 39, the sliding door 18 is positioned directly over the aperture 17, thereby firmly closing and covering said aperture. Should it be an advantage to the messenger to be positioned a short distance away from the side of the express-car, in order that a

view of both ends of the train may be obtained, said messenger manipulates the crank-handle 28, which in turn rotates the gear-wheel 26. Said gear-wheel 26 meshing with the pinion 23, mounted upon the shaft 21, said pinion and shaft are rotated. The pinion 22 being rigidly mounted upon the forward end of the shaft 21 and meshing with the face-wheel 2, the result of the manipulation of the crank-handle 28 will be to turn the boom, carrying on each end the cylinders and domes to the position shown in dotted lines in Fig. 1 or in any desired position or angle relative to the car. The messenger, having thus advantageously positioned himself, swings any one of the doors 34 to one side and uses such weapons or firearms as he may have at his command through the loop-holes 33.

Should there be two messengers or persons in charge of the car, they may each locate themselves in the cylinders and domes. This being the case, and the boom moved at right angles to the car upon which it is mounted, a view and command of each side of the full length of the train may be had.

When the weapon or firearm is withdrawn from the loop-hole 33, the swinging door 34 by gravity immediately closes said loop-hole.

Thus it will be seen how a perfectly bullet-proof retreat is provided for the messenger or person in charge of the car, said retreat being adapted to be moved by the messenger at any angle relative to the car upon which the boom carrying said retreat is mounted.

What I claim is—

1. An attachment for railway cars, comprising a boom pivoted upon said car, and telescoping cylinders carried by said boom.
2. An attachment for railway cars, comprising a boom pivoted upon the car, telescoping cylinders carried by said boom, and means for moving the boom to any angle relative to the car.
3. An attachment for railway cars, comprising a boom pivoted to the top of and at the longitudinal center of the car, metallic cylinders carried by the ends of said boom, metallic domes provided with loop-holes telescoping upon said cylinders, and mechanism operating from one of the cylinders to the center of the boom for moving said boom at any angle relative to the car upon which it is mounted.
4. An attachment for railway cars, comprising a bearing bolted to the top of and in the longitudinal center of the car, a boom pivoted upon said bearing, a face-gear-wheel bolted to the top of the car around and concentric with said center bearing, cylinders carried by the ends of said boom, cylindrical domes adapted to telescope upon said cylinders, the tops of said domes being flaring and provided with loop-holes, swinging-doors adapted to cover said loop-holes, spring-catches adapted to hold the domes in their extended positions, a shaft mounted in bearings fixed to the dome

and extending from the face gear-wheel on top of the car to one cylinder, pinions mounted upon said shaft, one of which meshes with the face-gear-wheel, the other pinion meshing
5 with a gear-wheel, the shaft of which is operated from the interior of the cylinder, and sprocket-chains and sprocket-wheels mounted upon the inner sides of the dome and cylinder for raising or extending said cylinders
10 when desired.

5. The combination of a railway car, and a boom pivoted upon the top of said car, said boom carrying bullet proof cylinders and domes on its outer ends.

6. The combination of a railway car, a boom 15 pivoted to the top of said car, said boom carrying on its ends bullet proof metallic cylinders upon which telescope bullet proof steel domes, and means for moving said boom at any angle relative the car upon which it is 20 mounted.

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

ROBERT LEE WILSON.

Witnesses:

E. E. LONGAN,
JNO. C. HIGDON.