(No Model.)

W. R. CONGER.

CAR DOOR GUARD.

No. 438,432. Patented Oct. 14, 1890.

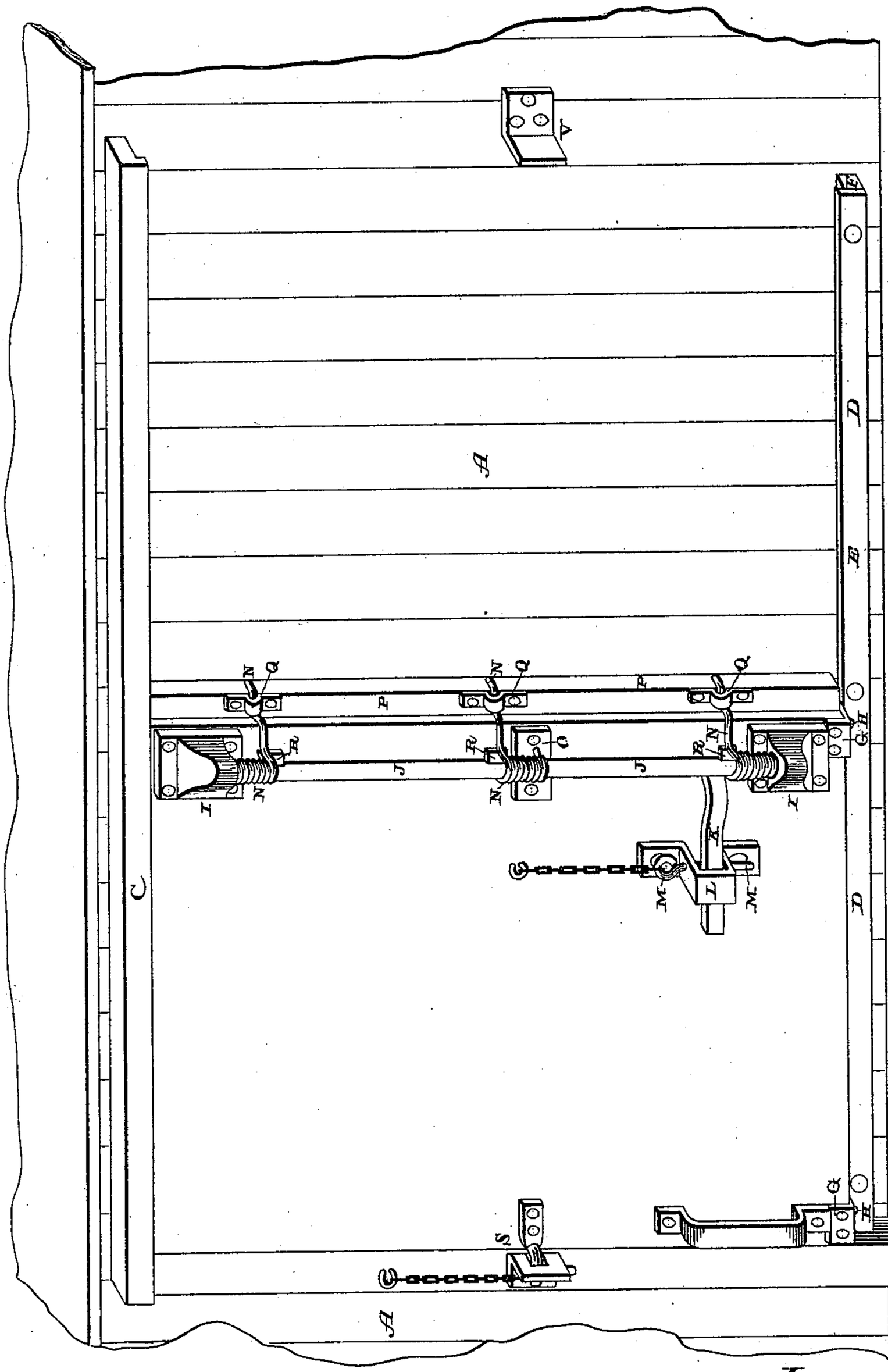

Fig. 1.

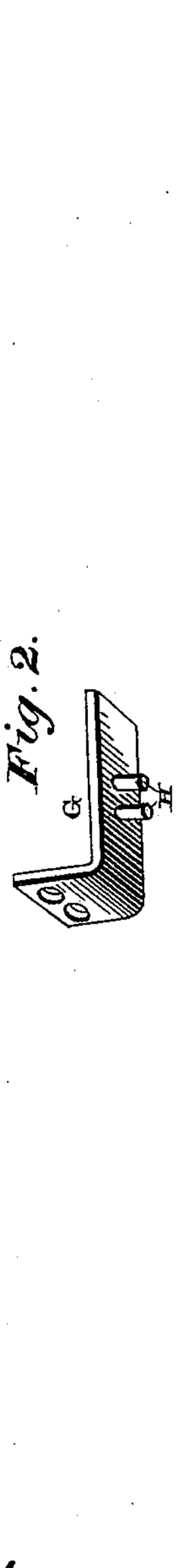

Fig. 2.

Witnesses:
E. P. Ellis,
B. Brockett,

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per C. E. Allen, atty.

UNITED STATES PATENT OFFICE.

WILLIAM R. CONGER, OF ST. ALBANS, VERMONT.

CAR-DOOR GUARD.

SPECIFICATION forming part of Letters Patent No. 438,432, dated October 14, 1890.

Application filed June 13, 1890. Serial No. 355,323. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. CONGER, a citizen of the United States, residing at St. Albans, in the county of Franklin and State of Vermont, have invented certain new and useful Improvements in Car-Door Guards, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in car-door attachments; and it consists in the construction and arrangement of parts to be fully described hereinafter, and pointed out in the claims.

The object of my invention is to provide a strip which fits against the rear vertical edge of a sliding car-door and held in contact with the side of the car and the said edge of the door by means of a spring, whereby the space between the door and the side of the car is closed and sparks and cinders prevented from entering the car, and to provide a lever for raising the said strip from engagement with the side of the car, so as to allow the door to be freely opened and closed.

Figure 1 is a perspective of a car-door with my attachment secured thereto. Fig. 2 is a detached perspective of one of the guiding and sliding plates which are secured to the bottom of the door.

A represents the side of a freight or other car having the tracks C D secured to the upper and lower ends thereof, respectively. The lower track consists, mainly, of a horizontal metallic plate E, which is secured to the strip F, that is fastened to the car.

Secured to the lower edge of the door are a suitable number of plates G, which are preferably made U-shaped in form and which are provided with two depending projections or pins H, which engage opposite sides of the said plate E, and thus guide and support the door in place. By this means the plates G E provide a metallic bearing-surface for the door, upon which the weight thereof rests, and thus reduces the friction of the door in its movement, since no other part of the lower edge of the door is in contact with the lower track.

A socket I is secured to the door at its upper and lower rear corners, as shown, and in these sockets the ends of a vertical shaft J are journaled. This shaft is provided with a laterally-extending operating-arm K, which has its opposite and free end extending into a socket L, secured to the door, and this socket is provided with vertical perforations through which a pin M passes, and by means of which the said operating-arm K is locked in the desired position. Placed upon the shaft J are the three coil-springs N, the central one of which has its short end passed into a perforated plate O, which is secured to the door, while the corresponding ends of the two end coils are placed in a perforation made in flanges formed upon the inner ends of the sockets. The opposite ends of these springs extend outward beyond the adjacent edge of the door and have their ends made essentially L-shaped in form, whereby it rests upon the side and edge of the strip P, which engages the side of the car and the edge of the door and closes the space between. These ends of the said springs are preferably, though not necessarily, secured to the said strip by means of suitable sockets Q. If desired, the ends of the springs may be passed downward into the side of the strip. By forming the ends of the springs as shown, however, the strip is forced against the edge of the door and the side of the car, so as to more perfectly close the opening. The inwardly-extending ends of the springs tend to force the strip against the edge of the door, while that part of the L-shaped end which engages the side of the strip forces it against the side of the car, the springs passing through the sockets loose enough to allow the strip to move upon them.

Extending from the shaft J are the short arms or projections R, which engage the extending ends of the springs, as shown, so that an inward pressure upon the operating-arm of the shaft will raise the springs, and with them the strip.

The opposite edge of the door is provided with the ordinary fastenings S, and the side of the car with a stop V, which limits the movement of the door.

While I here show three springs, it will be

readily understood that but one spring could be used at the center of the shaft or only the two end springs used.

Having thus described my invention, I claim—

1. The combination, with a sliding door, of a shaft journaled near one edge thereof, a spring secured at one end to the door and the strip secured to the opposite end of the spring, a projection upon the shaft which engages the spring, and an operating-arm for the shaft, substantially as shown and described.

2. The combination, with a sliding door, of a shaft journaled near one edge thereof, springs secured at one end to the door, and a strip which is placed at the edge of the door secured to their opposite ends, projections upon the shaft which engage the springs, an operating-arm secured to the shaft, a socket upon the door into which the free end of the operating-arm extends, and a pin which passes through the socket and engages the arm, substantially as set forth.

3. The combination, with a sliding door, of a shaft journaled at one edge thereof, a coiled spring placed thereon, having one end engaging the door, its opposite end extending over the edge of the door, a strip secured to the last said end of the spring, projections upon the shaft which engage the extending ends of the springs, and an operating-arm for the shaft, substantially as described.

4. The combination, with the door, of a shaft journaled near one edge thereof, a coiled spring placed upon the shaft, having one end engaging the door and its opposite end extending over the edge of the door and its end bent essentially L-shaped, a strip placed at the edge of the door with which the L-shaped portion of the spring engages, a socket secured to the strip through which the spring passes, a projection upon the shaft which engages the extending end of the spring, and an operating-arm for the shaft, substantially as specified.

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

WILLIAM R. CONGER.

Witnesses:
GILBERT A. DOW,
CHARLES E. ALLEN.