

J. M. SCOTT.
BUMPING POST.

APPLICATION FILED SEPT. 22, 1904.

2 SHEETS—SHEET 2.

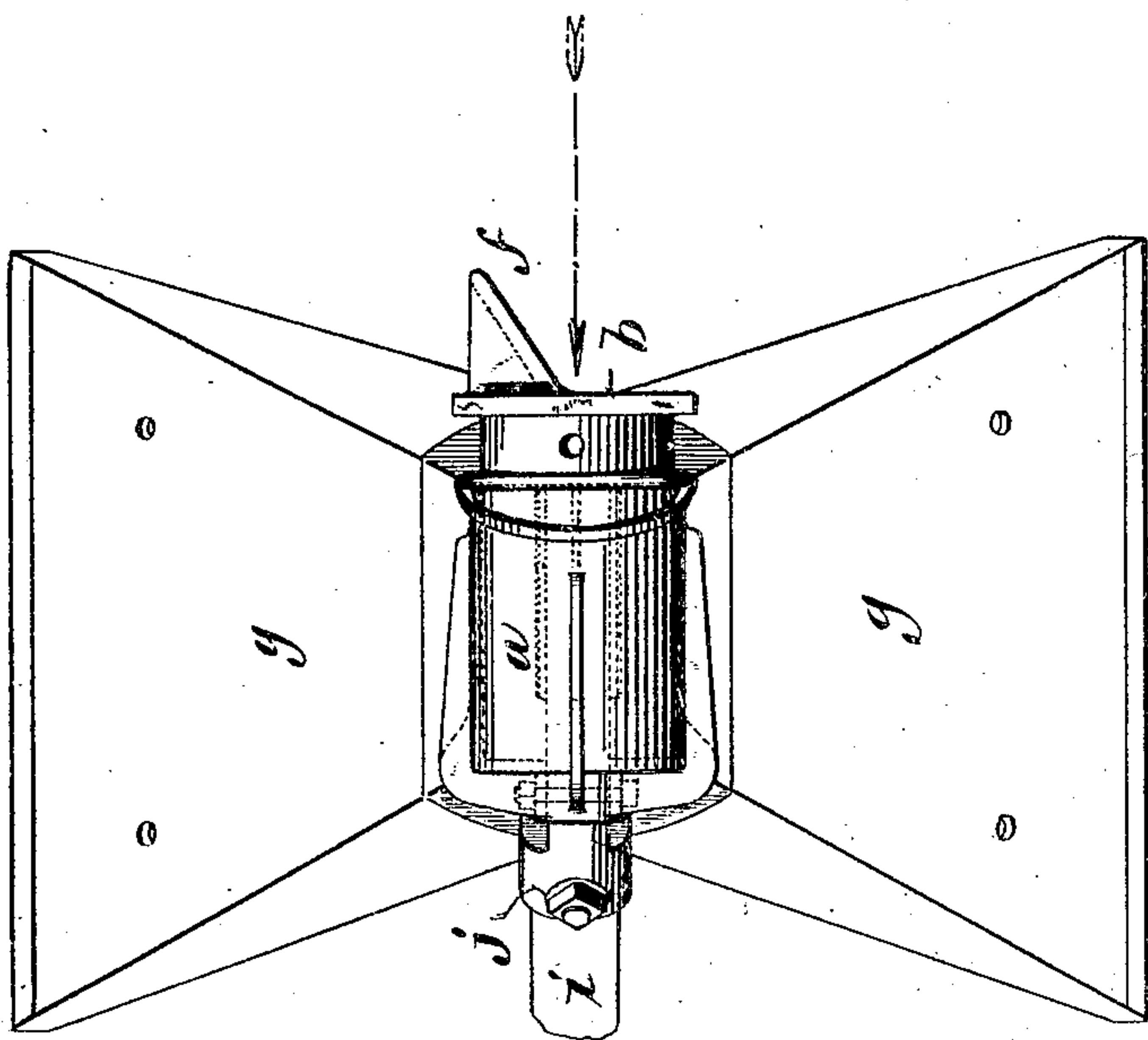


Fig. 3.

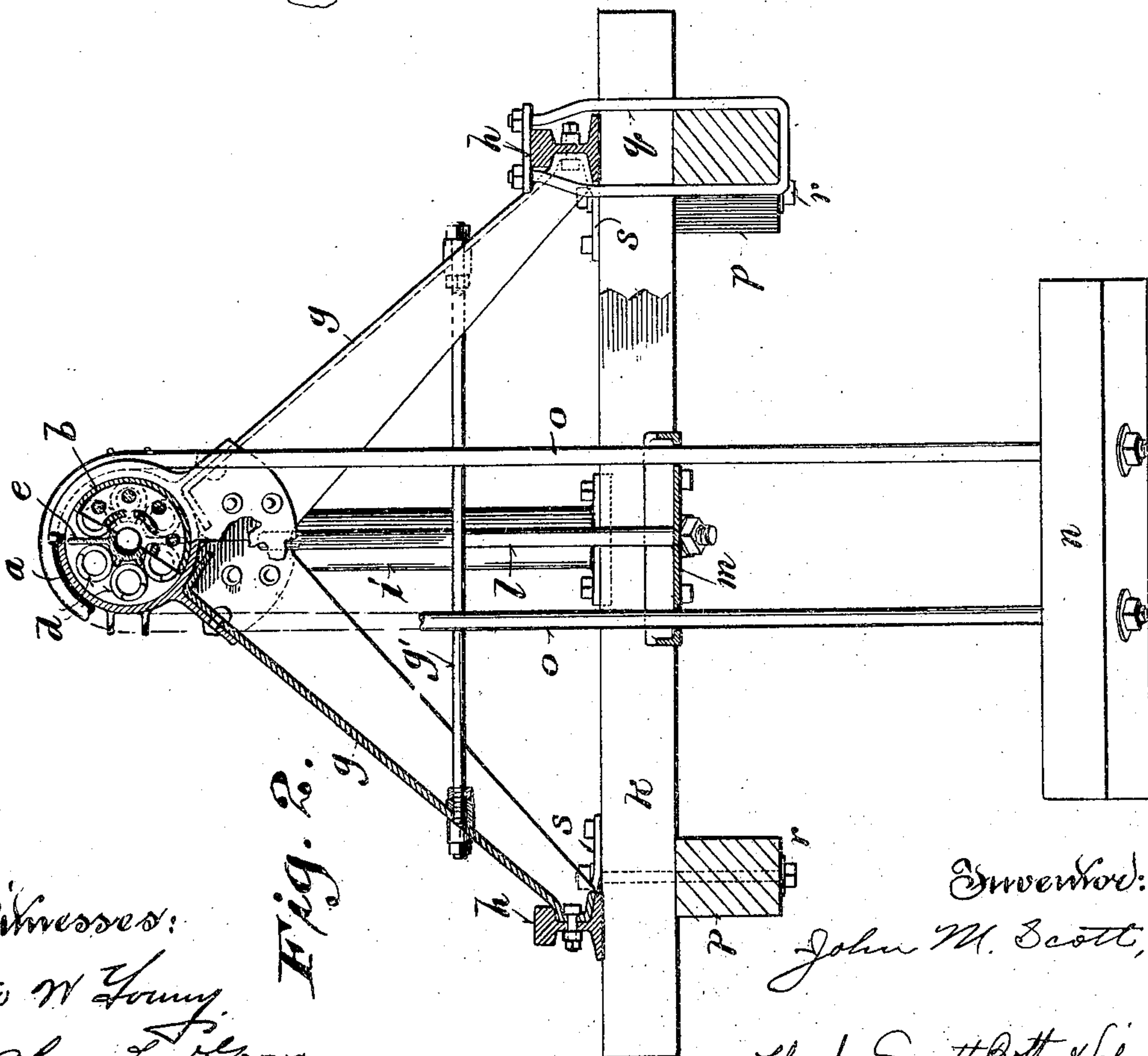


Fig. 2.

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BUMPING-POST.

No. 803,021.

Specification of Letters Patent.

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To all whom it may concern

Be it known that I, JOHN M. SCOTT, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Bumping-Posts, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

10 This invention relates to stops employed at railway-terminals to prevent cars running off the ends of tracks or past certain limits. Its main object is to provide a device of this class which shall be of simple, strong, and durable construction, effective and reliable in operation, and easily applied to or removed from a track without cutting, bending, or displacing the rails.

20 It consists in certain novel features of construction and in the peculiar arrangement and combinations of parts hereinafter particularly described, and pointed out in the claims.

In the accompanying drawings like letters designate the same parts in the several figures.

25 Figure 1 is a view, partly in side elevation and partly in vertical longitudinal section, of a bumping-post embodying the invention. Fig. 2 is a view thereof, partly in front elevation and partly in vertical cross-section; and Fig. 3 is a plan view of a portion of the device.

30 The device comprises a spring-cushioned buffer and supporting and bracing members by which the buffer is immovably secured in place on a railway-track. The buffer comprises a cylinder or recessed head *a*, which is entirely open at its front end and has a flanged central opening at its rear end, a striking plate or head *b* movably fitted into the open end of the cylinder *a* and formed or provided with a stem or shank *c*, which is guided and secured by a cross-pin in the flanged opening at the rear end of the cylinder, and a number of stiff spiral springs *d d*, arranged around the stem *c* within the cylinder and bearing at one end against the striking plate or head *b* and at the other end against the rear end of the cylinder. The cylinder is preferably reinforced and strengthened by ribs or flanges, as shown, and the striking plate or head *b* and its stem *c* are strengthened by longitudinal wings *e* between some or all of the springs. On one side the striking plate or head is formed or provided with an inclined guide *f* for the purpose of closing hinged car-coup-

lers and directing them against the center of the striking-plate. The buffer is supported and braced on each side from the track by metal plates *g g*, which widen longitudinally and diverge transversely downward, their upper narrower ends being bolted to a skirting or flanges on the cylinder *a* and their lower wider ends being fitted and bolted to the track-rails *h h* between their heads and base-flanges. These plates, which may be conveniently made of heavy boiler-iron, are preferably stiffened and strengthened by inturned marginal flanges, as shown, and they are connected with each other by tie-bolts *h h*. They constitute of themselves a strong stiff supporting structure for the buffer; but to insure greater strength and stability the buffer is additionally braced and anchored, as hereinafter explained.

75 *i* is a brace, preferably of tubular form, secured at its upper end in a socket *j*, which may be cast with the rear end of the cylinder *a*. It extends rearwardly and downwardly therefrom and rests upon and is attached to a cross-tie *k* in the road-bed. The upper end of this brace or the socket on the cylinder in which it is secured is connected by a tie-rod *l*, extending forwardly and downwardly therefrom, with a plate *m*, between two cross-ties, to the under sides of which said plate is attached.

80 To prevent the lifting of the track by the buffer in case it is subjected to a very heavy blow or severe strain by the impact of a car, an anchor *n*, which may consist of a piece of timber, is sunk in the road-bed some feet below the surface ahead of the buffer and connected therewith by a tie-rod *o*, passing over and around the cylinder *a* and secured at its ends in said anchor, the cylinder being formed with a rib or shoulder against which the looped end of said tie-rod is seated. To further insure against displacement of the buffer and lifting of the track-rails to which it is secured in case of severe shocks or strains, two longitudinal sleepers *p p* are embedded in the roadway beneath the cross-ties and bolted or otherwise secured to the tie *k*, on which the brace *i* bears, and to the rails *h*, some distance in advance thereof, by U-bolts *q*. The bolts *r*, by which the sleepers are secured to the tie *k*, preferably pass at their upper ends through plates *s*, which project over the inner flanges of the rails and securely bind them to said tie.

110 In operation when a car is run in the direction indicated by the arrow on Fig. 3 against the bumping-post the coupler or draw-head,

engaging with the striking plate or head *b*, thrusts it into the cylinder *a*, compressing the springs *d*, which thus deaden the shock and avoid injury not only to the bumping-post and its connections, but also to the car and its contents. The shock or strain on the buffer caused by the impact of a car run forcibly against it is received and distributed through the several supporting and bracing members of the device. A part of the shock or strain is received by the supporting-plates *g* and communicated directly to the rails, a part is received by the brace *i* and communicated to the cross-tie *k* and the sleepers *p* upon which it rests, and a part is received by the tie-rods *l* and *o* and by the ties and the anchor to which they are secured. The severe shocks and strains to which the striking plate or head of the buffer is subjected are thus distributed through several supporting and bracing members to the track-rails and substructure, thereby avoiding injury to and displacement not only of the bumping-post itself, but also of the track to which it is attached.

Various changes in the details of construction and arrangement of parts may be made without departure from the principle and intended scope of the invention.

I claim—

1. In a bumping-post the combination of a buffer comprising a cylinder or recessed head, a striking plate or head having a shank or stem movably held in said cylinder or recessed head, and a number of spiral springs disposed around the longitudinal center of the buffer and bearing at one end against said striking plate or head and at the other against the opposite end of said cylinder or recessed head, and supporting members for securing said buffer to and carrying it above the rails of a track, substantially as described.

2. In a bumping-post the combination of a buffer comprising a cylinder, a striking plate or head movably fitted in the open end of said cylinder and having a stem guided in its opposite end, and a number of spiral springs arranged around said stem within the cylinder between the closed end thereof and the striking-head, and supporting members for securing said buffer in place on a railway-track, substantially as described.

3. In a bumping-post the combination of a buffer, lateral supporting-plates attached thereto at their upper edges from which they diverge transversely and widen longitudi-

nally, being adapted at their lower wider ends for attachment to track-rails, a brace attached at its upper end to the rear end of the buffer and at its lower end to a bed-piece behind the buffer, a tie-rod extending forwardly from the upper end of said brace and secured at its front end to the road-bed, and an anchor sunk in the road-bed in advance of the buffer and connected therewith by a rod passing over the buffer and secured at its ends in the anchor, substantially as described.

4. In a bumping-post the combination of a buffer, supporting-plates widening longitudinally and diverging transversely downward and attached at their upper narrow ends to the buffer and at their lower ends to track-rails, a downwardly and rearwardly inclined brace attached at its upper end to the buffer and at its lower end to a cross-tie in the road-bed, an anchor sunk in the road-bed in advance of the buffer and connected therewith by a tie-rod, and longitudinal sleepers secured to said tie and to the rails in advance thereof and below the same, substantially as described.

5. In a bumping-post the combination of a buffer, supporting-plates widening longitudinally and diverging transversely downward and attached at their upper ends to the buffer and at their bases to track-rails, a rearwardly and downwardly inclined brace attached at its upper end to the buffer and at its lower end to a cross-tie in the road-bed, a tie-rod connecting the upper end of said brace with one or more ties in advance, an anchor sunk in the road-bed ahead of the buffer and connected therewith by a rod which is looped over it and secured at the ends in the anchor, and longitudinal sleepers secured below the rail-ties to the tie to which the lower end of said brace is attached and to the track-rails some distance ahead, substantially as described.

6. In a bumping-post the combination of a buffer having a striking plate or head provided on one side with an inclined guide to close a car-coupler and direct it against the center of said plate or head and supporting members for securing the buffer to track-rails, substantially as described.

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

JOHN M. SCOTT.

Witnesses:

D. J. MOREY,
A. R. BAUMAN.