J. B. RUDOLPH.

AUTOMATIC SELF RELEASING CURTAIN HOOK.

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1,049,770.

Patented Jan. 7, 1913.

Fig. 1,

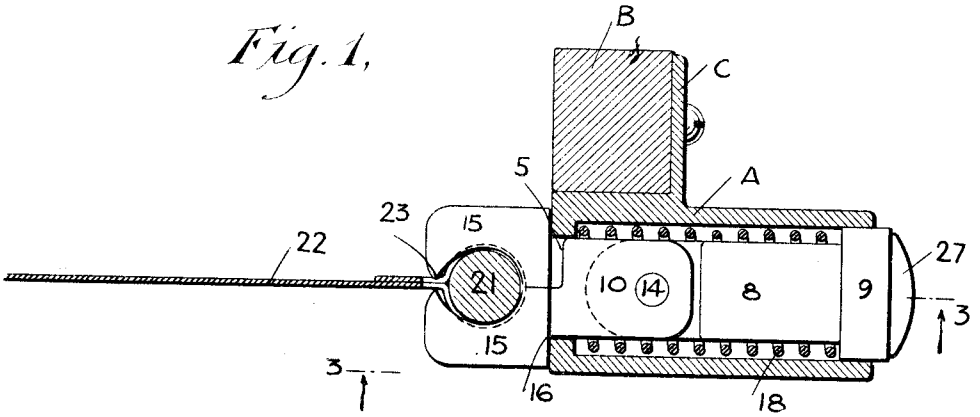


Fig. 2,

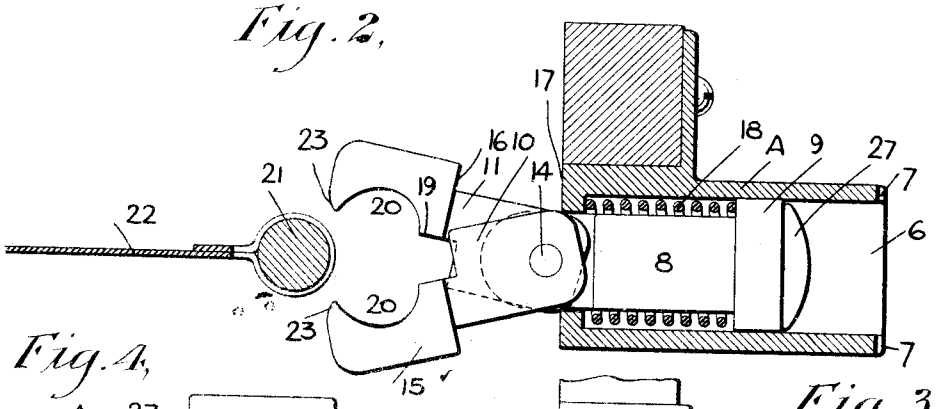


Fig. 4,

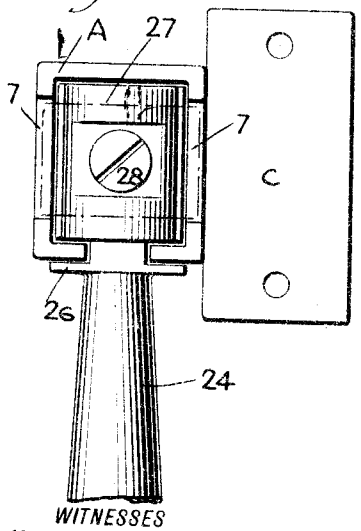
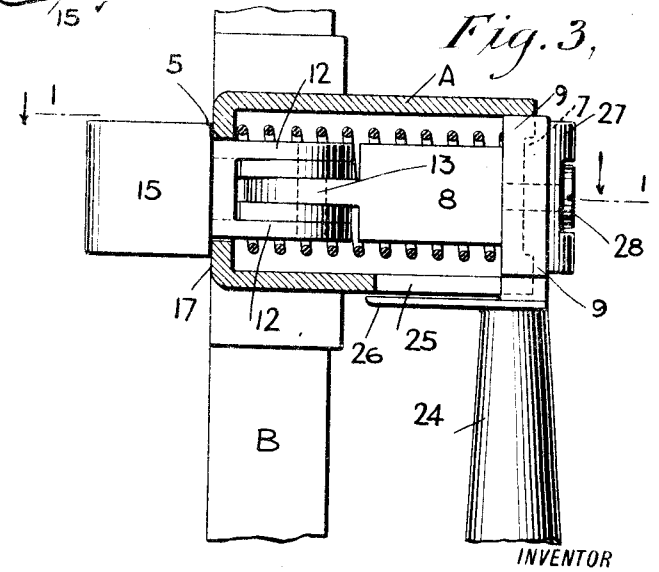


Fig. 3,



WITNESSES

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AUTOMATIC SELF-RELEASING CURTAIN-HOOK.

1,049,770. Specification of Letters Patent. Patented Jan. 7, 1913.

Application filed April 6, 1912. Serial No. 688,930.

To all whom it may concern:

Be it known that I, JOHN B. RUDOLPH, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Automatic Self-Releasing Curtain-Hook, of which the following is a full, clear, and exact description.

My invention relates to a self-releasing hook particularly adapted for holding curtains.

The means at present in use for fastening the curtains connecting the bellows of adjacent railway cars, are defective for the reason that if the cars become uncoupled, unless care is taken to disconnect the curtains, the parting of the cars will tear the curtain or rip the same from their fastenings.

An object of my invention is to provide a fastening or hook adapted to engage the binding rod at the free edge of the curtain, to firmly hold the same under normal conditions, but which will automatically permit the release of the curtain when a strong pull is exerted on the latter.

A further object of my invention is to provide a hook into which the edge rod of the curtain may readily be inserted.

A further object of my invention is to provide a device of the above identified character in which the several parts may be locked to change the same from an automatically releasing hook to a locked hook.

A further object of my invention is to provide a device of the above identified character simple in construction, easily operated and of relatively few parts.

I attain the above outlined objects by constructing a cylinder containing a spring-controlled sliding bolt, one end of which contains the locking device, the opposite end of which has pivoted thereto a pair of pivoted jaws, said jaws when projected from the casing against the action of the spring, adapted to be separated from each other to receive the edge rod of a curtain.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a horizontal sectional view taken through a preferred embodiment of my invention, on the irregular line 1—1 of Fig. 3, and showing the engagement of the edge rod of a curtain; Fig. 2 is a view similar to Fig. 1, but showing the bolt and jaws in protracted position releasing the curtain rod; Fig. 3 is a side elevation, partly in vertical section, on the irregular line 3—3 of Fig. 1; and Fig. 4 is a rear elevation of the device.

Described more in detail, my invention comprises a casing A suitably affixed to a support B by means of an L-shaped bracket C, preferably constructed integral with the casing A. The casing is preferably in the form of a hollow parallelepiped having slightly greater height than width and being open at both ends, the front opening 5 being circular in plan, the rear of the casing outlining the opening 6 having its vertical edges recessed as shown at 7, constituting part of the locking means hereinafter described.

Suitably mounted within the casing A is a bolt 8, preferably of a cylindrical form, the rear end of which terminates in a rectangular head 9 of the configuration of the inner bore of the casing, so as to prevent rotation of the bolt. The bolt 8 is of two parts, the forward portion consisting of two arms 10 and 11, each arm comprising a pair of transversely spaced-apart plates 12, 12, pivoted to each other and to the tongue 13 projecting forwardly from the cylindrical portion of the bolt 8, by means of a pivoting pin 14. The front portion of the bolt, that is, the portion including the arms 10 and 11 projects through and conforms in configuration to the front opening 5. Each of the arms 10 and 11 terminates in one of a pair of coacting jaws 15, each of which jaws has a rear shoulder portion 16 adapted to contact with the face 17 of the casing in order to maintain the jaws in closed position, as shown in Fig. 1. The jaws are resiliently held in this position by means of an extension spring 18 surrounding the bolt 8 and having one end bearing on the head 9 and the opposite end bearing on the inner front of the casing about the opening 5. Each of the jaws 13 has on its coacting face 19, a recess 20, shown in the drawings to be substantially semi-elliptical, so that the two recesses 20 coact to form an elongated bore adapted to receive the edge rod 21 on the free edge of the curtain 22 to be held by this coupler.

In order to insert the rod 21, the bolt 8 is projected forward, preferably by means hereinafter described, until the pivoting pin 14 is outside of the casing, permitting the separation of the jaws 15, as shown in Fig. 2. The rod 21 may then be inserted between the jaws and into the combined recesses 20, this action being facilitated by the inwardly beveled nose 23 of each of the jaws 15. On releasing the bolt 8, the spring 18 acting on the head 9 will withdraw said bolt into the casing A, closing the arms 10 and 11, and is stopped by the shoulder 16 coming in contact with the face 17 of the casing. By this construction, it is seen that the curtain rod 21 is maintained in the bore formed by the recesses 20, but should an abnormal strain or pull be placed on the curtain 22, the tendency will be for the curtain to draw the bolt out of the casing A against the tension of the spring 18 until the bolt is in the position shown in Fig. 2. A further pull on the curtain will, of course, cause the jaws to separate permitting the escape of the curtain, so that it is only necessary to regulate the tension of the spring 18 to vary the pull necessary to release the curtain from the hook. The bolt in this instance is actuated manually by means of a handle 24, which handle is suitably attached to the head 9 and extends through a slot 25, preferably in the bottom of the casing A.

In order to guide the bolt, to protect the casing and brace the handle against side strains, and, at the same time, to cover the slot 25, a plate 26 extends forwardly from and is preferably integral with the handle, said plate bearing upon the under side of the casing and of a length to entirely cover the slot or opening 25 in all positions of the bolt.

In order to lock the bolt in the position shown in Figs. 1 and 3, there is positioned on the rear of the head 9, a locking plate 27 substantially the same size as the rear face of the head 9 and pivoted centrally thereto by means of a screw 28. It will be seen that with the locking plate in the position shown in Fig. 4, no interruption is made to the movement of the bolt into the casing, but should the plate be revolved on the pivoting screw 28 about ninety degrees, the projecting edge of the plate 27 will enter the recess 7 hereinbefore described.

While this invention has been described with some detail in connection with a means for fastening a curtain in the coupling of railroad cars, it is of course to be understood that the device is not limited to this specific art, but may be used in any locality where it is desired to couple members together in a manner whereby the uncoupling of the same is obtained under abnormal stress on either of the members.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A hook comprising a casing having an opening in one end thereof, a bolt slidably mounted in said casing, a head on the end of the bolt farthest from said opening to prevent the rotation of said bolt in the casing, an extension spring surrounding said bolt and bearing on said head and casing tending to maintain said bolt within said casing, a pair of arms pivotally connected with the end of said bolt and projecting through the opening and constituting part of said bolt, and a pair of coacting jaws external of the casing, each of said jaws forming the outer end of one of said arms.

2. A hook comprising a casing having an opening in one end thereof, a bolt slidably mounted in said casing, a head on the end of the bolt farthest from said opening adapted to prevent the rotation of said bolt in the casing, an extension spring surrounding said bolt and bearing on said head and casing tending to maintain said bolt within said casing, a pair of arms pivotally connected with the end of said bolt and projecting through the opening and constituting part of said bolt, a pair of coacting jaws external of the casing, each of said jaws forming the outer end of one of said arms, and means carried by said head locking said bolt to the casing.

3. A device of the character described, comprising a casing open at both ends, a bolt slidably mounted in said casing, jaws carried by one end of said bolt projecting through one of said open ends of said casing, the opposite end of said bolt projecting through the opposite open end of the casing, and a pivotally mounted locking plate connected with the end of said bolt opposite said jaws, said locking plate being of such a shape as to fit into said casing so as to slide back and forth therein when in one position and to span the bore of said casing when turned to another position whereby said bolt is locked against movement.

4. In a device of the character described, a casing having a longitudinal bore therein, said bore extending entirely through the casing, said casing being formed with an overhanging or substantially annular flange at one end whereby a shoulder is provided at one end of the bore, a spring arranged on said shoulder, a bolt provided with a head fitting said bore arranged in said casing, said bolt being normally positioned with its head partially extending from said casing, and a pair of pivotally mounted jaws connected with said bolt and extending from the casing, said jaws having shoulders arranged thereon for fitting the annular flange on the casing.

5. A hook, comprising a casing having a longitudinal slot in one side thereof, a bolt slidably mounted in said casing, said bolt having coacting jaws carried thereby, an actuating handle attached to the bolt projecting through said slot, and a bearing plate attached to the handle moving in a plane parallel to the line of movement of said bolt and engaging the outside of the casing adjacent the slot to cover the same.

6. A device of the character described, comprising a casing having a longitudinal slot in one side thereof, a bolt slidably mounted in said casing, a pair of pivotally mounted co-acting jaws carried by the bolt, and an actuating handle attached to the bolt projecting through said slot providing manually operated means for reciprocating the bolt, and means for preventing rotation of the bolt.

7. A device of the character described, comprising a casing having an opening at one end, said opening being restricted by an annular shoulder projecting from the casing, a spring arranged in said casing resting on said shoulder, a bolt arranged in the casing and fitting the end of said spring, said bolt being provided with a head substantially fitting the interior of said casing and resting against one end of said spring, said spring continually tending to hold said bolt in a predetermined position, a pair of pivotally mounted arms connected with said bolt and acting as a continuation thereof, said arms projecting through an opening defined by said shoulder, and a pair of jaws connected with said arms formed with shoulder portions acting against the shoulder of said casing for limiting the inward movement of the bolt under the action of said spring.

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

JOHN B. RUDOLPH.

Witnesses:
W. S. ORTON,
PHILIP D. ROLLHAUS.