

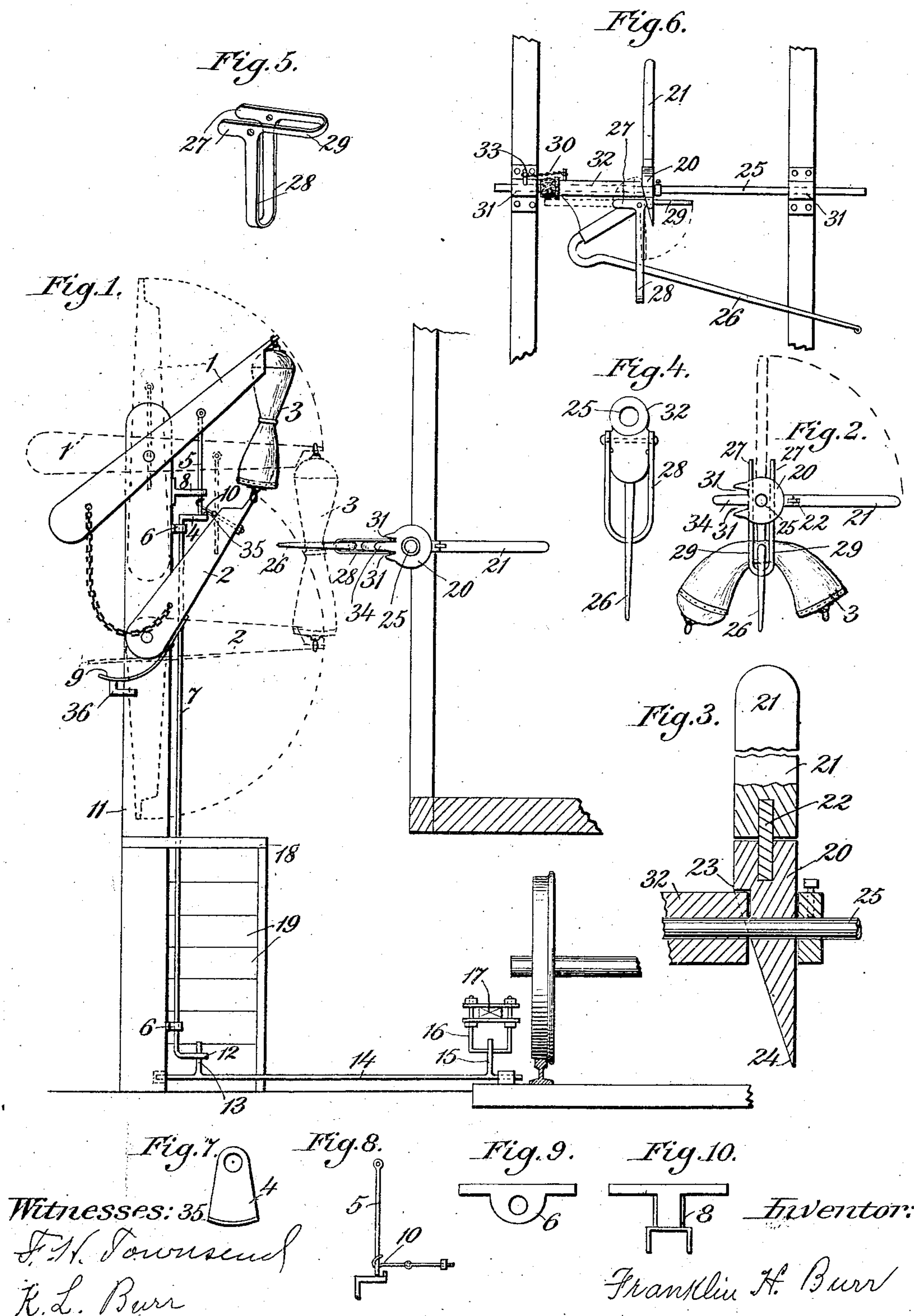
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PATENTED AUG. 11, 1908.

F. H. BURR.

# MAIL RECEIVING MECHANISM FOR RAILWAY CARS.

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# UNITED STATES PATENT OFFICE.

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## MAIL-RECEIVING MECHANISM FOR RAILWAY-CARS.

No. 895,723.

Specification of Letters Patent.

Patented Aug. 11, 1908.

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*To all whom it may concern:*

Be it known that I, FRANKLIN H. BURR, a citizen of the United States, and a resident at Atlantic, in the county of Cass and State of Iowa, have invented certain new and useful Improvements in Mail-Receiving Mechanism for Railway-Cars; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being made to the accompanying drawings, which form a part of this specification.

This invention relates to a mail receiving mechanism for railway cars, and has for its objects, first, the safety of the mail pouch to be received on railway-cars while in motion, by providing means to automatically lock the mail pouch in the receiving mechanism; second to provide means for a greater clearance of the mail crane arms, holding the pouch to be received on the passing train, by providing means to hold the arms in an obliquely upright manner until the cab of the passing engine has passed the crane, and then to provide means to automatically lower the arms with mail pouch attached into a position to be taken on by the passing train.

It is further intended to provide a simple, durable and efficient construction and one readily adapted to the mail receiving mechanism now in use.

In the drawings, Figure 1 is a side elevation of a mail-crane, showing the application of the safety mechanism on the crane ready for use and includes a sectional end view of a mail-car showing the front end of a catcher with the safety locking mechanism attached; Fig. 2 is front end view of the catcher showing the locking clamp in locking position, and means for holding the clamp in locking position; Fig. 3 is a sectional side elevation of the rotary wedge shaped locking disk, and shows its application to a catcher; Fig. 4 is an end view of that portion of the catcher that shows the locking clamp in locking position; Fig. 5 is a perspective view of the locking clamp; Fig. 6 is a side elevation of a catcher with safety clamp applied; Fig. 7 is a plan view of the vibrating or swinging platform; Fig. 8 is a plan view of the supporting rod of the upper crane arm and the hook of the lower crane-arm; Fig. 9 is a plan view of the hangers that pivotally support the vibrating or swinging rod in its operating position; Fig. 10 is a plan view of the guide that holds the rod support-

ing the upper crane-arm, from moving in the direction in which the vibrating platform is swinging or vibrating when being operated; Figs. 1, 2, and 6 also show views of the rotary wedge shaped locking disk.

In the drawings, reference 1 is the upper crane-arm, 2 is the lower crane-arm, 3 is a mail-pouch hung for delivery to the passing train, 4, is a platform that swings or vibrates horizontally in either direction and supports the crane-arms in their obliquely upright, and safety positions, by means of supporting rod 5, pivotally attached to the upper crane arm. Vibrating platform 4 is rigidly attached to the perpendicular rod 7, which is pivotally attached to the mail-crane post 11 the said platform and rod swinging or vibrating simultaneously, 8, is a slotted guide and is rigidly attached to the mail-crane post 11, and holds the rod 5 from swinging or vibrating in such a manner that the platform 4, will swing out from under the rod 5, and allow the rod 5, and the crane arms which is supported in their safety positions, to gravitate into their operating positions as shown by the dotted lines of crane arms with mail pouch attached in an operating position, 9, is a spring rigidly attached at one end to the lower crane-arm with the other end left free to intercept the bracket 36 when the lower crane arm is being raised into its safety position, which causes the "setting" of the spring; this spring is necessary to accelerate the crane arms in their downward descent into their operating position. This spring accelerates the movements of both of the crane arms as they are connected together by means of the mail-pouch removably attached to each. The rod 5 when deprived of its support swings out from the platform supporting it, this allows the hook 10 to slip off from the end of said rod 5, and allows the crane arms with pouch attached to drop from their safety clearance position into an operating position as shown by the dotted lines of crane arms and mail-pouch.

10, is a hook pivotally attached to the lower crane-arm and hooks around rod 5, of the upper crane arm. Said hook holds the lower crane-arm in safety position.

In the drawings, 12, and 13 are the automatic connecting arms which are rigidly attached to the automatic rods 14, and 7, these arms swing together simultaneously and automatically in the direction in which the train is passing, rod 14 is the automatic oper-



ating and connecting rod between the passing train and rod 7, 15 is the operating arm of rod 14, this arm is intercepted by the clamp 16 which is rigidly attached to the lower truck bar of the engine tender, and turns the arm 15 in the direction in which the train is passing, and simultaneously turns its connections in the same direction and releases the rod 5, of its support, and thereby allows the crane-arms to descend into their operating position; 18, and 19; are the steps and platform used in hanging the mail-pouch to the crane-arms.

To provide means for a greater safety clearance of the mail-crane arms, to which the mail-pouch is removably attached, the crane-arms are supported in an obliquely upright manner; the upper crane-arm if held half way between its horizontal and perpendicular positions would give the desired safety clearance position; the lower crane-arm must be raised to a more nearly perpendicular position as shown, to give the desired safety clearance, and in this position would not gravitate to an operating position quickly enough when released from its support for a fast moving train to receive the mail-pouch that has been removably attached to the said crane-arms, without the accelerating downward movement given the said crane-arms by means of the spring attached to the lower of said crane-arms and "set" for the purposes named. When the crane-arms are raised into the position described, they are in a safety clearance position, and are not released from this position until the cab of the engine has passed the crane, as the automatic releasing trip is located on the tender as described.

In the drawings 20 is a rotary wedge shaped locking disk, 23, being the widest, and 24 the narrowest portions of said disk; this disk is rotatively mounted on the rocking bar of the catcher 25, and rocks automatically from an operating to a pouch locking position as shown, this disk is rigidly attached to the catcher handle 21, is slotted to receive the locking portion of the locking clamp thereby making an interlocking position, is elongated between the slots, to adapt it to begin its locking functions at a slighter rearward angle of the locking clamp.

Fig. 5 shows a loop made L shaped mail-pouch locking clamp, with portions 27, and 28, made heavier in order to counter balance portion 29, and maintain the clamp in its operating position, and is pivotally attached to the V shaped intersection of the catcher casting 32, the 29, portion of said clamp interlocking with the wedge shaped locking disk, when in operating position, and is adapted to automatically rotate rearwardly into a mail-pouch locking position.

In the drawings 21 is the catcher handle and is rigidly attached to the wedge shaped

locking disk by means of the stud 22, 26 is a catcher arm and is rigidly attached to the rocking bar of said catcher 25, by means of casting 32, 30 is a safety chain connection between the catcher and the catcher hanger, this safety chain connection is pivotally attached to the casting supporting the catcher and placing a loop of the chain over a stud 33 rigidly attached to the hanger, 31, 31, are slots in the rotary wedge shaped locking disk and are used in the interlocking and automatic clamp locking features of the catcher.

The locking clamp is adapted to rotate rearwardly in operation, the lower portion 28 is made long enough to rotate behind the goose neck of the catcher and short enough to impact against the rubber collar of the catcher placed on the rocking bar of said catcher between the catcher and the hanger on the side of the car and used as a cushion for the catcher in its operation.

The carry and operating positions of the catcher, wedge shaped locking disk, and the loop made L shaped locking clamp are shown in Fig. 6. When the catcher is rocked into an operating position, the locking clamp is held in operating position by means of the friction of the interlock of the portion 29 in the slots 31, 31, of the wedge shaped locking disk, the inter lock of the said clamp with the said disk being shown in Fig. 6; the interlocking in this manner of the said loop made locking clamp and the rotary wedge shaped locking disk at their pivotal points, makes the handle of said catcher rigid in such a manner that the operator can bring the catcher into an operating position; the catcher being in position to receive the mail-pouch removably attached to the mail-crane arms, the impact of said pouch against the portion 28 of the loop made L shaped locking clamp, forces the clamp from its interlocking position by rotating the clamp rearwardly on its pivotal points into the position shown of the clamp in the dotted lines of Fig. 7; the releasing of the interlock in operation of the locking clamp with the wedge shaped locking disk, allows the catcher to gravitate to its carry position and automatically locks the mail-pouch simultaneously as shown, by means of the catcher rocking on its hangers and on the pivotal point of the rotary wedge shaped locking disk. To release the pouch from its locking position, raise the handle to its upright or carry position, when the slots of the locking disk will again interlock with the wedge shaped disk, and the catcher is again in operating position and the pouch can be removed in the usual manner.

The wedge shaped locking disk is made cylindrical in form and wedge shaped with slots 31, 31, and elongated between the slots, and is rigidly attached to the catcher handle 21; as soon as the catcher is released from its interlock in action, the catcher begins to



gravitate downwards, the elongated portion begins to lock the clamp as that feature of the locking disk allows it to begin its locking functions at a slightly descending angle of the locking portion of the locking clamp, and the continued and increasing wedge shaped features of the disk allows a more perfect lock of the locking clamp to be made as the catcher continues to automatically gravitate.

From the foregoing description, taken in connection with the accompanying drawings, the construction mode of operation and advantages of my invention will be readily understood, and various changes in form proportion and minor details of my invention may be resorted to without departing from the spirit of my invention or sacrificing any of the principles or advantages thereof.

What I claim as new is—

1. In a mail receiving mechanism for railway cars, a mail-crane post with arms pivotally attached thereto, and a mail-pouch removably attached to the said arms, means adapted to support the upper arm of said crane arms, in an oblique manner at approximately an angle of forty five degrees uprightly, and means adapted to support the lower arm of the said crane-arms, in an oblique manner, and in a nearly perpendicular manner uprightly, with the said mail-pouch removably attached to the said crane-arms, and supported by the said crane-arms in a correspondingly oblique manner uprightly, substantially as described.

2. In a mail receiving mechanism for railway cars, a mail-crane post with arms pivotally attached thereto and a mail-pouch removably attached to said arms, said arms being supported in an obliquely upright manner as described, a spring attached to the lower arm for the purposes named and substantially as described.

3. In a mail receiving mechanism for railway cars, a mail-crane post with arms pivotally attached thereto, with a mail pouch removably attached to said arms, said arms being supported in an obliquely upright manner for the purposes named, a spring attached to the lower of said crane-arms, as described, acting on said crane-arms when supported in an obliquely upright manner, said support adapted to be automatically removed, substantially as described.

4. In a mail receiving mechanism for railway cars a mail-crane post with arms pivotally attached thereto, and a mail-pouch removably attached to said arms, said arms being supported in an obliquely upright manner for the purposes named, a rod pivotally attached to the upper crane-arm as a means of support, a hook pivotally attached to the lower crane arm as a means of support, the said rod and said hook being the means of holding said crane-arms in an ob-

liquely upright manner, for the purposes named, and as substantially described.

5. In a mail receiving mechanism for railway-cars, a mail-crane post with arms pivotally attached thereto, and adapted to be supported in an obliquely upright manner with a mail-pouch removably attached to said crane-arms, a rod pivotally attached to the upper crane-arm, a hook pivotally attached to the lower crane-arm, said pivotal hook being hooked around the said pivotal rod of the said upper crane-arm, the said rod and said hook being automatically supported on a vibrating platform, which vibrates or swings in either direction in which a train is passing, said platform being rigidly attached to a rod pivotally attached to the said mail-crane post, substantially as described.

6. In a mail receiving mechanism for railway cars, a mail crane post with arms pivotally attached thereto, and adapted to be supported in an obliquely upright manner with a mail-pouch removably attached to said crane arms, a rod pivotally attached to the upper crane-arm a hook pivotally attached to the lower crane-arm, said rod and hook being the means of holding the said arms with a mail-pouch removably attached thereto in an automatic safety position, a vibrating rod pivotally attached to the said mail-crane post, supporting the vibrating platform on its upper end and an interlocking arm on its lower end, said arm being adapted to interlock with a corresponding arm rigidly attached to the vibrating and automatic rod extending from the mail crane-post to the point of its automatic operation by means of an operating trip placed on the lower truck bar of the tender of the passing engine, substantially as described and set forth.

7. In a mail receiving mechanism for railway-cars, a mail crane post with arms pivotally attached thereto, and adapted to be supported in an obliquely upright manner with mail-pouch removably attached thereto, a rod pivotally attached to the upper crane-arm, a hook pivotally attached to the lower crane-arm, a vibrating platform with lip extending upwards for the purpose of keeping rod 5 with hook 10 from slipping off from said platform when placed in safety and operating positions, said platform rigidly attached to a vibrating rod pivotally attached to the said mail-crane post, at the upper end of said vibrating rod, with an arm rigidly attached to said rod at its lower end, and adapted to interlock with a corresponding interlocking arm rigidly attached to the rod pivotally attached to the said mail-crane post at one end and to the ties of the rail road track at the other end, an automatic vibrating rod with interlocking arms rigidly attached to said rod, said rod vibrating from



right to left or in either direction in which a train is passing, said arms adapted to interlock with the vibrating rod supporting the vibrating platform and means placed on the tender of a passing engine to cause the simultaneous vibrating or swinging of said rods and the release of the rod and hook supporting and holding said crane-arms with a mail-pouch removably attached in their safety clearance position, that said crane-arms with mail-pouch attached being deprived of their support fall by gravity, being accelerated by means of spring rigidly attached to the said lower crane-arm into position to be taken on to the passing train, as set forth and substantially described.

8. In a mail receiving mechanism for railway cars, a loop shaped clamp rigidly attached to the lower truck bar of engine tender and adapted to intercept arm 15 of the vibrating rod 14 in such a manner as to cause the automatic operation that allows the mail-pouch which is removably attached to the crane arms of the mail-crane post to fall into position to be taken on the passing train, as set forth and substantially described.

9. In a mail receiving mechanism for railway cars, a mail-crane post with arms pivotally attached thereto and adapted to be supported in an obliquely upright manner for the purposes named, with a mail-pouch removably attached to said arms, a spring rigidly attached to the lower crane arm, and means for the "setting" of said spring for the purposes named and substantially as described.

10. In a mail receiving mechanism for railway-cars, a car with a mail-pouch catcher hung in the usual position to be rocked into a position to receive the mail-pouch removably attached to the mail-crane arms when said arms are in operating position, a rotary wedge-shaped locking disk with the handle of said catcher rigidly attached thereto, said rotary wedge-shaped locking disk adapted to rotate around the rocking bar of said catcher in either direction and to hold the said catcher in operating and pouch locking position, as set forth and substantially described.

11. In a mail receiving mechanism for railway-cars, a car with a mail-pouch catching device hung in the usual position, to be rocked by an operator into a receiving position to receive a mail-pouch hung in the usual manner to be received on a passing train, the handle of said mail-pouch receiving device being rigidly attached to a rotary wedge-shaped locking disk, said rotary wedge-shaped locking disk adapted to rotate around the rocking bar of the said mail-pouch receiving device, and hold said device in an operating position, a locking L shaped clamp pivotally attached to the said mail-pouch receiving device at the V intersection of the casting supporting the said rocking bar of

said device and the operating arm of the said mail-pouch receiving device, and adapted to rotate rearwardly, for the purposes named, and as set forth and substantially described.

12. In a mail-receiving mechanism for railway-cars, a mail-pouch receiving device held in operating position and adapted to receive a mail-pouch hung on a mail-crane in the usual manner to be received on a passing train, by means of said device, means for holding said device in its operating position in such a manner that said device will gravitate in operation from its operating to its "carry" position locking the said mail-pouch in the said mail-pouch receiving device simultaneously, substantially as described.

13. In a mail receiving mechanism for railway cars, a rotary wedge-shaped locking disk, with the operating handle of the receiving device rigidly attached thereto, said disk being slotted and elongated between the slots for the purposes named, said wedge shaped rotary locking disk with handle of the mail-pouch receiving device rigidly attached thereto remaining stationary in the operators hands in automatically bringing the said receiving device from its operating to its "carry" or mail-pouch locking position, as set forth and substantially described.

14. In a mail receiving mechanism for railway cars, a loop made L shaped locking clamp, pivotally attached to the V shaped intersection of the casting supporting the catcher arm to the rocking bar of the mail receiving device, means for adapting said casting at the said V shaped intersection, to receive the pivotal point of the said loop made L shaped locking clamp, substantially as described.

15. In a mail receiving mechanism for railway cars, a mail receiving device hung in the door of a railway-car in the usual manner, by means of hangers rigidly attached to the jambs of said mail car and adapted to rock into operating position in the usual manner, and to gravitate into a "carry" and pouch locking position automatically in operation, a casting rigidly connecting the catching arm of said device to the rocking bar of said device, a rubber collar fitted around the said rocking bar between the said casting and the hangers supporting the said receiving device to the railway-car, said collar being used to cushion said receiving device in its operation, a loop made L shaped locking clamp, pivotally attached to the said casting and adapted to rotate rearwardly into mail pouch locking position and against the said rubber collar, the said rubber collar cushioning the impact of the said locking clamp when forced into the said locking position, substantially as described.

16. In a mail receiving mechanism for railway-cars, a mail receiving device pivotally attached to the jambs of a railway-car door



in the usual manner and place by means of  
hangers rigidly attached to the said jambs of  
the car door, said mail receiving device  
adapted to rock into and out of operating  
5 position, and slide forward and backwards in  
the said hangers, a flexible safety connec-  
tion, pivotally attached to the casting of the  
said mail receiving device, and removably  
attached to the hangers for the said mail re-

ceiving device for the purposes named and 10  
as substantially as described.

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

FRANKLIN H. BURR.

Witnesses:

L. W. NILES,  
RAYMOND SMETH.