

**RAILWAY MAIL CATCHER AND DELIVERY DEVICES.**

In continuance of our notice of railway mail catcher and delivery devices we present the accompanying illustrations of the Ayars mail catcher and receiver. Of these Fig. 1 shows the apparatus as attached to the side of the mail car, and Fig. 2 is a side and rear view of the iron mail receiver as set up alongside the track. The catcher is attached to the outside of the car on one side of the door by means of a plate which is securely bolted thereto. Another plate on the opposite side of the door carries the shafting and gear of the deliverer, which is capable of swinging outwardly through a quarter circle, and is held in the outward position by means of lugs or stops. Upon the outer end of the delivery arm is pivoted a tripping device, as will be later described. At the upper end of the vertical shaft upon which the deliverer is keyed is mounted a gear segment which meshes with a similar gear segment on a horizontal shaft which extends along the side of the car toward the doorway. The shaft is rotated in its bearings by the hand bar attached thereto at right angles as shown in Fig. 1, thereby causing at the same time the delivery arm to swing out from the car or return to its original position. This shaft is carried in bearings cast on the plate on which the deliverer is carried, and the end opposite the door opening is carried within the hollow end of the large arm of the mail bag catcher. The catcher is supported by its connection with this shaft at one end, and at the other end it rests in a bearing secured to the side of the car in front of the door, where an adjustable collar is provided to limit its forward movement. The usual buffer is provided at the rear of the catcher to receive the impact of the bag. The end of the horizontal shaft which operates the delivery arm is flattened where it enters the hollow shaft of the catcher, and a transverse opening in the latter receives a flat pin which serves to lock the shaft and the catcher arm so they shall rotate together. The handle above mentioned on the catcher opposite the catching hook is in such a position as to lie flush with the side of the car when the catcher is not in use. When the train is approaching the receiver, this handle is pulled down into a horizontal position within the car, the hook arm being carried then into a horizontal position and placed in line with the bag which is to be caught. The same movement of this handle turns the horizontal shaft and the vertical shaft by means of the gear before mentioned and swings the horizontal arm, with the mail bag attached, out to a horizontal position, bringing the bag into the proper position for delivery. The releasing of the bag is accomplished by means of an automatic cast-off device which is operated by means of a striker on the mail receiver, as will be later described.

The receiver, which is built usually on an extension of the ties of the railroad track and is securely bolted to them, is a metal structure of the kind shown in illustration, Fig. 2. A little in advance of the mouth of it a small crane is erected which carries a series of pendent strikers. These are suspended at such a height that they will just strike the tripping lever on the cast-off or release device before mentioned, and they are made in separate pieces in order to lessen the weight of the blow when the train is traveling at a high rate of speed. The strikers may be made of very light weight, as it requires but little force to release the catch. The fingers of the release device are ingeniously designed to cause the bag to drop the moment the lever of this device is pushed slightly backward. The side of the receiver consists of wire netting. It is built of sheet iron and is curved somewhat to a cycloidal form, as this form is best adapted to bringing the mail bag to a state of rest gradually, and with least injury to its contents. Just to the rear of the receiver is a stout wooden crane with a swinging cross bar, and when mail is to be delivered to the train the cross bar is drawn down into a horizontal position and the mail bag suspended from it.

At stations where there is no receptacle for mail it will not be necessary to use the delivery arm on the car, and to enable the mail clerk to use the catcher alone, it is only necessary to withdraw the small pin before mentioned, which locks the catcher to the deliverer. This will allow the delivery arm to remain locked against the side of the car while the catcher is swung

out into position. The operation of catching and delivering mail is as follows:

On approaching a mail station the clerk hangs the mail bag upon the holder while the delivery arm is projecting into the door opening. As the station is approached he pulls down the handle of the catcher, thereby swinging the delivery arm out into position. When the station is passed the catcher will, of its own accord, swing down into normal position and

be received and delivered along the route, attention is drawn to its trial on a division of the Pennsylvania Railroad at three stations, between which the distances were respectively 0.8 of a mile and 1½ miles. The mail train passes these three stations at the rate of sixty miles per hour, and as the road is on a down grade at this point the trains frequently go by at a speed of seventy miles an hour. In spite of the brief interval of time between stations, the mail clerk has no difficulty in locking the pouches and attaching them to the deliverer.

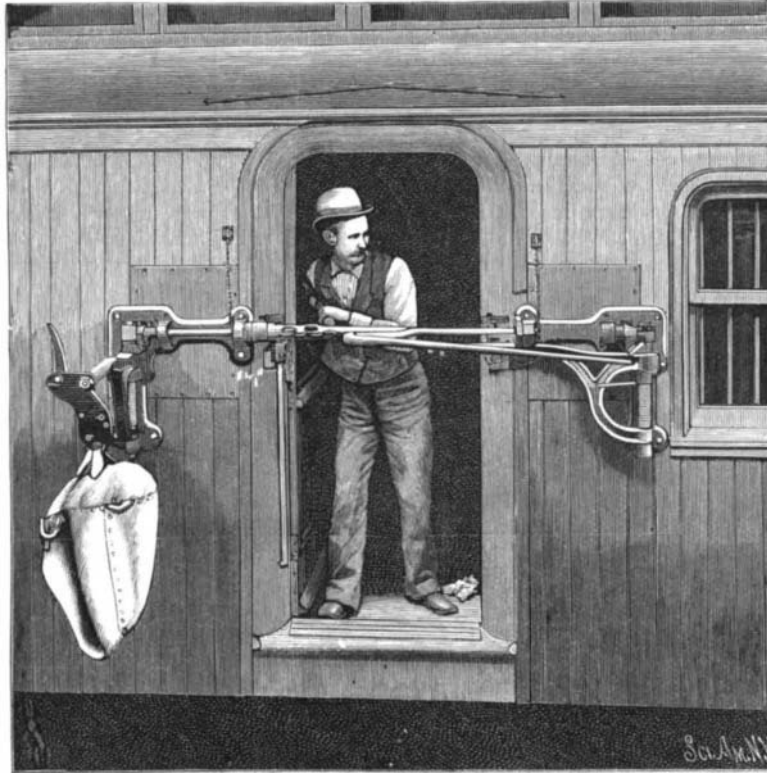


Fig. 1.—THE AYARS DELIVERER ARM AND CATCHER IN POSITION.

turn the delivery arm in against the car, where it may be securely locked. This very interesting and effective device has been thoroughly tested by the Erie Railroad Company at Lake View, N. J., and also by the New York and New Haven Railroad, at New Haven, Conn., and we are informed that the management of both these railroads have expressed their unqualified approval of the device. Special advantages claimed by this form of catcher and deliverer are that the receiver is always set and requires no attention before the arrival of the train; that there is no violent contact of metal against metal to cause ultimate breakage and necessitate repairs, and this device involves no risk to the mail clerk as compared with others, for the reason that it is not necessary for him to hold down the catcher handle after the delivery arm has been thrown out.

As an instance of the facility with which mail may

upon the great white cross that indents the Mount of the Holy Cross at an elevation of 14,176 feet?

If it is the duplicate of Chor that tourists seek, Manitou, in this State, rests at the foot of 14,000 foot Pike's Peak for them, and is itself 6,300 feet above the sea, while being endowed with health-giving waters the equal of Carlsbad.

There are 110 mountains in Colorado whose peaks are over 12,000 feet above the ocean level. Forty of these are higher than 14,000 feet, and more than half of that number are so remote and so rugged that no one has yet dared to attempt to climb them. They are as unique as those of Switzerland, and as fearful as the Alps in the warning they offer to men and women who are so hardy as to defy them by starting upon their ascent. Some of them are massed with snow, others have glaciers over their approaches, and others are merely masses of jagged rocks.

Not even Coloradoans have sought as yet to surmount them, and the profession of "guide" is still open for whoever may care to enter it. Railroads reach within close enough range to provide hotel facilities, but otherwise the mountain climbing of Colorado is awaiting its pioneers. Did the Coloradoans or the people of the State fully realize the intoxication as well as the health-giving powers of mountain climbing, Rocky Mountain climbing would be one of the popular recreations of America.

Only one mountain climbing club is known to exist in Colorado. There is room for a dozen more. There should be one in every city. By the evidences such clubs might offer of their thrilling experience and unexampled pastimes, the fame of the Rockies as a place of pleasure and adventure might be widely advertised, and Colorado thus be pushed forward to the place it must eventually occupy as the American substitute for Switzerland.

THAT the water of the sea contains gold, among other metals, is perhaps well known. According to Tont Savoir, quoted by the *Revue Scientifique*, which gives a summary of the data that have been obtained in regard to this subject, Sondstadt, in 1872, reached the conclusion (confirmed more recently by Munster) that the "briny deep" contains about one grain of this metal to the ton of water. One grain is not much, but this figure has its value when we take into consideration the immense extent of the oceans, which, as a whole, would, at this estimate, contain a total of 10,250,000,000 tons of gold. This latter is found in the state of iodide, and the iodide that enters into the combination would amount to something like 4,428,800,000,000 tons.

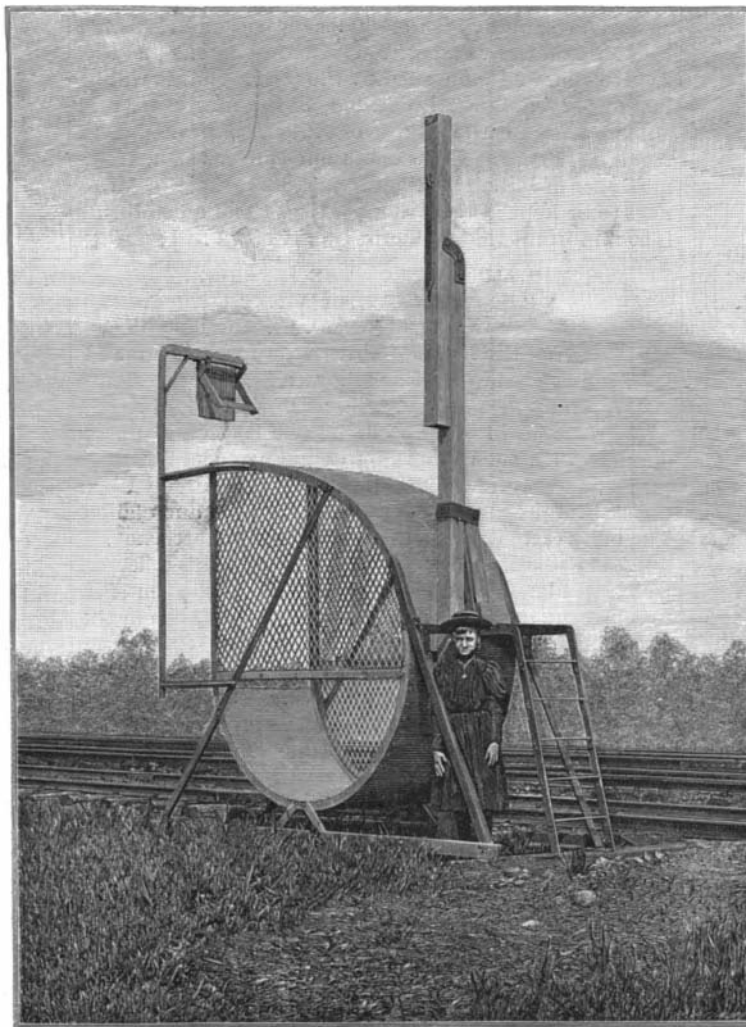


Fig. 2.—THE AYARS MAIL RECEIVER.