able mechanism set in action, whereby such defective can will be thrown out at a suitable point of discharge.

The testing mechanism of the present invention is inclosed within a box 22, and is in character as follows: The pipe 20 communicates with a bowed tubular gage spring 23 of the usual character, which is adapted to expand or straighten under the influence of pressure, as shown in Fig. 2, its normal curvature being indicated in Fig. 1. The free end of the spring has pivoted thereto a link 24, which engages the short arm 25 of an L lever 26 which is pivoted at its elbow 27. The lever 26 abuts against a spring 26^a carried by a slide plate 26^b, which is adjustably mounted within a guideway 26^c. The position of the slide plate can be adjusted by turning a thumb screw 26^d, which can be locked in adjustable position by means of a jam nut 26^e. The long arm of this L lever greatly exceeds the short arm in length, so that very small variations in the position in the free end of the bowed gage spring will be magnified many times at the end of the long arm of the L lever. The L lever is connected by means of a rod 28, with a trip finger 29 which is pivoted to a bracket 30 at a point near the upper end of the finger, whereby movements of the rod 28, imparted to the short end of the pivoted finger, will be magnified or accentuated at the long end of such finger, which is provided with a hook 30^a which is adapted to engage a lug 31 which outwardly projects from the end of an actuating pin 32, which is slidably mounted within a sleeve or guideway 33 and is provided, on its lower end, with a cam head 34, whose side face 35 is flattened in the form shown in Fig. 3, and is adapted, when the pin is dropped, to engage a spring supported pin 36 which outwardly projects from the inner face of a cam wheel 37. The cam wheel is in the form shown in Fig. 4, and is provided, in addition to the pin 36, with a stop pin 38 which lies slightly nearer the center of the cam wheel. The cam wheel is mounted upon a shaft 39, driven by means of bevel pinions 40, or other suitable gearing, at such speed that the cam wheel will be completely revolved by the passage of each cam. In other words, if the tester wheel is provided with forty sealing heads adapted to receive forty cans, the cam wheel will be revolved forty times during the revolution of the tester wheel. The cam wheel is adapted to engage an inwardly extending pin 41 on the actuating pin, and the formation of the surface of the cam is such that the actuating pin will be raised slightly with each revolution of the cam wheel.

The spring supported pin 36 is adapted to engage the upper end of a lever 42, which is pivoted at the point 43 and is adapted to actuate a discharging runway like that shown in the application previously referred to. The upper end of the lever normally underlies the pivoted catch finger 44, which is held in engagement with the lever by means of a spring 45. The catch finger is provided with a depending tooth 46 which, when the lever 42 is thrust back, as shown in Fig. 1, will hold the lever against the return movement until the revolution of the cam wheel has brought the stop pin 38 under the end of the catch finger 44, which rises as the stop pin passes thereunder and allows the lever 42 to resume its normal position.

In use, the cans are fed in succession to the tester wheel in any suitable manner, and are successively clamped in position against the sealing heads. Each can in turn receives its charge of air under pressure and is carried around to practically a complete revolution until the can is brought into communication with the tester. If the pressure within the can be reduced, by leakage, the gage spring will be moved from the position shown in Fig. 2 to the position shown in Fig. 1, which movement is made possible by a slight lifting of the actuating pin with each revolution of the cam wheel. As the pin is lifted, the hook 30^a on the trip finger 29 will be released from engagement with the tooth 31, which allows the parts to assume a position shown in Fig. 1, and allows the actuating pin to fall by gravity, so that its cam head 35 will occupy a position within the course of travel of the spring supported pin 36. When said pin is brought into contact with the cam surface 35, it will be thrust back against the lever 42, which lever will be locked against a return movement by the catch finger 44. This movement of the lever 42 serves to actuate suitable discharging mechanism, preferably of the style shown in the application previously referred to, whereby the defective can will be thrown out and discharged. If, on the other hand, a perfect can be brought into register with the tester, the proper degree of pressure will be maintained in the gage spring, which will be bowed as indicated in Fig. 2, so that, when the actuating finger is raised by the revolution of the cam wheel, the trip finger 29 will maintain its same position and engage and suspend the actuating pin after it has been released by the cam wheel.

In testing cans of different sizes, it is necessary to regulate the degree of pressure of the lever 26 so that, regardless of the size of the cans being tested, the lever will have just a sufficient amount of movement to effect the suspension of the pin 32; and, in order to adjust the mechanism to such varying conditions and prevent an excess of movement which would carry the hooked finger 30^a too far under the tooth 31, the adjusting screw is provided by the regulation of which

UNITED STATES PATENT OFFICE.

ALBERT H. NELLER, OF FAIRFIELD, IOWA.

STOP FOR OVERHEAD CARRIERS.

945,577. Specification of Letters Patent. Patented Jan. 4, 1910.

Application filed September 13, 1909. Serial No. 517,521.

To all whom it may concern:

Be it known that I, ALBERT H. NELLER, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented a new and useful Improvement in Stops for Overhead Carriers, of which the following is a specification.

My invention relates to stops adapted to arrest the movement of a carrier on an overhead track, and it consists of the improvement set forth in this specification, and more particularly pointed out in the claims.

In the accompanying drawings forming a part of this specification, Figure 1 is a side view of a portion of an overhead track and carrier with stops embodying my invention. Fig. 2 is the same showing the carrier in a different position on the track, a portion of its traveling wheel being broken away. Fig. 3 is an enlarged transverse section on line 3—3 of Fig. 1. Figs. 4 and 5 are the same on lines 4—4 and 5—5 of Fig. 1.

Referring to the drawings, A represents an overhead track-wire having one of its ends connected in the usual way by means of a tension bolt B to the upper end of a post P.

C is a portion of the frame of a carrier having a wheel W adapted to run on the track-wire A.

S is a stop adapted to arrest the movement of the carrier by coming in contact with the wheel W. It is made slidable on the track and is provided with a concave portion immediately above the track which is adapted to fit the groove of the wheel, particularly as shown in Fig. 2.

H represents a holder which is rigidly secured to the track-wire. It is preferably made of two similar pieces held together by bolts I and is provided with a longitudinal opening in its lower end. The stop S is also preferably made of two pieces held together by bolts or rivets J. It is also provided with an opening in its lower end in which the end of a rod R is inserted and is held in place by a bolt K. A compression coiled spring L is placed on the rod R so it will abut the lower portion of the stop S.

H is a holder preferably made of two parts with coinciding transverse grooves in its inner faces at each end. The grooves at one end are made to tightly clamp upon the track A, and at the other to slidably hold the free end of the rod R which is kept in place by a pin or key N. The parts of the holder H are held together by the bolts I.

The stop S being slidable on the track-wire, the impact of the carrier against it will cause the rod to slide in the opening of the holder H and the spring L will be compressed thereby. This will ease off the momentum of the carrier against the stop and the recoil of the spring will cause the carrier to rebound, and to start it back on its return trip on the track. The abutting portion of the stop S being made to fit the groove of the wheel, the latter will not be injured by its impact against the former.

The contacting portion of the stop is held in proper position to engage the groove of the wheel partly by means of the holder H and also, by the weight of the rod R and spring L and the portion of the stop below the track-wire. In addition to this, it is provided with a projecting portion T over which the wheel will pass in coming into contact with the stop. The end of this portion is pointed and its body is widened and rounded below the track-wire, so that it will come in contact with the flanges of the wheel W, the lower portion of which is shown by dotted lines in Fig. 5. If by any means the stop should get turned to one side so that its contacting portion would not enter the groove of the wheel, the upraised side of the projecting end T would come in contact with the adjacent flange of the wheel and the weight of the carrier would press it down to its proper place and the stop would thus be righted before it engages the wheel.

As before stated it is preferable that the stop S should be made of two adjoining and similar parts, and when this is done the projecting end T will also be in two parts, and each part will be extended out beyond the edge of the track-wire so it may come in contact with the adjacent flange of the wheel. It is also preferable that the end of the rod R which is inserted in the lower end of the stop S should be flattened and that the opening therein should be made to correspond therewith.

What I claim is:—

1. The combination of an overhead track, a carrier to run thereon, a stop slidable on the track and adapted to come in contact with the carrier, a rod running parallel with the track secured to the stop, a coiled spring

applied to the rod, a two part holder having coinciding transverse grooves adapted to clamp on the track in the inner faces of one end, and similar grooves in the inner faces of the other end adapted to slidably hold the free end of the rod therein, and means to clamp the parts together.

2. The combination of an overhead track, a carrier having a wheel to run thereon, a stop having a contacting end adapted to fit the groove of the wheel and resilient means having one end applied to the track and the other end connected to the stop.

3. The combination of an overhead track, a carrier having a wheel to run thereon, a stop having a contacting end adapted to fit the groove of the wheel and concave resilient means having one end applied to the track and the other end connected to the stop.

4. The combination of an overhead track, a carrier having a wheel to run thereon, a stop having a contacting end adapted to fit the groove of the wheel and a rod running parallel with the track secured to the rear end of the stop, a coil spring placed upon the rod, a holder rigidly secured to the track and the free end of the rod slidably passed through an opening in the holder.

5. The combination of an overhead track, a carrier having a wheel to run thereon, a stop having a contacting end adapted to fit the groove of the wheel and under it a projecting end running substantially parallel with the track and also adapted to fit the groove in the wheel so that in passing over it the flanges of the wheel will equalize the relative positions of the sides and will bring the contacting portion of the stop in position to enter the groove of the wheel.

6. The combination of an overhead track, a carrier having a wheel to run thereon, a stop having a contacting end adapted to fit the groove of the wheel and under it a projecting end running substantially parallel with the track and widened beyond the sides of the track so that in passing over it the flanges of the wheel will equalize the relative position of the sides and will bring the contacting portion of the stop in position to enter the groove of the wheel.

7. The combination of an overhead track, a carrier having a wheel to run thereon, a two part stop applied to the track and slidable thereon, and having a contacting end adapted to fit the groove of the wheel and each part of the stop having projecting ends running substantially parallel with the track and each extended out beyond the sides thereof, so that in passing over them the flanges of the wheel will equalize their relative positions and will bring the contacting portion of the stop in position to enter the groove of the wheel.

ALBERT H. NELLER.

Witnesses:
F. H. HIGBY,
LAURA J. KAMP.