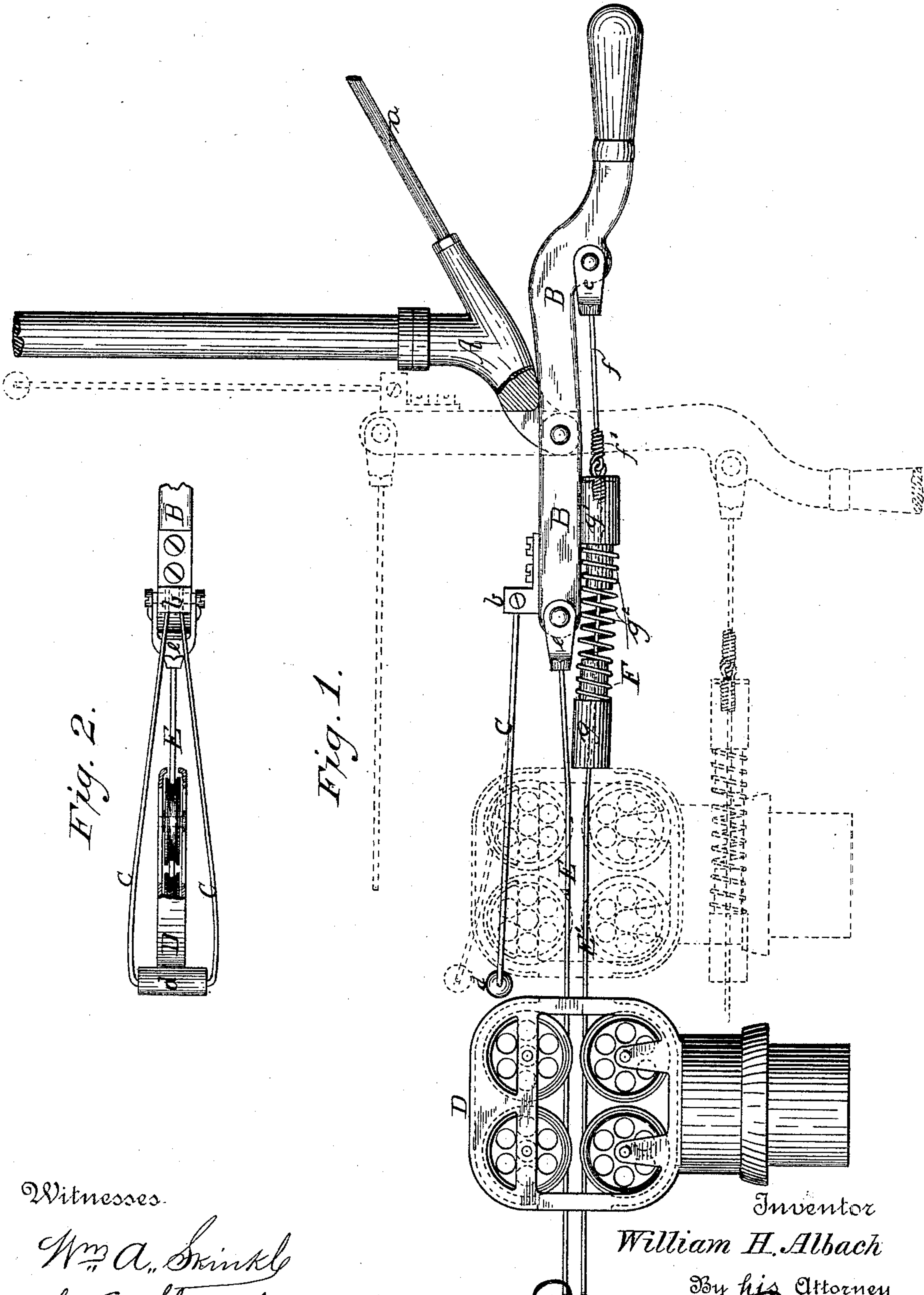


(No Model.)

W. H. ALBACH.
CASH CARRIER.

No. 411,515.

Patented Sept. 24, 1889.



Witnesses.

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AND PACKAGE CARRIER COMPANY.

CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 411,515, dated September 24, 1889.

Application filed May 14, 1889. Serial No. 310,721. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ALBACH, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Cash-Carriers, of which the following is a specification.

My invention relates to that class of transmitting apparatus for store-service in which the carrier runs upon a wire way or track, and more particularly, but not specifically, to that type wherein the carrier is impelled by the wedging action of two or more track-wires either diverging or converging behind it—such, for instance, as represented in Letters Patent No. 357,449, granted to Samuel W. Barr on the 8th day of February, 1887—and for the purpose of the ensuing description I shall adopt and make reference to apparatus constructed upon the principle of that made the subject of said patent.

In the Barr device two wires extend from station to station, one wire being shorter than the other and being fixed to the ends of levers, one at each station, while the other wire is secured to the shanks of said levers under such arrangement that when one lever is vertical the other will be horizontal and the wires stretched taut between them and separated at the lever which is vertical, while converged and brought into close proximity at the lever which is horizontal. Buffers or bumpers are placed on the ends of each lever, so that when either is horizontal it may receive the shock of the carrier, which has been driven toward it by the parting of the wires at the other end of the track. Such a construction requires means for the attachment of the buffer to the lever, and necessarily circumscribes the thickness of the buffer to that which will be self-supporting from the base. I propose, instead of a buffer attached to the lever, to employ a section of rubber tubing having thick walls and a bore of about the diameter of the wire track, that it may be slipped thereover, and of any appropriate length, thus causing the track-wire itself to provide the means of attachment of said buffer and of its support. I further propose, in order to obtain greater elasticity and to diminish the liability of

breaking the wire at the exposed end of the buffer, to form the latter of two sections of tubing, both slipped upon the track-wire and connected by a coiled spring encircling said wire. Finally, I propose, in order to still further diminish the liability of breakage where two wires are employed, to mount said buffer upon that wire which is longest, or which has the greatest length from its point of attachment to the point where the carrier meets the buffer, said wire being represented in the Barr system by the lower of the two tracks there shown.

In the drawings, Figure 1 is a side elevation at one station of a cash-carrier apparatus embodying my invention, and Fig. 2 is a detail in top plan view.

A represents brackets or any suitable supports for the levers which operate and control the track-wires, and *a* guys or braces for said brackets. At the station or terminals of the line are levers B, pivoted each to one of said brackets, and having, respectively, catches *b* to receive and retain the carrier as it reaches the station. The catches herein shown are each formed of a wire loop C sufficiently spaced between its arms to receive the upper part of the carrier D and drop over its sides, but provided at the outer end with a rubber tube *d*, slipped over the bend of the loop to drop on the farther side of the carrier after it has come in contact with and compressed the buffer. Only one of the levers is shown, and that as horizontal; but the position of the other will be understood from said Barr patent—to wit, that it will at the time be in a vertical position. One wire E stretches taut between ears *e*, pivoted to the ends of said levers, and a second wire E' extends from an ear *e'*, pivoted to the shank of the horizontal lever, to a second ear pivoted to the shank of the upright lever, this latter wire being the lowest and necessarily the longest.

In the Barr patent, as I have stated, a buffer is shown as attached to the end of the lever immediately above the point where the upper wire is secured, or at the base of a curved catch projecting from said lever. This buffer necessarily projected but very lit-

the beyond the end of the lever for want of a
 support, besides requiring special fastenings,
 and consequently being expensive. It could
 therefore offer but very little elasticity to
 5 meet the shock of the carrier sent at great
 speed against it, and as it met the carrier
 above the upper wire, and necessarily above
 both, the momentum of the lowest end of the
 carrier would carry the latter on, tipping it
 10 and bringing a violent wrench on the upper
 wire just in advance of the buffer, ultimately
 resulting in breaking the latter. To avoid
 these defects and to apply the resistance
 more nearly on a line with the wires, I con-
 15 struct the buffer F of a length of rubber tub-
 ing having thick walls and a central bore of
 about the diameter of one of the track-wires,
 so that it may be slipped snugly thereover.
 This tubing, in case it is applied to the up-
 20 per wire, will then rest at its base against
 the end of the lever, and will be sustained
 slightly by the wire, which it encircles and
 embraces and along which it may be made
 to extend to any distance necessary to ob-
 25 tain a perfect resisting medium. In prac-
 tice, however, I deem it advisable to apply
 this buffer to the lower track-wire, or that one
 which in the Barr system is the longest, be-
 cause this, having a greater length between
 30 its end and the point where the buffer neces-
 sarily meets the carrier, can yield or bend
 more gradually beneath the shock or jar, and
 therefore is less liable to break; but, whether
 located on the upper or on the lower wire, this
 35 buffer will meet the carrier practically on a
 line drawn between the upper and lower
 wheels or trucks, and since it surrounds the
 wire in this position it will to a great extent
 prevent the tipping or wrenching action above
 40 adverted to. When said buffer is located on
 the lower wire, I have found it desirable, not
 only for the purpose of forming the seat for
 the base of the buffer, but also for conven-
 ience and economy in repairing the track when
 45 broken, to make that part of the lower track
 extending from the buffer to the shank of the
 lever in the form of a wire link f , having a
 loop or clevis f' at its advanced end, to which
 the end of the line-wire is attached, when the
 50 enlargement caused by the coiling of the wire
 loop in forming it and joining it to the track
 will provide the seat for the buffer, the bore
 of which is of too slight diameter to admit the
 clevis. By this arrangement it is obvious that
 55 should the lower track-wire be broken from
 any cause the buffer may be slipped forward
 a short distance away from the clevis, the

line-wire disconnected from the latter, and
 the buffer slipped off and applied to a new
 wire, which will then be attached to the clevis 60
 or to the link upon which it is formed.

Although I have thus far spoken of the
 buffer as being composed of a length of rub-
 ber tubing slipped over the track-wire, and
 although I consider such a feature of my in- 65
 vention when applied to the lower track-wire,
 I deem it preferable to form this buffer in
 sections g g' , and interpose between the two
 a coiled spring g^2 , encircling the track-wire.
 By thus doing I obtain all the advantages of 70
 both the rubber and the metallic spring, the
 noiselessness of the first, with its sluggish elas-
 ticity and comparative stiffness, and the great
 compressibility, quick elasticity, and flexibil-
 ity of the latter. The coiled spring may have 75
 coils of a diameter slightly less than the rub-
 ber tubing and be secured over the sections
 of the latter; or they may be considerably less
 in diameter than the tubing and the end of
 the latter be formed of less diameter than the 80
 body part, as in Fig. 1, and shouldered, so as
 to receive the ends of the spring, and with its
 shoulders form a seat for the same. This
 compound buffer, it will be observed, permits
 great flexibility to the line-wire or to the track- 85
 wire, so that it will readily bend or yield when
 wrenched by the tipping of the carrier as it
 strikes the buffer, and thus avoid one of the
 chief causes of breakage. It also yields to a
 much greater extent than a buffer of rubber 90
 alone and much quicker, therefore distribut-
 ing the strain of the shock and preventing it
 from coming always at one place on the wire,
 which also would speedily result in breakage.

I claim— 95

1. The combination, substantially as here-
 inbefore set forth, with the lower or longer
 wire in a cash-carrier apparatus of the nature
 described, and with the operating-lever, of a
 buffer composed of a tube of rubber slipped 100
 over said wire.

2. The combination, substantially as here-
 inbefore set forth, of the operating-lever, the
 wire loop attached to the shank thereof, the
 lower track-wire secured to said loop, and the 105
 tubular buffer seated against the loop.

3. The buffer herein described, composed of
 two sections of rubber tubing connected by
 an intermediate coiled spring which clasps the
 ends of said sections.

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Witnesses:

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