

No. 814,635.

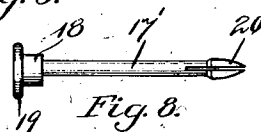
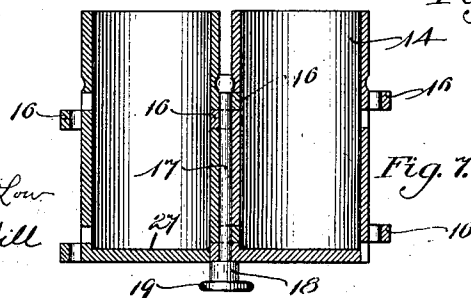
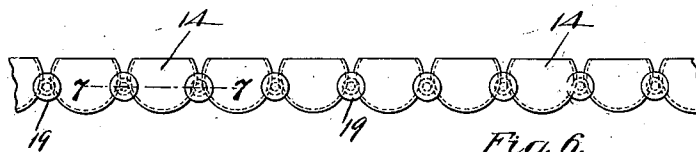
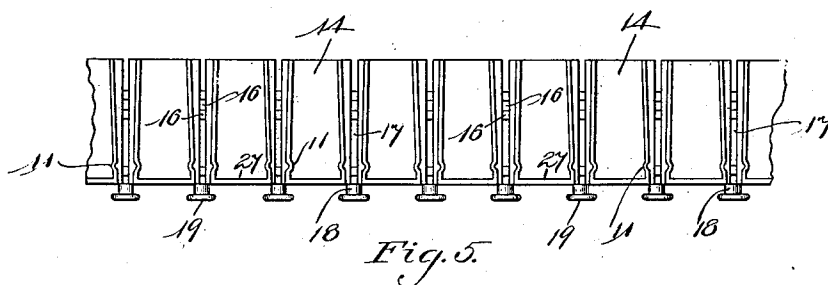
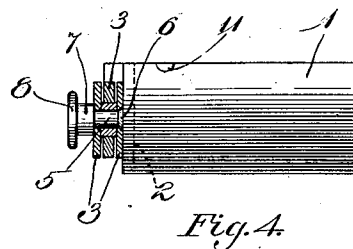
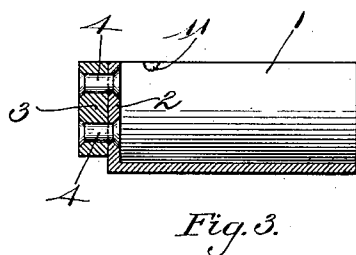
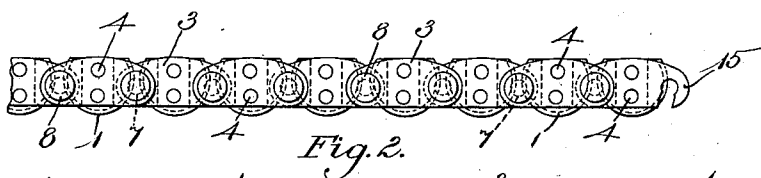
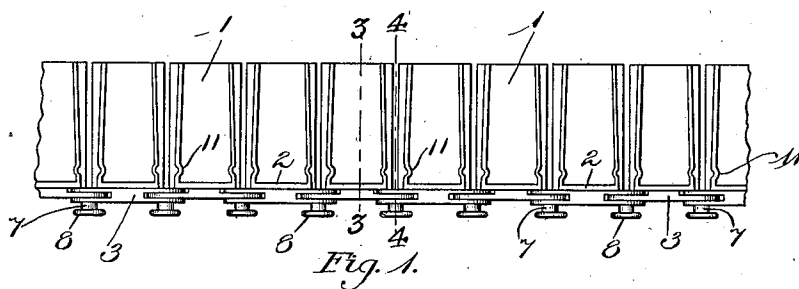
PATENTED MAR. 6, 1906.

F. K. YOUNG & J. E. SHERIFF,

CARTRIDGE CONVEYER.

APPLICATION FILED MAY 7, 1904.

2 SHEETS—SHEET 1.



Witnesses:

Franklin C. Low
Oscar F. Hill

Inventors:

Franklin K. Young
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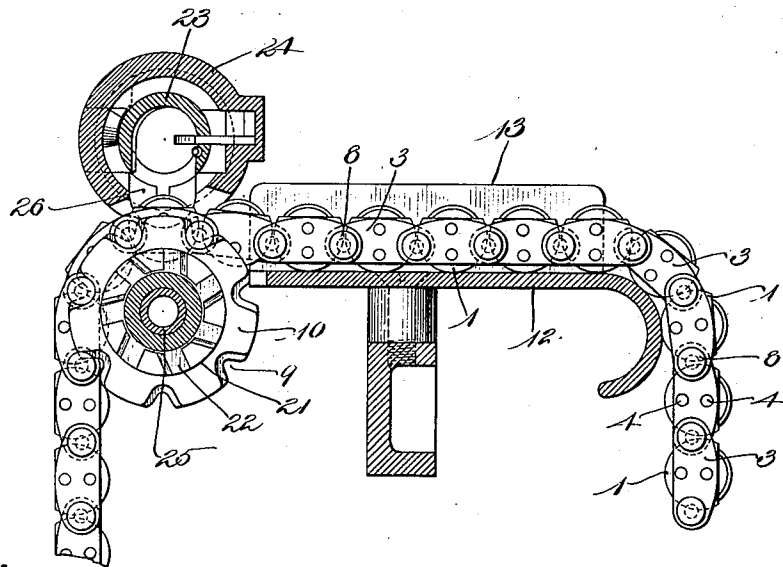


Fig. 9.

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UNITED STATES PATENT OFFICE.

FRANKLIN K. YOUNG, OF BOSTON, MASSACHUSETTS, AND JAMES E. SHERIFF, OF NEW YORK, N. Y., ASSIGNORS TO AMERICAN AUTOMATIC ARMS COMPANY, OF SACO, MAINE, A CORPORATION OF MAINE.

CARTRIDGE-CONVEYER.

No. 814,635.

Specification of Letters Patent

Patented March 6, 1906.

Original application filed December 7, 1903, Serial No. 184,087. Divided and this application filed May 7, 1904. Serial No. 206,808.

To all whom it may concern:

Be it known that we, FRANKLIN K. YOUNG, residing at Boston, in the county of Suffolk, State of Massachusetts, and JAMES E. SHERIFF, residing in the borough of Brooklyn, city of New York, in the county of Kings and State of New York, citizens of the United States, have invented a certain new and useful Improvement in Cartridge-Conveyers, of which the following is a specification, reference being had therein to the accompanying drawings.

The conveyer consists of a series of cylindrical-segmental holders linked together and adapted to be intermittently driven by mechanism actuated by the operation of the firearm, so as to convey the cartridges at the proper times into the position to be engaged by the injector and pushed into the chamber. The conveyer is specially intended for use in combination with an automatic firearm in which the conveyer is driven by a sprocket-wheel actuated by the rearward movement of the weight; but it is not intended to limit the invention to use with any particular form of driving mechanism.

The invention will now be fully described, reference being made to the accompanying drawings, and the novel features thereof will be particularly pointed out in the claims at the close of the specification.

In the drawings, Figure 1 is a detail plan of the cartridge-conveyer embodying the invention. Fig. 2 is a rear elevation of the conveyer. Fig. 3 is an enlarged vertical section on line 3 3 of Fig. 1. Fig. 4 is an enlarged section on line 4 4 of Fig. 1. Fig. 5 is a plan of a modification of Fig. 1. Fig. 6 is a rear elevation of Fig. 5. Fig. 7 is an enlarged sectional view on line 7 7 of Fig. 6. Fig. 8 is a side elevation of a pin employed to attach a loaded cartridge-conveyer onto one that is partially exhausted of the modified form shown in Figs. 5 and 6. Fig. 9 is a vertical cross-section through the breech mechanism of a firearm and the table which supports the improved cartridge-conveyer.

Referring now to the drawings, each holder 1 is of cylindrical-segmental shape. The end of each holder which points toward the rear of the firearm, as the conveyer travels in a transverse direction relative to the length of

the firearm, is closed by a wall 2. The end wall of each holder is fastened to a link 3—as by rivets 4, for instance, (see Fig. 3)—and the links 3 are connected with each other by pins 5, thus forming a chain which carries the holders. The inner ends 6 of the pins 5 are riveted or headed to prevent them from drawing out, and the shanks are formed with an enlarged neck portion 7, which extends outward from the chain, terminating in a head 8. The necks 7 engage with the notches 9 in the periphery of the sprocket 10. The heads 8 form guards to hold the chain on as it passes over the sprocket.

Formed in the upper edges of the holders near the chain side are inwardly-extending projections 11. The cartridges are inserted into the holders by forcing them base first into the open ends of the holders, the sides of the holders springing apart sufficiently to allow the flange on the rear end of the cartridge to pass the projections 11, after which the said projections 11 will snap into the circumferential groove in the cartridge-case.

A table 12 is preferably provided connected with the piece which supports the conveyer and cartridges as they approach the sprocket. (See Fig. 9.) The table is provided with upwardly-extending side walls 13, which guide the cartridges and conveyer.

In the modification shown in Figs. 5 to 8 there is shown a modified means of connecting the holders. The holders 14 are formed with lugs 16 on the sides, which are perforated to receive the link-pins 17. The pins are formed with necks 18 and the heads 19 for the same purpose as the necks and heads of the pins 5. The last pin in each conveyer is made detachable in order to attach another conveyer to the nearly-exhausted one, but should be held in place so as not to be easily displaced by the operation of the mechanism. In the form shown in Fig. 8 the pin 17' is formed with a slightly-enlarged split point 20, the split allowing the enlarged portion to be contracted and shoved through the holes in the lugs 16, and after it is passed through the expansion will hold it in place.

Mechanism by which the sprocket-wheel 10 is given its intermittent movement to bring the cartridges into position at the proper time is shown and described in an ap-

plication filed by us in the United States Patent Office December 7, 1903, Serial No. 184,087, of which this is a branch application, and as that mechanism is the subject of 5 claims retained in that application it is not shown in the drawings accompanying this application.

The sprocket 10 is mounted on a rotatable cylinder 21, which also carries a ratchet 22, 10 which rotates with the cylinder.

The weight consists of a cross-head, a cylinder fixed thereto surrounding the bolt 23 in the receiver 24, a firing-pin projecting from said cross-head through the bolt, and a 5 rod 25, which is fixed to said cross-head and passes through the cylinder 21. The cross-head, weight-cylinder, and firing-pin are not shown in the drawings accompanying this application. The rod 25 moves as a part of 10 the weight and has connections whereby its rearward movement rotates the cylinder 21 and sprocket 10, and thereby actuates the conveyer. The ratchet 22 engages with a pawl pivoted to the frame to prevent back- 15 ward rotation of the sprocket.

The cartridges are pushed by the injector (not shown) up the inclined way 26 into the chamber.

In the form shown in Fig. 2 the last link of each conveyer is formed with a hook 15, 20 which will hook over the neck 7 of the first pin of another conveyer.

What we claim is—

1. A cartridge-conveyer comprising a series of cylindro-segmental cartridge-holders 25 hinged together by pins, the pins projecting

laterally beyond the holders and formed with a flanged head and a neck adapted to be engaged by a sprocket-wheel.

2. A cartridge-conveyer comprising a series of cylindro-segmental cartridge-holders 30 hinged together, having pins which project from between the holders laterally beyond the ends of the holders, and adapted to be engaged by a sprocket-wheel.

3. A cartridge-conveyer for firearms comprising a series of cylindro-segmental cartridge-holders hinged together, a wall at the rear end of each holder, the hinge-pins having 35 a neck which projects laterally and terminates in a flanged head, the projecting neck portion of the hinge-pins being adapted for engagement by an actuating sprocket-wheel.

4. A cartridge-conveyer for firearms comprising a series of cylindro-segmental cartridge-holders hinged together, a wall at the rear end of each holder, the pivots of the hinges having necks which project laterally 40 beyond the ends of the holders, and are adapted for engagement by a sprocket-wheel.

In testimony whereof we affix our signatures each in presence of two witnesses. 45

FRANKLIN K. YOUNG.
JAMES E. SHERIFF.

Witnesses to signature of Franklin K. Young:

WILLIAM A. COPELAND,
ROBERT WALLACE.

Witnesses to signature of James E. Sheriff:

FRANK L. NICHOLS,
M. P. WILKINS.