

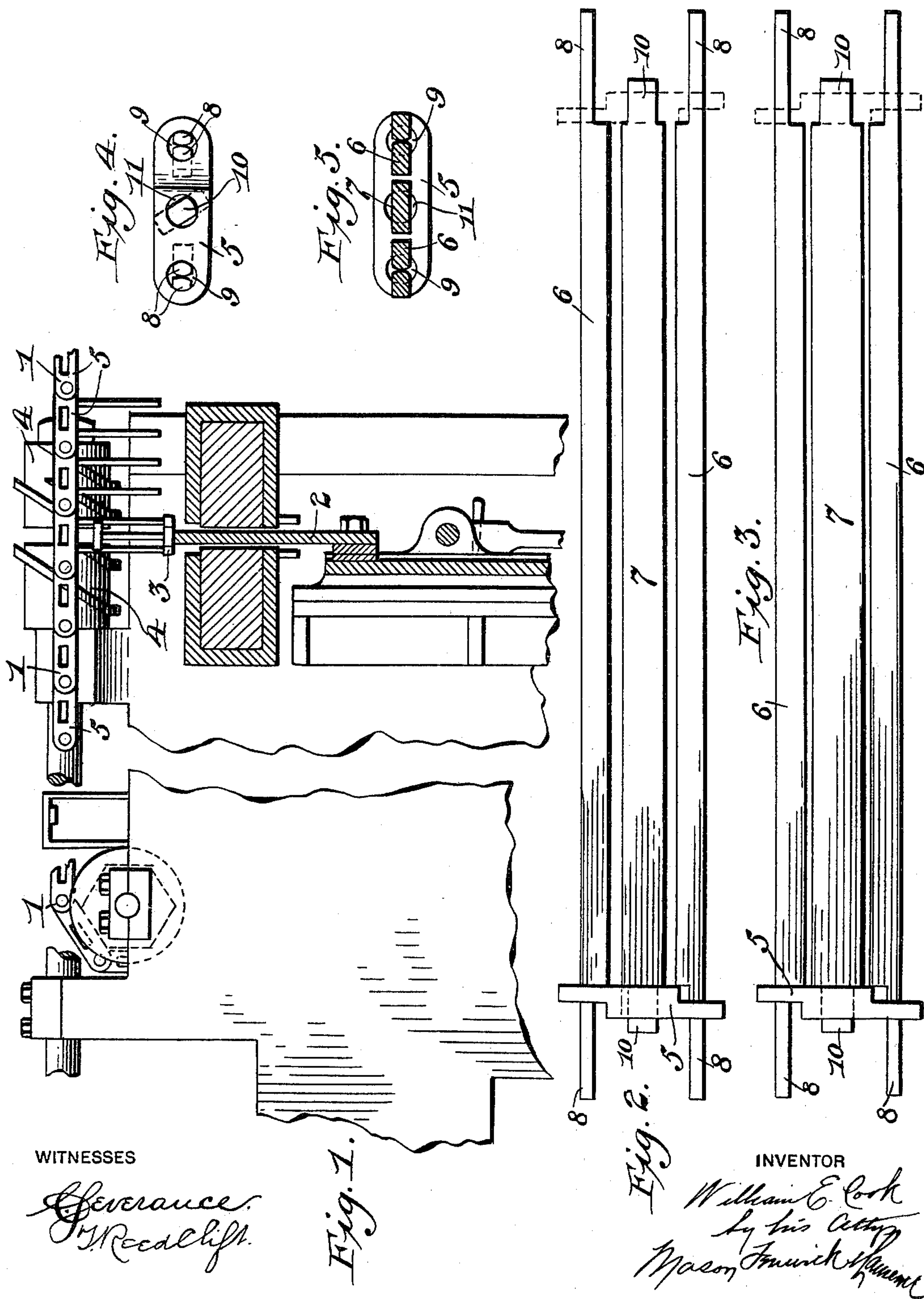
No. 626,458.

Patented June 6, 1899.

W. E. COOK.  
MATCH MACHINE.

(Application filed Jan. 21, 1899.)

(No Model.)



WITNESSES

*Everance*  
*J. Reedcliff*

*Fig. 1.*

INVENTOR

*William E. Cook*  
*By his Attorney*  
*Mason French*



# UNITED STATES PATENT OFFICE.

WILLIAM E. COOK, OF OGDENSBURG, NEW YORK.

## MATCH-MACHINE.

SPECIFICATION forming part of Letters Patent No. 626,458, dated June 6, 1899.

Original application filed June 1, 1898, Serial No. 682,269. Divided and this application filed January 21, 1899. Serial No. 702,958. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM E. COOK, a subject of the Queen of Great Britain, residing at Ogdensburg, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Match-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in carrier-chains for match-machines; and it consists in a chain made up of a series of sections linked together, each section comprising outer fixed slats and an inner movable slat, the construction being such that by moving the inner slat rows of splints may be gripped between the said movable slats and the outer fixed slats.

It also consists of certain other novel constructions, combinations, and arrangement of parts, as will be hereinafter more fully described and claimed.

This application is a division of an application filed by me on the 1st day of June, 1898, Serial No. 682,269, for improvements in match-machines.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section through a portion of a match-machine, showing the carrier-chain mounted therein, which is constructed in accordance with my invention. Fig. 2 represents a top plan view of a section of my improved chain, the inner movable slat being arranged so as to receive a charge of match-splints. Fig. 3 represents a similar view, but showing the inner movable slat arranged so as to grip the match-splints. Fig. 4 represents an end elevation of one of said sections. Fig. 5 represents a cross-section through the same.

1 in the drawings represents my improved carrier-chain; 2, a cutter-head of a suitable match-machine; 3, cutting-dies mounted upon the said cutter-head, and 4 4 cams for moving the carrier-chain forward in the match-machine.

Carrier-chains constructed in accordance with my invention may be used in match-machines of various kinds, but are especially

well adapted for use in machines that are similar to that described and claimed by me in an application filed June 1, 1898, Serial No. 682,269. As will be seen from Fig. 1 in the drawings, a machine of this character is adapted to cut two rows of splints at a time and to carry them up and deposit them in the carrier-chain. I find that it is advisable to construct the sections of such a chain so that they will be capable of gripping the match-splints and forcibly pulling them from the cutters. In carrying out this idea I construct my carrier-chain 1 of a series of sections which are pivotally connected together by means of links, as 5, so as to form an endless flexible conveyer or chain. Each of the sections are provided with outer fixed slats, as 6, and inner movable slats, as 7. The outer fixed slats 6 are provided with reduced ends, as 8, which are adapted to extend into the journal-bearings 9, formed in the links 5. The reduced ends 8 of said fixed slats occupy only one-half of the bearings 9, both of the reduced ends 8 of the adjoining fixed slats of two sections extending into the said bearings, and thus forming the pivotal connection between the two chain-sections, as will be clearly seen in the drawings. The reduced end portions of the fixed slats extend sufficiently beyond the links 5 to be engaged by the cam 4, whereby the carrier-chain may be fed forward in the machine. Each section of the chain is provided with a centrally-movable slat, the said slat being preferably revoluble. The ends of the revoluble slat 7 in each section are reduced, as at 10, to form a journal, which is adapted to engage the journal-bearing, as 11, formed separately in each link 5. By this construction it will be seen that when the inner slat 7 is rotated, as illustrated in Figs. 2 and 4 of the drawings, the spaces between the said inner slats 6 will be sufficiently widened to permit of a charge of matches being inserted between the said slats. After the splints have been inserted if the movable slat 7 is turned so as to occupy the position shown in Figs. 3 and 5 of the drawings it will grip the matches between its edges and the outer fixed slats. Any suitable means may be employed for rotating the inner movable slat of the said chain-sections for gripping and re-



leasing the match-splints. It will be noted that the chain-sections may thus be constructed in simple form and in a strong manner and that the manipulation of such a chain  
5 may be very easily accomplished to grip the match-splints.

Having now described my invention, what I desire to claim and secure by Letters Patent is—

10 1. A carrier-chain made up of a series of sections linked together, each of said sections comprising outer fixed slats and an inner movable slat, the said slats being arranged side  
15 by side and the inner slats being interposed in the space between the outer ones so as to occupy more or less of the said space according as it may be moved, the construction being such that when the inner slat is moved to one position, the spaces between it and the  
20 fixed slats will be lessened so as to grip match-splints between them, and when the said slat is moved to another position, the said spaces will be enlarged and the splints released, substantially as described.

25 2. A carrier-chain for match-machines, comprising sections, links for securing the said sections flexibly together, each of the said sections comprising outer fixed slats and inner  
30 revoluble slats mounted between them having a varying cross-section, whereby upon rotating the said inner slats, the spaces between

them and the outer slats will be enlarged or diminished so that match-splints may be gripped in or released from said spaces, substantially as described. 35

3. A carrier-chain for match-machines made up of a series of sections linked together, each section comprising two outer fixed slats having reduced end portions, the said reduced end portions engaging bearings formed in the  
40 chain-links, and a single inner revoluble slat having a journal formed upon its ends adapted to engage journal-bearings formed in the chain-links, the construction being such that  
45 when the inner slat is rotated in one direction it will grip two rows of match-splints between it and the outer fixed slats and when rotated in the opposite direction it will release the said match-splints, substantially as described. 50

4. A carrier-chain formed of sections linked together, each section consisting of two outer fixed slats and one inner movable slat, adapted to clamp two rows of splints at a time, substantially as described. 55

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

WILLIAM E. COOK.

Witnesses:

NELLIE G. LAWRENCE,  
EDWARD L. STRONG.