G. M. DEPEW.

CONVEYER.

APPLICATION FILED NOV. 22, 1913.

1,094,780. Patented Apr. 28, 1914.

Fig. 1.

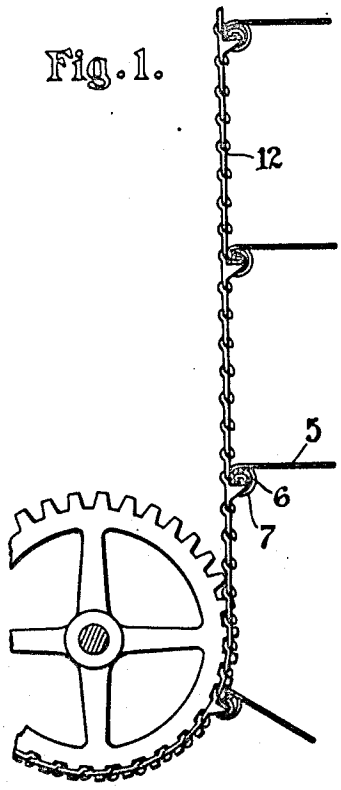


Fig. 2.

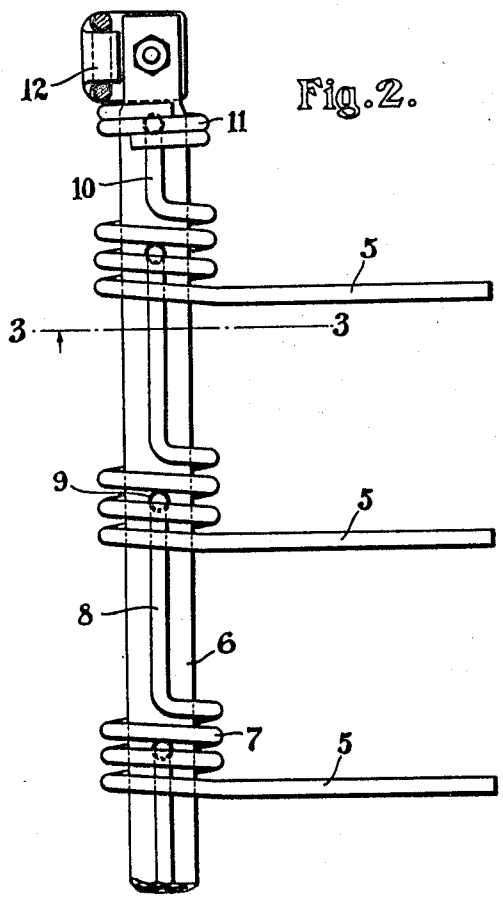
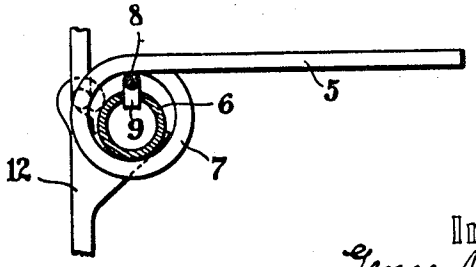


Fig. 3.



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UNITED STATES PATENT OFFICE.

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CONVEYER.

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To all whom it may concern:

Be it known that I, GEORGE M. DEPEW, a citizen of the United States, and resident of Canandaigua, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Conveyers, of which the following is a specification.

This invention relates to conveyers, or similar devices, in which fingers or teeth are arranged in rows upon one or more rods or elongated supports, particularly where such fingers are required to be resilient.

The object of the invention is to produce a construction, for use in such connections, whereby the form and the mode of attachment of the fingers are simplified and improved, and whereby the fingers are attached with perfect security when in use, while at the same time the structure is easily assembled in the process of manufacture, or disassembled when repairs are necessary.

To the foregoing ends I employ a construction in which the adjacent fingers are formed to coöperate with each other in such a manner that one finger serves as the means for locking the next finger in position upon the supporting-member or rod. This is preferably accomplished by providing each finger with one or more spring-coils, the latter serving specifically as the means for locking the next adjacent finger in position, and also to provide the desirable resiliency in the fingers.

In the accompanying drawings:—Figure 1 is a side-elevation of a part of a conveyer embodying the present invention. Fig. 2 is a plan-view, on a larger scale, of a part of the conveyer, showing particularly one of the transverse rods, with a number of fingers thereon; and Fig. 3 is a section on the line 3—3 in Fig. 2.

The invention is applicable to conveyers of various forms, or to devices of other kinds, wherever such conveyers or devices comprise one or more rods upon which fingers are mounted in series. The invention is illustrated in the accompanying drawings, however, as embodied in a conveyer of the type commonly employed in hay-loaders and similar machines, wherein a series of transverse rods are mounted upon conveyer-chains, each rod being provided, in turn, with a series of outwardly-projecting spring-fingers.

In the illustrated embodiment of the invention the fingers each comprise a straight portion 5 projecting, at a right-angle, from a rod 6 upon which the fingers are placed equidistant from each other. Each finger is formed of a single length of spring-wire, and it has an intermediate coiled portion 7, and a straight portion 8 which extends along the bar 6 and terminates in an inwardly-bent extremity 9. This extremity is seated loosely in a perforation in the rod. In the drawings the rods 6 are illustrated as hollow, being, in fact, preferably made of ordinary iron pipe, but they may obviously be made solid with equal facility.

The form of the fingers as just described is advantageous in itself, in that the coiled portion 7 and the straight portions 8 both contribute to the desired resiliency in the fingers, but this form is particularly useful in that it permits each finger to serve as means for locking the next finger in place on the rod 6. As shown particularly in Fig. 2, the fingers are so spaced that the coiled portion 7 of each finger incloses the extremity of the straight portion 8 of the next finger in series, thus locking the extremity 9 in engagement with the corresponding perforation in the rod. In assembling the structure the finger at one extremity of the series is first slipped over the rod and engaged with one of the perforations therein, the next finger is then put in place, thus locking the first finger, and so on until the last finger in the series is in place. This last finger must obviously be locked in place by special means, and as shown in Fig. 2 it is provided with a straight portion 10 shorter than those of the other fingers, this straight portion being locked by a slip-ring 11, consisting merely of a short piece of coiled wire. This wire is held in position by its resiliency, and by engagement with one of the chains 9 upon which the transverse rods 6 are mounted. So long as the last finger of the series remains in place none of the fingers can become disconnected from the rod, and thus accidental derangement of the apparatus when in use is effectually prevented, but whenever it becomes desirable to remove one or more of the fingers this may be readily done by disengaging the rod from the chain 12, and then removing the fingers in the inverse order. The extremities 9 prevent the fingers from turning on, or sliding along, the rod, but the coils 7 and the straight portions 8 both con-

tribute to the elastic and resilient character of the fingers.

While the locking portions of the fingers are preferably made, as above described, to constitute also spring-coils, the arrangement is not limited to this specific construction, and is not, in general, limited to the embodiment thereof hereinbefore described and illustrated in the accompanying drawings, but may be embodied in various other forms within the nature of the invention as it is defined in the following claims.

I claim:—

1. A structure, comprising an elongated support and a series of fingers projecting therefrom, in which each finger has an extremity in locking engagement with the support, to retain it in place thereon, and each finger has a portion which surrounds the support and said extremity of the next finger and retains the latter in such locking engagement with the support.

2. A structure, comprising an elongated support provided with a series of recesses, and a series of fingers projecting therefrom, in which each finger has a portion entering one of said recesses, to secure the finger in place on the support, and each finger has also a part which engages the next finger to maintain its said portion in engagement with the corresponding recess.

3. A structure, comprising an elongated support provided with a series of recesses, and a series of fingers mounted on and projecting from the support, in which each finger consists of a single length of spring-wire bent to form an extremity engaging one of said recesses, an intermediate portion coiled about the support and also engaging and retaining the extremity of the next finger, and an arm projecting from the support.

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