J. M. JONES.

CHAIN.

APPLICATION FILED MAR. 16, 1911.

1,004,575. Patented Oct. 3, 1911.

Fig. 1

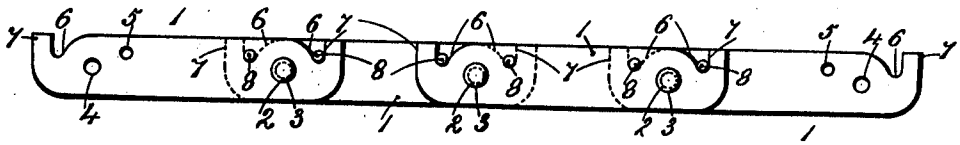


Fig. 2

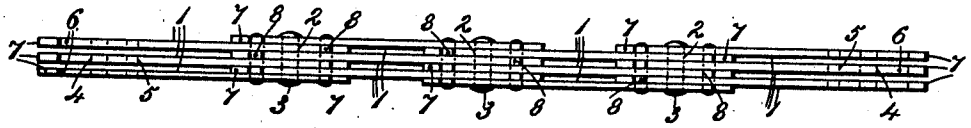



Fig. 4

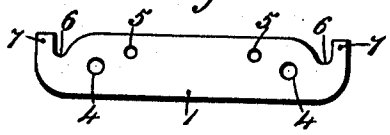
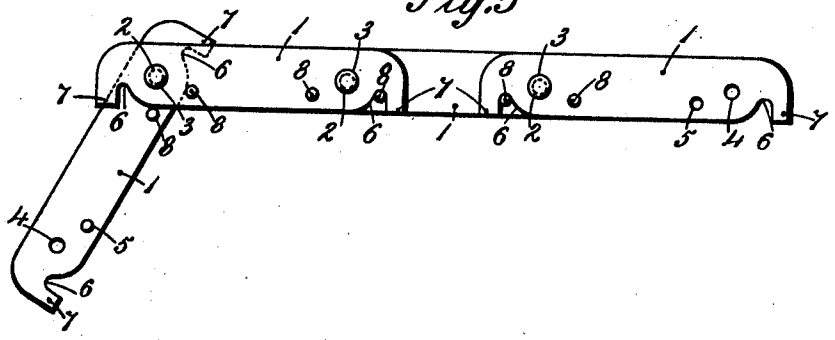


Fig. 3



Witnesses.
Gertie Nicholson,
A. C. Turnbull

Inventor.
James Melvin Jones
per
Alfred J. Bratton
Attorney.

UNITED STATES PATENT OFFICE.

JAMES MELVIN JONES, OF HAMILTON, ONTARIO, CANADA.

CHAIN.

1,004,575. Specification of Letters Patent. Patented Oct. 3, 1911.

Application filed March 16, 1911. Serial No. 614,937.

To all whom it may concern:

Be it known that I, JAMES MELVIN JONES, a citizen of the Dominion of Canada, residing at 22 King William street, in the city of Hamilton, in the county of Wentworth, in the Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Chains, of which the following is a specification.

This invention relates to chains and more particularly to that class known as the flat link type which may be used for various purposes, such as restraint, support, and connection; or, wherever it is desirable that said chain should be adapted to assume rigid continuity when laid in a certain direction but possible of inclination thereto, or to be wound up when reversely placed.

The main object of my invention is to provide an improved construction of chain of the foregoing nature.

A further object is to construct the chain so that its tensile strength is considerably increased while at the same time insuring greater rigidity laterally, or axially of the hinge pins.

I attain the foregoing objects by means of the chain illustrated on the accompanying sheet of drawings; in which:—

Figure 1, is a side view of a portion of a chain embodying my improvements. Fig. 2, is a plan of the same. Fig. 3, is a side view showing part of the chain bent at an angle. Fig. 4, is a detail of one of the detached link elements.

According to the form of my invention shown I constitute each link from a series of flat stamped out or otherwise fashioned alining elements 1, 1, 1, which are hingedly connected together by pins 2, the free ends whereof are riveted or flared over at 3, as shown. Or any other suitable means of connecting together the links may be employed. Each separate element 1, is preferably fashioned as shown more particularly by Fig. 4. that is to say, it is stamped out from any suitable material and furnished with holes 4, 4, for the hinge pins 2, 2, holes 5, 5, notched out parts 6, 6, and ears 7, 7, all of which will be respectively referred to hereinafter.

8, 8, are locking pins which are driven firmly or otherwise suitably fixed in the aforesaid holes 5, 5, and they are adapted in use to coöperate with the notched out parts 6, 6, and ears 7, 7, as hereinafter fully described.

Assuming that—as shown—the succession of links of my improved chain each comprise three alining elements 1, 1, 1, the ends whereof are inter-connected by the pins 2, 2, it will be readily seen that when the pins 8, 8, are inserted or fixed in position, that each said pin 8, will be firmly held by its three carrying elements 1, 1, 1, and adapted for coöperation with the three notched out registering parts 6, 6, and ears 7, 7, of the succeeding link. By this arrangement of the parts it will be readily seen that the tensile strength at each link connection is very considerably increased, whereas the rigidity of the chain lengthwise or axially of the pins 2, and 8, is positively insured, an important desideration when the chain is employed continuously in a straight line. An instance of the above nature may be cited in the case of telescoping guards, shields or tubes. If the foremost link is rigidly secured to the innermost of a series of telescoping members for example and arranged in either of the positions indicated, it will be readily seen that by forcing said chain forwardly, said telescoping members will be extended and firmly supported, while displacement laterally of the axis thereof will be impossible. A converse movement or pull upon the free end of the chain will telescope the members, when said chain may be wound on a suitable drum or left depending. A further advantage accruing to my improved construction of chain resides in its applicability for threading lengths of cable through pipes or conduits; or wherever it is necessary that said chain be adapted in one position—a straight line—to constitute a more or less rigid member.

Having fully described my invention it will be readily seen that I provide an extremely effective chain for the purposes referred to, and I wish it clearly understood that I do not limit myself except as required by the scope of the claims to the specific form exemplified, or the precise details of construction described. Many variations and other combinations of the parts being possible, for instance, only one pin 8, may be employed in connection with each succeeding pair of links; or, distance pieces may be fitted on said pins 8, 8, between the link elements 1, 1, for strengthening purposes as

will be obvious, and it is intended to include all such modifications within the present application wherein only the preferred form has been described and illustrated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. A chain, each link whereof is constituted from a series of flat alining elements adapted to intermesh with those of the succeeding link, each said element being furnished with holes for the hinge pins and having notched-out parts adapted for cooperation with laterally disposed pins carried by the elements of the succeeding link, substantially as described for the purposes specified.

2. A chain, each link whereof is constituted from a series of flat alining elements adapted to intermesh with those of the succeeding link, each said element having holes for the reception of the hinge pins and being formed with notched-out parts and ears adapted for coöperation with laterally disposed pins passing through holes in the elements of the succeeding link, substantially as shown for the purposes specified.

Signed at Hamilton, Ontario, Canada, this 10th day of March, 1911.

JAMES MELVIN JONES.

In the presence of—
ALFRED T. BRATTON,
GERTIE NICHOLSON.