

(No Model.)

D. MUNRO.
CHAIN LINK.

No. 333,095.

Patented Dec. 22, 1885.

Fig. 1.

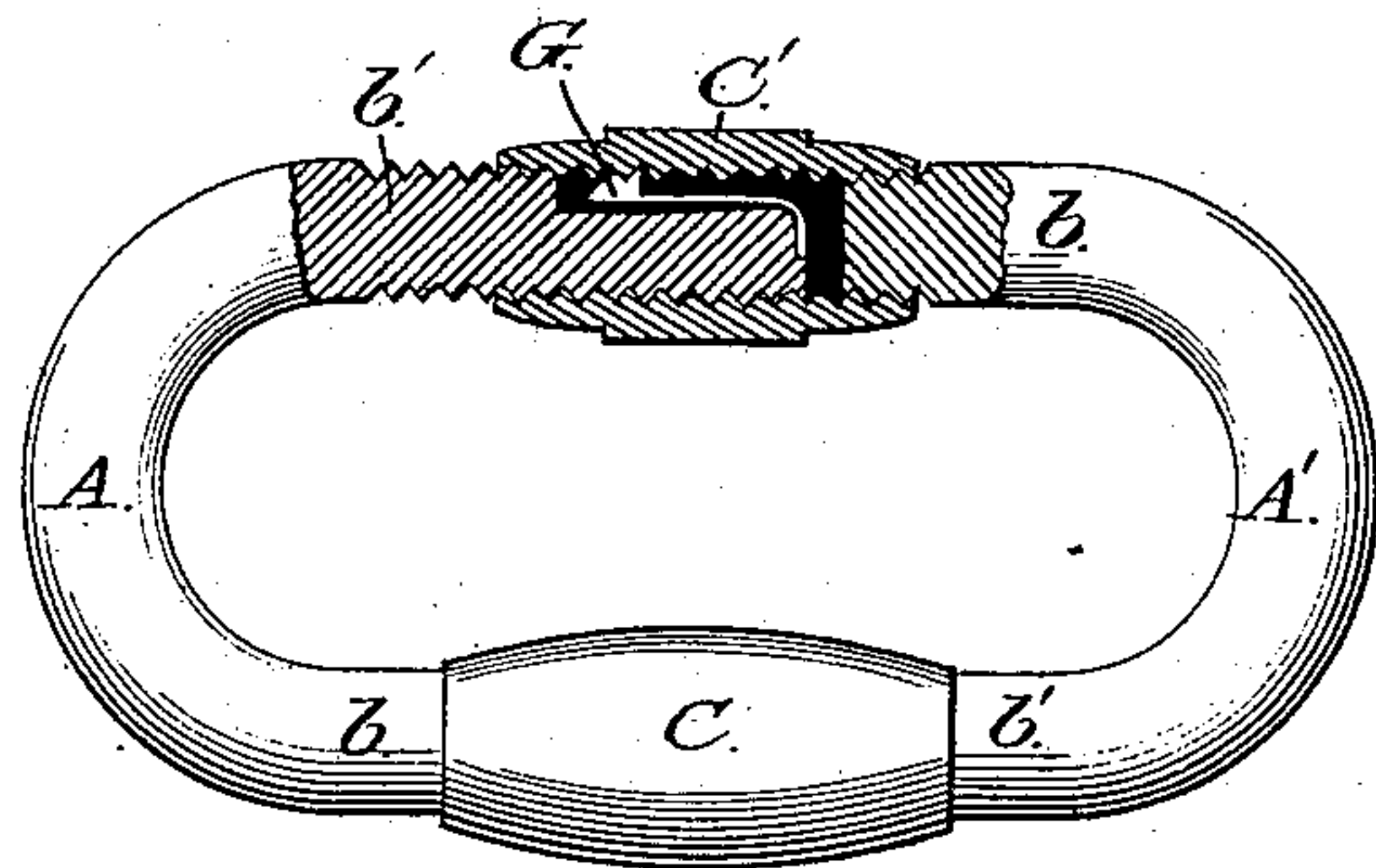


Fig. 2.

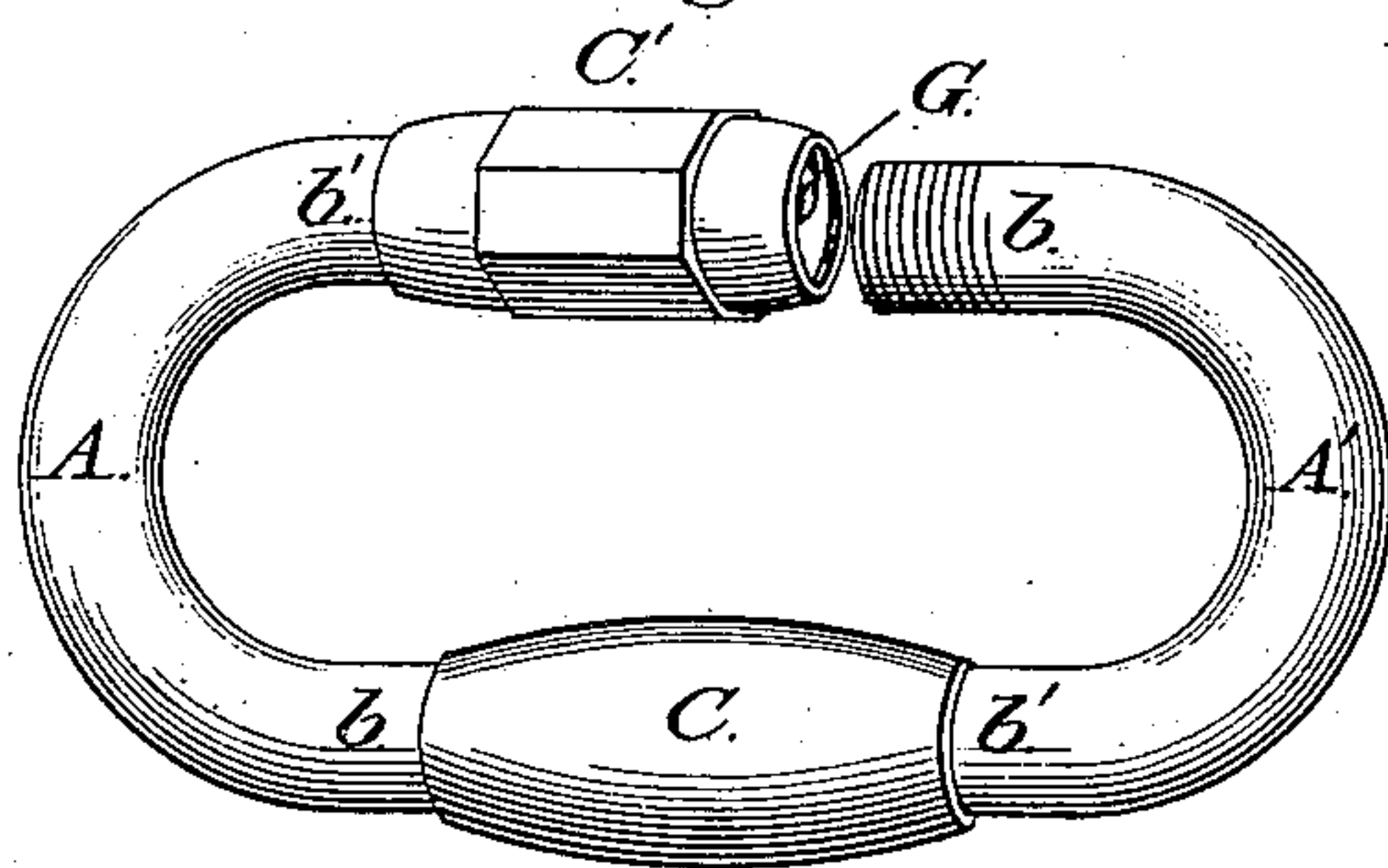
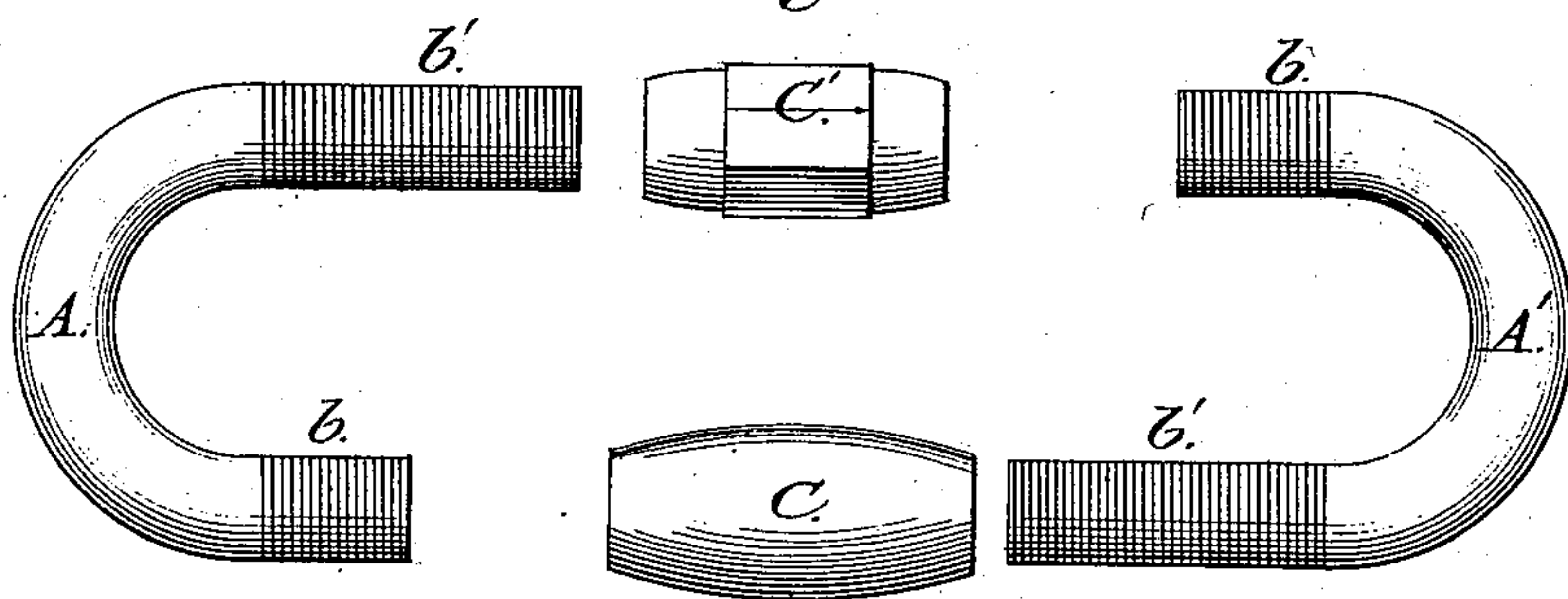


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

DONALD MUNRO, OF PICTOU, NOVA SCOTIA, CANADA, ASSIGNOR OF ONE-HALF TO ANDREW HISLOP, OF SAME PLACE.

CHAIN-LINK.

SPECIFICATION forming part of Letters Patent No. 333,095, dated December 22, 1885.

Application filed July 10, 1885. Serial No. 171,153. (No model.) Patented in Canada May 30, 1885, No. 21,779.

To all whom it may concern:

Be it known that I, DONALD MUNRO, of Pictou, in the Province of Nova Scotia and Dominion of Canada, have invented a new and useful Improvement in Chain-Links, (for which I have received Letters Patent in Canada, dated May 30, 1885, No. 21,779;) and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to that class of divided chain-links which are closed and secured by means of a screw-connection. Heretofore open chain-links of this class have been constructed with a nut swiveled upon the end of one arm of the link to screw upon the threaded end of the opposite arm, as may be found described in the patent to J. Packer, No. 39,239, of July 14, 1863. This form of link-coupling is not only awkward and objectionable because of the space required by the swivel, but also so expensive in construction as to render it practically unavailable for general use. Open links have also been constructed in two curved pieces, the two legs or straight portions of one piece being cut exteriorly with a right-handed and those of the other piece with a left-handed screw-thread, so as to be connected by two sockets, each socket having at one end an internal right-handed and at the other an internal left-handed screw-thread cut therein, so that the sockets may be simultaneously screwed onto the ends of the two pieces, as is described in an English patent, No. 1,250 of 1865; but these links are also objectionable for general use from the fact that the divisions do not admit of being turned or swung open one upon the other except by a special adjustment, and then not without simultaneously turning both sleeves or sockets, which is practically a bar to their use, while they are also comparatively costly in their manufacture because of the two sets of threads required in each socket.

My invention is designed to obviate these objections both to the swiveled chain-links and to the right and left handed screw-links, and to provide an open link which, closed by a screw-connection, will admit of being swung

open at one side without separating its two parts by simply running back one of the sockets only, and which shall be of neat, compact form and may be manufactured at a comparatively small cost.

It consists in the combination, with the two separate divisions of the link each made with arms of unequal length, screw-threaded at their ends uniformly in the same direction and with one common pitch, of two connecting sleeves or sockets internally threaded uniformly and in the same direction from end to end to screw upon the ends of said arms, whereby either division of the link may be swung open laterally upon the other by running back one of the sleeves, and thereby disconnecting the arms on one side only, so as to leave the remaining two arms and their sleeve to form a hinged joint for the link.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of my improved link closed; Fig. 2, a view in perspective of the link opened; and Fig. 3 illustrates all parts of the link detached.

A A' represent the two parts or divisions which, when properly connected, constitute my improved chain-link. These divisions are preferably made as duplicates one of the other, so that any two of a number of these pieces may be united to form a link. They are made each of a bit of iron bent to present parallel arms *b b'* of unequal length, and the end of each arm is screw-threaded to receive a nut or threaded sleeve, C or C', all the threads being cut of the same pitch and to run uniformly in the same direction. These nuts C C' are of such length as to admit of fully covering and overlapping the two ends of the divisions of the link when they are brought into juxtaposition, and are each interiorly threaded uniformly from end to end in the same direction. One of them, C, is made with a smooth outer surface, and, being run upon one of the threaded arms of one of the divisions, A, far enough to obtain a firm hold, is preferably made fast thereon, with its outer end projecting as a threaded socket to receive the counterpart arm of the opposite division, A'. If the nut C be thus fixed upon the longer arm of the division A', the shorter arm of the opposite division, A, is screwed therein and may be

turned until its opposite arm comes into contact with the corresponding arm of the division A'. The periphery of the second nut, C', is formed with a series of flat faces, so as to
5 be square, octagonal, or otherwise polygonal in cross-section to serve as a thumb-nut, which may be easily turned with the fingers. This second or thumb nut, C', is run back upon the threaded end of the free shorter arm of the division A', or, if preferred, upon the longer free
10 arm of the division A, until the outer end of the nut is flush with the outer end of said arm in position, when the arms are swung around into juxtaposition and contact as described,
15 to be run out again over the threaded end of the opposite arm to engage the same and couple the two together, and thereby close the link, as illustrated in Fig. 1.

As the diameter of each nut is but slightly
20 greater than that of the arms of the link, the link remains neat and light in appearance. As the nuts and the divisions of the links are interchangeable, they are made at comparative low cost, and, as each division of each link
25 will when the thumb-nut is run back to uncouple the arm upon which it moves turn freely upon the other, the links are readily opened to their full width, if required.

To prevent the too free working of the
30 thumb-nut and its accidental displacement, I insert in the threaded portion of either arm upon which the nut plays a spring, G, which is fitted in a recess in the arm to bear outwardly against the inner periphery of the
35 sleeve.

I do not claim, broadly, an open link having the arms of its two divisions pivoted together, end to end, to rotate upon an axis extending longitudinally through said arms; but

I claim as my invention and desire to secure 40 by Letters Patent—

1. The combination, with two separate corresponding divisions of a divided link, each formed with arms of unequal length, both threaded at their extremities uniformly in the 45 same directions and with the same pitch, the longer arm to a length equal to that of the sleeve to be fitted thereon, of two coupling sleeves or sockets internally threaded uniformly and in the same direction from end to 50 end to screw each upon the longer arm of one division and then back upon the shorter arm of the opposite division when brought into juxtaposition therewith, all substantially in the manner and for the purpose herein set 55 forth.

2. The combination, with an interiorly-threaded sleeve or nut screwing upon the opposite arms of an open link to couple them together, of a spring seated in the threaded 60 portion of one arm to bear against the encircling-sleeve, substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two 65 subscribing witnesses.

DONALD MUNRO.

Witnesses:

CHARLES L. ROOD,
ANDREW HISLOP.