No. 704,185. Patented July 8, 1902.

J. GIRLOT.

APPARATUS FOR MAKING CHAINS.

(Application filed Apr. 28, 1902.)

(No Model.)

Fig. 1

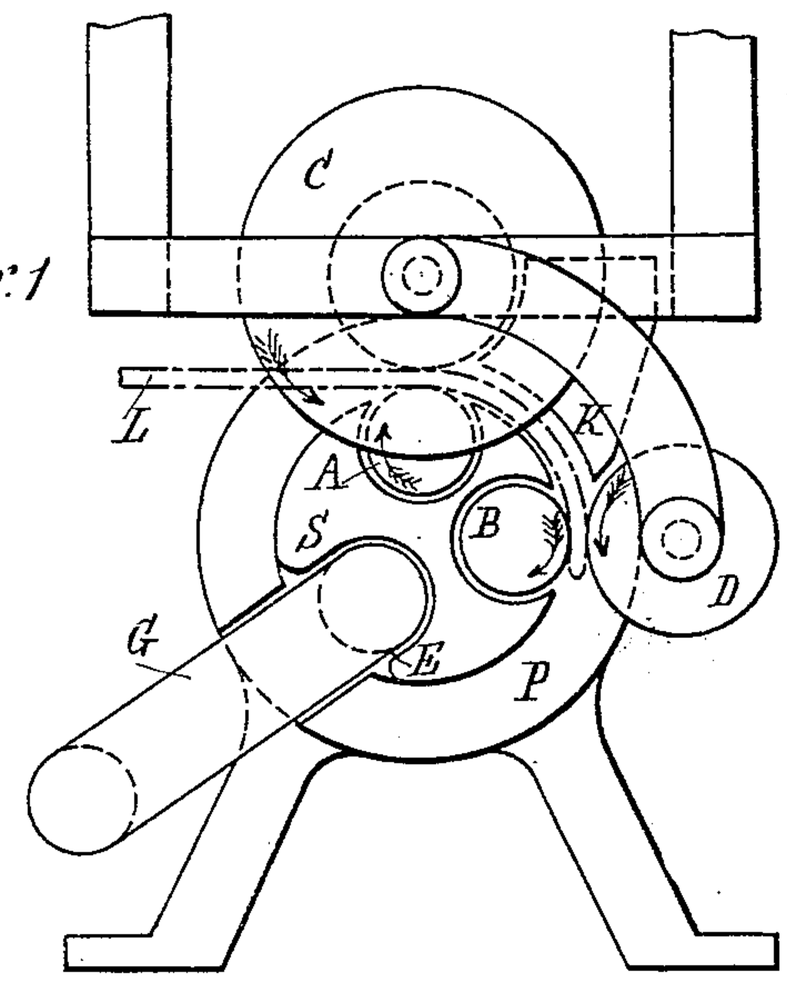

Fig. 2

WITNESSES=

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INVENTOR

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HIS ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH GIRLOT, OF JETTE ST. PIERRE, BELGIUM, ASSIGNOR TO SOCIÉTÉ GÉNÉRALE DU LAMINAGE ANNULAIRE POUR LA FABRICATION DE CHAINES SANS SOUDURE, OF BRUSSELS, BELGIUM, A CORPORATION OF BELGIUM.

APPARATUS FOR MAKING CHAINS.

SPECIFICATION forming part of Letters Patent No. 704,185, dated July 8, 1902.

Application filed April 28, 1902. Serial No. 105,044. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH GIRLOT, a subject of the King of Belgium, residing at 254 Rue Léopoldà, Jette St. Pierre, in the Kingdom of Belgium, have invented certain new and useful Improvements in Apparatus for Use in Making Chains, of which the following is a specification.

In the United States Patent No. 668,614, of February 19, 1901, is described an apparatus for use in the manufacture of chains by winding a metal strip at a welding heat on a winding-ring, the said apparatus being formed by the combination, with this winding ring or roll, of a lever carrying two compressing cylinders or rolls which are so actuated that they can be brought nearer to or farther apart from the winding-ring, and the strip is bent on the winding-ring and is moved forward without it being necessary to fasten it to the winding ring or roll. As regards rapidity of manufacture the apparatus described in the said United States Patent had the disadvantage that as it contained a two-part winding-ring, one of which parts it was necessary to remove and put back into its place each time the link in which another one is to be formed is placed in the apparatus. It is necessary for this operation to stop the machine, and it is also necessary to stop it to disengage the finished link. This winding-ring is necessarily thin, since it must pass with the new ring in course of formation into the previously-made ring. For this reason it is a weak part of the apparatus.

The apparatus forming the subject of my present invention has for its purpose to dispense with this two-part ring in the manufacture of chain-links by the superposed windings of a metal strip.

In the accompanying drawings, Figure 1 is an end elevation of my improved apparatus according to my invention, and Fig. 2 is a longitudinal section of the same.

The two-part ring hereinbefore referred to is in this improved apparatus replaced by a stationary core S, having recesses therein, in which two cylinders A and B are capable of rotating. These two cylinders are situated opposite two compressing-rolls C and D, respectively. The strip L, of which the link is to be formed, is fed between the cylinders A B and the rolls C D as it is being wound, the core S insuring the ring in the course of manufacture being of the proper diameter. The core S is provided with a recess E for the reception of the preceding ring G while a ring is being formed by winding the strip onto the said preceding ring. In Fig. 1 the direction of rotation of the cylinders A B and rolls C D is indicated by arrows. The strip L enters between the cylinder A and roll C and is guided between the cylinder B and the roll D by a guide K, which together with the roll D compels the strip to assume the curved form produced by the difference of the diameters of the cylinders A B and the rolls C D.

The roll A is driven from any suitable motive power by a strap or toothed wheel engaging the wheel M, Fig. 2, and the roll B may be actuated in a similar manner. The portion of the core S around which the strap is wound is of less diameter than the main body of the core, whereby a guide P is provided for one edge of the strip of metal to bear against, the other edge of the said strip being guided by a rim provided on the compressing-roller C. The rolls C and D and the guide K must recede from the rolls A and B as the coil increases in size.

For winding links of large diameters more than two cylinders may be provided in the core S, so as to reduce the friction, if necessary.

I claim as my invention—

1. Apparatus for making chains of successive superposed windings of a metal strip, comprising a stationary core provided with a recess for a previously-formed link, rotating cylinders in the core and compressing-rollers, substantially as described.

2. Apparatus for making chains of successive superposed windings of a metal strip, comprising a stationary core, provided with a recess for a previously-formed link, rotating cylinders in the core, compressing-rollers and a guide between the compressing-rollers, substantially as described.

3. Apparatus for making chains of successive superposed windings of a metal strip,

comprising a stationary core provided with a recess for a previously-formed link, rotating cylinders in the core, compressing-rollers, one compressing-roller having a rim, and a guide K, substantially as described.

4. Apparatus for making chains of successive superposed windings of a metal strip, comprising a stationary core, a portion of said core being of less diameter than the main body, the core being provided with a recess for the previously-formed link, rotating cylinders in the core and compressing-rollers, substantially as described.

5. Apparatus for making chains of successive superposed windings of a metal strip, comprising a stationary core, a portion of said core being of less diameter than the main body, the core being provided with a recess for the previously-formed link, rotating cylinders in the core, compressing-rollers and a guide between said rollers, one of which has a rim, substantially as described.

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

JOSEPH GIRLOT.

Witnesses:
GUSTAVE PIERRY,
GREGORY PHELAN.