

(No Model.)

J. M. DODGE.

Drive Chain.

No. 238,096.

Patented Feb. 22, 1881.

Fig. 1.

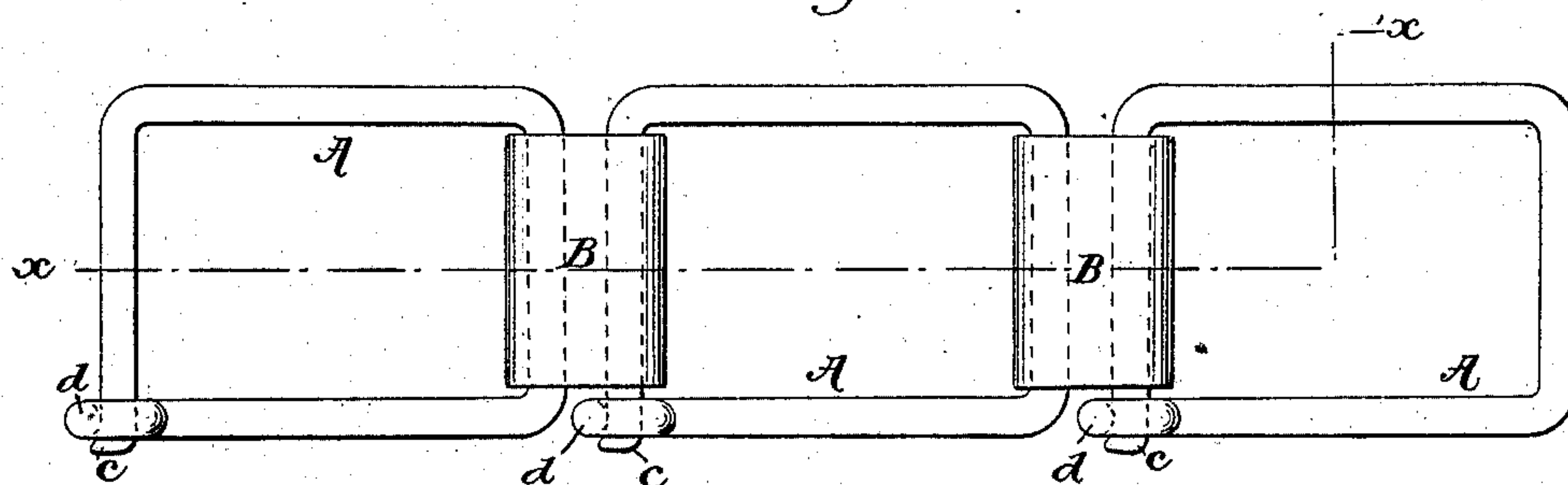


Fig. 2.

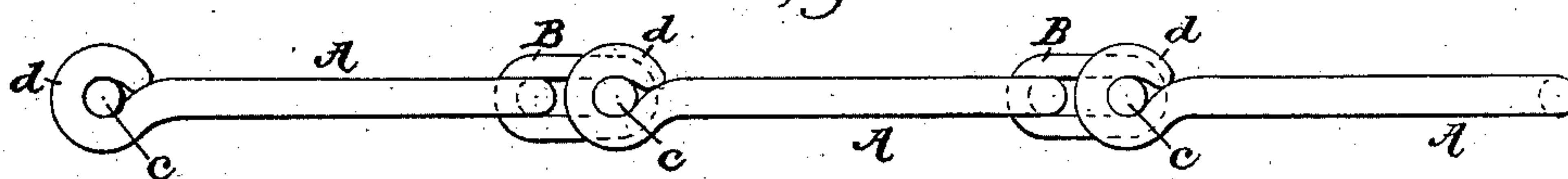


Fig. 3.

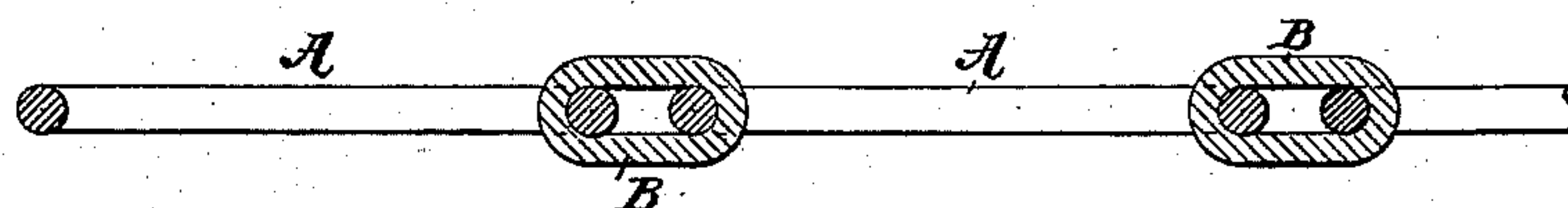
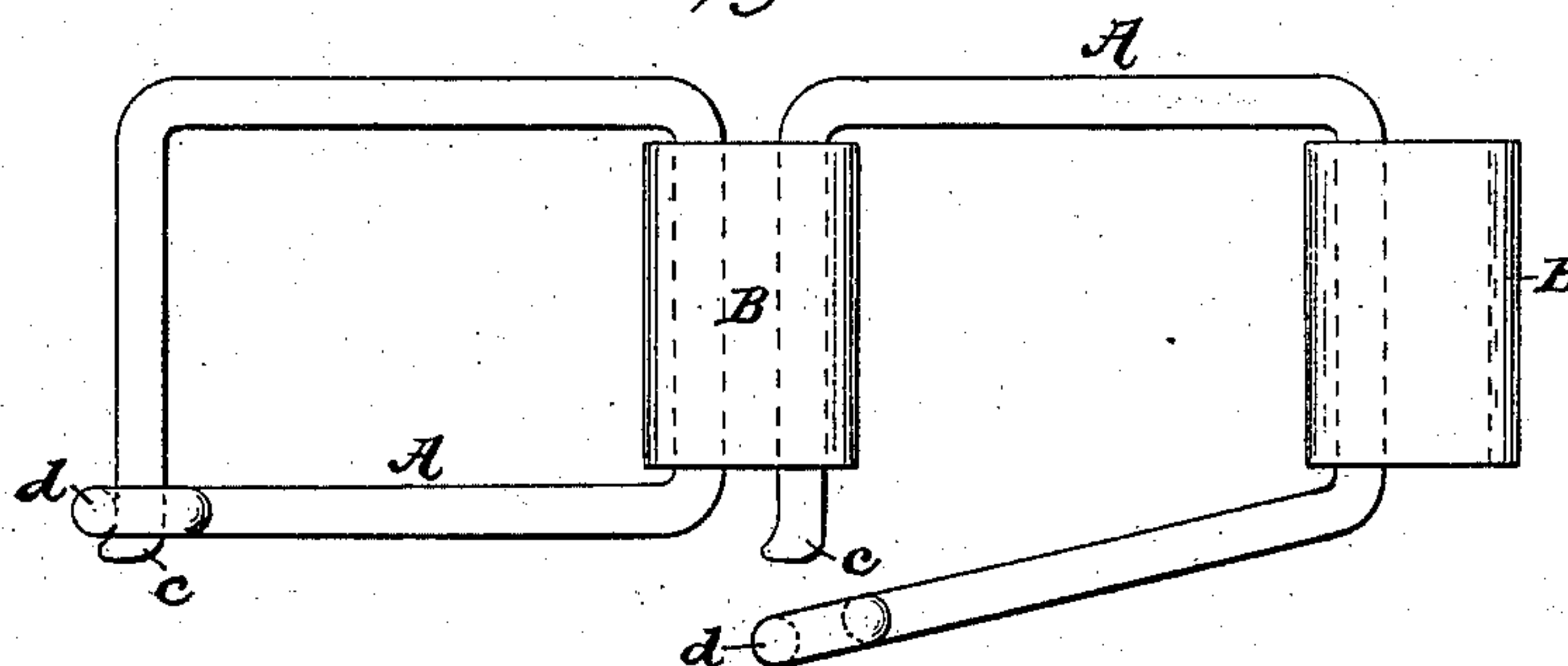


Fig. 4.



Witnesses:

Geo. N. Graham

Jacob Felbel

Inventor;

Jas. M. Dodge

B. J. N. Mc Intire

Atty.

UNITED STATES PATENT OFFICE.

JAMES M. DODGE, OF CHICAGO, ILLINOIS, ASSIGNOR TO EWART MANUFACTURING COMPANY, OF SAME PLACE.

DRIVE-CHAIN.

SPECIFICATION forming part of Letters Patent No. 238,096, dated February 22, 1881.

Application filed January 20, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES MAPES DODGE, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements in Drive-Chains; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this application.

10 My invention relates to that kind of drive-chains which is composed of alternately-arranged plain open links and connecting-couplers, and has for its main object to provide for use a chain of this class in which the parts
15 may be designedly detached and recoupled by opening and reclosing at a given point any one of the links of the chain.

To this main end and object my invention consists in a detachable drive-chain composed
20 of alternately-arranged flattened tubular couplers or connecting sections and links, made each of a single piece of wire bent into the form desired, and having one end of the piece interlocked with an eye formed at the other
25 end, all as will be hereinafter more fully explained.

To enable those skilled in the art to which my invention relates to fully understand and practice it, I will proceed to more fully explain
30 it by referring to the accompanying drawings, which form part of this specification, and in which—

Figure 1 is a plan or face view; Fig. 2, an edge view; Fig. 3, a section, (at *xx*, Fig. 1;) and
35 Fig. 4, a partial top view (showing the method of detaching the parts) of a chain made according to my invention as I have up to this time practiced it.

In the several figures the same part will be
40 found designated by the same letter of reference.

A are the links, and B the couplers or connecting-sections. As will be seen from the drawings, each link A is composed of a single piece
45 of wire, and is preferably about rectangular in contour, and each coupler B is in the form of a flattened tube about equal in length to the width of the rectangular opening of a link, and having a bore, which, while it is more than
50 double the diameter of the end bar of a link in

one direction, is in the other direction about equal to the diameter of such end bar, as most clearly illustrated at Fig. 3. The union of the ends of the single piece of wire composing each link A is effected at one corner of the link, as
55 shown, by the interlocking of the slightly-bent end portion, *c*, with the eye *d*, formed at the other end.

When the parts of the chain are all properly coupled together, as seen at Figs. 1, 2, 3, the
60 chain works substantially like drive-chains of an analogous construction, except as to the capacity of detachability, heretofore known and used; and when, for any of the usual purposes of detachment, it may become necessary
65 to uncouple any of the parts, any one of the links A may have its end portion, *c*, disengaged from its eye *d*, as seen at Fig. 4, by simply springing these ends apart, and after such uncoupling of the parts *c* and *d* the end bar,
70 carrying the slightly-bent portion *c*, may be readily extricated from the coupler, B, in which it worked. In this manner any one or more links, A, (with the coupler belonging to it,) may be removed; or any one or more similar links
75 and accompanying couplers may be introduced, to either repair or lengthen and shorten the chain.

To render the designed detachment of the parts *c* and *d* easy, the eye *d* should be slightly
80 larger than the diameter of the end portion, *c*, and to prevent any accidental detachment when the chain may not be under any tensional strain, the wire links A should be made so that the spring of the wire will tend to keep the
85 parts *c* and *d* in a coupled or interlocked condition. Of course a like tendency will always exist when the chain is under any strain in the direction of its length, and at such time the draft-strain would prevent any slipping of the eye
90 *d* over and off of the bent end *c* any way.

It will be seen that in a detachable chain such as described, the uncoupling and recoupling of any of the parts may be effected while the chain is in a substantially taut condition,
95 which, in the use of drive-chains for some purposes or under some circumstances, is quite a desideratum.

The size, proportions, and detail conformation of either or of all the parts of the chain 100

may, of course, be varied from what I have shown and described without departing from my invention, so long as the principle of construction and mode of operation peculiar to my invention be retained in any modified form of chain embracing it.

It will be seen that an exceedingly cheap, simple, and durable detachable drive-chain may be made according to my invention, which is most admirably adapted for use in many places where no very great strength is required in the chain.

The couplers B may be cheaply made of malleable iron, and receive nearly or quite all the frictional wear occasioned by the contact of the sprockets of the chain-wheels with the parts of the drive-chain.

Having so fully explained the nature of my

invention, and the mode in which I have so far practiced it, that any one skilled in the art can make and use a chain embracing it, what I claim as new, and desire to secure by Letters Patent, is—

In a drive-chain, the combination of a tubular coupler, B, and a chain-link composed of a single piece of suitable material, having its ends adapted to be connected together and disconnected, substantially as hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 27th day of October, 1880.

JAMES M. DODGE.

In presence of—

S. HOWARD SMITH,
B. M. SAUNDERS.