UNIVERSAL PATENT OFFICE.

RAYMOND W. DULL, OF LA GRANGE, ILLINOIS, ASSIGNEE TO LINK BELT COMPANY,
OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

LOCKING LINK FOR CHAIN BELTS.


To all whom it may concern:

Be it known that I, RAYMOND W. DULL, a citizen of the United States, residing at
La Grange, in the county of Cook and State
of Illinois, have invented a certain new and useful Improvement in Locking Links
for Chain Belts, of which the following is a
specification.

My invention relates to improvements in
link belt chains and has amongst its objects
to provide links for such chains which shall
have vertical instead of horizontal side bars.

Other objects and advantages will appear
from the description. The invention is illus-
trated in one form in the accompanying
drawings wherein:

Figure 1 is a plan view of a channel bar
from which the links are to be made;

Figure 2 is a cross section on the line 2--2
of Figure 1;

Figure 3 is a plan view of a link blank
with the scoring lines;

Figure 4 is a sectional view of the finished
link;

Figure 5 is a cross section on the line
5--5 of Figure 4;

Figure 6 is a sectional view of two links
in the process of being interlocked;

Figure 7 is a similar view of a second po-
sition;

Figure 8 is a side elevation of three links
in interlocking relation.

Figure 9 is a plan view of the finished link.
Like parts are indicated by the same let-
ter in all the figures.

The channel bar is composed of the flat
member A, and the side members A'A'.

Without referring to the process by which
the operation is carried on, it may be well
to say that of course, the blanks for the
links could be made from such channel bar
stock or from flat stock turned up at the
edges to form the channel and it is a mat-
er of difference when such edges are
turned up to form such channel.

As soon as they have been turned up,
the link blank will be scored as indicated
by the score lines B B in the corner of the
channel and the transverse score line C
which connects them. This will facilitate
the punching out of the hook and the cross
bar and when such punching out takes place,
the link will have a cross bar D, the hook
E and the vertical side bars F F. The

mouth G of the hook E is narrower than the
width of the side bar F which will effec-
tually prevent all relative lateral motion of
any pair of links in any direction after
the same have been interlocked. Because of
this fact, the links will have to be disen-
gaged in reverse of the operation by which
they are interlocked if they are to be disas-
sembled.

The proportions of the hook E and the
pintle or cross bar D are such that in the
process of slipping the cross bar into the
tubular interior of the hook there is a snug
fit so that normally a degree of pressure is re-
quired to force the cross bar onto the hook
and to remove it therefrom. This is par-
ticularly illustrated in Figures 6 and 7.

By having vertical side bars, this fit may
be very snug and close because pressure can
be applied to such vertical side bars to en-
gage or disengage the links without fear of
such distortion as might easily occur were
the side bars flat as would be the case if the
links were made from flat stock and not
from channel bar stock.

As soon as the side bars are extended in
a vertical direction, the scoring which is
intended to make easy the punching out
of the hook and cross bar, may be made by
direct lines, the side lines extending up to
the point where the bend begins, for since
the side bars are vertical, there will be little
if any tendency for the metal to tear at this
point during the process of forming the
hook and cross bar. The side bars are
slightly spread toward their junction with
the cross bar so as to widen the space be-
tween the side bars at this point to permit
easy introduction to the hook.

It will be evident as above suggested
that the structure here shown could be great-
ly varied without departing from the spirit
of my invention. What I have shown is
to be merely taken as a suggestion of the
general idea.

I claim:

1. A chain belt comprising a plurality of
separate links each having a cross bar at
one end and a hook at the other with side
bars slightly spread near the cross bar to
give free access to the hook.

2. A chain belt comprising a plurality of
separate links each having a cross bar at
one end and a hook at the other with side
bars slightly spread near the cross bar to give free access to the hook, said side bars vertically extended.

3. A chain belt comprising a plurality of separate links each having a cross bar at one end and an open hook at the other and adapted to be interlocked by the insertion of the cross bar through the hook opening, the parts formed so that pressure is required to force the cross bar through the hook opening.

4. A chain belt comprising a plurality of separate links each having side bars located in planes perpendicular to the plane of the link, a cross bar at one end, and a hook at the other, the side bars being bent upwardly at each end where they project in the hook and cross bar respectively.

5. A link for chain belts comprising vertical side bars upwardly curved at either end, the side bars being connected at one end by a hook portion in the form of a split cylinder, the opposite ends of the side links being connected by a concave surfaced pintle.

6. An integral chain link comprising vertical side bars connected at one end by a substantially tubular hook and at the other end by a concave surfaced pintle.

7. An integral chain link comprising vertical side bars connected at one end by a substantially tubular hook and at the other end by a concave surfaced pintle, the ends of the side bars being curved at each end in an arc substantially concentric with the hook and the pintle respectively.

Signed at Chicago, county of Cook and State of Illinois, this 27th day of August, 1920.

RAYMOND W. DULL.