

(No Model.)

C. W. SCHWARTZ, Jr.
DRIVE CHAIN.

No. 564,030.

Patented July 14, 1896.

Fig: 1.

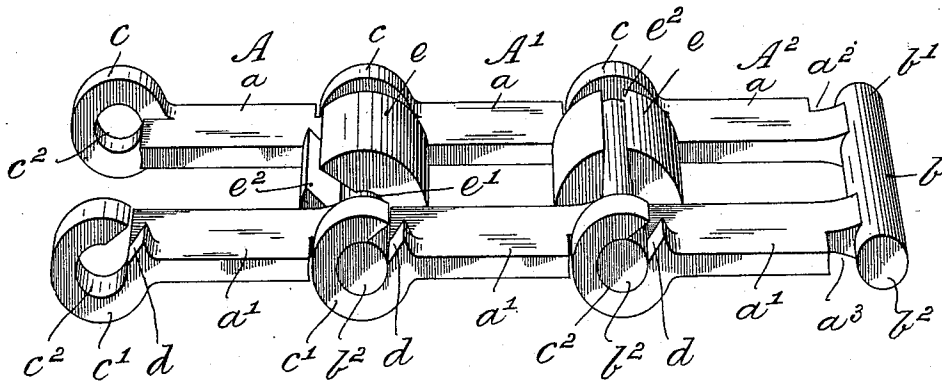
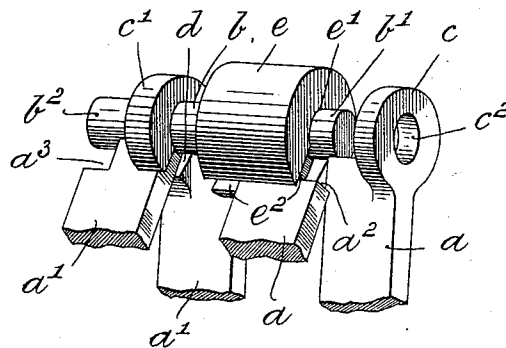


Fig: 2.



Witnesses:
Thomas M. Smith.
Richard C. Maxwell.

Inventor:
Charles W. Schwartz, Jr.
By Walter Duglass,
Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES W. SCHWARTZ, JR., OF PHILADELPHIA, PENNSYLVANIA.

DRIVE-CHAIN.

SPECIFICATION forming part of Letters Patent No. 564,030, dated July 14, 1896.

Application filed April 17, 1896. Serial No. 587,936. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. SCHWARTZ, Jr., a citizen of the United States, residing at Philadelphia, (Germantown,) in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Drive-Chains, of which the following is a specification.

My invention has relation to an improvement in drive or conveyer chains of the character in which the links thereof are detachable from one another, each link being adapted to receive a movable roller, which is readily attached to and detached from the same; and it relates particularly to the construction and arrangement of the rollers and links of such a chain.

The principal objects of my invention are, first, to provide a simple, durable, and strong drive or conveyer chain in which the links are readily detachable and each link adapted to receive a movable roller, which may be readily and quickly attached to and detached from the same, and, second, to provide a detachable link, consisting of a frame or body the flat side bars of which terminate at one end in a transverse pintle projecting outward beyond the recessed portion thereof of each side bar and at the other end terminating in two eyes, the transverse perforations of which are each of a diameter large enough to receive the pintle of an adjacent link and to permit of the same being slid through the eyes, one of said eyes being radially slitted to a width sufficient to permit of the sliding therethrough of that portion of a side bar or arm adjacent to the pintle of the adjacent link, and the said pintles adapted to both receive a transversely-perforated and radially-slotted roller, when the same is slid over said side bars or arms and onto the pintle to constitute a bearing therefor, and also so as to permit said roller to revolve thereon.

My invention, stated in general terms, consists of a drive or conveyer chain constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a perspective view of three links of a drive or conveyer chain secured together embodying features of my invention with a roller mounted on the pintle of one link and so as to be free to rotate thereon, and also to be removed therefrom; and Fig. 2 is a similar view of three links and a roller, the same being turned into such position as to show how the roller may be readily detached from or mounted upon its pintle and the links also readily detached from one another.

Referring to the drawings, A, A', and A² represent three links, each provided with two flat and broad arms *a* and *a'*, arranged parallel to each other and provided at one end with right-angular recesses *a*² and *a*³, and with an integral transverse pintle *b*, the outer ends *b'* and *b*² projecting to the outer sides of the said side bars or arms *a* and *a'*. At the other end of the side bars or arms *a* and *a'* are formed the eyes *c* and *c'*, each of which is perforated, as at *c*², in a transverse direction. The openings *c*² of the eyes *c* and *c'* are of sufficient diameter to permit of the sliding of a pintle *b* of an adjacent link through said eyes. One of said eyes, *c'*, is also provided with a radial slit *d*, extending from the perforation *c*² to and through the periphery of the same. This slit *d* is sufficiently wide to permit of the sliding of either side bar or arm through the same and pintle *b* through the perforations *c*² of the eyes *c* and *c'* in connecting or separating two adjacent links of the series constituting a conveyer-chain.

On the pintle *b* is adapted to be slid one or more rollers *e*, each of which is provided with a transverse perforation *e'* and a radial slit or slot *e*², corresponding, respectively, in diameter and width with that of the perforation *c*² and width of the slot *d*, that is, the roller, by reason of the perforation *e'* and slot *e*², is adapted to be slid over the side bar or arm *a* or *a'*, and a pintle *b* to occupy a position such as is illustrated in Fig. 1; whereon it is adapted to freely rotate between said side bars or arms *a* and *a'* of a link.

In operation to disconnect the links A, A', and A² from one another, as well as to remove the roller *e* from a pintle *b*, the links are brought into the position indicated in Fig. 2, in which the side bars or arms *a* and *a'* of

one link are in alinement with the slot d of the eye c' of the adjacent link, and the roller e is likewise turned so that its slot e^2 is in alinement with the slot d . One link may
5 then be withdrawn from the other, its side bars or arms a and a' and pintle b sliding through the roller e and the eye c' of the adjacent link. In the same manner to connect
10 the links and to mount the roller e upon a pintle b the links are brought into relationship with each other, substantially as described and as illustrated in Fig. 2 of the
15 drawings, the rollers being held in position between the eyes of one link while the side bars or arms a and a' and a pintle b of the other link are slid through the slotted eye c' and roller e .

Having thus described the nature and objects of my invention, what I claim as new,
20 and desire to secure by Letters Patent, is—
A drive or conveyer chain, consisting of a

series of links, each having two side bars or arms provided at one end of each with a single eye, one of said eyes being radially slitted, said side bars terminating at the other end
25 in a transverse solid cylindrical cross bar or pintle, each side bar being provided at its outer edge with a recess partly separating the bar from the pintle and adapted to receive the eye of the adjacent link to permit of the
30 articulation of the eyes upon said pintle, and a detachable slitted friction-roller mounted upon and adapted to freely rotate on the pintle between the side bars, substantially as and
35 for the purposes described.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

CHARLES W. SCHWARTZ, JR.

Witnesses:

J. WALTER DOUGLASS,
THOMAS M. SMITH.