

(No Model.)

T. CRANEY.

BUCKET ATTACHING LINK FOR CHAIN CONVEYERS.

No. 422,735.

Patented Mar. 4, 1890.

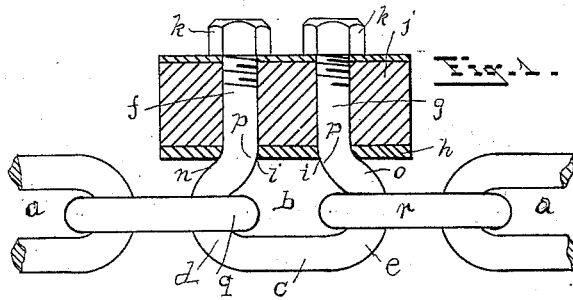


Fig. 1.

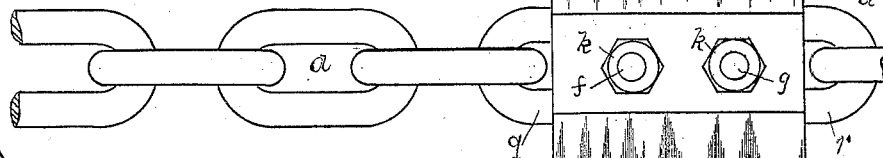


Fig. 2.

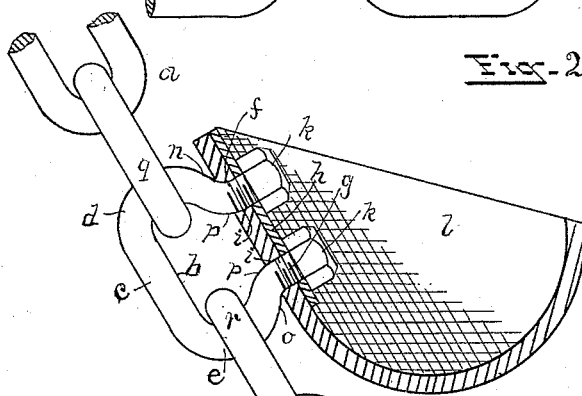


Fig. 3.

Fig. 5.

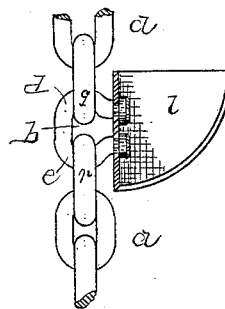
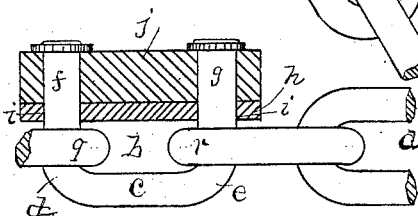


Fig. 4.

Attest:

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UNITED STATES PATENT OFFICE.

THOMAS CRANEY, OF BAY CITY, MICHIGAN.

BUCKET-ATTACHING LINK FOR CHAIN CONVEYERS.

SPECIFICATION forming part of Letters Patent No. 422,735, dated March 4, 1890.

Application filed May 28, 1889. Serial No. 312,401. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CRANEY, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Bucket-Attaching Links for Chain Conveyers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention pertains to endless-chain conveyers, and especially relates to devices for securing the buckets or flights to an endless chain of the common form having oval links.

The object of this invention is to provide an effective and durable device whereby flights or buckets of any desired form may be secured to a chain cable in a manner to leave all of the links free to engage with the teeth of sprocket-wheels of the ordinary and common forms.

Another object of the invention is to provide a means of securing a flight or bucket to the chain cable in such a manner as to leave all of the links thereof free to rock or move in any direction.

My improvement is illustrated in the accompanying drawings, in which—

Figure 1 represents a side view of the chain cable with cross-section of the flight as secured to the cable by means of my improvement. Fig. 2 is a plan view of the same. Fig. 3 shows the chain in an inclined position, with a bucket in transverse section secured thereto by my improvement for elevating grain or other material. Fig. 4 shows another form of bucket secured to a vertical moving chain by my invention. Fig. 5 shows my improved attaching-link in a modified form.

Similar letters represent similar parts throughout the several views in the drawings.

a is an endless cable composed of a chain having oval links of the ordinary well-known form, to which a series of flights or buckets are secured at regular intervals of distance.

b is a link composed of the lower portion *c* and the curved end portions *d* and *e* of the same form and dimensions as the other links

of the chain *a*, but provided, however, with the outwardly-projecting end portions *f* and *g*, which are passed through a tie-plate *h*, provided with suitable openings *i* for that purpose, and also through the flights *j*, and is secured in position by the nuts *k*, or may be riveted, if desired, while for securing a bucket *l*, as shown in Figs. 3 and 4, the tie-plate may be omitted, and the portions *f* and *g* are then passed through and secured directly to the rear side of the buckets.

As shown in Figs. 1, 3, and 4, this link is formed with the end curves *d* and *e*, which are continued until their upper portions *n* and *o* extend toward each other in a *U* form, while the portions *f* and *g* are bent outwardly at *p*, so that the portions *n* and *o* serve to retain the tie-plate *h* or the buckets above the upper line of the chain.

In practice the securing-links are placed in the chain by dividing the chain into sections of the length of the desired space between the flights, and the end links *q* and *r* are then passed over the portions *f* and *g* and rest in the curved end portions *d* and *e*, and the buckets or flights are then secured in position by having the portions *f* and *g* passed through openings therein, as before described, and the chain may then be placed in the ordinary way upon sprocket-wheels of any well-known or common form, and any desired form of trough or conduit for carrying the flights and material to be moved may be used as desired (or necessary) in the ordinary way.

It will be seen, of course, that various forms of carrying devices or buckets may be secured to the cable by means of my improved attaching-link, and that it may be applied to very many uses for conveying lumber, slabs, sawdust, mill-refuse, logs, grain, coal, &c., the buckets or flights being of different forms and construction to adapt them to the work required, and it will also be noticed that various modifications of form of my improved attaching-link may be made, and the result of its operation will be the same, and I therefore wish it distinctly understood that I do not confine my invention altogether to the precise form and construction herein illustrated; but

What I desire to secure, broadly, by Letters Patent is—

1. A device for securing flights or buckets

- to an endless chain cable, and consisting, substantially as described, of the elongated link portion *c*, having at each end thereof the curved U-shaped end portions *d* and *e*, and
5 having the portions *f* and *g* projecting outwardly at a right angle to the longitudinal axis of the link portion and provided with fastening means, substantially as and for the purpose set forth.
- 10 2. In a conveyer, the combination, with the chain cable composed of sections and the flights or buckets, of the attaching-links connected, as described, at intervals with the adjacent links of the said chain-sections, and having the portions *f* and *g* projecting outwardly therefrom and secured to the flights or buckets, substantially as set forth. 15

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS CRANEY.

Witnesses:

JAS. E. THOMAS,
G. P. THOMAS.