(No Model.)

W. D. EWART.

Conveyer.

No. 241,796. Patented May 24, 1881.

Fig. 1.

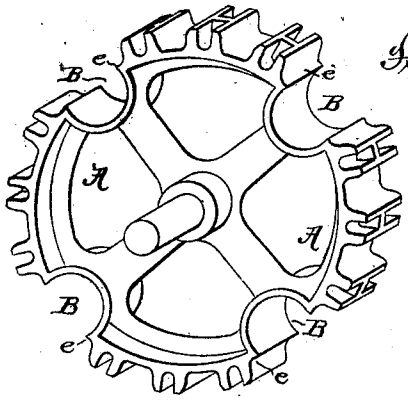


Fig. 2.

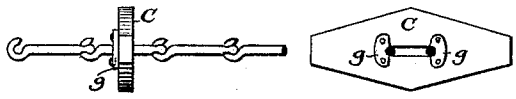


Fig. 3.

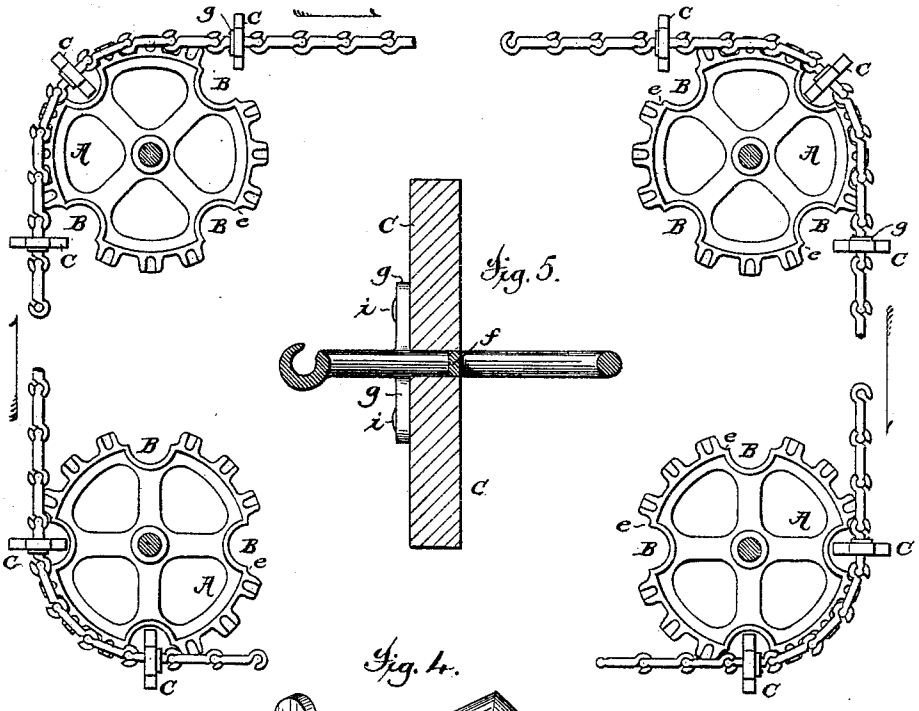
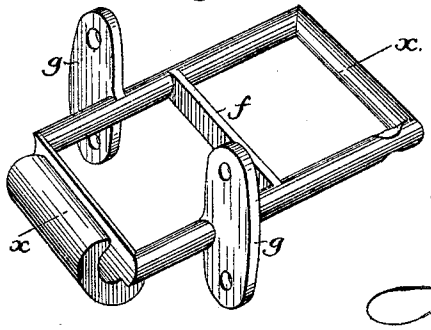


Fig. 5.

Fig. 4.



Attest;

Geo. K. Graham

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Inventor,

W. D. Ewart

by

J. N. McIntire

Att'y.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM D. EWART, OF CHICAGO, ILLINOIS.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 241,796, dated May 24, 1881.

Application filed March 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM DANA EWART, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Conveyers; 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 specification.

My invention relates to certain new and useful improvements in that kind of conveyer apparatus in which is employed a drive chain or chains traveling over chain-wheels, and provided with flights that project from both sides of the carrier-chain; and it consists in certain novel features of construction, which will be hereinafter more fully explained, and more specifically pointed out in the claims of this specification.

To enable those skilled in the art to make and use my invention, I will now proceed to more fully describe the same, referring by letters to the accompanying drawings, making a part of this specification, and in which—

Figure 1 is a perspective view of my new chain-wheel. Fig. 2 is a side and end view of a drive-chain with double flights attached thereto, (drawn on a smaller scale than Fig. 1.) Fig. 3 is a side view (on a still smaller scale) of four of my improved wheels and drive-chains, showing how the floats of the chain are accommodated in the gaps of the wheels. Fig. 4 is a perspective view, drawn full size, of a link, showing better the ears for the attachment of the float and the cross-strip for plugging up the hole cut in the double float, in order to slip it on the link. Fig. 5 is a longitudinal section at the line *x x* of Fig. 4, but showing the float attached.

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

A is a chain-wheel, having its periphery cut out at suitable places below the rim, on which the chain rests, so as to form gaps or openings B for the reception and accommodation of slats, disks, flights, or other carrier devices arranged on the chain and projecting from that side or face thereof which runs in contact with the wheel's periphery. Said wheel is also provided with the usual teeth, sprockets, or other known means for the engagement therewith of the open links or other engaging devices of a drive-chain of any of the known constructions, for the usual purpose of transmitting power and motion. The gaps or cut-aways B of the wheel A may, of course, be of any desired size, shape, and number, and are made or formed in the periphery of the wheel at those localities at which the flights on the chain must come during their travel around the wheel.

In my novel wheel, as shown, each tooth or sprocket is constructed with its working sides to occupy nearly or quite all of the central opening of the long link, which I prefer to use, and to lighten the thus constructed teeth the middle portion of the stock thereof is removed and the sides connected by a web or rib to prevent the misplacement of the chain, and at the same time strengthen the tooth. This confines the cleat or flight to its place accurately, and enables me to make the gaps B so narrow that on each side of each of them may be left a portion of the rim next to the tooth, as seen at *e*, for the cross-bars of the slatted link to rest on, so that the pitch or running curve of the chain is not affected by the omission of a tooth and the leaving of the space in lieu thereof for forming the gap B.

The chain I have shown in the drawings is the well-known "Ewart" detachable drive-chain, adapted for engagement with the sprockets on the gap-wheel A, and said chain is provided, as shown, at suitable intervals of its length, with double flights or valves C—that is to say, flights or valves which entirely surround the links, to which they are fastened—or project from both sides of the chain, for the purpose of raking along, as it were, a greater quantity of the material desired to be carried, and for holding the chain above the lower or scraping edge of the flights, and thus preventing it from dragging on the floor of the box or trough in which the chain and flights may be run.

The links to which the double flights or valves C are attached are made (as best seen at Figs. 4 and 5) with a cross-bar, *f*, near the middle of the link endwise, and with laterally-projecting ear-pieces or wings *g g*, the relative arrangement of the said wings *g g* and cross-bar *f* being such that (as seen at Fig. 5) when

perforated flight C is placed in position on the link and secured to the wings *g g* by the bolts *i* the cross-bar *f* will fill up the slot-like perforation *m* of said flight.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a chain-wheel having one or more gaps in its periphery, the combination, with the gap, of resting-places or supports in the periphery of the wheel and each side of the gap, for the support at each end of the link which carries the flight, as set forth.

2. In combination with a flight arranged to project from both sides of the chain-link and perforated for the accommodation of the link therein, a cross-bar, *f*, adapted to close up the perforation or slot in the flight.

3. The combination of the flight C and the chain-link provided with ear-pieces *g g*, all substantially in the manner described.

Witness my hand this 7th day of March, 1881.

WILLIAM D. EWART.

In presence of—

JACOB FELBEL,

H. JANVIER.