

(No Model.)

F. A. LOCKWOOD.
CONVEYER MECHANISM.

No. 467,943.

Patented Feb. 2, 1892.

Fig. 1.

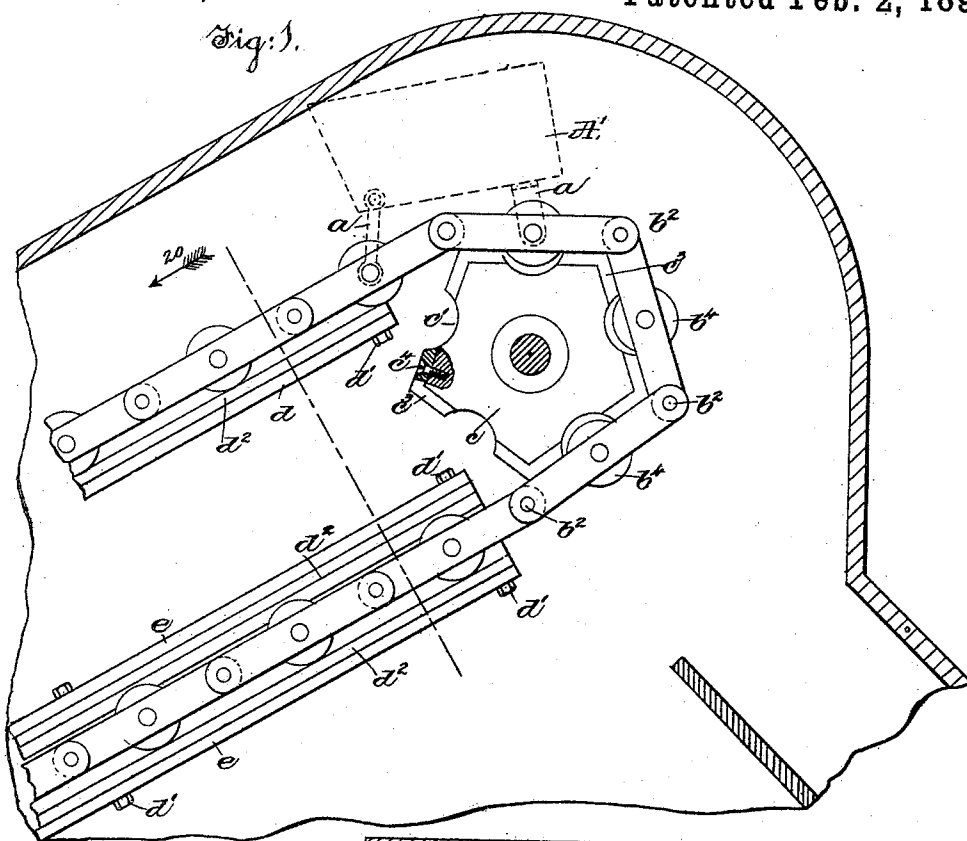
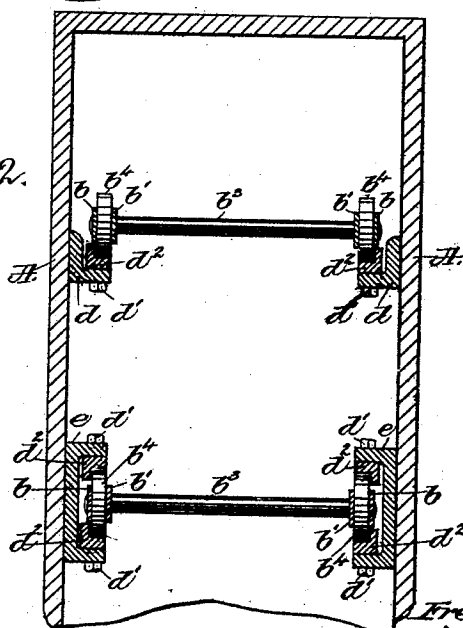


Fig. 2.



Witnesses.

Frederick L. Emery.

Frederick L. Emery.

Inventor.

Frederick A. Lockwood

By Lemuel Gregory

Attys

UNITED STATES PATENT OFFICE.

FREDERIC A. LOCKWOOD, OF BOSTON, MASSACHUSETTS.

CONVEYER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 467,943, dated February 2, 1892.

Application filed April 30, 1888. Serial No. 272,344. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC A. LOCKWOOD, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Conveyer Mechanism, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to conveyers of that class in which an endless chain of buckets is made to travel over sprocket-wheels located at or near the opposite ends of a structure comprising part of a conveyer-frame such as commonly employed on dredges and in grain-conveyers.

In conveyers of the class referred to the endless chain to which the buckets are attached passes over and is supported by an upper and lower track or guideway, the upper track being formed by an angle-iron, while the lower guide is composed of channel-bars, both being made of considerable length and rigidly secured to the sides or walls of the conveyer-frame.

It has been found in practice that the wear upon the tracks or guideways and sprocket-wheels, especially on dredging-machines substantially such as shown and described in United States Patent No. 299,945, granted to J. A. Ball June 10, 1884, is so great that the tracks are worn away after little use, thus necessitating the renewal of the same, which in dredges substantially as shown in the patent referred to requires a renewal or reconstruction of the central tracks or ways at a great expense and loss of time.

It is the object of this invention to provide the guideways with removable portions, upon which the endless chains run, so that as the said portions become worn they may be removed and replaced by others without loss of time and at a minimum expense.

Figure 1 in section and elevation shows a sufficient portion of a conveyer-frame and endless chain therein to enable my invention to be understood, the shaft of the sprocket-wheel being in section, and also the discharge-chute; Fig. 2, a section of Fig. 1 on line $x x$ to

more clearly show the guideways or tracks and removable caps attached thereto.

The conveyer-frame, composed of sides or walls A, only one being shown in Fig. 1, contains an endless chain, to which buckets A' (represented by dotted lines) are attached by rods or links a . The endless chain is composed, as herein shown, of two independent chains, one at each side of the elevator-well, and each chain is composed of links $b b'$, connected at their ends by pins b^2 to form a single endless chain, the said chains on opposite sides of the elevator-well being joined by rods or shafts b^3 , having bearings near the center of the links $b b'$, each rod or shaft b^3 having mounted on it at its opposite ends, between the links $b b'$, rollers b^4 . The endless chain of buckets is made to travel by sprocket-wheels c at opposite ends of the conveyer, only one being shown, the said sprocket-wheel being of polygonal shape. Each face of the sprocket-wheel is provided, as shown, with a concavity c' , and between adjacent concavities the sprocket-wheel at its opposite ends is provided with metallic caps c^3 , secured, as shown, by screws c^4 , the rollers b^4 entering the opening or space between adjacent caps.

In operation the endless chain travels in the direction opposite to that indicated by arrow 20, Fig. 1, and the upper half or part of the endless chain is supported by the upper track, herein shown as angle-irons d , securely fastened to the walls A of the conveyer-frame, the said angle-irons having secured to them by bolts d' caps d^2 , upon which the rollers of the endless chain run, the said caps being made in substantially short sections to enable them to be readily removed and replaced by new ones when worn.

The lower half or part of the endless chain is supported by channel-bars e , and to the upper and lower flange of each bar caps d^2 are secured by bolts d' , similar to those on the upper track.

I claim—

In an elevator, the combination, with an endless chain of buckets and rollers thereon, of upper and lower guides or tracks therefor,

and removable caps d^2 , composed of angle-
irons, said caps forming bearings for the tread
and outer faces of the rollers running on said
guides or tracks to thereby prevent lateral as
5 well as vertical displacement, substantially
as described.

In testimony whereof I have signed my name

to this specification in the presence of two
subscribing witnesses.

FREDERIC A. LOCKWOOD.

Witnesses:

J. C. SEARS,

JAS. H. CHURCHILL.