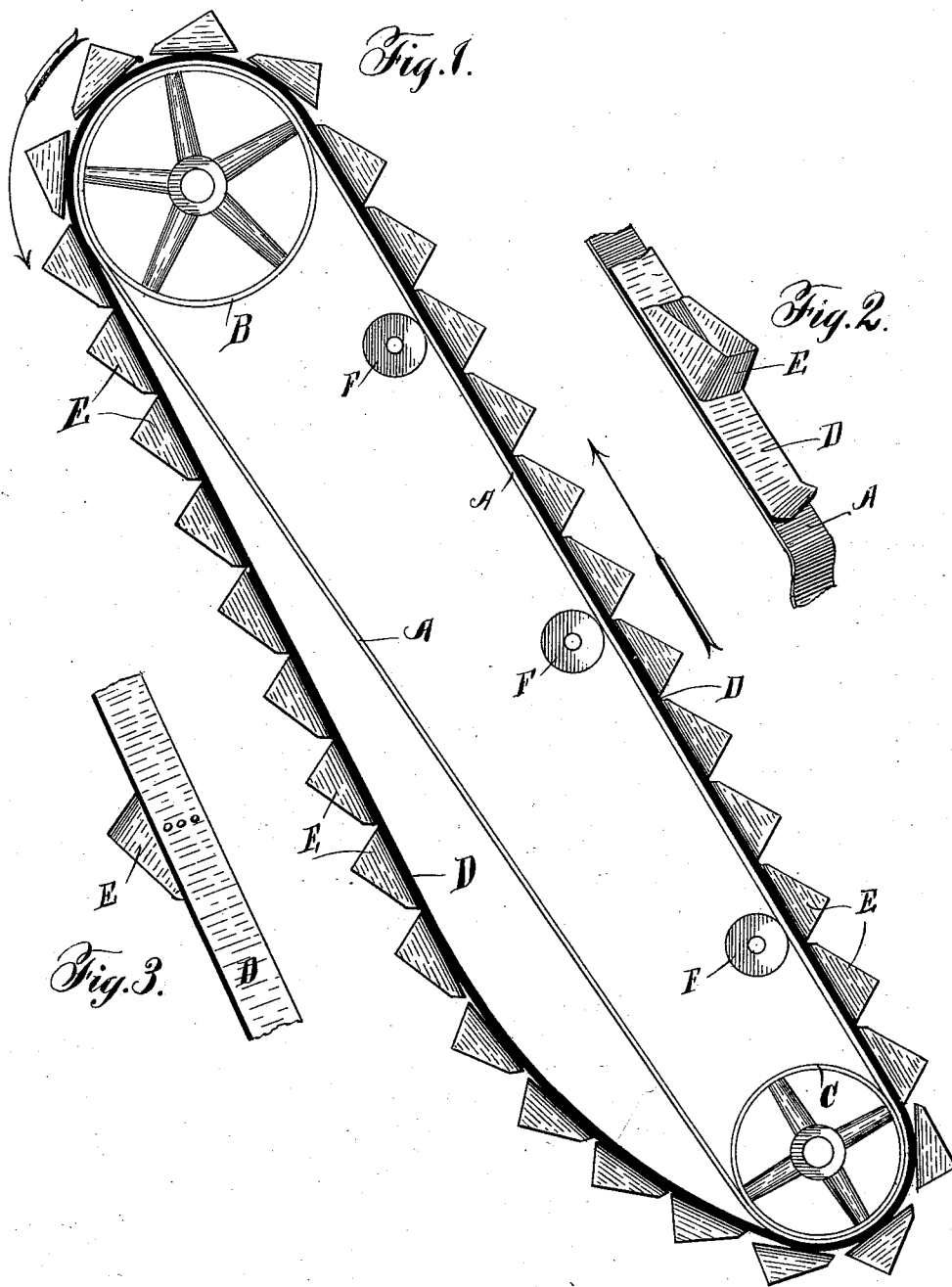


(No Model.)

L. J. HEWES.
ORE ELEVATOR.

No. 507,126.

Patented Oct. 24, 1893.



Witnesses.
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UNITED STATES PATENT OFFICE.

LEWIS J. HEWES, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE GATES IRON WORKS, OF SAME PLACE.

ORE-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 507,126, dated October 24, 1893.

Application filed January 25, 1893. Serial No. 459,642. (No model.)

To all whom it may concern:

Be it known that I, LEWIS J. HEWES, of Chicago, Illinois, have invented certain new and useful Improvements in Stone or Ore Elevators, of which the following is a specification.

The object of my invention is to make a stone elevator of such construction that stone or ore can be elevated with the least amount of belting and the least possible loss of friction, and it consists in the features, details and combinations hereinafter described and claimed.

In the drawings Figure 1 is a side elevation showing my improvements; Fig. 2, a perspective view of a portion of the elevator showing the bucket and belting used, and Fig. 3 a perspective view of a portion of one belt and the method of securing the bucket thereto.

In the present forms of elevators in use, the buckets are secured to the main belting by means of rivets or bolts, and where the distance to lift the ore or stone is considerable there is more or less weakening of the belt by reason of these rivets, of which there are in such cases a large number. This permits the belting to stretch a great deal. In order to overcome this disadvantage the belting is usually made of from six to eight ply belts, and this of course renders it very expensive and does not entirely obviate the stretching or weakening of the belt.

In constructing my improved elevator I use a main belt, A, which passes around the driving pulley B and the driven pulley C, and is primarily used for the transmission of the power between and around these two points. Supported and driven by this main belt is a second belt D, which for convenience I will term a supplemental belt, to which is riveted or secured in any other desired manner the buckets E, which form the elevator proper.

During the operation of the elevator while

carrying the load, most of the sagging of the belting on the upper side and the weight of the load is supported or taken up by means of the idlers F.

It will be seen from the above description and an inspection of the drawings that during the operation of my improved elevator the entire transmission of power is dependent upon the main belt, and none of it is required of the second belt. Consequently all that the elevator proper, or the second belt D, has to do, is to carry the load plus its own weight, which enables me to use a much lighter belt in the elevator, as there is very little stretching, and the strength required of such a belt is only so much as will lift the load, and I am thereby enabled to use belting of two, three, or four ply. It will be seen also that during its operation my improved elevator has the benefit of the friction of a little over one-half the entire length of the main belt to help it in lifting the load, while in the present forms of construction it has merely a portion of the driving pulley, which causes the loss of a large percentage of the power used in operating the mechanism.

I claim—

In stone elevators, the combination of a driving pulley, a supporting or driven pulley, a main belt for transmitting power between and around these pulleys, a supplementary belt having complete buckets secured thereto, forming the elevator proper, and supported on and driven by the main belt and around the same set of pulleys, and a third set of idler pulleys to assist in preventing the sagging of the elevator, substantially as described.

LEWIS J. HEWES.

Witnesses:

H. W. HOYT,
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