No. 712,585. Patented Nov. 4, 1902.

S. B. PECK.

CONVEYER.

(Application filed July 7, 1902.)

(No Model.)

Fig. 3.

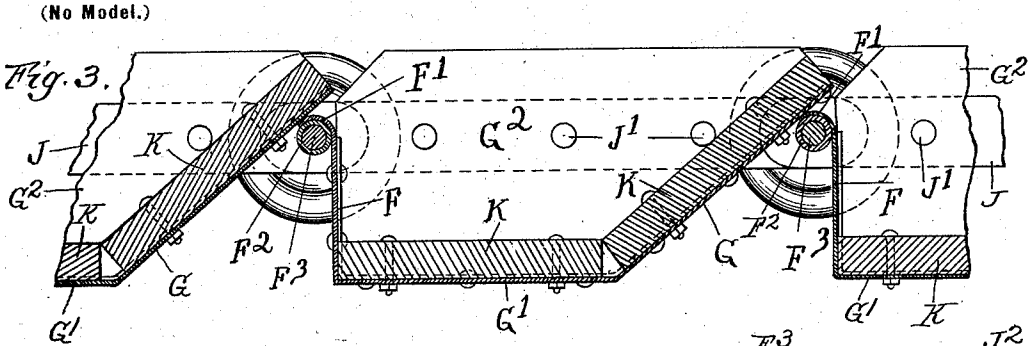


Fig. 4.

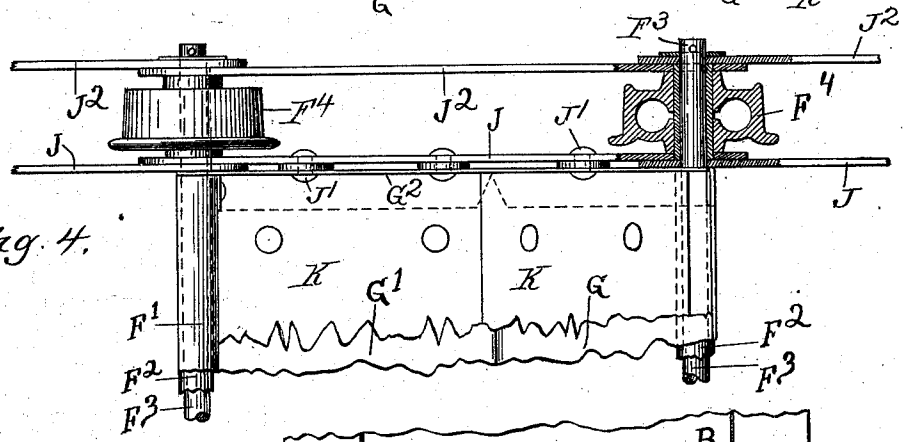


Fig. 1.

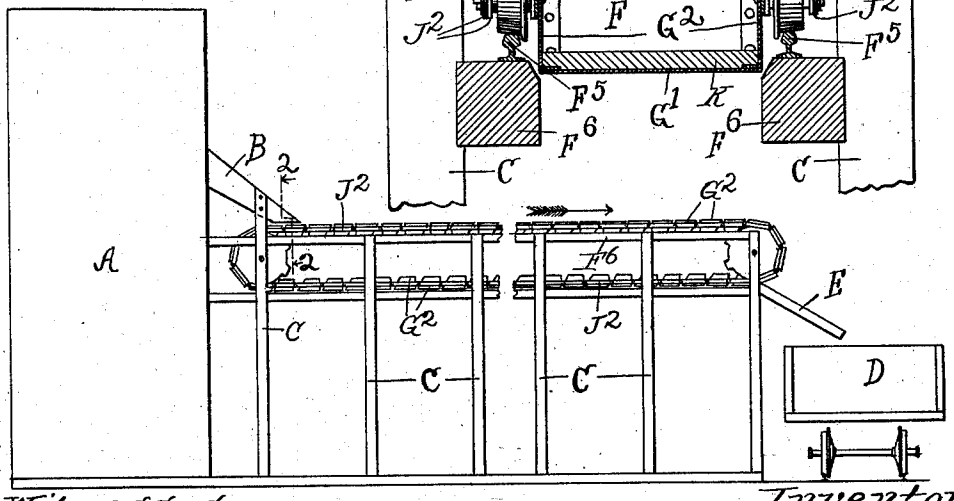


Fig. 2.

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UNITED STATES PATENT OFFICE.

STAUNTON B. PECK, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE LINK BELT MACHINERY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 712,585, dated November 4, 1902.

Application filed July 7, 1902. Serial No. 114,588. (No model.)

To all whom it may concern:

Be it known that I, STAUNTON B. PECK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Conveyers, of which the following is a specification.

My invention relates to conveyers, particularly such as are intended to be used for carrying heavy and lumpy material—such, for example, as ores.

One form of my invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a diagrammatic arrangement of the several parts of a conveyer embodying my invention. Fig. 2 is a cross-section on the line 2 2 of Fig. 1. Fig. 3 is a longitudinal section through the conveyer proper. Fig. 4 is a plan view with parts broken away and other parts shown in a horizontal section of a portion of the conveyer.

Like parts are indicated by the same letter in all the figures.

A is a portion of the building, in the upper part of which there may be carried a supply of ore or material to be conveyed. B is a spout or trough leading therefrom.

C C are the portions of a framework construction for holding up the conveyer proper.

D is the car into which the material is to be deposited, and E the chute along which it is carried from the conveyer to such car.

The conveyer proper consists of a series of trucks with pans and chains, the parts associated so that the pans are carried in a continuous procession by the trucks in a desired direction, as indicated by the arrow in Fig. 1. Each pan consists of the following elements: the end F, preferably curved at F′, so as to hang upon the sleeve F^2 on the axle F^3, which axle carries at its outer extremities the wheels F^4 F^4, adapted to run on the rails F^5 F^5 on the beams F^6 F^6, which are supported by the framework-standards C C. The pan has at its other extremity an upward-inclined portion G, which performs the functions of bottom and end. The pan also has the bottom proper, G′, and the sides G^2 G^2. The inclined portion of the pan is secured in any proper manner, as also the ends and the bottom, to the side portion G^2. These latter portions are secured to the inner links J J by means of the bolts J′ J′. Associated with these inner links are the outer links J^2 J^2, which with the axles and the wheels F^4 F^4, constitute a traveling belt or chain on which the pans are mounted. The inclined portion G is carried upwardly above the axle F^3, as indicated in Fig. 3, so that its discharge end overhangs the curved portion F′ of the end F, and thus the running parts are protected while the entire series of pans presents a continuous receiving-body. The material discharged from the spout B will be received into one pan or the next succeeding one. The spout may be, as indicated in Fig. 2, supported on the standards C C, and in any event should have a mouth contracted, as indicated at B′ B′, to cause it to discharge properly into the pan.

K K are inner linings which may be applied to one or more or to all of the inner walls or faces of the pans. Ordinarily it is only necessary to attach the linings to those portions of the pans which form or serve as the bottom or parts thereof. These linings are secured in fixed relation to the pan portions by proper bolts. The pans are preferably composed of comparatively light sheet metal, while the linings are composed of comparatively thick wood sections or sheets.

It will be understood, of course, that the several features of this device may be greatly changed and altered as to form, construction, and arrangement without departing from the spirit of my invention. For example, the pans may be a very different shape, and they may be mounted and carried by very different devices.

I wish my drawings to be taken in the first instance as diagrammatic to illustrate the invention and in the second instance as an illustration of one form which my invention may assume.

The use and operation of my invention are as follows: It will be useless to describe in detail the operation of the several elements which I have shown in connection with my invention. I shall therefore proceed to describe that feature which is of peculiar importance. It is well known that a metal plate

if hammered persistently even by blows which are not heavy enough by reason of the pressure applied to bend the plate will, nevertheless, eventually buckle or become dish-shaped responsive to such action. In the use of conveyer-pans such as are illustrated in my drawings this action is certain to take place when the same are used in connection with heavy metals or ores which are in a lumpy condition. This is true because such lumps falling into the pan, even though they fall from no great height, do have a hammering effect, and although the metal may be heavy enough, thick enough, or strong enough to obviate bulging or disturbance of the shape of the pan by reason of the weight, still under such conditions such pan will become dished and distorted, so as to interfere very seriously with the action of the conveyer. Moreover, it is desirable to have the pans as light as possible, both on account of the saving in the cost of metal and on account of the saving in the cost and expense of moving the same. I propose, therefore, to attach to the bottoms and perhaps to the sides of the pans, or at least to such portions of the pans as are subject to this hammering action, a lining or cushion of fibrous material which will cushion as against the blow of such falling lumps. This lining material need not itself be strong enough to serve as such bottom or side, but should be thick enough and firm enough to act as such cushion. It should also be firmly attached to the metal of the pan, so as to distribute the pressure and strain. By such an arrangement with a minumum amount of metal and weight I can produce a conveyer-pan strong enough to receive, to hold, and to carry the load and which, nevertheless, will not buckle, become dish-shaped, or otherwise become distorted by the hammering action from the falling lumps of ore, metal, or the like.

I claim—

1. A conveyer consisting of the usual chains and traveling portions with a series of pans, each consisting of comparatively thin metal portions and fibrous linings for such portions as receive the blows of the falling material.

2. In a conveyer for heavy, lumpy materials, a series of conveyer-pans with proper supports therefor, each pan consisting of a thin metal body portion with fibrous linings on the bottom of such pans.

3. In a conveyer for heavy, lumpy materials, a series of conveyer-pans with proper supports therefor, each pan consisting of a thin metal body portion with wood linings on the bottom of such pans.

4. In a conveyer for heavy, lumpy materials, a series of conveyer-pans with proper supports therefor, each pan consisting of a thin metal body portion with a yielding lining on the bottom of such pans adapted to protect the bottom from the hammering effect of such lumps.

5. In a conveyer for heavy, lumpy materials, a series of conveyer-pans with proper supports therefor, each pan consisting of a thin metal body portion with relatively elastic linings on the bottom of such pans.

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