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1,452,012

G. F. WIESECKEL

COAL TRIMMER

Filed Aug. 29, 1921

Fig. 1.

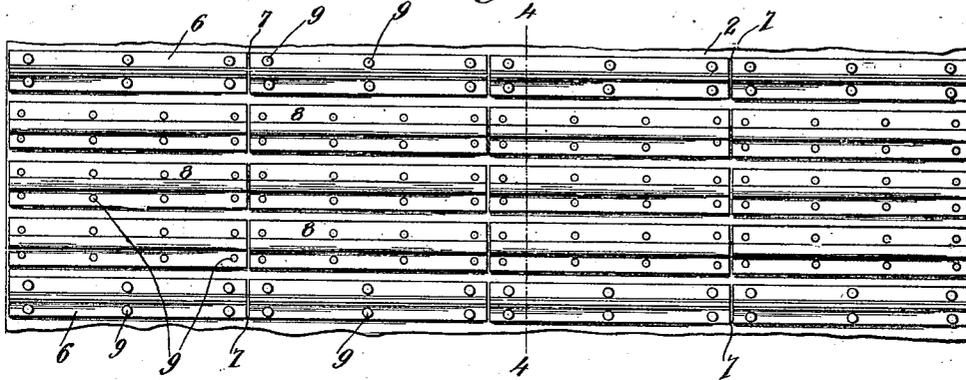


Fig. 2.

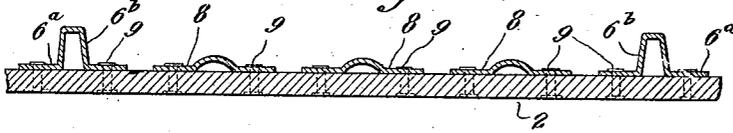


Fig. 3.

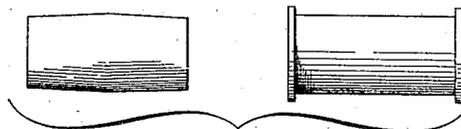
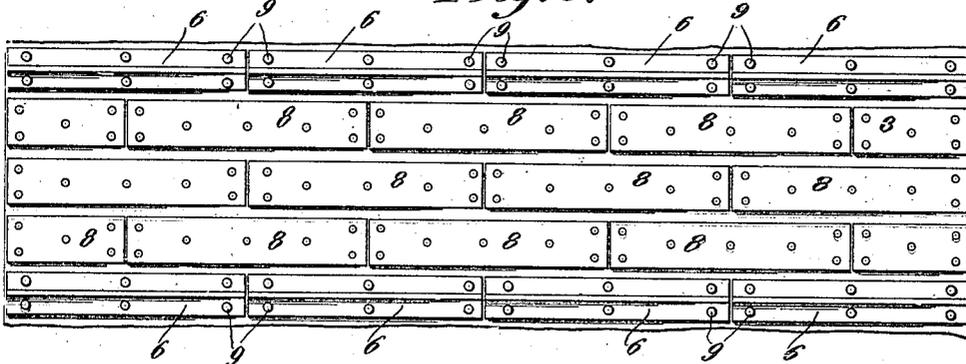


Fig. 4.

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UNITED STATES PATENT OFFICE.

GEORGE FRANK WIESECKEL, OF HAGERSTOWN, MARYLAND, ASSIGNOR TO WESTERN MARYLAND RAILWAY COMPANY, A CORPORATION OF MARYLAND AND PENNSYLVANIA.

COAL TRIMMER.

Application filed August 29, 1921. Serial No. 496,566.

To all whom it may concern:

Be it known that GEORGE F. WIESECKEL, a citizen of the United States, and resident of Hagerstown, in the county of Washington, in the State of Maryland, has invented certain new and useful Improvements in Coal Trimmers, of which the following is a specification.

This device relates to trimmers for delivering coal from a chute to a remote position such as are used in coal yards, docks, ships, and the like.

More particularly, this invention has to do with providing a protecting armor for the belts of such trimmers with the object of imparting maximum movement to the coal delivered to the belt with the minimum amount of damage and wear to the body of the belt.

Another object is to provide an armor which will be as flexible as possible to allow the belt to pass around the pulleys with ease and without straining the rivets of the armor or other means of fastening, yet maintaining a rigidity consistent with the maximum efficiency of the device.

These and other objects I secure by providing the endless belt of a coal trimmer of ordinary construction with lateral strips of armor extending the entire width of the belt but preferably in more than one piece. The best form of armor of which I am now aware consists of strips of iron of a substantial inverted T shape placed laterally of the belt at short intervals. Between pieces of said armor, I place additional strips of flat metal which serve to protect the face of the belt body from wear. The number of flat strips will be determined by their width and the distance of separation of the T shaped pieces, however, the maximum number are to be placed on the belt yet retaining the natural flexibility of the belt body material.

The invention further consists of the construction, arrangement and combination of parts more fully hereinafter described and shown in the drawings which are illustrative only of the most desirable form of the invention of which I am now aware.

In the drawings:

Fig. 1 is plan view of a portion of the belt showing a preferred form of armor on an enlarged scale.

Fig. 2 is a sectional detail on line 4—4 of Fig. 1.

Fig. 3 is a plan view similar to Fig. 1 of a modified form of armor showing staggered interruptions.

Fig. 4 is a detail showing two forms of pulleys.

Referring now more particularly to the drawings in which like characters of reference designate like parts throughout the several views, the numeral 1 represents a coal chute of ordinary construction adapted to deliver coal to the endless belt 2 of the trimmer, carried upon pulleys 2' which are mounted in bearings 3 carried by the frame 4 of the machine and driven by any suitable means such as motor 5. The usual means for tightening the belt 2 is shown diagrammatically at 2^a.

The belt 2 in the preferred form consists of a body of laminated fabric such as canvas stitched or otherwise secured together to form an endless length of material of a width equal or slightly less than the width of the pulleys. Upon this belt is secured in any desirable manner inverted T armor strips 6 preferably of pressed material because of its inherent flexibility, the short arms of the T 6^a being slightly separated for a purpose hereinafter described. Such armor 6 does not extend in one piece the entire width of the belt but is preferably provided with a broken joint separated to a slight extent as at 7. It will be found necessary to increase or decrease the number of members 6 according to their length and the width of belt used. Between T members 6, I place flat metal armor strips 8 of a number equal to members 6 also slightly separated both endwise and from each other. All armor may be secured to the belt body in any suitable manner such as rivets 9.

It will be noticed that the portions 6^b of the armor are provided with sharp abrupt edges which tend to impart a horizontal movement to the coal delivered to the belt. Any variation from such construction tends to throw the coal in a more or less vertical trajectory thus lessening the ultimate throw of the coal and detracting from the efficiency of the device.

By the use of T armor having its parts 6^a separated I obtain a flexibility in the armor

commensurate favorably with that of the belt body with the result that there is no tendency to pull out the rivets when the armor travels around the pulley. It will be readily seen that this is true as in passing over the curved surface, portions 6^a are drawn toward each other somewhat, allowable because of the double separated portion 6^b, and tend to assume a slightly curved position conforming to the periphery of the pulley.

A similar construction to a modified degree is also desirable in members 8.

The width of armor 6 and 8 and the distance of separation is such as to allow the belt to pass around the pulley with the maximum amount of flexibility which will necessitate a more or less number of spaces between members, the latter being of a comparatively narrow width.

By breaking the continuity of the armor laterally, I secure a rigidity not found were the armor to extend the entire width of the belt. This action is secured by reason of the fact that each individual section of armor receives its own impact from the body of coal and does not transmit the same to the other members.

It may be found desirable to stagger the position of the joints in the armor to more evenly distribute the strain on the belt.

Various designs of pulleys may be used such as one of cone construction having a raised portion at the center of its periphery tending to keep the belt centered, or a pulley having a cylindrical contact surface with flanges on each end thereof.

A cast inverted T form of armor may be used in combination with ordinary flat strips, and such a combination will give beneficial results but is less efficient than the preferred form of my device.

I claim:

1. A belt for trimming coal having strips of armor arranged laterally thereof, said strips including a member of inverted T-shape, having a doubled upright portion separated at its base and capable of relative movement as the belt passes over a pulley.

2. The device of claim 1, the separated portion of the strip being continuous throughout its length.

3. A belt for trimming coal comprising a body of flexible material provided with armor, extending laterally thereof, said armor having an interrupted continuity.

4. The device of claim 3, said armor comprising metallic strips, the interruption in each strip being staggered in relation to the interruption in its neighbor.

In testimony whereof I affix my signature.

GEORGE FRANK WIESECKEL,