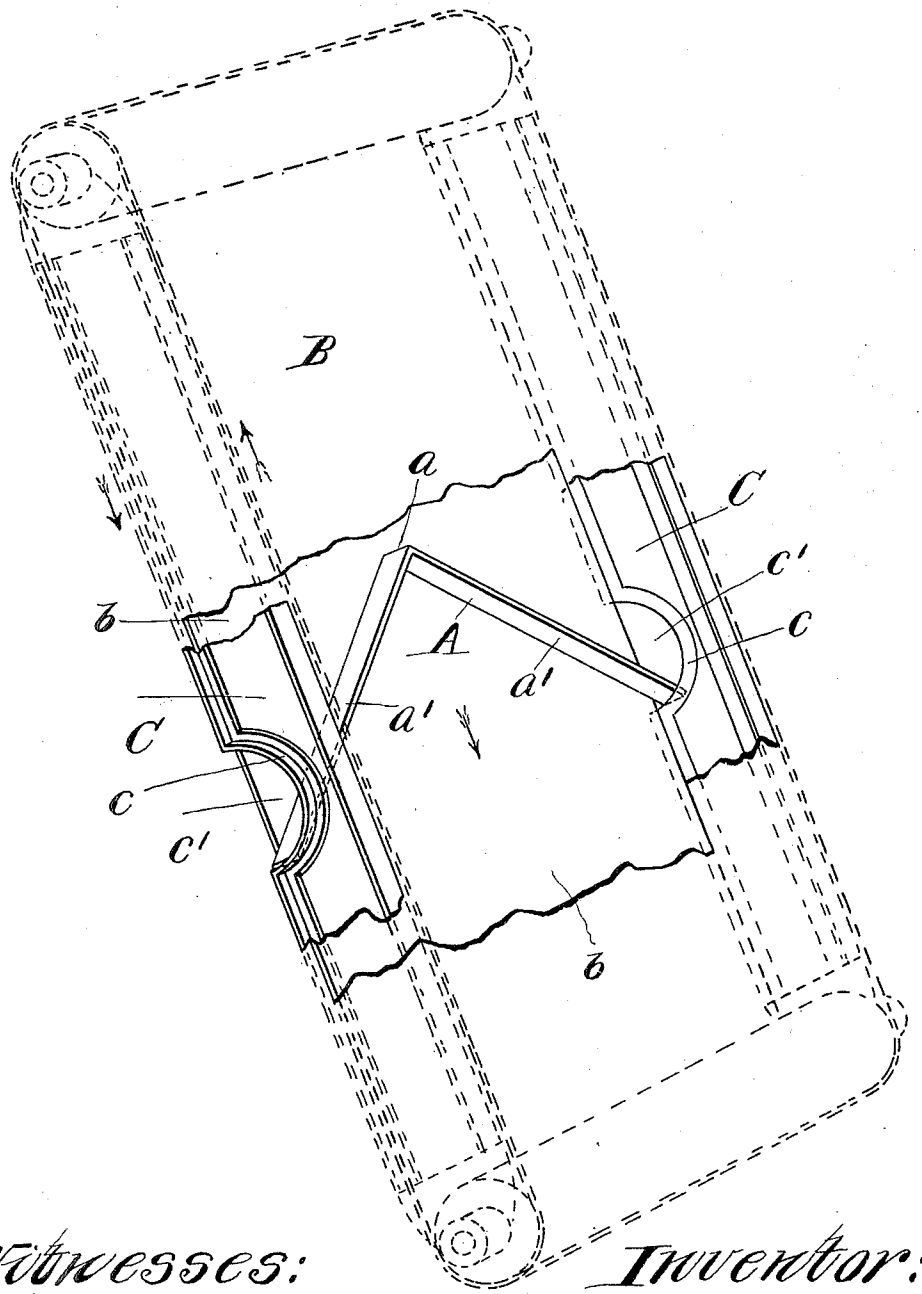
No. 689,881. Patented Dec. 31, 1901.

H. S. HOY.

BELT CLEANER.

(Application filed Feb. 16, 1901.)

(No Model.)



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BELT-CLEANER.

SPECIFICATION forming part of Letters Patent No. 689,881, dated December 31, 1901.

Application filed February 16, 1901. Serial No. 47,684. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. HOY, a citizen of the United States, residing at Harvey, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Belt-Cleaners, of which the following is a specification.

My invention relates to devices for cleaning or scraping the surfaces of belts, and particularly to a form of cleaner especially adapted for cleaning the inner surface of the elevator or carrying belt of an excavating-machine, such as a grading and ditching machine.

Objects of my invention are to provide a simple and effective form of belt-cleaner adapted to scrape the inner surface of the lower leaf of the belt and discharge the dirt or other substance at either side thereof and to provide a construction tending to facilitate the discharge and prevent clogging.

To the foregoing and other useful ends my invention consists in matters hereinafter set forth and claimed.

My invention is applicable to any desired construction of excavating or grading and ditching machine in which the excavated soil is taken by an endless conveyer-belt arranged to pass about suitably-located rolls, a construction of machines of such class being shown, for example, in Letters Patent of the United States to Edwards and Gray, No. 636,506, dated November 7, 1899.

The accompanying drawing shows in perspective a belt conveyer or elevator equipped with a cleaning device embodying the principles of my invention, the cleaner and adjacent parts being shown in full lines, while the balance of the conveyer is shown in dotted lines.

As thus illustrated, the wedge-shaped cleaner A is preferably arranged between the upper and lower leaves of the belt B, it being observed that the corner or angle *a* of the cleaner points in an opposite direction to the movement of the lower leaf *b*. With this arrangement the downwardly and outwardly diverging portions *a'* of the cleaner will bear against the upper surface of said lower leaf *b*, it being understood that the application of the cleaner in this manner is for the purpose of removing objectionable accumulations from the inner surface of said belt, such accumulations occurring, for instance, in operating the carrying-belt of an ordinary grading and ditching machine. These flaring or outwardly-diverging portions *a'* are, it will be observed, preferably straight and so formed as to present straight edges to the belt and smooth unbroken deflecting-surfaces to the dirt or other substance carried by and moving with the belt.

While I do not limit myself to any particular construction, it will be seen that in the present embodiment of my invention the side bars C of the excavator-elevator or conveyer are provided with arch-like portions *c*, located at the terminals of the portions *a'* of the deflector and providing at such points a couple of lateral discharge-openings *c'*. Through these openings the dirt or other substance collected by the cleaner is discharged at either side of the conveyer. It will be observed that the ends of the cleaner project within said discharge-openings in such manner as to make substantially the entire width of each opening available for the purpose of discharge. It will be understood that any suitable construction or arrangement can be adapted for securing the cleaner in place. Thus it will be seen that my improved belt-cleaner is simple and effective and adapted to remove substances from the surface of a belt without danger of clogging and that my invention is particularly applicable to excavating-machines for the purpose of removing objectionable accumulations of dirt from the inner surface of the carrying-belt, and especially from the inner surface of the lower leaf of the endless conveyer-belt employed in grading and ditching or like soil-excavating machines in which loose soil commonly finds its way in between the leaves of the belt to an extent to interfere with the proper working of the same over the belt-rolls at opposite ends of the elevator-frame. The portions of the belt which in such machines more particularly require cleaning are the marginal portions of the inner surface of the lower belt-leaf, and hence while the union of the two oblique portions of the cleaner or scraper shown at a point at or near the middle longi-

tudinal line of the belt-leaf forms a more complete cleaner or scraper and also permits each oblique scraper portion to brace and steady the other it is understood that the scraper portions which are arranged oblique to the line of movement of the lower belt-leaf need not for some purposes be united at their inner ends, but, to the contrary, can be more or less separated at such ends and that, if desired, they can also in such case be connected together by a transverse rod or bar, and also that such scraper portions could be relatively spaced along the belt—that is to say, they need not be set opposite one another, as shown.

From the foregoing it will be seen that the stationary wedge or V shaped scraper is arranged with its apex pointing in a direction opposite to the direction in which the lower leaf of the belt travels and with its opposite sides secured to opposite sides of the frame and that the latter is at such points adapted to form lateral discharge-passages for the soil scraped from the belt; also, that the oblique sides of this scraper which are opposed to the travel of soil along with the lower belt-leaf form deflectors and guides, along which the scraped-up soil will be caused to slide toward the discharge-passages by reason of the forward travel of the belt.

What I claim as my invention is—

1. The combination in an elevating-conveyer for excavating-machines, of the endless belt; the frame; and a stationary wedge or V shaped scraper arranged over the lower leaf of the belt and having its apex pointing in a direction opposite to the direction of travel of such lower leaf, and its opposite side portions secured to opposite sides of the frame, said frame being adapted at such points to provide passages for the discharge of soil, and the oblique sides of the scraper being arranged to form guides and deflectors along which the scraped-up soil will be caused by the movement of the belt to slide toward the lateral discharge-passages.

2. The combination of the carrying-belt of the elevator or conveyer of an excavating-machine, the side bars of said elevator or conveyer formed with arch-like portions providing a couple of lateral discharge-openings, and a wedge-shaped cleaner arranged between the upper and lower leaves of said belt, and composed of two downwardly and outwardly diverging portions, the corner or angle of said cleaner pointing in an opposite direction to the movement of said lower leaf, and the outer ends of the cleaner extending into said discharge-openings in such manner as to make the greater part of each opening available for the purpose of discharge, substantially as described.

3. The combination of the belt B, the side bars of the elevator-frame provided with the arch-like portions c, providing discharge-openings c', and the cleaner A composed of the outwardly and downwardly diverging portions a', substantially as shown and described.

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