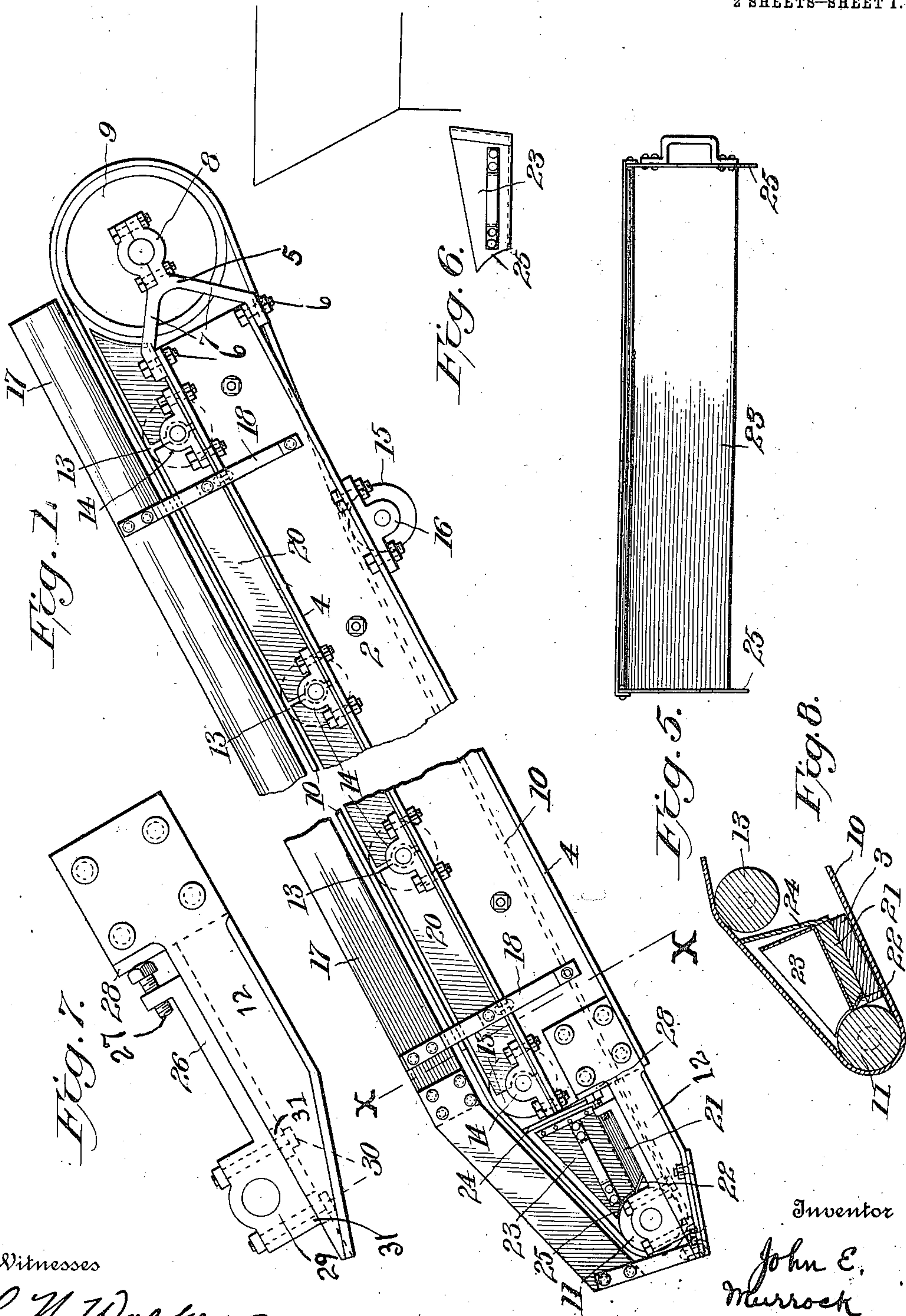


J. E. MURROCK.  
CONVEYER FOR GRADING AND THE LIKE.  
APPLICATION FILED JAN. 18, 1910.

999,515.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.



Witnesses

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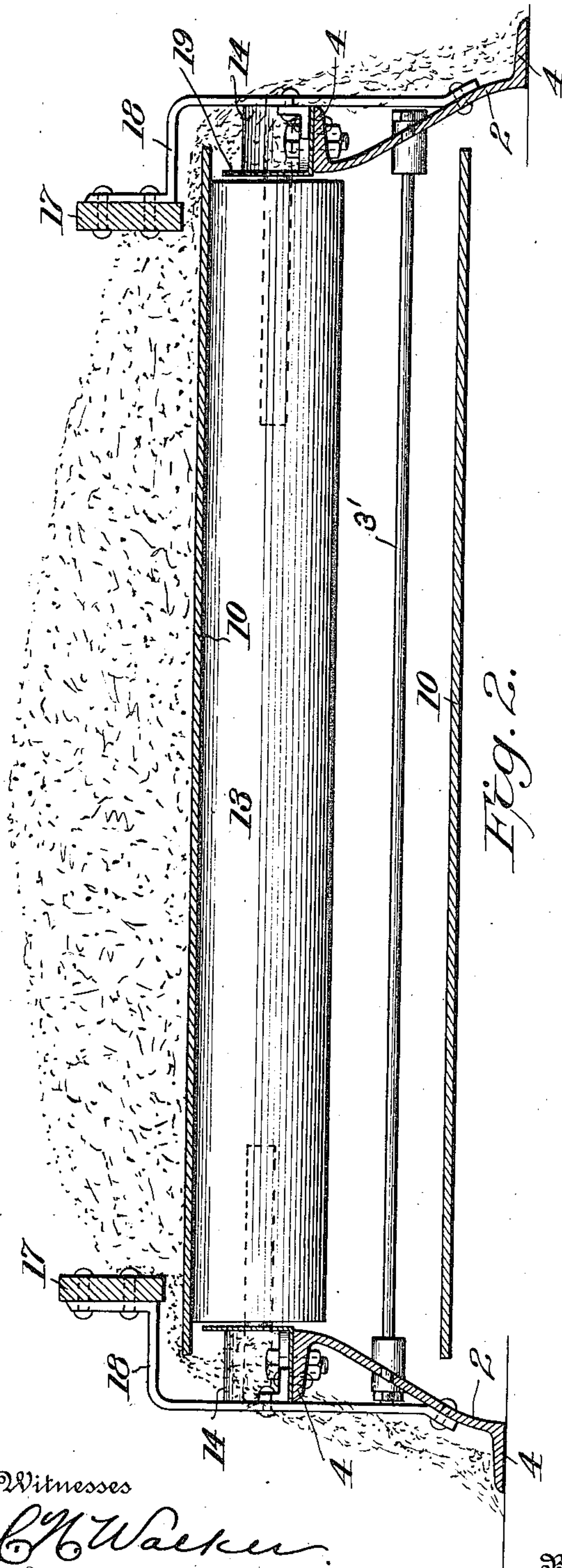


Fig. 2.

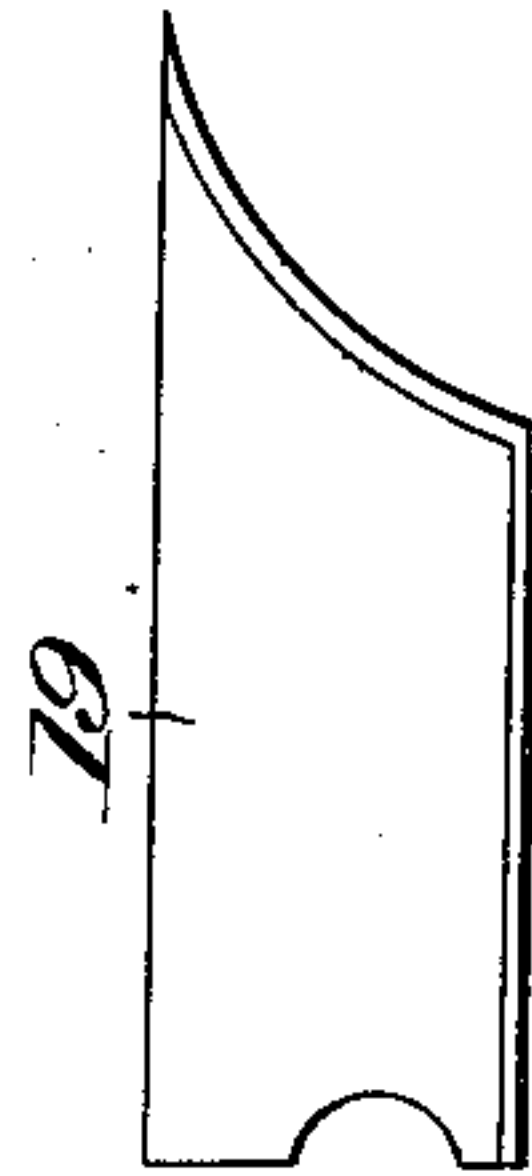


Fig. 4.

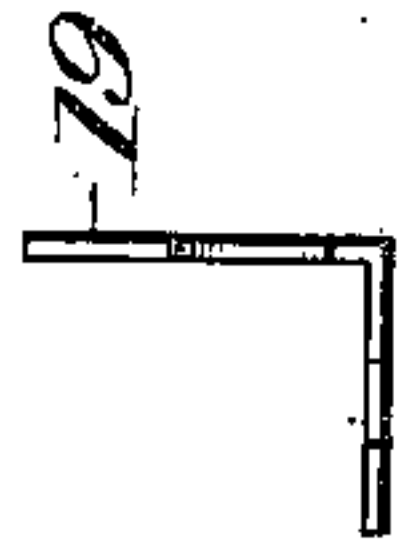


Fig. 3.

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# UNITED STATES PATENT OFFICE.

JOHN E. MURROCK, OF BARNES CORNERS, NEW YORK.

CONVEYER FOR GRADING AND THE LIKE.

999,515.

Specification of Letters Patent.

Patented Aug. 1, 1911.

Application filed January 18, 1910. Serial No. 538,606.

*To all whom it may concern:*

Be it known that I, JOHN E. MURROCK, a citizen of the United States, residing at Barnes Corners, in the county of Lewis and State of New York, have invented new and useful Improvements in Conveyers for Grading and the Like, of which the following is a specification.

This invention relates to an improved conveyer to be used in construction work on roads, in building tunnels and like uses, and has for its primary object the provision of a device of this character which has effectual means for keeping the operative parts free from dirt, rocks or other material being conveyed.

Briefly stated the conveyer herein shown as embodying the several features of my invention, comprehends a structure comprising a frame, a drum and series of rollers mounted in said frame, an endless conveyer belt trained about the rollers and drum, and shields, extending parallel with the sides of the main frame arranged to catch the droppings of material and prevent the same from falling upon the underneath portion of the belt.

Another novel feature of the invention is the provision of means for readily catching and removing such material as may find its way to the lower lap or returning portion of the belt.

Other characteristics and patentable details in the construction and operation of the several parts of the conveyer will be apparent from the detailed description hereinafter when read in connection, with the accompanying drawings, forming part thereof, in which:—

Figure 1 is a side elevation of the conveyer. Fig. 2 is a cross section taken on the line XX Fig. 1. Figs. 3 and 4 are detail views of the dirt shield. Fig. 5 is a plan view of the dirt receptacle. Fig. 6 is an end detail view of the dirt receptacle and:—Fig. 7 is a side elevation illustrating the adjustment of roller. Fig. 8 is a longitudinal section of the lower end of the conveyer.

Referring more specifically to the drawings, wherein like reference characters refer to corresponding parts in the several views, 1 designates a main frame, comprising the side members 2 which are connected by suitable transverse members. These side members are inclined downwardly and outwardly at an angle to the perpendicular for a pur-

pose hereinafter described, and at their upper and lower ends have outwardly projecting web portions or flanges 4.

5 is a bracket secured to the frame by bolts 6 passing through the ends of the bracket arms 7 and through the flanges 4 of the side members 2 of the main frame. Mounted in bearings 8 formed in said bracket is a drum 9 driven by a suitable source of power, not shown.

10 designates a conveyer belt which is located between the side members of the main frame and is trained about drum 9 and roller 11 at the front and rear ends respectively, of said frame. The rear roller 11 is mounted in a rearwardly extending bracket 12 carried by the main frame and in order to facilitate the reception of material by the belt, the said roller is placed as low as practicable. The bearing 29 supporting roller 11 is made adjustable with respect to the bracket 12 for the purpose of tightening the conveyer belt, and to this end the said bearing is provided with an arm 26 through which a bolt 27 works. When screwed to the left the bolt 27 will bear against the wall 28 of the bracket 12 and force the roller 11 rearwardly thus tightening the conveyer belt. It will be seen that the bearings 29 which carry said roller are adjustably secured to the bracket 12 by bolts 30 passing through slots 31 formed in said bracket. The upper lap of the conveyer belt is supported at intervals by rollers 13 which are rotatively mounted in bearings 14 bolted to the upper flanges 4 of the side members of the main frame and as shown are arranged in an inclined plane above that of the roller 11. A roller 15 over which the lower lap of the conveyer belt runs is rotatively mounted in bearings 16 also bolted to the lower flange 4 of the side members. Boards 17 are arranged slightly above and on either side of the top lap of the belt for the purpose of preventing any considerable quantity of the material being conveyed from falling off the sides of said belt. These boards are carried by angled supports 18 which in turn are bolted to the side members 2. A shield 19 is provided for directing material falling from the top lap of the belt, outwardly and away from the bottom lap thereof. Said shield is made of sections 20 formed of sheet metal plates L shaped in cross section, bolted to flanges 4 of side members 2, the same bolts which secure the bearings 14 answering the purpose



of fastening means for said shield. As heretofore stated the side members of the frame are inclined downwardly and outwardly thus permitting the upper portion thereof to lie between the upper and lower laps of the conveyor belt without interfering with the operation thereof, and as is clearly shown in the drawings the shields 19 which are carried by the side members are in position to catch the dropping material and direct the same away from the lower lap of the belt.

Provision is made for collecting and readily removing any foreign matter which may find its way to the inside of the belt. This consists of a board 21 carried by the arm 26 of the bracket 3 which board is provided with a steel scraping edge 22 bearing against the periphery of the roller 11. Projecting upwardly from the forward edge of said board is a piece of belting or other suitable material 24 adapted to engage and scrape the conveyor belt. A receptacle 23 is provided to catch and retain the material scraped from the belt and roller by scrapers 22 and 24. The said receptacle extends through an opening formed in one of the side members 2 and rests upon the board 21. As shown the sides of the receptacle 23 are tapered to correspond to the incline of the belt 10 and are cut away as at 25 to conform to the curvature of the roller 11.

The operation of my improved conveyer will be obvious from the foregoing but may be briefly stated as follows: The forward end of the conveyer is attached in a suitable manner to a wagon or other vehicle not shown and the lower end thereof drags upon the ground. The dirt is thrown on the lower end of the conveyer with a plow or disk or shovel and is carried up to and deposited within the vehicle, while any falling dirt which may pass the shield and fall upon the lower lap of the belt is carried around the roller 11 until it comes in contact with the scraper 22 when it will be scraped therefrom and fall into the receptacle 23. Any material still clinging to the under face of the belt after the same passes around the roller 11 will be scraped therefrom by the belt scraper 24 and fall within the receptacle 23, which receptacle when full can readily be withdrawn and emptied.

What I claim is:

1. In a conveyer, a main frame, a drum and roller mounted in said frame, an endless belt on said drum and roller, a scraper for said belt and said roller, a receptacle adjacent said roller, said receptacle being

cut away at one end to conform to the periphery of said roller. 60

2. An endless conveyer, comprising a main frame, a drum and roller mounted in said frame, a belt on said roller and drum, scrapers for said belt and said roller, a dirt receptacle extending transversely of said belt, said receptacle being open at its top and one end thereof and said open end being cut away to conform to the curvature of said roller. 65

3. In a conveyer, the combination of a drum, a roller, and an endless belt thereon, a scraper and means supporting it against the roller between the folds of the belt; and a receptacle having a bottom removable from between the folds of the belt and normally stationarily supported in position covering the scraper blade, with the edge of the removable bottom close to said scraper edge in proximity to the roller. 70 75

4. In an endless conveyer, a main frame having flanged side members extending longitudinally of the conveyer; guide rollers; journal bearings for said rollers on said flanges; a conveyer belt on the rollers; and sectional shields, comprising flanges adapted to be fastened to said flanges of the side members and guards sustained thereby inside the bearings of the roller and under the belt at the level of the roller tops. 80 85

5. In an endless conveyer, a main frame having side members extending longitudinally of the conveyer; guide rollers; journal bearings therefor on said side members; a conveyer belt on the rollers; and shields extending along said side members under the belt, arranged in sections set inside the bearings of the roller, the ends of the sections being recessed in segments conforming to the adjacent rotating part intervening between two section ends. 90 95 100

6. In an endless conveyer, a main frame having side members extending longitudinally of the conveyer; guide rollers; journal bearings for said rollers on said side members; a conveyer belt on the rollers and shields on said side members, arranged inside of the bearings thereof in sections between the successive rollers substantially at the level of the tops thereof. 105

Signed by me at Barnes Corners, New York, this 3rd day of January, 1910. 110

JOHN E. MURROCK.

Witnesses:

C. B. HUBBARD,  
R. M. JONES.