

No. 707,613.

Patented Aug. 26, 1902.

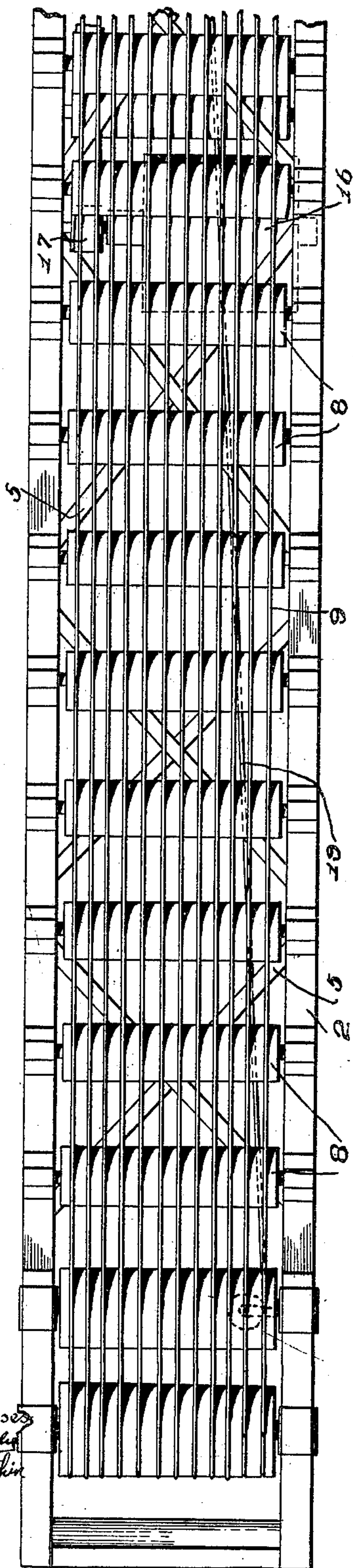
W. L. McCABE.
ENDLESS CONVEYER.

(Application filed Nov. 21, 1901.)

(No Model.)

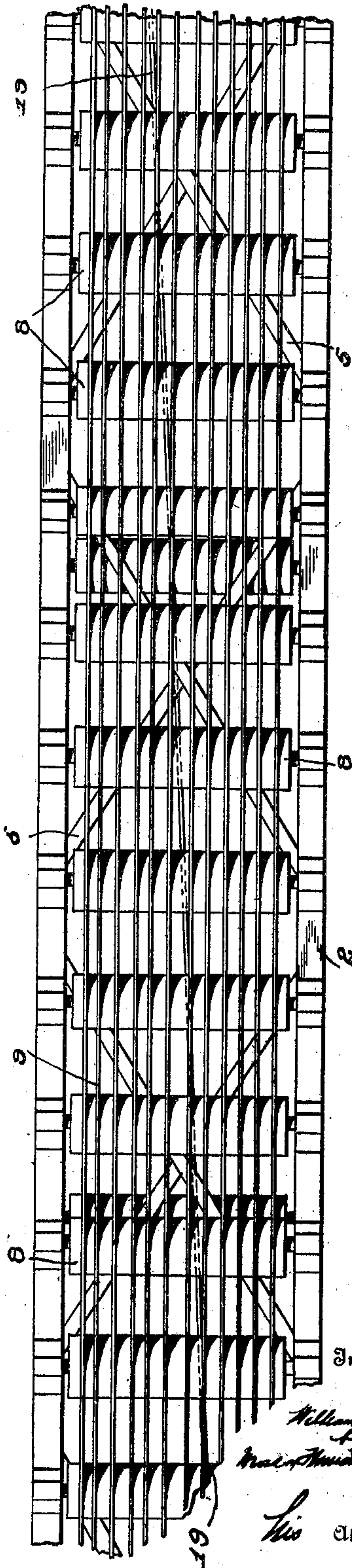
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Fig. 1.



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Fig. 2.



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Fig. 6.

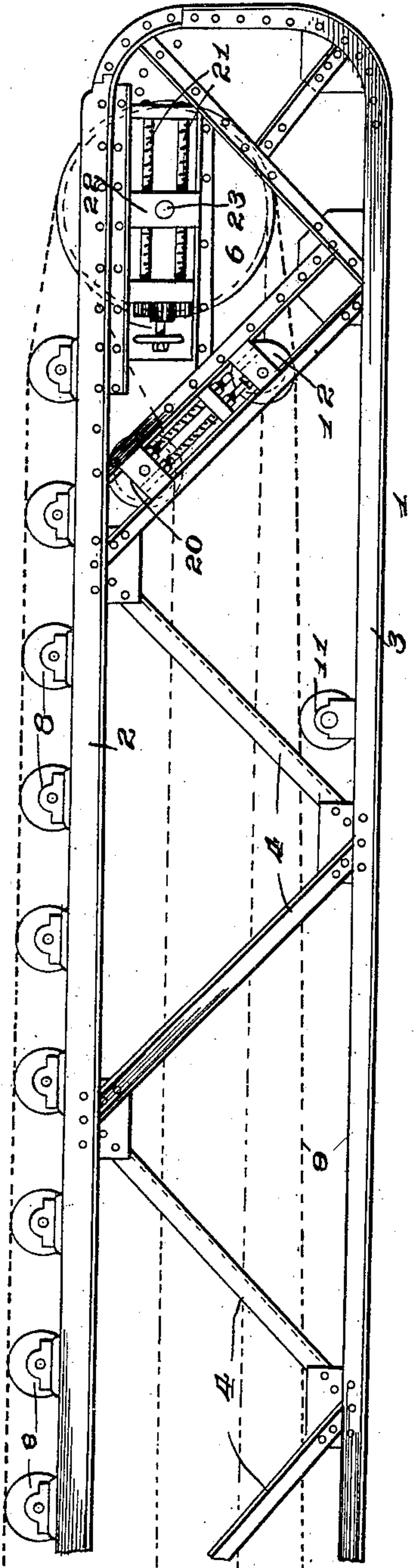
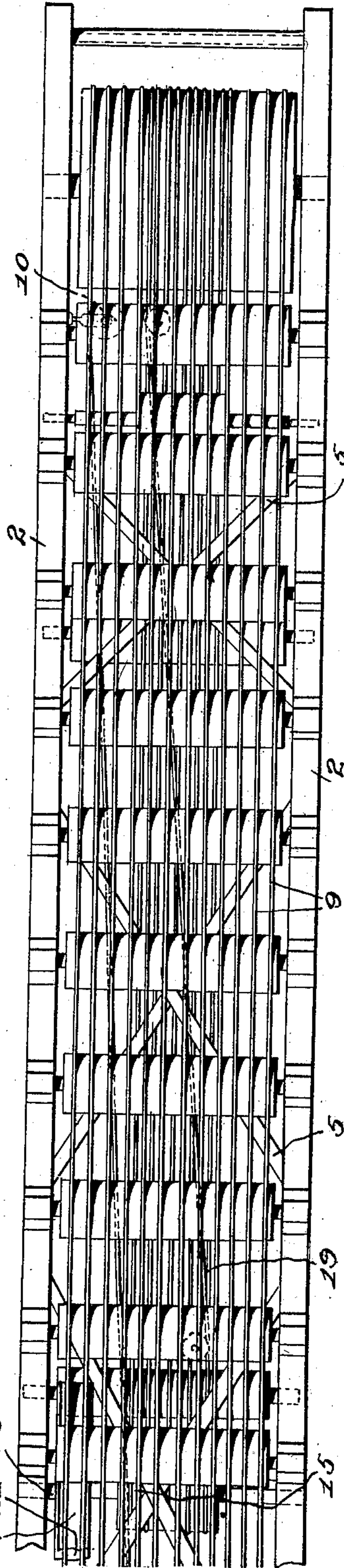


Fig. 3.



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Fig. 4.

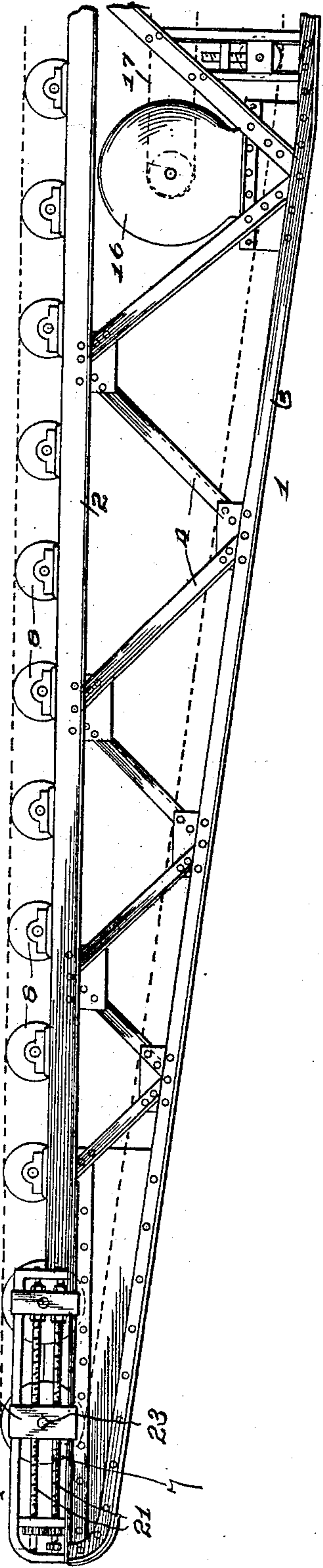
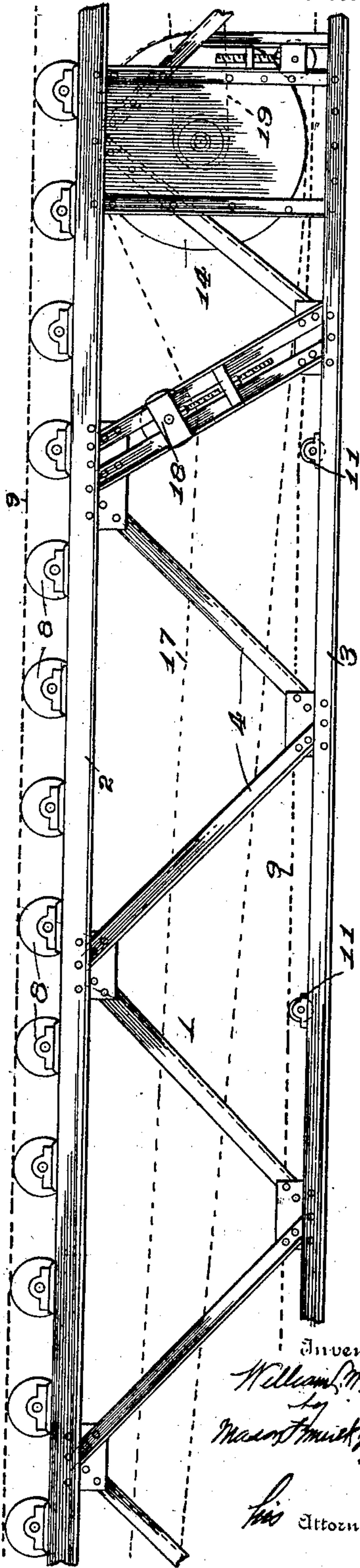


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM LEGGETT McCABE, OF SEATTLE, WASHINGTON.

ENDLESS CONVEYER.

SPECIFICATION forming part of Letters Patent No. 707,613, dated August 26, 1902.

Application filed November 21, 1901. Serial No. 83,207. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LEGGETT McCABE, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Endless Conveyers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in endless conveyers, and more particularly to the portable type.

It consists of a suitable framework, a single cable carried thereby, pulleys at either end of said framework, the said cable being wound a number of times over said pulleys for the length of said framework, a similar cable interlacing with said first-mentioned cable on one of its pulleys, and means for imparting motion to said interlacing cable.

It also consists of certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a top plan view of one end of a conveyer embodying the features of my invention. Fig. 2 represents a similar view of the central portion of the same. Fig. 3 represents a similar view of the opposite end to that shown in Fig. 1, the three figures taken together completing the length of the conveyer; and Figs. 4, 5, and 6 represent in side elevation corresponding fragmentary views to those shown in the first three figures.

In the art to which the present invention relates it has been found desirable to produce a continuous belt formed of a single cable and driven to the best advantage, and in order to attain such results from such structure I employ, as seen in the accompanying drawings, a suitable framework, as 1, formed of upper parallel rails, as 2 2, and similar lower rails, as 3 3. Any desired form of diagonal braces, as 4 4, may be employed for connecting said upper and lower rails, and suitable horizontal braces, as 5 5, are employed for bracing the said pairs of upper and lower rails against lateral movement with respect to each other. Any other braces de-

sired may be employed; but I desire to attain a maximum of strength with a minimum of weight, and therefore use no more braces than are necessary.

Revolubly mounted transversely of one end of framework 1 is arranged a suitable drum or pulley, as 6, and at the opposite end of said framework is a similar but smaller pulley, as 7. At suitable intervals along the length of framework 1 and revolubly mounted upon the rails 2 are arranged any suitable number of rollers, as 8 8, each of which rollers is preferably provided with a plurality of circumferential grooves, and the said pulleys 6 and 7 have a like number of similar grooves over which travels a cable, as 9, which is a continuous line extending a plurality of times, corresponding in number to the number of grooves in each of said rollers, and forming the conveyer-belt. It will of course be readily observed that the continuation of the cable 9 will result in the fed portion thereof being always on the opposite end of its supporting-pulleys to the feeding portion thereof, whereby I have found it necessary to provide pulleys, as 10 10, on opposite sides of framework 1 and at opposite ends thereof, the said cable passing through the yoke supporting said pulleys 10, about said pulleys, and crossing the return portion of the remainder of itself beneath the same, the said return portion preferably being guided in its return and supported by any suitable number of circumferentially-grooved rollers, as 11 11, mounted upon rails 3 and held in a taut condition by any preferred form of belt-tightener, as 12.

At any suitable point within the framework 1 is mounted a rotatable shaft, as 13, carrying a comparatively large fixed pulley, as 14, and a comparatively small elongated fixed pulley, as 15. Any suitable motor, as at 16, is arranged at any desired point within framework 1 and imparts motion to pulley 14 by means of connecting-belt 17, or it will be understood that when the motor is in the form of a steam-engine I may, if desired, connect the piston of the same directly to pulley 14 by a suitable interposed pitman. When belt 17 is employed, however, I find it desirable to use a suitable belt-tightener, as 18, for retaining the same in a taut condition. With the ro-

tation of pulley 14 pulley 15 of necessity is revolved, and the said last-mentioned pulley being circumferentially grooved carries a cable, as 19, which is made up of one continuous line passed over a portion of pulley 6, which has a series of circumferential grooves arranged to receive the same spaced between the grooves for cable 9, whereby the two cables continually interlace without contacting with each other at any time. The last strand on one side of the belt formed by cable 19 is of course passed through suitable pulleys and crossed beneath the return portion of said belt similarly to the arrangement of cable 9.

Any suitable belt-tightener, as 20, is arranged in the framework 1 for governing the tautness of cable 19. Any suitable bolts, as 21 21, are designed to be threaded through each of the bearing-blocks, as 22, carrying the axles 23 23 of pulleys 6 and 7, the said bolts being provided with suitable intermeshing gear-wheels, whereby rotation thereof is designed to control the tautness of cable 9.

Although I have specifically set forth one particular embodiment of my invention, yet I wish it decidedly understood that I shall feel at liberty to deviate therefrom in all matters of detail within the spirit and scope of the present invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An endless conveyer, comprising a suitable framework, a single cable carried thereby, pulleys at either end of said framework, the said cable being wound a number of times about said pulleys and forming a continuous carrier-belt, a similar cable forming a belt and interlacing with said first-mentioned cable on one of its pulleys, and means for imparting motion to said interlacing cable, substantially as described.

2. In an endless conveyer, the combination with a suitable framework, of a circumferentially-grooved pulley mounted at each end of said framework, one of said pulleys having

a greater number of circumferential grooves than the other, a series of strands of cable passed over and moving within the grooves of said pulleys, a belt composed of a number of strands of cable passed about and operating within some of the circumferential grooves in one of said pulleys and interlacing with said first-mentioned cable, and means for imparting motion to said belt, substantially as described.

3. In an endless conveyer, the combination with a suitable framework, of a circumferentially-grooved pulley mounted at each end of said framework, a continuous cable passed over said pulleys, a circumferentially-grooved pulley mounted within said framework, means for imparting motion thereto, and a continuous cable moving within the grooves of said last-mentioned pulley and passed about and operating within circumferential grooves in one of said end pulleys and interlacing with said first-mentioned cable, substantially as described.

4. In an endless conveyer, the combination with a suitable framework, of a pulley mounted at one end thereof and provided with a plurality of circumferential grooves, a pulley mounted at the opposite end of said framework and provided with similar grooves on the same vertical plane, and also provided with a plurality of similar grooves spaced between said first-mentioned grooves, a continuous carrier-belt carried by said pulleys and formed of a single cable moving within the grooves of said pulleys on the same plane, and a second belt formed of a single cable moving within said second-mentioned grooves, and means for imparting motion to said second-mentioned belt, substantially as described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WILLIAM LEGGETT McCABE.

Witnesses:

C. A. BARNES,
FRANK OLIVER.