R. H. LANSING.

CONVEYER.

APPLICATION FILED APR. 6, 1921.

1,425,988.

Patented Aug. 15, 1922.

3 SHEETS—SHEET 1.

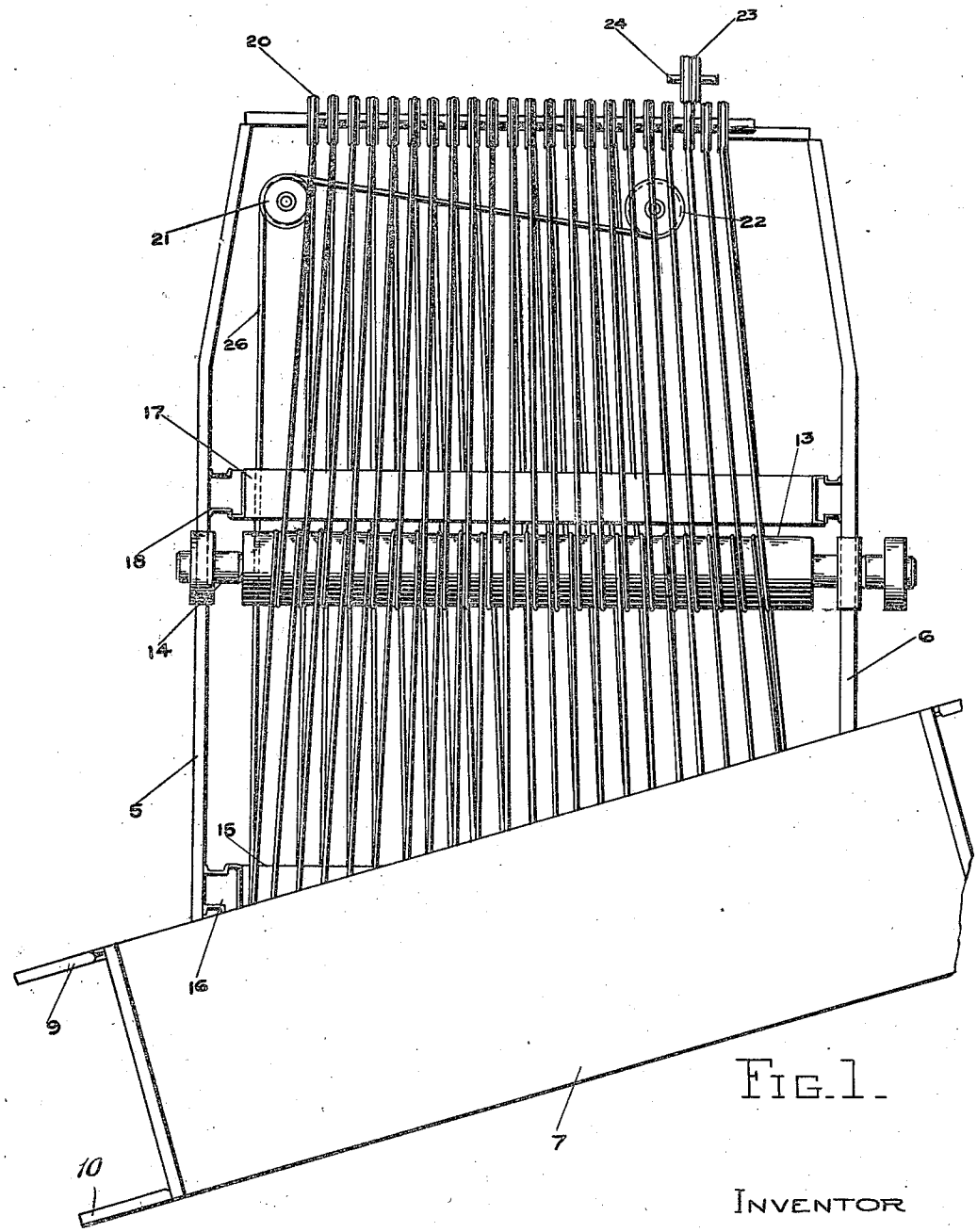


FIG. 1.

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Joseph J. O'Brien

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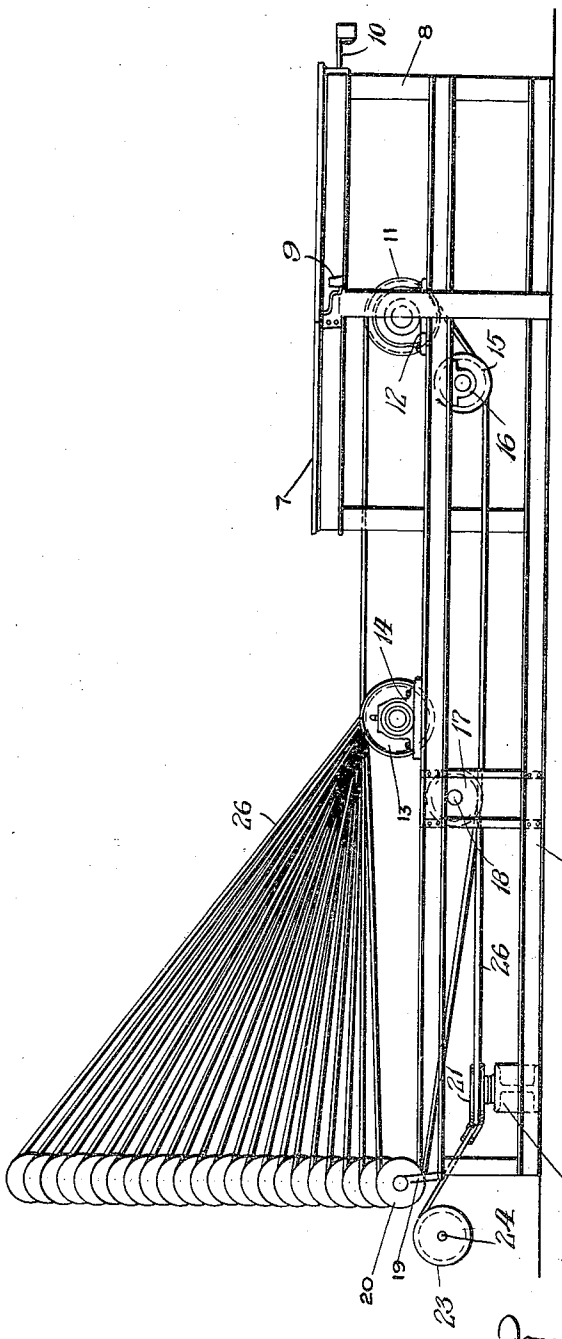


FIG. 2.

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3 SHEETS—SHEET 3.

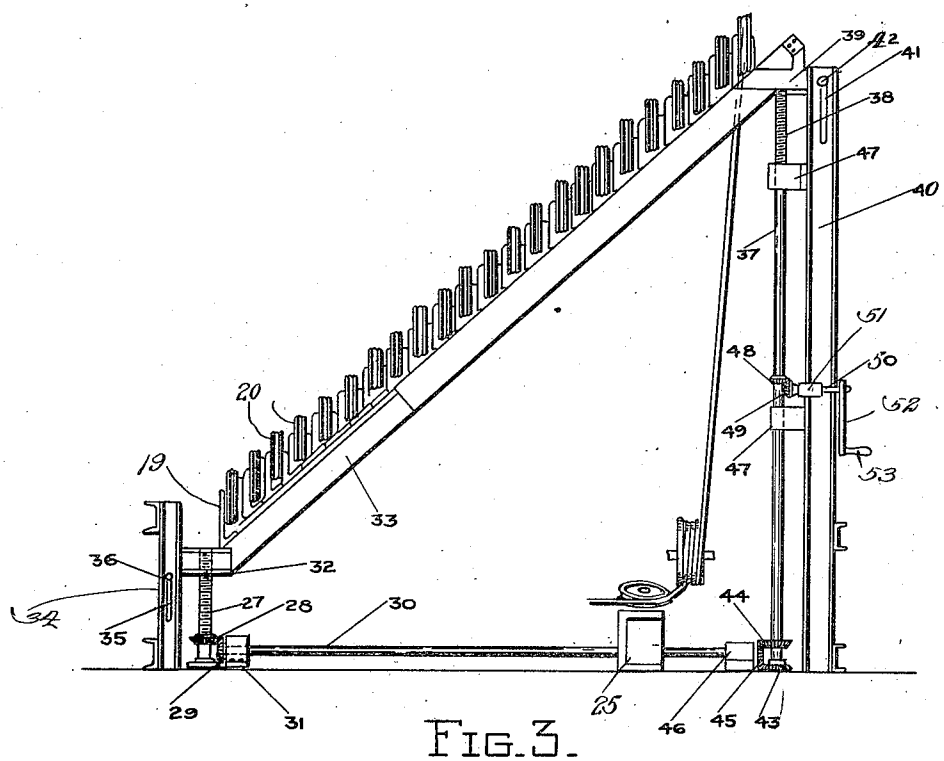


FIG. 3.

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UNITED STATES PATENT OFFICE.

RICHARD H. LANSING, OF CHICOPEE FALLS, MASSACHUSETTS.

CONVEYER.

1,425,988. Specification of Letters Patent. Patented Aug. 15, 1922.

Application filed April 6, 1921. Serial No. 459,186.

To all whom it may concern:

Be it known that RICHARD H. LANSING, a citizen of the United States of America, residing at Chicopee Falls, in the county of Hampden and State of Massachusetts, has invented certain new and useful Improvements in Conveyers, of which the following is a specification.

This invention relates to improvements in conveyers for use in handling fabric webs and the like, and its leading object is to provide a conveyer consisting of a continuous cable arranged to be driven by a roller or the like, so as to provide a series of substantially parallel fabric conveying runs or lengths, a portion of which are arranged in a horizontal plane and a portion of which are arranged to receive the fabric on the incline and to deliver it to the horizontal portion, to be taken up by workmen and delivered to the receiving table.

With the above and other objects in view this invention relates to certain new and useful constructions, combinations and arrangements of parts, clearly described in the following specification, and fully illustrated in the accompanying drawings, in which:

Figure 1 is a plan view.

Figure 2 is a side elevation.

Figure 3 is an end elevation showing the elevating means.

Referring to the accompanying drawings 5 and 6 designate the sides of a frame over one end of which a table 7 is diagonally disposed, said table being supported by the legs 8. This table is shown to be provided with suitable roll holding arms 9 and 10, which may be located on each end thereof, one end being shown completely equipped with said arms.

Located below the plane of the surface of the table 7 is a roller 11, which is journaled upon bearings 12 supported on the frame sides 5 and 6. This roller is journaled so that its axis lies at substantially right angle relation to the sides of the frame and so that it will be slightly spaced from one side of the table top 7.

Midway of the ends of the frame a second roller 13 is journaled upon the bearings 14 carried by the frame sides 5 and 6. Adjacent the roller 11 and located at a lower plane is a guide roller 15, which is journaled upon the bearings 16 carried by the frame sides 5 and 6. Adjacent the roller 13 is a roller 17, journaled upon the bearings 18 carried by the frame sides 5 and 6, the rollers 15 and 17 being disposed in parallel relation to the rollers 11 and 13 and being shown in a common horizontal plane. On the end of the frame a series of brackets 19 are mounted and these brackets are arranged in an incline of about 45 degrees so as to support a series of grooved wheels 20 for rotation thereon, each bracket being of U shaped construction to support one grooved wheel and the grooved wheels being mounted so that their axis will lie in the same vertical plane.

A grooved wheel 21 is journaled to one corner of the frame and a grooved wheel 22 is journaled near the opposite corner thereof. The periphery of the grooved wheel 22 is adapted to project into the plane described by a line passing under the periphery of the grooved wheel 23 which is adapted to be driven by a rope or the like and which is mounted upon the shaft 24. The grooved wheels 21 and 22 are mounted to rotate upon bearings 25.

An endless rope or cable 26 is trained over the grooved wheel 23 and then around the grooved wheel 22 and then passes over the grooved wheel 21 to the roller 10 and then is wound spirally around the roller 13 after leaving the roller 11 and then passes over the lowermost grooved wheel 20 and from the grooved wheel 20 passes under the rollers 17 and 15 and from the roller 15 over the roller 11 to spirally engage the roller 13 and then engage the second lowermost grooved wheel 20 from which the rope again passes under the rollers 17 and 15 to again engage the roller 11 and again spirally engage the roller 13 and then engage the third lowermost grooved wheel 20 and to successively describe this course over the next succeeding portions of the rolls 17, 13, 15 and 11 and the next succeeding grooved wheels 20.

The portions of the endless conveyer cable 26 reaching from the roller 15 to the roller 13 are disposed in a horizontal plane partly under the table 7 and the portions of the conveyer between the roll 13 and the grooved wheels 20 are disposed in various planes so that they will gradually shift the fabric at the point of its engagement with the grooved wheels 20 from an angular position to a horizontal position before projecting the table 7 from which the fabric can be removed

to the table. The angular disposition of the grooved wheel 20 may be adjusted by means of a lifting mechanism comprising a lifting worm shaft 27, the lower end of which carries a beveled gear 28 and this gear is engaged by a similar gear 29 carried by the horizontal shaft 30. The horizontal shaft 30 engages a supporting bearing 31 which also supports the lower end of the shaft 27, the upper end of said shaft engaging a horizontal portion 32 of the inclined frame member 33 on which the brackets 19 are mounted and having threaded relation with said portion 32. This portion or arm slides on a standard 34 which is provided with a longitudinal slot 35 whereby the arm 32 may be clamped by means of the bolt and nut 36. The opposite end of the frame member 33 is elevated by means of a shaft 37, the upper portion of which is provided with a worm 38 to engage an arm 39 carried by the frame member 33 and which arm has sliding connection on the standard 40 which is provided with a slot 41 whereby the arm 39 can be adjusted by means of the bolt and nut 42. The lower end of the shaft 37 is supported by a bearing 43 and said shaft carries a beveled gear 44 which engages a similar gear 45 carried by the shaft 30, the adjacent portion of the shaft 30 being supported upon the bearing 46. The shaft 37 is supported upon bearings 47 and said shaft carries a beveled gear 48 engaged by a similar beveled gear 49 on the horizontal shaft 50 arranged to operate in the bearings 51 and the shaft 50 is provided with a crank 52 having a handle 53 whereby the whole mechanism may be manually operated and the frame 33 elevated or lowered.

Having described my invention I claim:

1. A conveyer consisting of a frame, rollers journaled on the frame, a series of grooved wheels journaled on the frame and an endless cable trained over the rollers and grooved wheels to provide a series of parallel horizontal portions and a series of variably inclined portions.

2. A conveyer consisting of a frame, rollers journaled on the frame, a series of brackets, a series of grooved wheels journaled on the brackets, the brackets and wheels being disposed at an incline, and an endless cable trained over the grooved wheels and rollers, the endless cable being extended from the wheels to one of the rollers to provide a series of variably inclined lengths and from said roller to the other roller to provide a series of horizontal lengths, and a drive wheel having engagement with said cable for operating all of said lengths simultaneously.

3. In combination, a frame, a pair of rollers journaled on the frame, a table disposed diagonally on the frame, a support, a series of grooved wheels journaled at successively rising elevations on said support, a pair of guide rollers located beneath the first rollers, and a cable trained over said grooved wheels and first rollers and passed under the second rollers, said cable having spiral engagement with one of said rollers and providing a series of substantially horizontal lengths, a series of variably inclined lengths extending between the grooved wheels and the adjacent roller, of a common drive for the cable whereby all of said lengths will be maintained in motion in a common direction.

4. A conveyer consisting of a frame, a support, a series of grooved wheels mounted on said support in spaced relation to each other and at successively higher elevations, means for elevating the support relative to the frame, a roller, a second roller located between said first roller and said support, guide rollers located at a lower plane than said first guide rollers, and a cable trained over said rollers and grooved wheels, the cable having spiral engagement with the second roller.

5. A conveyer consisting of a frame, a support, a series of grooved wheels mounted on said support in spaced relation to each other and at successively higher elevations, means for elevating the support relative to the frame, a roller, a second roller located between said first roller and said support, guide rollers located at a lower plane than said first guide rollers, and a cable trained over said rollers and grooved wheels, the cable having spiral engagement with the second roller, and a table located over said first roller and spaced therefrom.

6. A conveyer consisting of a frame, a support, a series of grooved wheels arranged to rotate on the support at successively higher elevations, a worm for elevating the support, a gear drive for operating the worm, a roller mounted to rotate on the frame, a second roller on the frame disposed in parallel relation to the first roller on the frame, a flexible cable trained over the rollers and the grooved wheels to present a series of horizontal runs extending between the first and second rollers, guides for the cable, and means for driving the cable.

Signed by me at Chicopee Falls.

RICHARD H. LANSING.