R. G. NICHOLAS.

BOLT FOR CLOTH MEASURING MACHINES.

APPLICATION FILED APR. 13, 1909.

952,933.

Patented Mar. 22, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

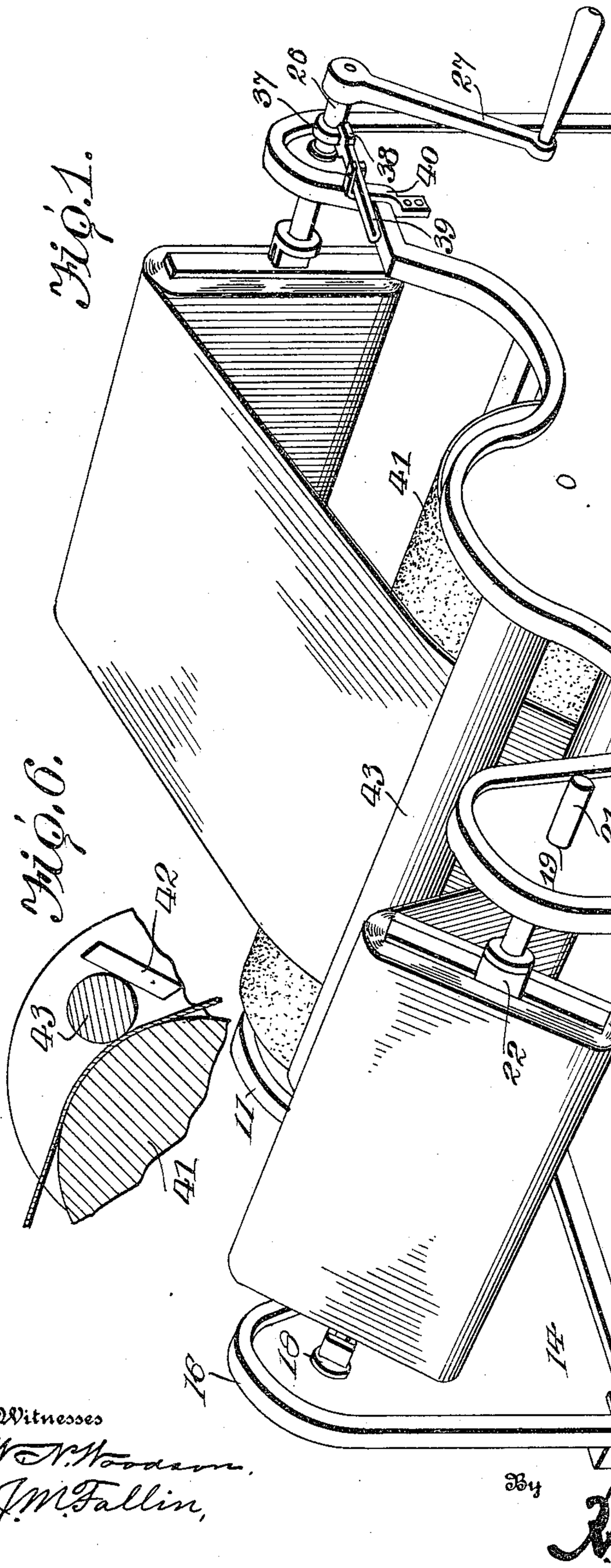
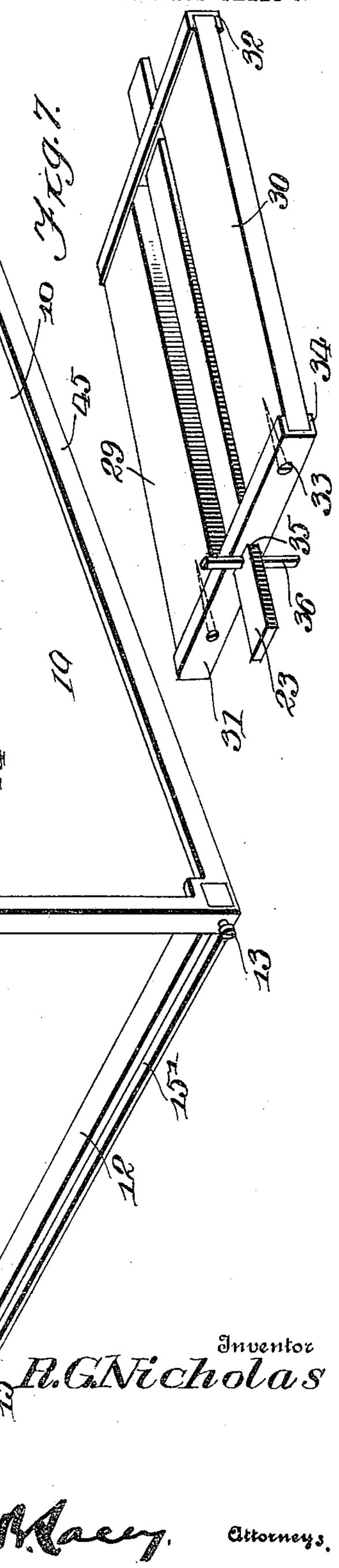


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

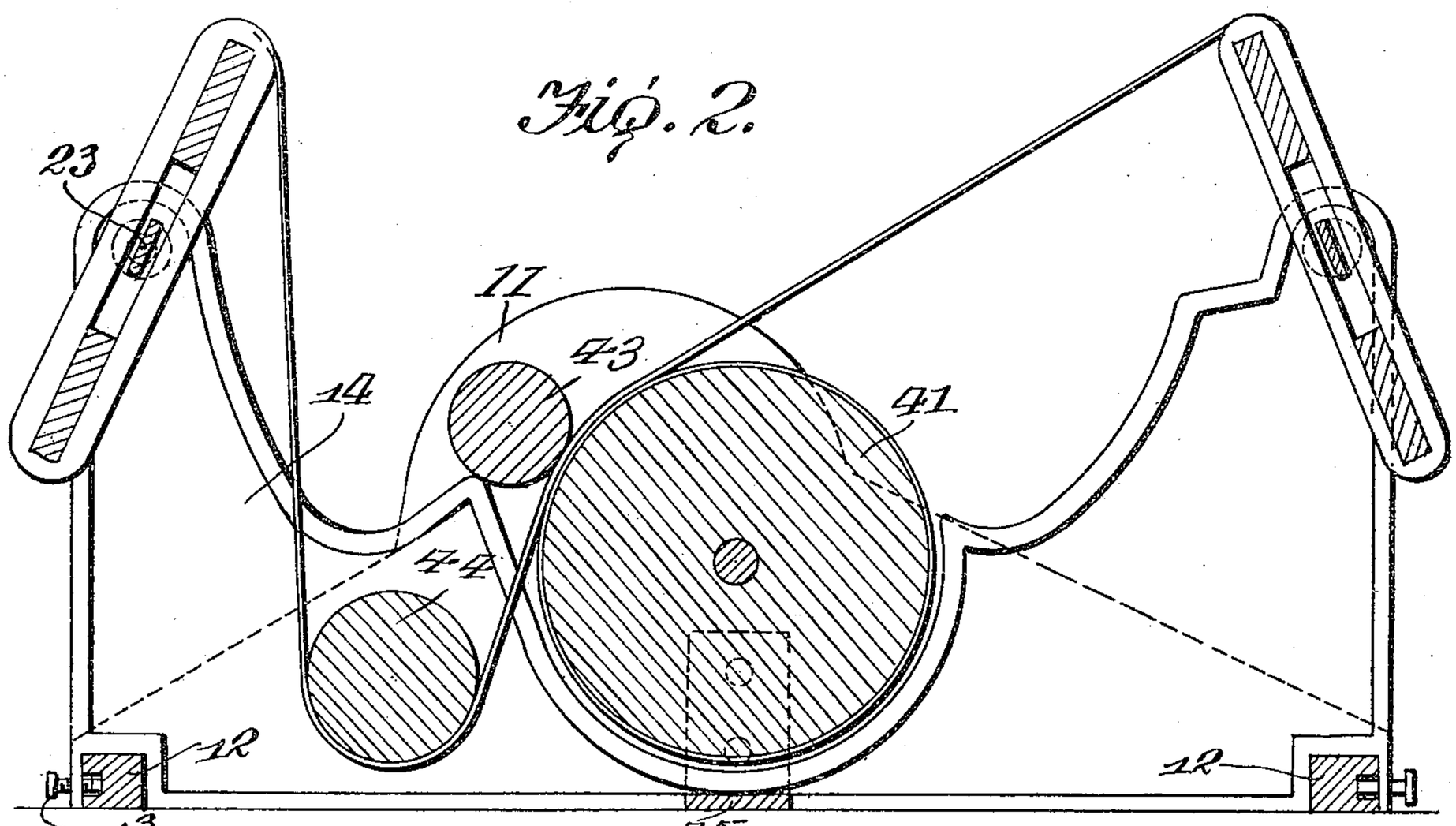
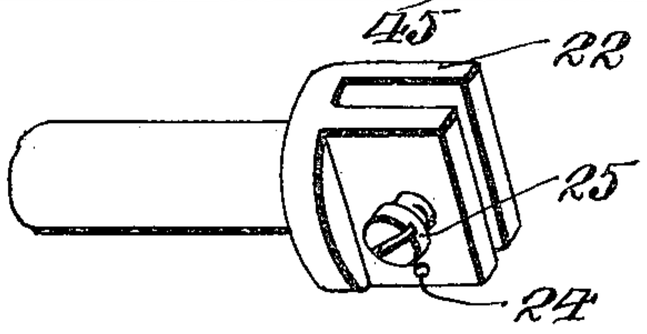


Fig. 4.



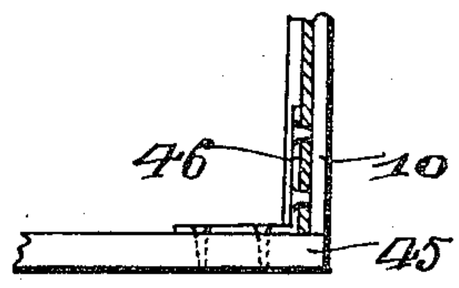


Fig. 5.

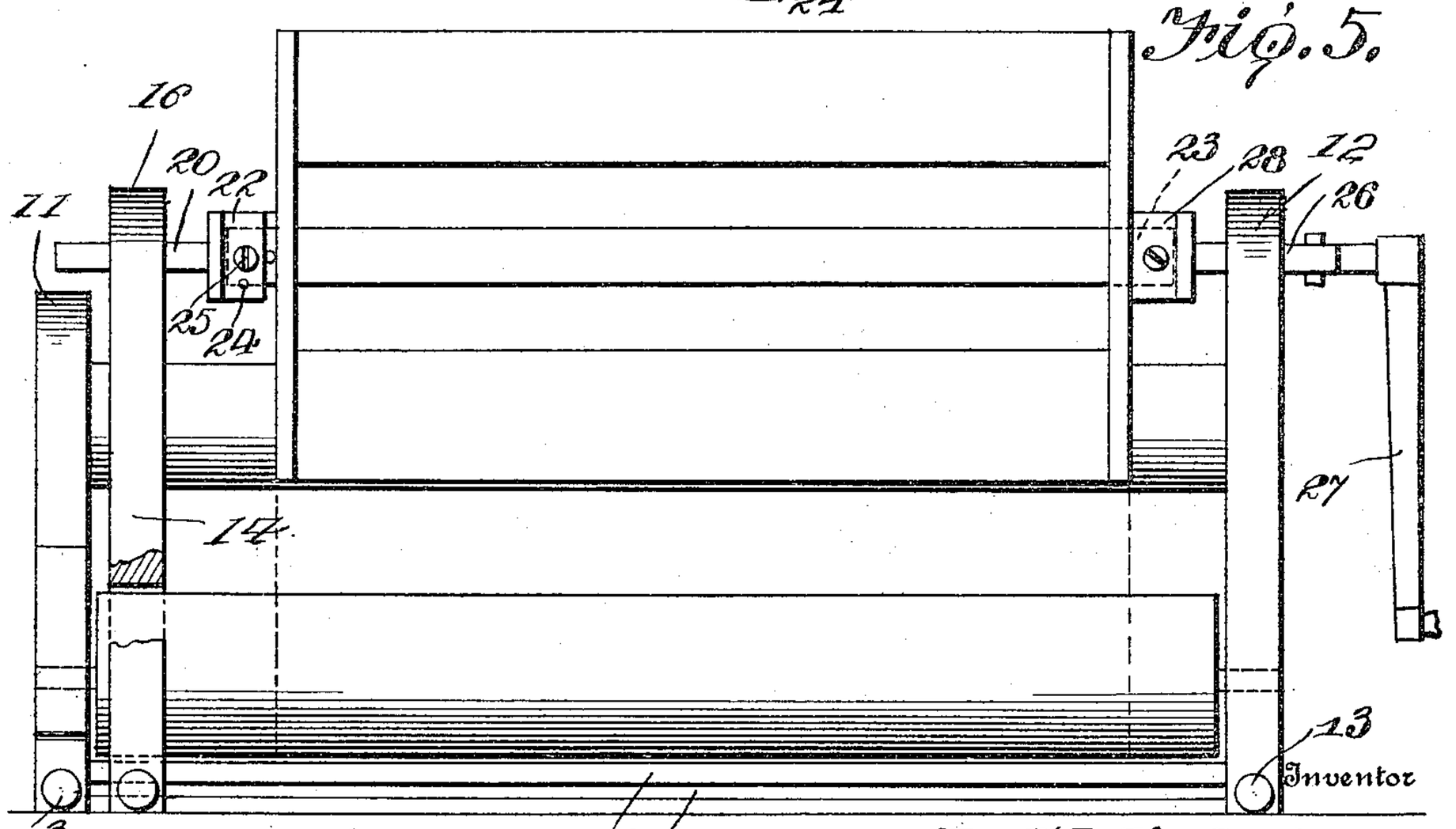


Fig. 3.

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UNITED STATES PATENT OFFICE.

ROBERT G. NICHOLAS, OF CLYDE, KANSAS.

BOLT FOR CLOTH-MEASURING MACHINES.

952,933. Specification of Letters Patent. Patented Mar. 22, 1910.

Application filed April 13, 1909. Serial No. 489,599.

To all whom it may concern:

Be it known that I, ROBERT G. NICHOLAS, citizen of the United States, residing at Clyde, in the county of Cloud and State of Kansas, have invented certain new and useful Improvements in Bolts for Cloth-Measuring Machines, of which the following is a specification.

This invention relates to cloth handling machines and refers particularly to an improvement upon a cloth measuring machine for which patent was granted me November 17, 1908, Patent No. 904,078.

An object of this invention is to provide a novel form of reel or bolt upon which the cloth is carried and from which the same is adapted to be delivered or drawn from a measuring machine.

The invention further contemplates the provision of a bolt which may be employed separately from the machine but which on account of its peculiar construction is especially adaptable to the above referred to cloth measuring machine.

The invention still further contemplates a general improved structure of frame and adjusting means in connection therewith over the above referred to patent to produce a machine which is more practical and advantageous in the art.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a detailed perspective of the improved cloth measuring machine having the improved bolt applied thereto. Fig. 2 is a longitudinal vertical section through the same. Fig. 3 is an end elevation of the improved machine. Fig. 4 is a perspective view of one of the blocks for detachably securing the bolt to the machine. Fig. 5 is a detailed view of one end of the cross bar and means for connecting the same to one of the side-pieces of the machine. Fig. 6 is a detailed section of the weighted roller employed. Fig. 7 is a detailed perspective view of the improved bolt employed in connection with the device.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings the numerals 10 and 11 designate the side-pieces of the frame of a machine, the same being held in parallel relation by means of braces 12 which are disposed across the ends of the same and are detachably secured in apertures formed at the lower corners of the side pieces 10 and 11 by means of set-screws 13. A movable side 14 is positioned between the sides 10 and 11 and is provided with apertures for loosely receiving the braces 12 to admit of the adjusting of the side 14 with respect to the side 10, the side 14 being held rigid by means of set-screws 15 which engage in grooves 15′. The ends of the side-pieces 10 and 14 are extended upwardly as at 16 and 17 in the upper ends of which are disposed bushings 18 and 19 which are mounted in registered relation and which are provided for the purpose of supporting the improved bolt which is a part of this invention.

The bushing 19 is provided for the reception of a shaft 20 which is slidably disposed therethrough to admit of the movement of the same longitudinally through the bushing 19. A block 22 is rigidly mounted upon the inner end of the shaft 20 in which one end of the bolt is detachably engaged. The block 22 comprises a body portion which is of cube formation and which is provided in its outer face with a transverse slot for supporting the extremity of a rectangularly formed shaft 23 disposed through the bolt. The end of the shaft 23 is inserted downwardly in the slot formed in the block 22 and engaged against a pin 24 which is positioned through the lower end of the block 22 and adapted to arrest the downward movement of the shaft 23. The block 22 is also formed with a set-screw 25 which engages through the side of the same and against the side of the shaft 23 to secure the same rigidly in position. The opposite bushing 18 is provided with a loosely mounted stub-shaft 26 which carries a handle 27 upon its outer extremity by means of which the stub-shaft 26 is rotated and is provided upon its inner extremity with a block 28 which is rigidly disposed thereon and which is of the same formation as the block 22 carried upon the shaft 20.

The improved bolt or reel upon which the cloth is mounted comprises two elongated blocks 29 and 30, the same being preferably formed from wood or a like light material, the same being of equal lengths and secured in parallel spaced relation by means of channel strips 31 and 32 which are mounted across the ends of the same and secured thereto by screws 33 or the like which are

passed through the channel members 31 and 32 and engaged in the ends of the blocks 29 and 30. The channel members 31 and 32 are each provided with flanges 34 which are formed along the opposite lateral edges of the same and engage the opposite outer faces of the blocks 29 and 30 to form a support for the same and to prevent the rotation thereof about the screws 33. The channel members 31 and 32 are provided intermediately thereof with rectangular openings 35 which are disposed in registered relation and which admit of the insertion of the shaft 23 therethrough, which shaft is extended between the blocks 29 and 30 having the outer extremities of the same extended beyond the channel members 31 and 32. A pin 36 is secured through one end of the shaft 23 and is adapted for engagement against the outer face of the adjacent channel member 31, the withdrawal of the shaft 23 from the channel members 31 and 32 being prevented by the engagement of the same within one of the blocks 22 or 28 according to the positioning of the same in the machine.

From this construction it is readily seen that the bolt may be employed for winding cloth upon the same separately from the machine by removing the shart 23 therefrom. This construction forms a neat and compact bolt upon which the cloth may be secured and also admits of the securing of the bolt upon the measuring machine by the insertion of the shaft 23 therethrough. This arrangement may be made without the removal of the cloth from the bolt in order to accomplish the same. The opposite end of the machine is provided with a like arrangement for supporting a bolt of like structure.

When the complete bolt is employed the blocks 22 and 28 are rotated so as to dispose the same in registered relation, the slots formed therethrough being vertically disposed, when the shaft 23 is inserted in the slots and engaged against the pin 24 carried by the block and held in such position by the tightening of the set-screws 25. The handle 27 may now be rotated to cause the revolving of the block 28 through the shaft 26 in order to turn the bolt carried thereby. As the block 22 is disposed upon the inner end of the shaft 20 the same is permitted a free rotation without interfering with the adjustment of the machine.

As disclosed in the drawings the shaft 26 at one end of the machine is provided only with a handle 27, the shaft 26 being retained and adjusted in position by means of a collar 37 which is rigidly engaged thereon and which rotates between the fork arms 38 of a lever 39 which is horizontally fulcrumed upon a bracket 40 extended upwardly from the adjacent side 10 at one end thereof in juxtaposition to the shaft 26. With this arrangement the lever 39 may be swung laterally to slide the shafts 26 and 20 respectively through the medium of the bolt carried thereby upon the shaft 23 to adjust the bolt laterally between the sides 10 and 14 to distribute the cloth evenly upon the bolt. The sides 10 and 11 are each provided centrally with raised portions for supporting the measuring roller 41 over which the cloth is passed when the machine is in operation. The raised portions are also provided with inward projections 42 for supporting a weighted roller 43 which rests against the measuring roller 41 and retains the cloth therebetween. The sides 10 and 11 are further provided with a roller 44 which is mounted below and in spaced relation to the measuring roller 41 and for receiving the cloth from the roller 41 and conveying the same to the adjacent bolt in the end of the machine. The side 14 is apertured to loosely receive the roller 44 and receives the weighted roller 43 upon its upper edge to admit of the lateral movement of the side 14.

The sides 10 and 11 are further braced by a cross bar 45 which is secured across the bottom edges of the same intermediately thereof and retained in such position by angle irons 46 engaged against the inner faces of the sides 10 and 11 and upon the upper face of the cross bar 45.

Having thus described the invention what is claimed as new is:—

1. A device as specified comprising two elongated blocks, channel members secured across the opposite ends of said blocks to hold the same in spaced parallel relation, a rectangular shaft longitudinally disposed through said channel members between said blocks, bushings disposed in registered relation and supported upon a frame, blocks mounted upon said bushings, said blocks having slots formed across the inner opposite faces of the same for the reception of the extremities of said shaft and means for securing said shaft between said blocks.

2. A device as specified comprising a frame, bushings mounted in said frame in registered relation, a shaft disposed through one of said bushings, a block having a slot formed across the inner face of the same disposed on the inner end of said shaft, a stub shaft journaled in the opposite one of said bushings, a block rigidly carried by said shaft, a rectangular shaft engaged in the grooves formed in said blocks having a bolt rigidly secured intermediately upon said rectangular shaft.

3. A device as specified comprising a frame, blocks having grooves disposed across the inner opposite faces of the same mounted in said frame, a rectangular shaft detachably carried by said blocks, channel members engaged upon said shaft in spaced relation, elongated blocks disposed in spaced

relation between said channel members and means carried by said shaft for detachably securing said channel members thereon.

4. A bolt as specified comprising two elongated blocks, channel members engaged across the opposite ends of said blocks to secure the same in parallel spaced relation, said channel members having rectangular openings formed intermediately thereof and in registered relation, a shaft of rectangular cross-section engaged through said openings, and a pin rigidly mounted through one end of said shaft for engagement against the adjacent channel member to secure said shaft against longitudinal movement relative to said channel member.

5. A device as specified comprising a pair of blocks of elongated formation, channel members engaged across the opposite ends of said blocks, a rectangular shaft disposed intermediately through said channel members between said blocks and means for detachably engaging the opposite ends of said shaft to rotatably support the same.

6. A machine as specified comprising two parallel side-pieces, a movable side disposed between said side-pieces, braces disposed across the opposite ends of said side-pieces in detachable engagement therewith, said braces extending through apertures formed in said movable side, set-screws carried by said side-pieces and said side for engagement with said braces to secure the same in adjusted position, a plurality of rollers disposed between said side-pieces and bolts rotatably mounted between the opposite ends of one of said side-pieces and said movable side.

7. A machine as specified comprising a frame, an adjustable side mounted in said frame, shafts carried by said frame and said side in registered relation, bolts detachably secured in the inner adjacent ends of said shafts, a handle carried by one of said shafts for rotating the same and means carried by said frame and connected to said shaft with said handle for reciprocating said shaft longitudinally to adjust said bolt in said frame.

8. A machine as specified comprising side-pieces, an adjustable side disposed between said pieces, rollers carried by said side-pieces for the reception of cloth thereon, said adjustable side being apertured for the reception of said rollers to admit of the lateral adjustment of said side, braces carried at the opposite ends of said side-pieces, means carried by said movable side for rigidly engaging said braces, bolts mounted in the opposite ends of one of said side-pieces and said movable side and means for rotating said bolts.

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

ROBERT G. NICHOLAS. [L. S.]

Witnesses:
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F. E. WEYER.