May 1, 1923. 1,453,300

J. L. WHEELER

MOUNTING FOR MEASURING MACHINES AND THE LIKE

Filed Dec. 20, 1921

Fig. 1.

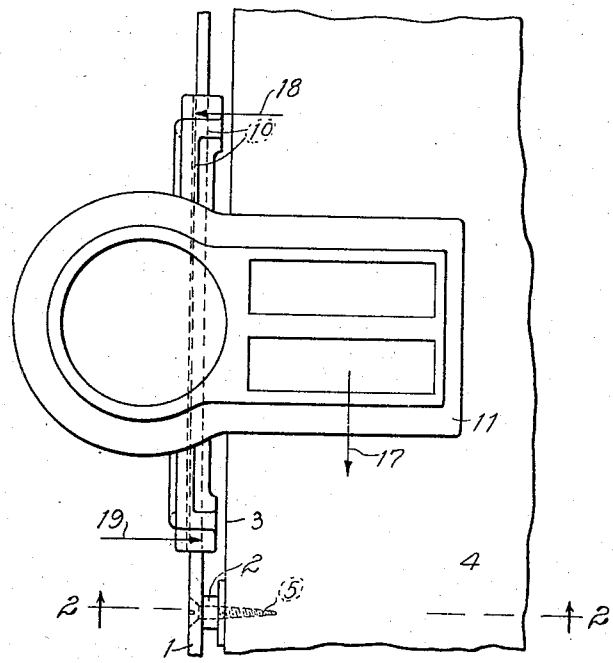
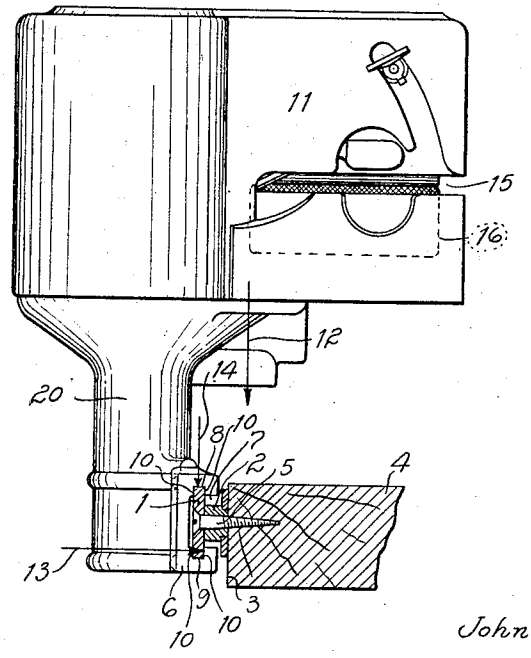


Fig. 2.



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Patented May 1, 1923. 1,453,300

UNITED STATES PATENT OFFICE.

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MOUNTING FOR MEASURING MACHINES AND THE LIKE.

Application filed December 20, 1921. Serial No. 523,699.

To all whom it may concern:

Be it known that I, JOHN L. WHEELER, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented new and useful Improvements in Mountings for Measuring Machines and the like, of which the following is a specification.

This invention relates to machines such as fabric measuring and cost computing machines, which are frequently mounted upon a rail running along the counter so as to enable the machine to be moved along to any point desired. In machines of this type the fabric is measured by pulling it along the counter, and the tension in the fabric, of course, tends to slide the machine along the rail.

The general object of the present invention is to provide a construction of this kind in which the measuring machine or other instrument is mounted upon a guide rail in such a way that the forces which act upon the machine or the rail tend to develop reactive forces between the rail and the shoe which supports the instrument, thereby developing an increased frictional resistance which will prevent the machine from being pulled along the rail during the measuring movement.

Further objects of the invention will appear hereinafter.

The invention consists in the novel features, and in the general combination of parts to be particularly described hereinafter, all of which contribute to produce a simple and efficient mounting for measuring machines and the like. A preferred embodiment of my invention will be particularly described in the following specification, while the broad scope of my invention will be pointed out in the appended claims.

In the drawing:

Figure 1 is a plan of the measuring machine and its mounting and showing a small segment of the counter on which the machine is mounted; and

Figure 2 is a side elevation of the machine, the rail and counter being shown in vertical section taken on the line 2—2 of Figure 1.

In the embodiment of the invention illustrated, I provide a rail 1 which may be in the form of a flat bar which is attached by short posts 2 so that it is parallel with and slightly removed from the vertical face or edge 3 of a counter 4. The posts 2 include fastening devices or screws, such as the screw 5, the head of which is countersunk into the outer face of the rail so that this face of the rail is unobstructed. The posts, such as the posts 2 which support the rail on the edge of the counter, are of relatively small diameter as compared with the depth or vertical dimension of the rail, and hence these posts leave the longitudinal edges of the rail free and exposed so that they will offer no obstruction.

On the rail I provide a shoe 6 which is formed with a gap 7 on its inner face to permit it to pass the posts 2, and this shoe is provided with an upper groove 8 and a lower groove 9 which respectively receive the upper edge and the lower edge of the rail. The side faces 10 of these grooves operate as bearing cheeks to engage the rail directly, without the interposition of anti-friction rollers, and hold the shoe in an upright position. The engagement between the rail and shoe is a direct sliding engagement. This shoe 6 supports an instrument such as a measuring machine 11, and this machine is so located with respect to the vertical plane of the rail 1 that the center of gravity of the machine is removed from the plane of the rail; in Figure 2 the vertical arrow 12 may represent the location of the center of gravity of this machine and indicates also the direction in which the weight of the machine is applied to the shoe and rail. By locating the center of gravity in this way the weight of the lochine tends to produce a rotation of the shoe in a clockwise direction around the longitudinal axis of the rail, as viewed in Figure 2. In this way a force, or forces, are developed upon the shoe which are reacted to by the side faces of the rail at the bearing cheeks 10; such a force is indicated by the horizontal arrow 13 in Figure 2. Such a force may be developed near the upper edge of the rail as well as near its lower edge, in addition to the downward pressure of the shoe which would be felt upon the upper face of the rail as indicated by the arrow 14 in Figure 2. In this way the weight of the machine operates to develop reactive forces between the rail and the shoe which operate to increase the friction which would be developed by contact between the shoe and the rail. The position (indicated by the arrow 12) for the center of gravity occurs by reason of the fact that the measuring machine

11 projects toward or overhangs the counter 4 in such a way that the guide gap 15 which is common in machines of this kind, and through which the fabric is pulled, is also located in a position removed from the vertical plane of the rail, that is to say, the measuring roller 16 is supported in the machine out of line with the plane of the rail, and hence when the fabric is being measured by pulling it through the gap 15 and over the measuring roller 16, the tension exerted in the goods will be developed in a horizontal direction and in a location which may be represented by the arrow 17 in Figure 1.

The force represented by the arrow 17 tends, of course, to produce a rotation of the machine in a clockwise direction about a vertical axis passing through the plane of the rail, and this force operates to develop reacting forces in the rail represented by the arrows 18 and 19 in Figure 1, that is to say, the bearing cheeks 10 of the shoe are reacted upon by the rail on opposite sides and in a direction to counter-balance, or counter-act, the effect of the force indicated by the arrow 17. In this way the reactive forces developed by the tension of the fabric in being measured tend to produce lateral pressure on the side faces of the rail which assist the forces developed by the weight of the machine to develop an increased frictional resistance to a movement of the shoe along the rail.

The machine 11 is preferably mounted upon the upper face of a pedestal 20, the lower end of which may be made integral with the shoe 6 which operates as a foot for the pedestal as well as a guide shoe for the pedestal and measuring machine.

A machine mounted in this way upon the counter may be readily moved by hand to any point on the counter where the machine is to be used, but it will effectively resist any tendency of the fabric, when it is being measured, to pull the machine along the counter.

It is understood that the embodiment of the invention described herein is only one of the many embodiments my invention may take, and I do not wish to be limited in the practice of my invention nor in my claims, to the particular embodiment set forth.

What I claim is:

1. In a mounting for a measuring machine to be secured to a counter, and which is operated by pulling the fabric through the machine parallel with the edge of the counter, the combination of a rail, a shoe mounted to slide along the rail and having fixed bearing cheeks to engage and slide upon the rail on its opposite sides, and a measuring machine supported on the shoe with its center of gravity disposed in a vertical plane removed from the plane of the rail, whereby the forces developed at the said bearing cheeks of the shoe are reacted to by the said face of the rail, and operate to offer sufficient frictional resistance to prevent the measuring machine from being pulled along the rail by the fabric during the measuring movement.

2. In a mounting for a measuring machine to be secured to a counter, and which is operated by pulling the fabric through the machine parallel with the edge of the counter, the combination of a rail, a shoe having longitudinal grooves receiving the longitudinal edges of the rail and having fixed bearing cheeks projecting over so as to slide upon the side faces of the rail adjacent to the longitudinal edges thereof, and a measuring machine supported on the shoe with its center of gravity disposed in a vertical plane removed from the plane of the rail, whereby the forces developed at the said bearing cheeks of the shoe are reacted to by the said sides of the rail, and operate to offer sufficient frictional resistance to prevent the measuring machine from being pulled along the rail by the fabric during the measuring movement.

In testimony whereof, I have hereunto set my hand.

JOHN L. WHEELER.