Dec. 16, 1924. 1,519,660

J. G. BREITENSTEIN

METER ATTACHMENT FOR SEWING MACHINES

Filed Nov. 10, 1922

Fig. 1

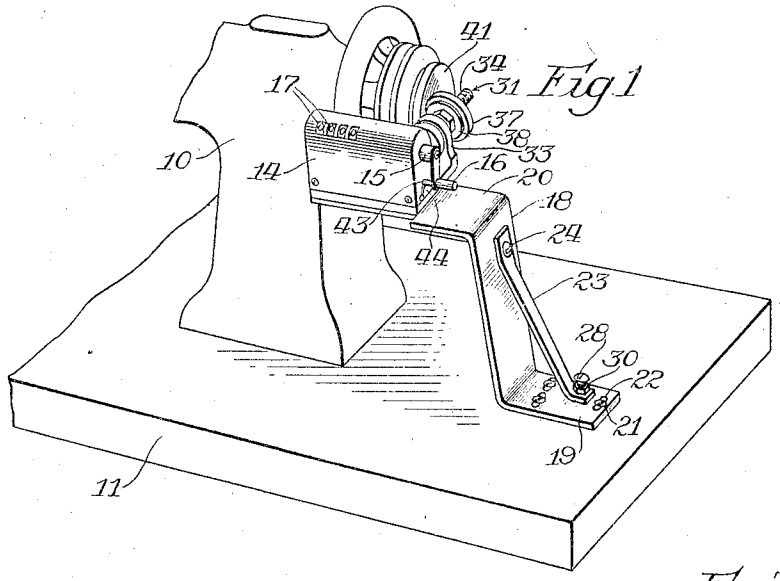


Fig. 3.

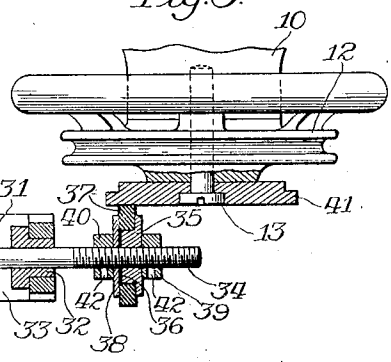


Fig. 2

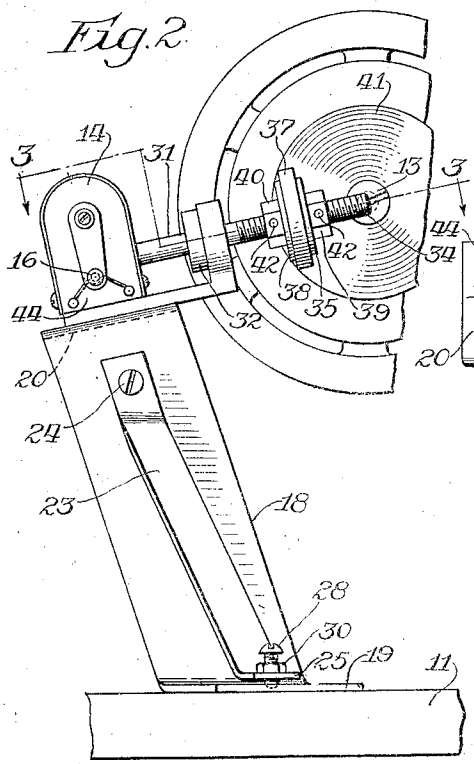
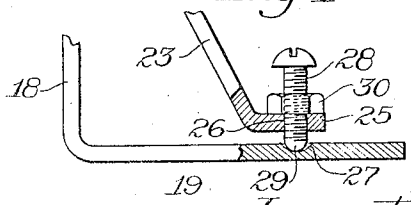


Fig. 4.



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Patented Dec. 16, 1924. 1,519,660

UNITED STATES PATENT OFFICE.

JULIUS G. BREITENSTEIN, OF CHICAGO, ILLINOIS.

METER ATTACHMENT FOR SEWING MACHINES.

Application filed November 10, 1922. Serial No. 600,069.

To all whom it may concern:

Be it known that I, JULIUS G. BREITENSTEIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Meter Attachments for Sewing Machines, of which the following is a specification.

This invention relates to improvements in meter attachment for sewing machines, particularly adapted though not necessarily limited in its use for measuring the yardage of the work performed on the machine, and one of the objects of the invention is to provide an improved, simple, durable and compact device of this character, which will be effective and efficient in operation and which may be readily attached to any machine of this character without dismantling any of the operating parts of the machine and without necessitating the services of a skilled mechanic.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in substantially the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing illustrating this invention, and in which—

Figure 1 is a perspective view of the device showing the same as applied to a sewing machine, portion of the sewing machine head being omitted.

Figure 2 is a right hand end elevation of Figure 1.

Figure 3 is a detail sectional view taken on line 3—3, Figure 2.

Figure 4 is a view partly in elevation and partly in section of a detail.

Referring more particularly to the drawing the numeral 10 designates generally the head of a sewing machine mounted upon the usual base 11, 12 designates the usual pulley over which the driving belt passes and 13 designates the usual fastening screw found in machines of this character.

The meter attachment consists essentially of a registering mechanism designated 14 and which meter attachment is provided with the usual reset shaft 15, having a crank 16 applied thereto, the registering mechanism being provided with totalizers or registering discs 17, visible through the casing of the device.

The meter is mounted upon a bracket embodying an upright 18, having a base 19 and a laterally projecting portion 20, upon which latter the meter is secured in any suitable manner.

The upright 18 is arranged in an inclined position with respect to the base 19 for a purpose to be hereinafter set forth, and the upright is of any desired height, the bracket being constructed of any suitable material and is adapted to be fastened to the base of the machine 11 in any suitable manner such as by means of fastening screws 21.

As a means whereby the bracket may be adjusted laterally upon the base 11, the base 19 of the bracket through which the fastening screws 21 pass, may be provided with slots 22.

A brace 23 of any suitable construction is connected at its upper end by means of a fastening device 24, with the upright 18 of the bracket, preferably adjacent the upper end of the upright, and the base of the brace 23 is preferably deflected horizontally as at 25 and is provided with an opening 26 therethrough. The base 19 of the bracket is preferably provided with a recess or depression 27 opening through its upper face, and threaded through the opening 26 is a screw 28, the extremity 29 of which is adapted to enter the recess or depression 27, so that when the screw 28 is adjusted in one direction with respect to the brace 23 the pressure between the end 29 of the screw and the bottom of the recess or socket 27 will force the brace in a direction to laterally deflect the upright 18 of the bracket, for a purpose to be hereinafter set forth and when the screw is rotated in the opposite direction, the elasticity of the bracket will cause it to have a tendency to assume its normal position.

If desired a suitable lock nut 30 may be provided for maintaining the screw in its adjusted position.

The meter is provided with an operating shaft 31, which projects beyond the casing and passes through a suitable bearing 32 carried by a bracket 33 connected with the casing of the meter. This shaft 33 may be of any desired length and is provided with screw threads 34 on its end.

Loosely mounted upon the end of the shaft 31 is a collar 35, provided with a circumferential flange 36 projecting for any desired distance beyond the periphery of

the collar. Mounted upon the collar 35 is a disc 37 constructed of any suitable material and the thickness of the disc 37 is such that it will project beyond the end of the collar so that a washer 38, which is also mounted loosely upon the shaft 31, will engage the proximate face of the disc 37 to permit the disc to be gripped between the washer 38 and the flange 36 of the collar 35, when the nuts or collars 39—40 which are threaded upon the shaft 31 to engage one with the end of the collar 35 and the other with the washer 38 to force these parts in a direction toward each other. The nuts or collars 39—40 also serve as a means whereby the disc and the collar together with the washer 38 will be secured to the shaft 31 for rotation therewith.

A disc 41 is connected with the shaft of the sewing machine 10 in any desired or suitable manner, preferably by means of the screw 13, usually employed in sewing machines of this character.

The disc 41 is preferably of a diameter somewhat greater than the diameter of the disc 37 and the two discs 37 and 41 are arranged to rotate upon axes which are transverse to each other, so that the periphery of the disc 37 will engage the face of the disc 41 to be rotated by the latter and through this medium the shaft 31 of the meter or registering mechanism 14 will be operated.

The axis of the shaft 31 and the disc 37 are arranged to intersect the axis of rotation of the disc 41 and the angle of inclination of the upright 18 of the bracket supporting the meter is such that when the bracket is adjusted upon the base 11 by loosening the screws 21, the axis of the shaft 31 and of the disc 37 will be always maintained in a proper position with respect to the axis of rotation of the disc 41, thereby preventing injury to either of the discs 37—41.

In use, the disc 41 is first applied by removing the screw 13 from the machine, and then fastening the disc 41 in position by reinserting the screw.

The meter attachment is then placed in position by positioning the same so that the periphery of the disc 37 will be spaced slightly from the proximate face of the disc 41. The fastening screws 21 are then tightened. By reason of the slots 22 the fastening screws may be placed in position and before they are tightened the bracket carrying the registering device or meter 14 may be bodily adjusted to position the disc 37 with respect to the disc 41. After the bracket has been secured to the table or support 11 and in order to obtain a frictional contact between the periphery of the disc 37 and the face of the disc 41, a screw 28 is adjusted, the lock nut 30 being first loosened so as to permit the screw 28 to be threaded through the opening 26 in the brace 23. This operation of the screw will deflect the upright 18 of the bracket sufficiently to cause the desired pressure of the periphery of the disc 37 upon the face of the disc 41, after which the lock nut may be adjusted for holding the parts in their positions.

In order to vary the speed of rotation of the disc 37 and also the shaft 31, the disc is adapted to be adjusted in a direction lengthwise of the shaft, which is accomplished by adjusting the nuts or collars 39—40 so as to move the disc 37 toward or away from the axis of rotation of the disc 41.

These collars may be adjusted in any suitable manner such as by means of suitable tools adapted to be inserted in suitable openings 42. When desired the meter may be reset by operating the crank 16 and the crank is held against accidental operation in any suitable manner such as by means of a pin or projection 43 carried by the crank and adapted to co-operate with a suitable catch 44.

While the preferred form of the invention has been herein shown and described, it is to be understood that various changes may be made in the details of construction and in the combination and arrangement of the several parts, within the scope of the claims, without departing from the spirit of this invention.

What it claimed as new is:—

1. In combination, a driving shaft, a friction disc connected with one end thereof, a counting mechanism embodying an operating shaft therefor, a friction disc carried by the last said shaft and rotatable on an axis transverse to the axis of the first recited shaft, a bracket supporting the counting mechanism, said bracket embodying an upright portion, the extremities thereof being deflected laterally, one of the said deflected extremities serving as a support for the counting mechanism, means adjustably securing the other deflected portion to a supporting surface, the said upright and the said extremity which supports the said counting mechanism being inclined to the vertical, a brace connected with the said upright portion of the bracket, one end of the brace terminating adjacent the base of the upright portion, and means engaging the last recited end of the brace and the base of the bracket for flexing the upright with respect to its base.

2. In combination, a friction driving disc, a bracket of integral construction and embodying an upright, the ends of the upright being deflected laterally and on opposite sides of the upright, counting mechanism supported by one of the said deflected por-

tions, said counting mechanism embodying a friction disc engaging the first recited disc, means securing the other deflected portion of the upright to a support, a brace secured by one end to the said upright, the free end of the brace terminating adjacent but being detached from the last recited deflected portion of the said upright, and an adjusting screw passing through the free end of the brace and engaging the adjacent deflected portion of the upright and serving when adjusted to deflect the said upright.

3. In combination, a friction driving disc, a bracket of integral construction and embodying an upright, the ends of the upright being deflected laterally and on opposite sides of the upright, counting mechanism supported by one of the said deflected portions, said counting mechanism embodying a friction disc engaging the first recited disc, means securing the other deflected portion of the upright to a support, a brace secured by one end to the said upright, the free end of the brace terminating adjacent but being detached from the last recited deflected portion of the said upright, and an adjusting screw passing through the free end of the brace and engaging the adjacent deflected portion of the upright and serving when adjusted to deflect the said upright, there being a recess in the face of the last recited deflected portion to receive the end of the screw.

4. In combination a friction driving disc a substantially Z shaped bracket of integral construction, counting mechanism supported upon one end of the bracket, said counting mechanism including a friction disc engaging the first said disc, means adjustably securing the other end of the bracket to a support, a brace secured by one end to the upright portion of the bracket and extending away from the upright toward and terminating adjacent the base of the bracket, the free end of the brace being substantially parallel with the base of the upright, and an adjusting screw threaded through the said free end of the brace and engaging the base of the bracket, said screw when forced against the said base serving through the said brace to deflect the upright portion of the bracket.

5. In combination a friction driving disc, a substantially Z shaped bracket of integral construction, counting mechanism supported upon one end of the bracket, said counting mechanism including a friction disc engaging the first said disc, means adjustably securing the other end of the bracket to a support, a brace secured by one end to the upright portion of the bracket and extending away from the upright toward and terminating adjacent the base of the bracket, the free end of the brace being substantially parallel with the base of the upright, and an adjusting screw threaded through the said free end of the brace and engaging the base of the bracket, said screw when forced against the said base serving through the said brace to deflect the upright portion of the bracket, the said base having a recess to receive the end of the screw and assisting in holding the upright deflected.

In testimony whereof I have signed my name to this specification, on this 4th day of November, A. D. 1922.

JULIUS G. BREITENSTEIN.