

J. A. ROBISON & E. McCURDY.

TREADLE GOVERNOR.

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932,580.

Patented Aug. 31, 1909.

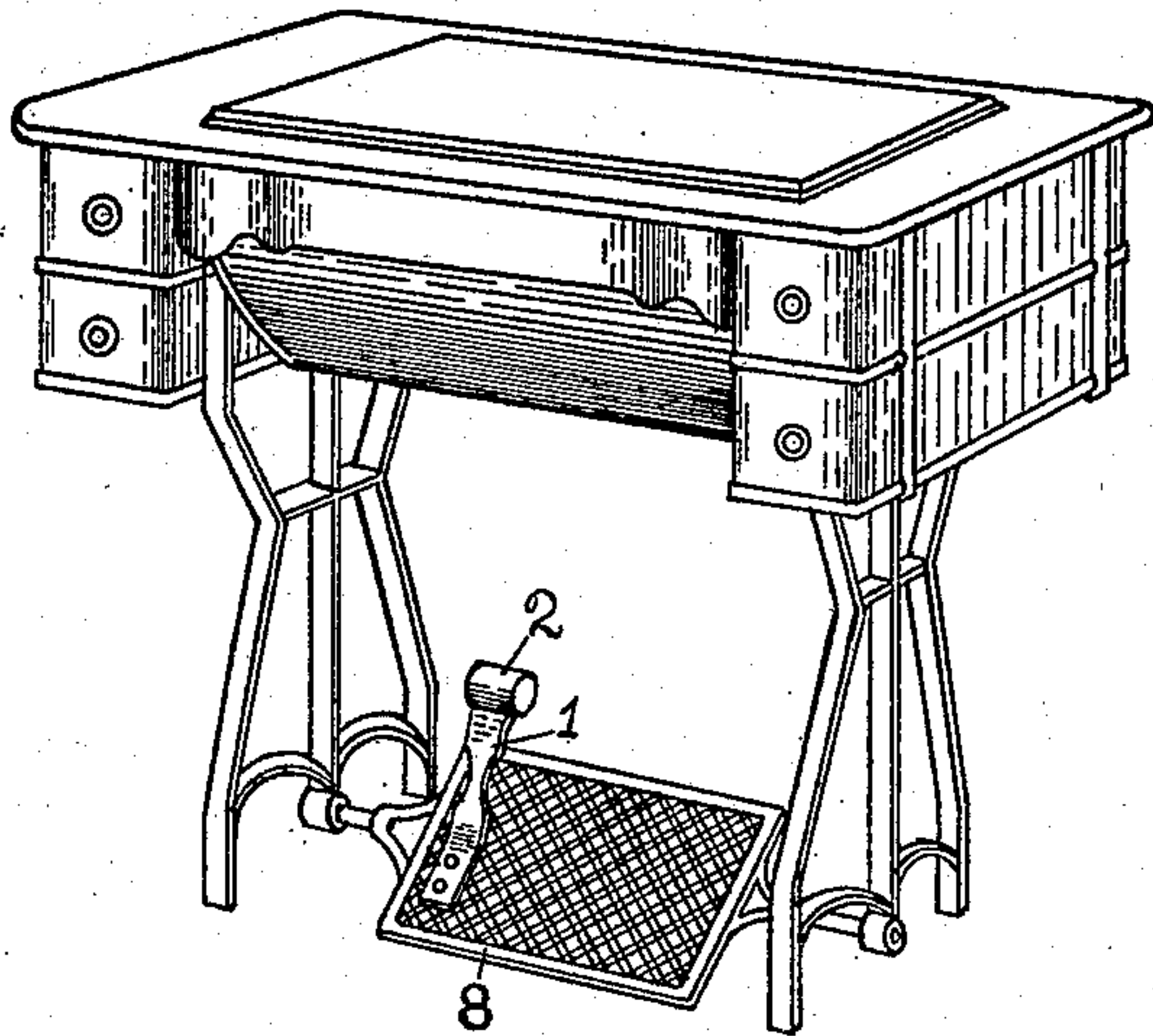


Fig. 1.

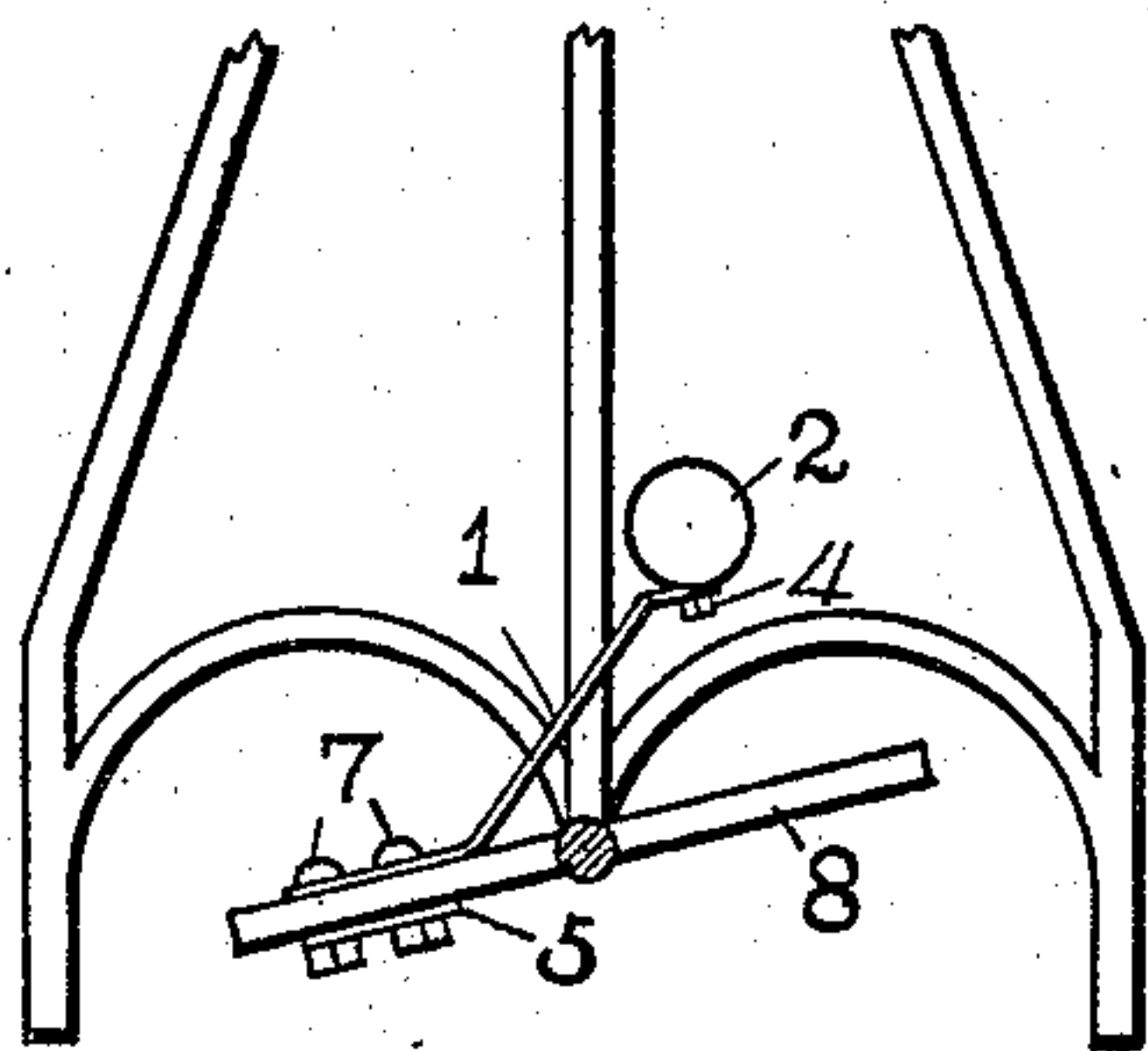


Fig. 2.

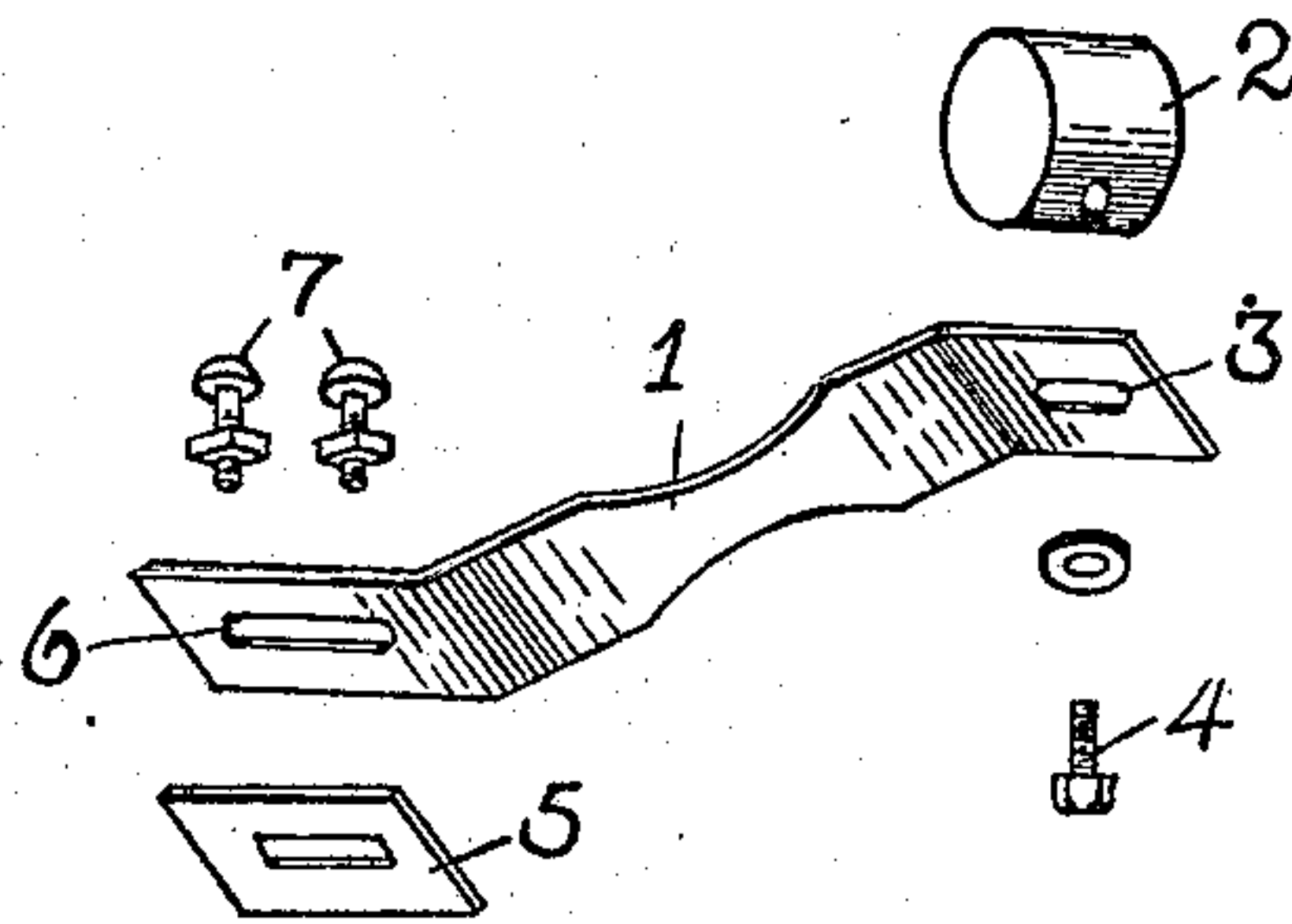


Fig. 3.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

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TREADLE-GOVERNOR.

932,580.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed August 9, 1907. Serial No. 387,938.

*To all whom it may concern:*

Be it known that we, JOSEPH A. ROBISON and EMERY McCURDY, citizens of the United States, residing, respectively, at Nashville, in the county of Davidson and State of Tennessee, and New Albany, in the county of Floyd and State of Indiana, have invented a new and useful Treadle-Governor, of which the following is a specification.

This invention relates to improvements in treadle governors; and the objects of our invention are, to provide a treadle governor which will equalize the muscular effort used to propel a sewing machine and thus save effort and consequent fatigue upon the part of the operator, and to provide a treadle governor which shall be simple, inexpensive, and may be attached to any sewing machine.

It is well known by reason of the anatomical structure of the human foot and ankle, the pressure applied to the treadle of the sewing machine by the toe of the operator engenders greater strain and fatigue than that applied by the heel.

The above-mentioned objects we accomplish by means of the device shown in the accompanying drawings, in which—

Figure 1 is a perspective view; Fig. 2, a side elevation; and Fig. 3, a detail perspective view of the component parts of the device.

An arm 1, and a weight 2 secured to one end thereof, constitute the body of the invention. The arm 1 is made in the form of a spring, preferably of flat spring steel, having its ends bent at an obtuse angle relative to the shank or middle portion. The upper end of arm 1, to which weight 2 is secured, is provided with a slotted hole adapted to receive a bolt or cap-screw 4, by means of which weight 2 is attached to the arm. The slotted hole 3 provides for adjustment of weight 2 longitudinally relative to arm 1. Weight 2 is made of any heavy material, such as iron, or, preferably, of a piece of brass tubing filled with lead, and its cylindrical wall is bored and tapped to receive the threaded portion of screw 4. The end of arm 1 opposite that carrying weight 2 is also pierced with a longitudinal slot 6 to adapt it for fastening to the treadle of a sewing machine by means of two bolts 7 preferably, which may pass through interstices in the grating of treadle 8 of the sewing machine. A long washer 5, with a longi-

tudinal slot corresponding with slot 6 in arm 1, is furnished to be applied underneath the treadle to receive the stress of the nuts of bolts 7. The slot in washer 5 provides that bolts 7 may be inserted through openings in treadles having various mesh to adapt the device for application to all sewing machines.

The operation of our invention will now be readily appreciated. When pressure is applied with the heel to treadle 8, and the front or heel portion of the treadle is depressed, weight 2 rises, and when the treadle reaches the upper dead point, the weight ascends a little farther, due to the resiliency of the spring arm 1, but immediately rebounds and by its momentum helps to depress the rear or toe portion of the treadle, thereby assisting the operator in the work done with the toe. When the rear or toe portion of the treadle reaches the lower dead point, the weight descends a little farther, until its momentum is absorbed by the spring arm, and on the rebound assists in raising the rear or toe portion of the treadle. The continuous repetition of these actions results in a decided saving in the strength of the operator.

Having thus described our invention so that any one skilled in the art pertaining thereto may make and use it, we claim—

1. A treadle governor, comprising a spring, a vibratile weight attached to said spring, and means for securing said spring to a treadle.

2. A treadle governor, comprising a spring 1, having its ends bent in opposite directions, at an obtuse angle relative to the main shank or middle portion, and lying in parallel planes, each to the other; an adjustable weight secured to the upper end of said spring, the lower end being secured near the fulcrum of the treadle.

3. A treadle governor, comprising a spring attached to a treadle and a mass at the free end of said spring so arranged that said mass is adapted to vibrate in a vertical plane relative to the treadle.

4. A treadle governor, comprising a spring rigidly attached to a treadle at one end of said spring and over said treadle, and a vibratile mass fixed at the free end of said spring over said treadle and adapted to swing relative to the treadle in a vertical plane.



5. An attachment of the class described,  
comprising a spring, attached on the upper  
surface of a treadle, having a slotted base  
portion, an integral angular longitudinal  
5 extension from and of greater length than  
the base portion, a top portion integral with  
said extension and lying in a plane parallel  
with the base portion, a mass adapted to be  
longitudinally adjusted on the top portion  
10 and to vibrate relative to and over a treadle,

and attaching means associated with the base  
portion:

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