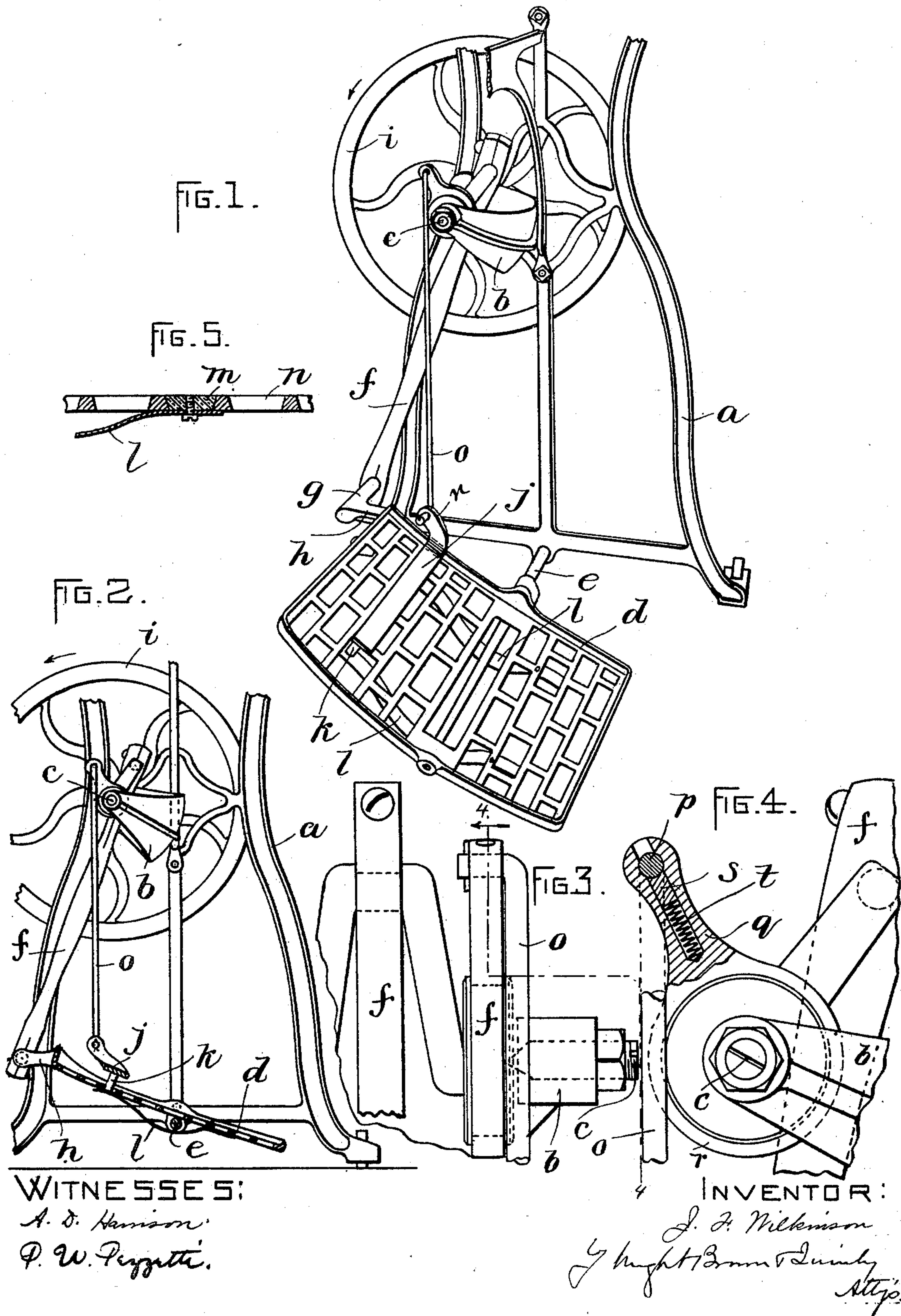


(No Model.)

J. F. WILKINSON.
TREADLE ATTACHMENT.

No. 592,577.

Patented Oct. 26, 1897.



UNITED STATES PATENT OFFICE.

JOHN F. WILKINSON, OF AYER, MASSACHUSETTS.

TREADLE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 592,577, dated October 26, 1897.

Application filed September 25, 1896. Serial No. 606,922. (No model.)

To all whom it may concern:

Be it known that I, JOHN FRANK WILKINSON, of Ayer, in the county of Middlesex and State of Massachusetts, have invented certain
5 new and useful Improvements in Treadle Attachments, of which the following is a specification.

This invention has for its object to produce an improved device for machines employing
10 a treadle mechanism for throwing the crank off of a dead-center and for starting the driving-wheel in the proper direction when the treadle is operated and preventing it from rotating in the wrong direction.

15 To this end the invention consists of the improved device which is illustrated on the drawings and which I shall now proceed to describe in detail, and then point out in the claims hereto annexed.

20 Reference is to be had to the annexed drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

25 Figure 1 shows in perspective a portion of a sewing-machine frame or standard with the treadle, driving-wheel, the pitman, and my improved device for preventing the rotation of the driving-wheel in the wrong direction
30 and throwing the crank off of a dead-center. Fig. 2 is a side elevation of the same, the treadle and the supplemental treadle being both shown in section. Fig. 3 is an enlarged detail view showing the crank-shaft and the
35 clutch thereon, which latter is connected with the supplemental treadle. Fig. 4 is a partial section on the line 4 4 of Fig. 3, looking in the direction of the arrow. Fig. 5 is a section through the treadle, illustrating one method
40 of fastening the supporting-springs of the supplemental treadle thereto.

My invention is adapted to be used in connection with the treadle and driving-wheel of a machine of any pattern or class, but for the
45 sake of illustration I have shown it as being attached to a sewing-machine having an end standard *a*, provided with a bracket *b*, in which the crank-shaft *c* is journaled.

50 The treadle *d* is mounted on a shaft *e* at the base of the standard and is connected at its upper end with the crank by the pitman-rod *f*, pivoted to said crank-shaft and to a pin *g*

on an extension *h* of the said treadle. On the crank-shaft is rigidly mounted a driving-wheel *i*. Thus far the machine described is
55 no different from those now in use.

My improvement consists of a supplemental treadle comprising a strip *j*, extending across the treadle from side to side beneath the ball of the foot when the latter is on the treadle.
60 The strip *j* is supported upon the ends of pins *k*, projecting upward from curved springs *l*, secured on the under side of the treadle and normally holding it in the position illustrated in Fig. 2. The ends of the springs may be
65 riveted to the under side of the main treadle, but I sometimes prefer to secure them to blocks *m*, with beveled edges inserted in the apertures *n* in the treadle, the walls of which apertures are tapering to receive said blocks,
70 as shown in Fig. 5. The strip *j* is bent upwardly at one end at *n* to receive the end of a link *o*, the upper end *p* of which is journaled or pivoted in the arm *q* of a clutch *r* on the crank-shaft. The arm *q* is slotted to receive
75 a block *s*, held forward by a spring *t* against the said end *p*, so as to compensate for any wear of the bearings of said end and prevent rattling of the end in the arm. The clutch *r* may be of any approved construction, but I
80 prefer one which is noiseless in its operation. The clutch allows the driving-wheel and the crank-shaft to revolve freely in the direction of the arrow shown in Fig. 1, but locks it against rotation in the opposite direction.
85 Hence when the supplemental treadle *j* is depressed, even though the pitman and the crank are on a dead-center, it will start the shaft in the direction of the arrow far enough for the treadle to revolve the driving-wheel
90 when it is depressed. Hence it will be seen that at no time will the driving-shaft be allowed to rotate in the wrong direction, and that upon starting the machine to work the driving-shaft is given its initial movement
95 without the help of the hands which is generally given to the rotating parts of machines without attachments of this nature. The contact of the springs with the under side of the main treadle limits the upward movement of
100 the supplemental treadle. In case it is desired to equip a machine in which the driving-shaft rotates in the opposite direction with my improvement the clutch is merely reversed,

as will be readily understood. Preferably the arm *t* is slightly longer than the crank-shaft, in order to allow for a slight movement of the clutch before it is locked to the shaft.

5 It will be understood that I do not limit myself to the precise arrangement of the springs *l* and the supplemental treadle, since it may be varied to suit any particular style of treadle; nor do I propose to limit myself in the employment of my antirattling device, consisting
10 of the spring-held block *s*, to a sewing-machine, since it may be employed on machines of other kinds and in a variety of ways.

Having thus explained the nature of the invention and described a way of constructing
15 and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

20 1. The combination with a driving-wheel, a crank, a pitman, and a main treadle, forming a treadle mechanism, of a clutch on the crank-shaft, a supplemental treadle connected to the said clutch and located over the
25 forward or toe end of the main treadle, so that both treadles can be moved simultaneously by the same foot or feet, and a spring connection between the supplemental and main treadles, whereby the supplemental treadle is
30 yieldingly raised and separated from the main treadle and permitted to move toward the

latter by downward pressure of the operator's foot, while the main treadle is being operated, the yielding support of the supplemental treadle relieving the jar on the operator's feet. 35

2. The combination with a driving-wheel, a crank, a pitman, and a treadle, forming a treadle mechanism, of a clutch on the crank-shaft, and a supplemental treadle connected to the said clutch, said supplemental treadle
40 consisting of a strip or bar extending across the main treadle, and springs located below the main treadle and connected with said bar.

3. The combination with a driving-wheel, a crank, a pitman, and a treadle, of a clutch
45 on the crank-shaft, a link *o* connected with the clutch, and a supplemental treadle connected to the said link, said supplemental treadle comprising the strip *j* arranged above the face of the main treadle, springs *l l* each
50 having one end secured to the under face of the main treadle, and pins *k k* connecting the said strip *j* with the free ends of the springs.

In testimony whereof I have signed my name to this specification, in the presence of
55 two subscribing witnesses, this 19th day of September, A. D. 1896.

JOHN F. WILKINSON.

Witnesses:

HORATIO N. TOWER,
FRED. J. DUNLAP.