

(No Model.)

C. W. SMART.

SEWING MACHINE TREADLE.

No. 347,836.

Patented Aug. 24, 1886.

Fig. $\frac{1}{x}$.

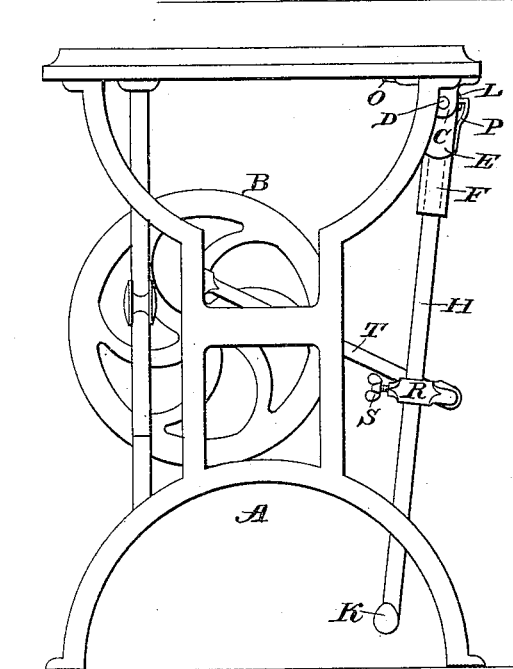
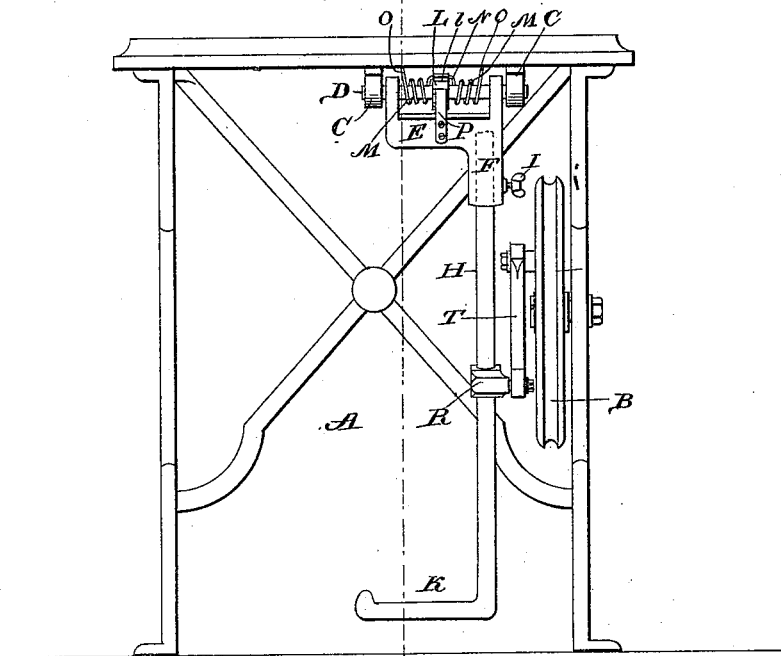


Fig. 2.

Witnesses

Percy C. Bowen.
J. W. Garner

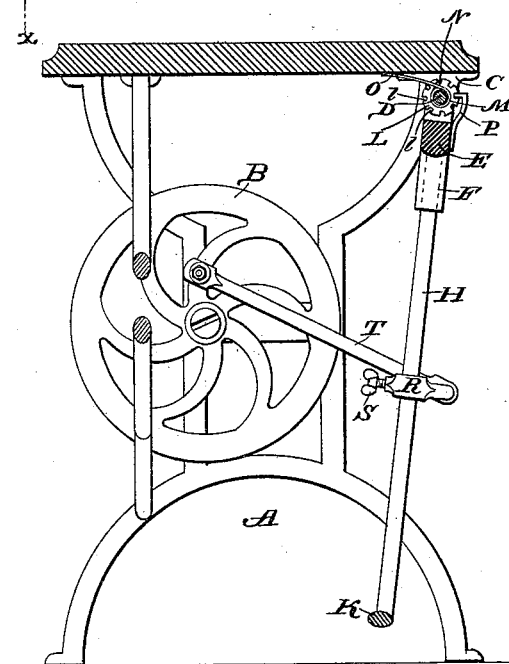


Fig. 3.

Inventor,

Charles W. Smart:

By his Attorneys

C. A. Snowdon

UNITED STATES PATENT OFFICE.

CHARLES WILLARD SMART, OF CARBONDALE, ILLINOIS.

SEWING-MACHINE TREADLE.

SPECIFICATION forming part of Letters Patent No. 347,836, dated August 24, 1886.

Application filed March 3, 1886. Serial No. 193,836. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WILLARD SMART, a citizen of the United States, residing at Carbondale, in the county of Jackson and State of Illinois, have invented a new and useful Improvement in Sewing-Machine Treadles, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in treadles for sewing-machines; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a front elevation. Fig. 2 is a side elevation. Fig. 3 is a vertical sectional view taken on the line *xx* of Fig. 1.

A represents a sewing-machine table provided with the usual fly-wheel, B.

C represents bearing-blocks, which are secured on the under side of the top of the table, at the front edge thereof, and through the said blocks passes a rod, D, on which is journaled a casting, E. This casting is provided with a depending arm, F, in which is a vertical cylindrical opening.

H represents a treadle-rod, the upper end of which is inserted in the opening G of the casting-arm, and is secured therein at any suitable adjustment by means of a set-screw, I, and the lower end of the treadle-rod is bent at right angles to form a treadle, K.

L represents a wheel, the periphery of which is notched or serrated, as at *l*, and the said wheel is loosely mounted on the central portion of the rod D.

M represents a coiled spring, the central portion of which is provided with a bail, N, and the ends of the spring being bent outwardly at right angles to the major axis of the spring, forming arms O. This spring is placed on the rod D, with the bail N thereof fitting in one of the notches on the wheel L, and the arms of the spring bear against the under side of the table-top. The casting E is provided with a spring pawl or detent, P, which engages with one of the notches of the wheel L, so as to cause the said wheel to partly rotate back and forth on the shaft D when the treadle-rod is oscillated.

R represents a sliding block, which fits on

the treadle-rod and is adjustable thereon, and is provided with a set-screw, S, by means of which the said block may be secured to the rod at any desired adjustment.

T represents a pitman or connecting-rod, one end of which is pivoted to the block R, and the other end of which is connected to the wrist-pin of the balance-wheel.

In order to rotate the balance-wheel, and thereby impart motion to the machinery, the operator places one foot on the pedal and swings his foot back and forth from the knee.

The sewing-machines heretofore constructed have been provided with treadles forming levers of the first class, necessitating continual bending of the ankle of the operator in order to drive the machine, which frequently results in great fatigue and injury to the person using the machine. By my improved form of treadle it is only necessary, in order to operate the machine, to swing the foot back and forth from the knee and without bending the ankle.

I have herein described my improvement as particularly applicable to sewing-machines; but I do not wish to confine myself to its use therein, as it is evident that it may be employed for other kinds of machinery as well.

By making the block R adjustable on the treadle-rod the treadle is adapted to be attached to various machines having the driving-wheels of unequal heights, and by making the treadle-rod extensible it may be adjusted to suit the convenience of the operator. The function of the spring M is to move the treadle outwardly when the pressure of the foot of the operator is removed therefrom, thus rendering it only necessary for the operator to push the pedal from him, and by providing the wheel L and the bail N in the spring for engaging with the wheel, and the detent for locking the wheel in any desired position, the spring may be turned or wound on the rod D, so as to increase or diminish its tension on the treadle-lever to the requisite degree.

Having thus described my invention, I claim—

1. The combination of the oscillating treadle; the fly-wheel, and the pitman, having one end attached to the fly-wheel and the other end attached to the treadle and adjustable vertically thereon, substantially as described.

2. The combination of the oscillating treadle

having the sliding block R, provided with the set-screw S, the fly-wheel, and the pitman T, having one end attached to the fly-wheel and the other end attached to the sliding block R, substantially as described.

3. The combination of the pivoted oscillating casting E, having the socket-arm F, provided with the set-screw I, the oscillating treadle-lever secured in the said socket-arm, the fly-wheel, and the pitman attached to the fly-wheel and to the oscillating treadle, substantially as described.

4. The combination, with the oscillating treadle, the fly-wheel, and the pitman connect-

ing the fly-wheel with the treadle, of the notched wheel L, journaled on the rod D, the pawl or detent P, connecting the treadle with the wheel, and the spring M, having the bail connected to the wheel L, and the bearing-arms O, for the purpose set forth, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES WILLARD SMART.

Witnesses:

THOS. J. MAHOFFEE,
H. O. BLANTON.