(No Model.)

I. S. BUNKER.

TREADLE.

No. 494,460. Patented Mar. 28, 1893.

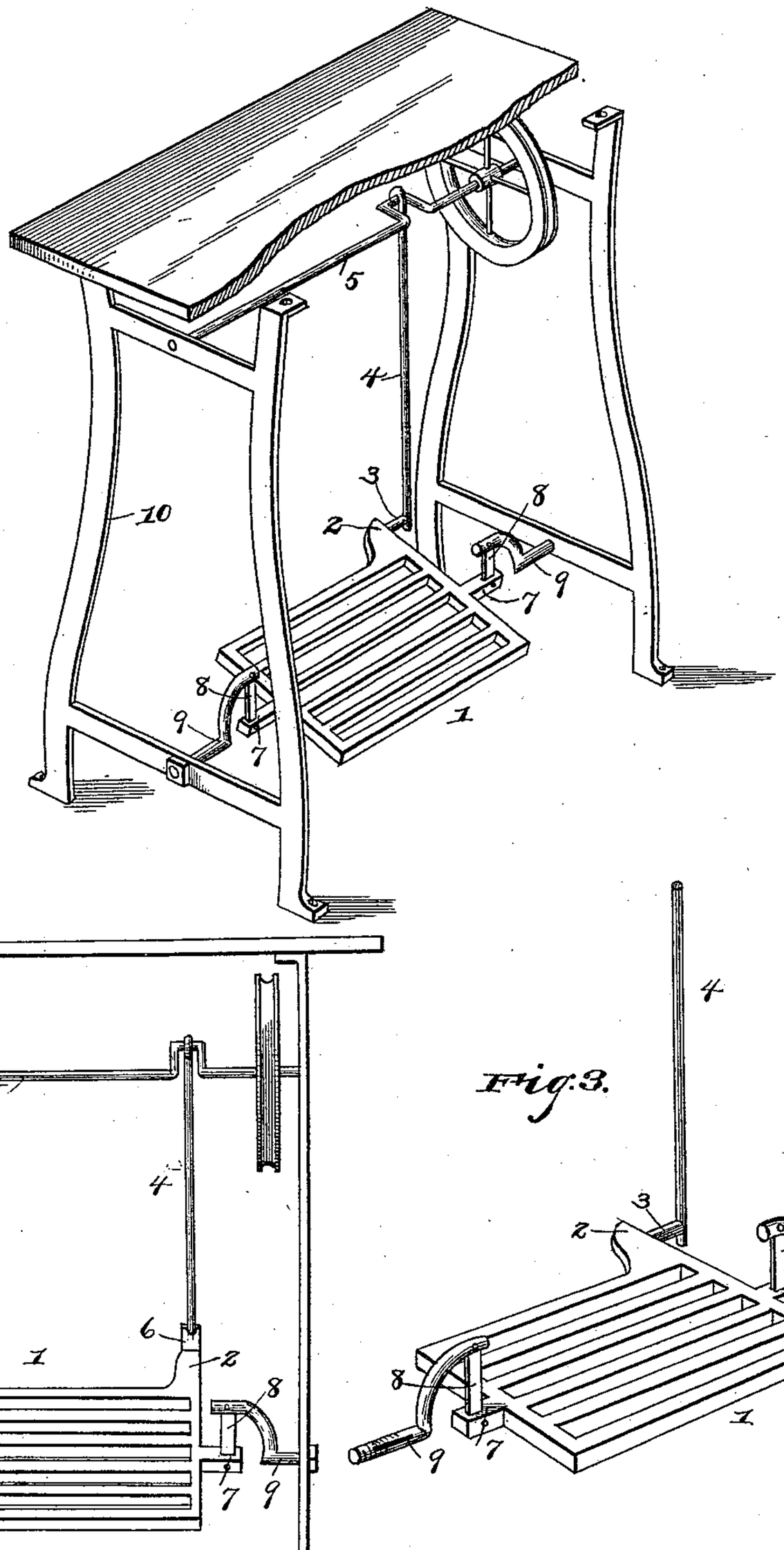

Fig. 1.

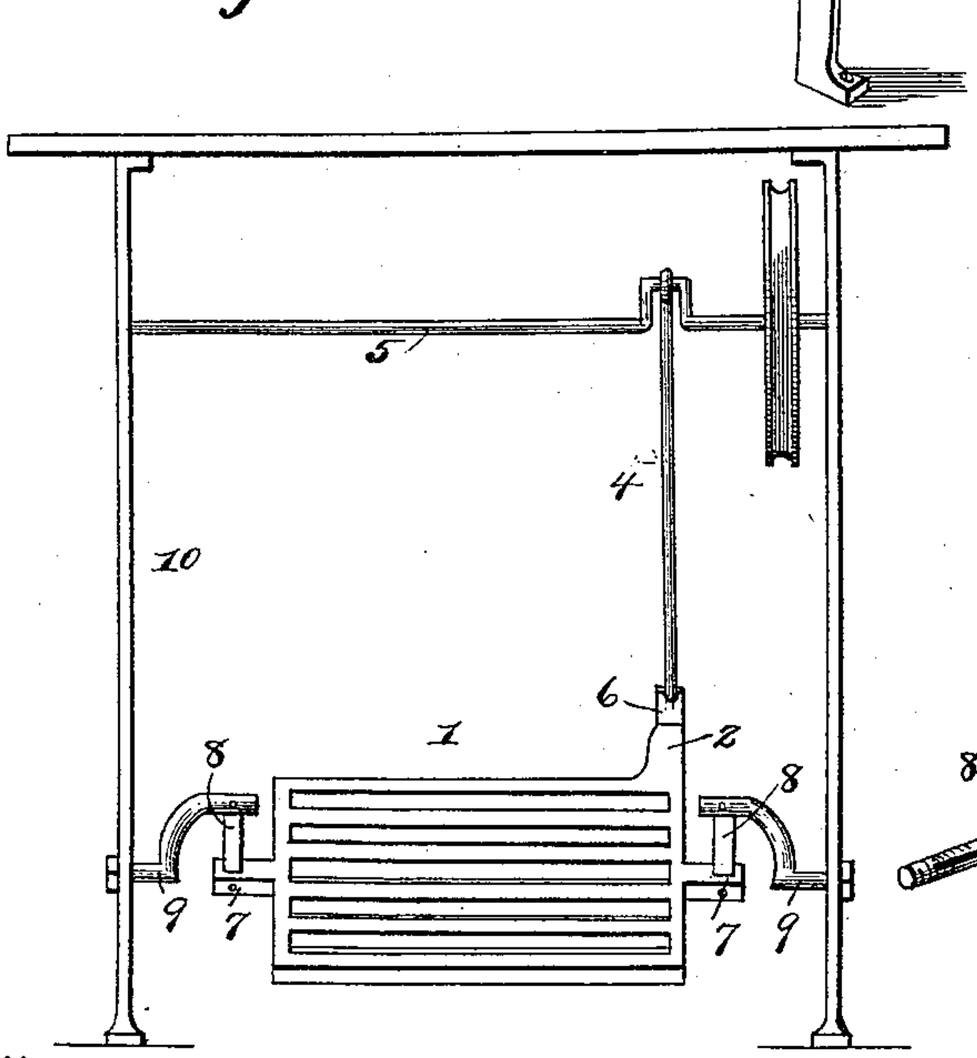

Fig. 2.

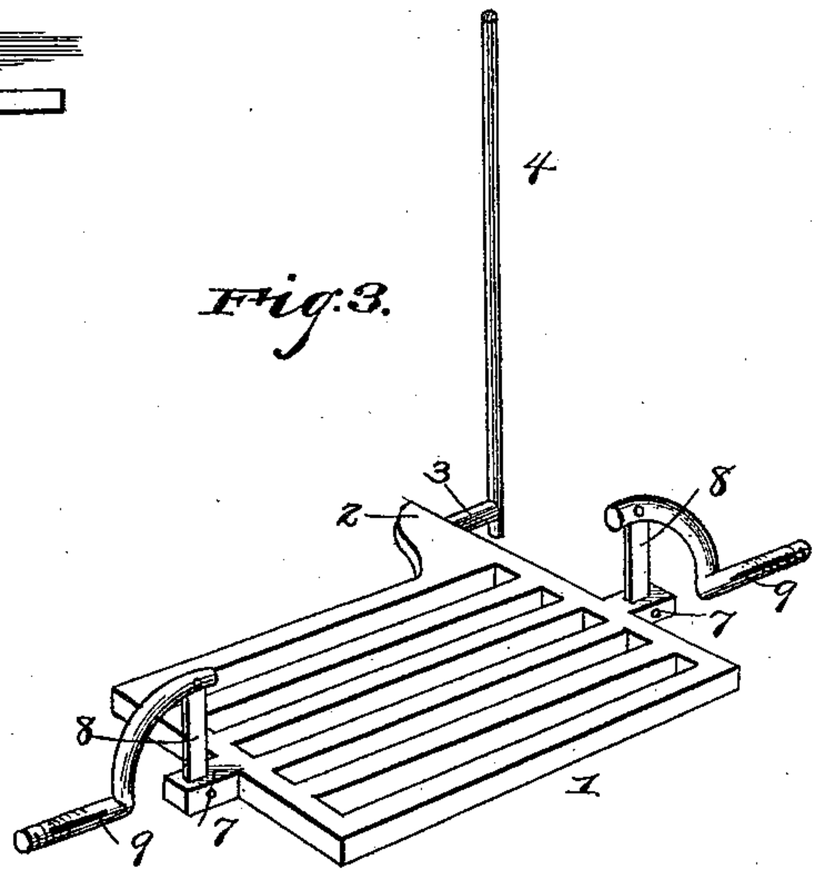

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

IRA S. BUNKER, OF NEVADA, MISSOURI.

TREADLE.

SPECIFICATION forming part of Letters Patent No. 494,460, dated March 28, 1893.

Application filed May 7, 1892. Serial No. 432,193. (No model.)

To all whom it may concern:

Be it known that I, IRA S. BUNKER, a citizen of the United States, residing at Nevada, in the county of Vernon and State of Missouri, have invented a new and useful Treadle, of which the following is a specification.

This invention relates to certain new and useful improvements in treadles, and consists in the construction and arrangement of the parts thereof as will be more fully hereinafter described and claimed.

The object of this invention is to provide a construction which will materially diminish friction through the medium of spring connections taking the place of journal bearings at different parts of the treadle.

The parts of the device are simple and effective in their construction and operation, strong and durable, and easily applied.

In the drawings: Figure 1 is a perspective view of the frame, showing the improved treadle applied in connection therewith. Fig. 2 is an elevation showing a different manner of connecting the pitman with the treadle. Fig. 3 is a perspective view of the treadle and its connections detached.

Similar numerals of reference indicate corresponding parts in the several views.

Referring to the drawings, the numeral 1 designates the treadle, preferably having an extension 2 at the rear thereof as is common in such form of devices, and as shown in Fig. 1, is provided with a journal 3, to which is connected a pitman 4, extending to a crank-shaft 5. As shown in Fig. 2, the pitman 4 is connected to the extension 2 of the treadle by a flat spring 6, and either form of connection of the pitman with the treadle may be employed as found desirable. Projecting from the sides of the treadle 1 are lugs 7, to which are riveted or otherwise secured flat springs 8, whose upper ends are secured to arms 9, removably attached to the frame 10. The arms 9 are removably attached to the said frame 10, as will be readily appreciated and consist of horizontal members which extend through the opposite sides of the frame and are screw-threaded to removably receive nuts at their outer ends, and also provided with segmental curved members extending upward from the inner terminations of the horizontal members and slotted at their free ends to receive the upper ends of the springs 8. The upper ends of the springs 8, as well as the lower ends of the same and also of the spring 6 heretofore referred to, may be removably connected to the several parts, as the operation of the same would be similar in either instance. The said springs are made sufficiently strong to resist breakage, but at the same time will be of proportionate resilient tension, corresponding to the nature of the work or weight of the treadle with which they are employed. It will be seen that the treadle hangs suspended, and the preferred form of connection of the same is rigid.

By the use of the device herein set forth, lubrication is avoided and friction removed, and when the treadle is operated the springs are bent in either direction and exert the same force on the treadle in returning from an impelled movement as they do on the said treadle when the same is operated or impelled as set forth, thereby making the operation easy and exceptionally simple.

The advantages and utility of a device of the nature hereinbefore set forth will be readily apparent to those skilled in the art and need not be further enlarged upon herein.

Having described the invention, what is claimed as new is—

In combination with a treadle, a series of flat springs connected thereto and extending above the same, a pitman in connection with the treadle, and supports removably attached to a frame and consisting of horizontal members inserted through the sides of the frame in longitudinal alignment and screw-threaded to removably receive nuts, the inner ends of said supports being arched or segmentally curved to rise above the treadle and having their free ends slotted to receive the springs attached to the opposite sides of the treadle, the said pitman being of rigid formation and having the upper end thereof directly attached to the driven shaft, substantially as described.

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

IRA S. BUNKER.

Witnesses:
J. SAM BROWN,
W. H. ROBINSON.