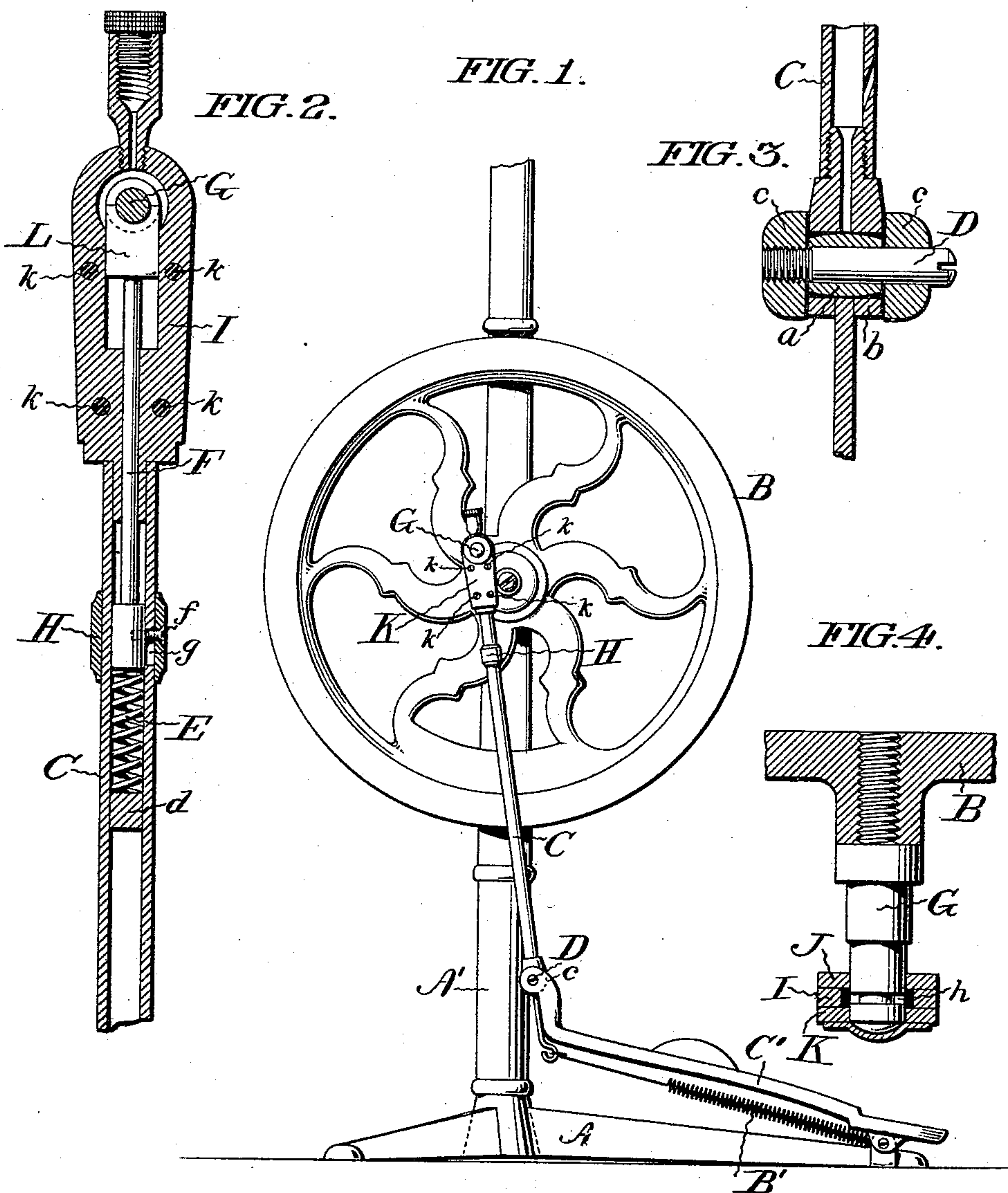


(No Model.)

C. DORIOT.
TREADLE MECHANISM.

No. 538,015.

Patented Apr. 23, 1895.



WITNESSES:

Edw. F. Simpson, Jr.
Samuel Barlow

INVENTOR

Constant Doriot,
By Atty J. S. Peyton

UNITED STATES PATENT OFFICE.

CONSTANT DORiot, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
S. S. WHITE DENTAL MANUFACTURING COMPANY, OF SAME PLACE.

TREADLE MECHANISM.

SPECIFICATION forming part of Letters Patent No. 538,015, dated April 23, 1895.

Application filed July 15, 1893. Serial No. 480,609. (No model.)

To all whom it may concern:

Be it known that I, CONSTANT DORiot, a citizen of the Republic of France, residing in the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Treadle Mechanism, of which the following is a specification.

My invention relates to certain improvements as hereinafter claimed in treadle mechanism especially applicable to dental engines, but which may be applied to other apparatus designed to be operated by foot power.

In the accompanying drawings which show such parts as are needed to illustrate a suitable adaptation of my invention, Figure 1 is a view in side elevation on a scale smaller than that of the other figures. Fig. 2 shows a portion of the pitman in longitudinal section, with parts in elevation. Fig. 3 is a similar section of the pitman at and near its jointed connection with the treadle; and Fig. 4 is a view partly in section showing details of the connection between the pitman, wrist pin and driving wheel.

The base A, frame standard A', driving wheel B, and off-center spring B' may be of any suitable construction, these parts as shown being such as used with an ordinary dental engine.

The pitman C by way of which motion is communicated from the treadle C' to the driving wheel is of peculiar construction. It is sectional and tubular and has universal-joint connection with the treadle in the following way: The treadle toe is bifurcated and between the toe forks c c there is pivoted a centrally bulged or barrel-shaped sleeve a within a parallel-walled socket b in the lower section of the pitman. The threaded pivot D passes through both forks of the treadle toe and loosely through the centrally bulged sleeve. It will be seen that there is space sufficient between the sleeve and the socket b at opposite sides of the sleeve's center to allow of sidewise movement of the pitman to prevent binding of the parts if not properly fitted. A coiled spring E within the pitman bears at one end against a block d pinned or otherwise held in place in a suitable well known way, and at its opposite end this spring

presses against one end of an endwise movable rod F for making operative connection between the wrist pin G of the driving wheel and the pitman. The endwise movement of the rod F is limited by means of a stop pin shown as formed by a screw f engaging the rod, projecting through a slot g in the pitman, and capable of being moved to the desired extent by a slidable sleeve H engaged by the stop pin. The wrist pin G, screwed to the driving wheel, as usual, has a peripheral groove h in it near its outer end, and the portions of the wrist pin at opposite sides of this reduced portion h are of a size corresponding with each other. The upper end of the pitman is made up of three parts, a central plate I, and plates J and K at opposite sides of the central plate. These plates are firmly but detachably connected with each other by screws k. The side plates J K engage the wrist pin at opposite sides of the groove h as will be seen by reference to Fig. 4. A slidable key block L is provided at the upper end of the movable rod F and is guided in its movements in the central plate I of the pitman. See Fig. 2. This key block is caused by the action of the spring E upon the endwise movable rod F to engage the lower portion of the peripheral groove and thus prevent accidental displacement of the pitman by movement endwise of or outward upon the wrist pin. To admit of the ready disengagement of the pitman from the wrist pin or to enable it to be engaged therewith it is only necessary to move the slidable sleeve H to compress the spring E so that the slidable key block will be moved into position such as not to interfere with the movement of the pitman plates endwise upon the wrist pin.

From the foregoing description it will be seen that binding at the joints between the treadle and pitman, and wrist pin and pitman, is guarded against, and that the pitman may quickly be disengaged from the wrist pin to allow the driving cord or belt to be placed about or removed from the driving wheel.

I claim as my invention—

1. The combination of the treadle, the pitman jointed thereto, the driving wheel, its wrist pin with which the pitman has jointed

connection, provided with the circumferential groove, the slidable key block carried by the pitman for engaging said groove, and means for actuating said key block, substantially as 5 and for the purpose set forth.

2. The combination of the treadle, the hollow pitman jointed thereto, the driving wheel, its wrist pin with which the pitman has jointed connection, provided with the circum- 10 ferential groove, the slidable key block car-

ried by the pitman for engaging said groove, the endwise movable rod acting on the slidable key block, and the spring acting on said rod, substantially as set forth.

In testimony whereof I have hereunto subscribed my name. 15

CONSTANT DORiot.

Witnesses:

EDW. F. SIMPSON,
R. DALE SPARHAWK.