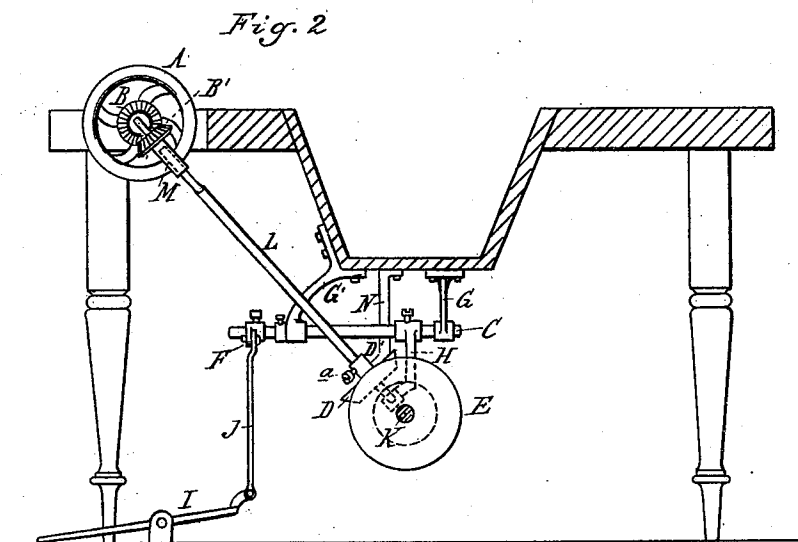
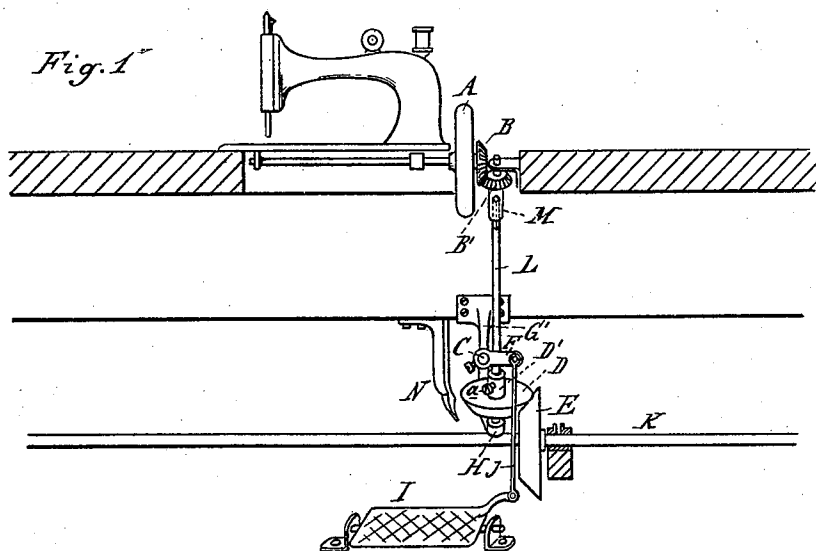


(No Model.)

E. L. SMITH.
MECHANISM FOR TRANSMITTING POWER.

No. 244,152.

Patented July 12, 1881.



Attest:
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UNITED STATES PATENT OFFICE.

EMMET L. SMITH, OF JACKSON, MICHIGAN.

MECHANISM FOR TRANSMITTING POWER.

SPECIFICATION forming part of Letters Patent No. 244,152, dated July 12, 1881.

Application filed May 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, EMMET L. SMITH, of the city and county of Jackson, and State of Michigan, have invented an Improvement in Mechanism for Transmitting Power, of which the following is a specification.

The nature of this invention relates to certain new and useful improvements in the construction and operation of mechanical devices by means of which power may be transmitted from the main line of shafting to machinery to be driven, whereby any of the evils arising from the use of belts for a like purpose are avoided.

The invention consists in the details of construction of the parts and their various combinations and operation in producing the desired result, as more fully hereinafter described.

Figure 1 is a front elevation, showing my device as applied to transmitting the motion of the main shaft to a sewing-machine. Fig. 2 is a side elevation of the same, partially in section.

In the accompanying drawings, which form a part of this specification, A represents the balance-wheel of a sewing-machine to which, or to the shaft upon which said balance-wheel is placed, is secured the bevel-gear or friction-wheel B.

B' is a similar wheel designed to engage with the wheel B. This wheel B' is attached or secured to a short shaft, M, the lower end of which is provided with a polygonal-shaped socket, designed to engage with the upper end of the driving-shaft L, which is similarly shaped at its upper end.

D is a bevel-wheel with a hub, D', which is sleeved upon said shaft, near its lower end, and is secured thereto by means of a set-screw, a. The lower end of the shaft L is stepped in a step-hanger, H, the upper end of which is secured to the rock-shaft C, which is journaled in suitable hangers G and G'. To the outer end of this rock-shaft is secured the crank F, to the outer end of which is pivotally secured the connecting-rod J, the lower end of which is pivoted to the treadle I.

E is a friction-wheel secured to the main

shaft K, (such shaft being the main driving-shaft,) and the wheel E is designed to engage with the bevel-wheel D on the shaft L. The bevel-wheel E is much thicker than the similar wheel, D, to allow the latter to engage with different parts of the former as varying speed may be required. This change is obtained by the vertical adjustment of the wheel D upon its shaft by means of the set-screw a. By pressing down one end of the treadle the rock-shaft, the motion of which is limited, throws the step H toward the wheel E, thereby producing frictional contact between the wheels D and E, thereby transmitting the motion of the main-line shaft K to the driving-shaft L, and through the bevel-gears B B' to the sewing-machine. Pressing the opposite end of the treadle releases the engagement or contact between the wheels D and E and throws the former against the rigidly-secured brake N, when its motion will be instantly stopped, allowing the main shaft to continue its motion without giving motion to the machine.

What I claim as my invention is—

1. In a combination of mechanism for transmitting power, the bevel-wheel D, vertically adjustable upon its shaft L, and adapted to be thrown into contact with the wheel E upon the main line of shafting by means of the treadle and rock-shaft, substantially as and for the purposes set forth.

2. In combination, the bevel or geared wheels B B', shaft L, bevel-wheels D E, shaft K, rock-shaft C, with its crank and treadle, and hanger H, substantially as and for the purposes set forth.

3. In a combination of mechanical devices, substantially as described, for transmitting power, the rigid brake N and bevel-wheel D, adapted to be thrown into frictional contact with said brake whenever thrown out of frictional contact with the wheel E by means of a rock-shaft and its connections, substantially as specified.

EMMET L. SMITH.

Witnesses:

L. C. CHANDLER,
H. W. MOULTON.