(No Model.)

G. S. ROMINGER.

Mechanical Movement.

No. 237,702. **Patented Feb. 15, 1881.**

FIG. 3.

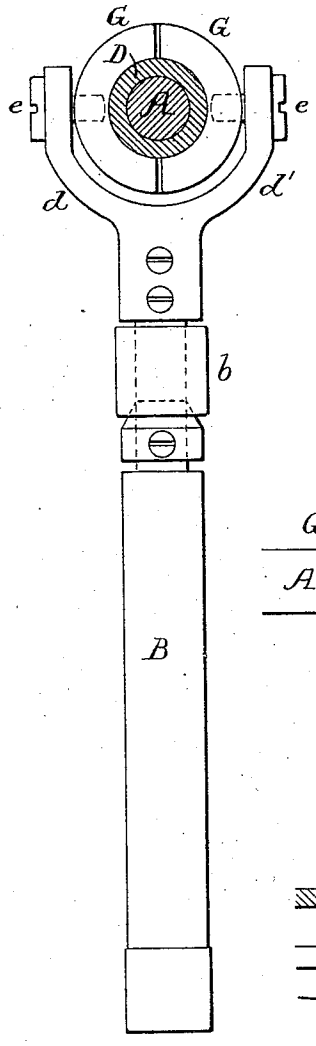


FIG. 1.

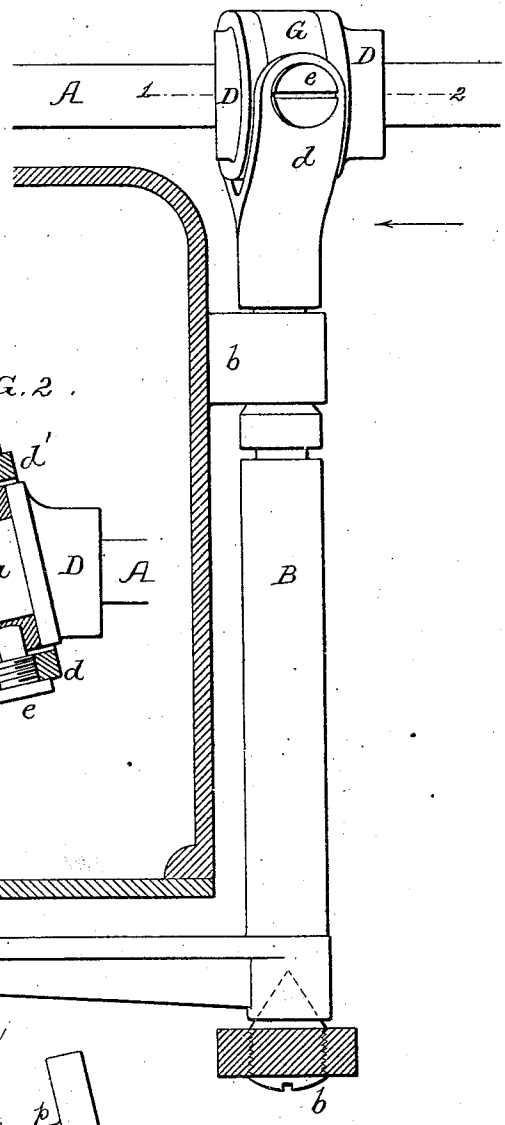


FIG. 2.

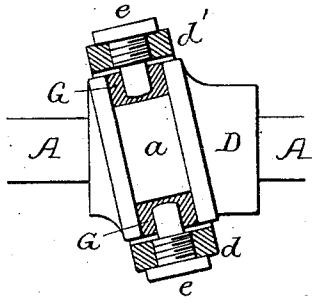
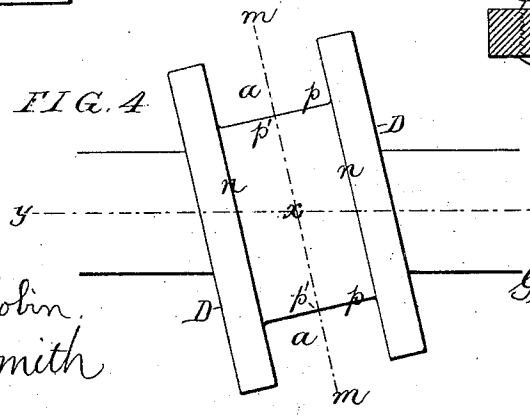


FIG. 4.



Witnesses.
James F. Tobin.
Harry Smith

Inventor
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UNITED STATES PATENT OFFICE.

GEORGE S. ROMINGER, OF PHILADELPHIA, PENNSYLVANIA.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 237,702, dated February 15, 1881.

Application filed January 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. ROMINGER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented a new Mechanical Movement, of which the following is a specification.

My invention consists of an improved mechanical movement, which is too fully described hereinafter to need preliminary explanation, and the object of which is to convert a rotary into a vibrating motion by a peculiar construction and combination of parts, which insure the durability and accurate working of the operating elements of the device.

In the accompanying drawings, Figure 1 is a side view of my improved movement; Fig. 2, a sectional plan on the line 1 2; Fig. 3, an end view, partly in section, and looking in the direction of the arrow, Fig. 1; and Fig. 4, a diagram illustrating my invention.

A is a driving-shaft adapted to fixed bearings, and B the shaft to which a vibrating motion has to be imparted, the axis x of this shaft being at right angles to and passing through the axis y of the driving-shaft. To this shaft A is secured a collar, D, in which is cut an oblique groove, a. The relation of this groove and the center lines or axes of the two shafts to each other will be best observed on reference to the diagram, Fig. 4, in which the point x represents the axis of the shaft D in the central line, y, of the driving-shaft A.

If an oblique line, m m, be drawn through the center, x, the edges n n of the groove in the collar should be on opposite sides of and equidistant from this line. The bottom p of the groove should preferably be at right angles to the line, and the points p' p', where the line m m crosses the bottom of the groove, should always be equidistant from the point x.

The shaft B is adapted to a fixed bearing or bearings, b, and the upper end of this shaft is forked, so as to present two arms, d d', into each of which is screwed a stud, e, Fig. 3, the two studs fitting in orifices in a collar or sleeve, G, which is fitted snugly in the groove of the collar D, said sleeve being made in two parts for introduction into the groove.

When the driving-shaft is turned a vibrating motion must necessarily be imparted to the shaft B, and the movement thus obtained may be applied to the driving of the shuttle of a sewing-machine, or to the reciprocating of a slide-valve, or to the imparting of a vibrating or reciprocating movement to any object.

It will be seen that the device partakes somewhat of the character of the well-known movement in which a grooved cam on a shaft reciprocates an arm; but it differs from such movements in this respect, that the power is transmitted from the driving-shaft through uniform and extended bearing-surfaces, by which durability and freedom from rattling noises are attained, and that in reaching this result I have departed, in arrangement and construction of parts, from the usual grooved cam devices, especially in using the sleeve G, by which uniform bearing-surfaces are attained.

I claim as my invention—

A mechanical movement in which a driving-shaft having an oblique groove or a collar with an oblique groove is combined with a shaft whose axis is at right angles to and passes through that of the driving-shaft, and with a sleeve adapted to the said groove and studs carried by the shaft B and adapted to orifices in the sleeve, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEO. S. ROMINGER.

Witnesses:
JAMES F. TOBIN,
HARRY SMITH.