3 Sheets—Sheet 1.

E. W. BRODNAX & B. COHEN.

Spring Motor.

No. 197,822. **Patented Dec. 4, 1877.**

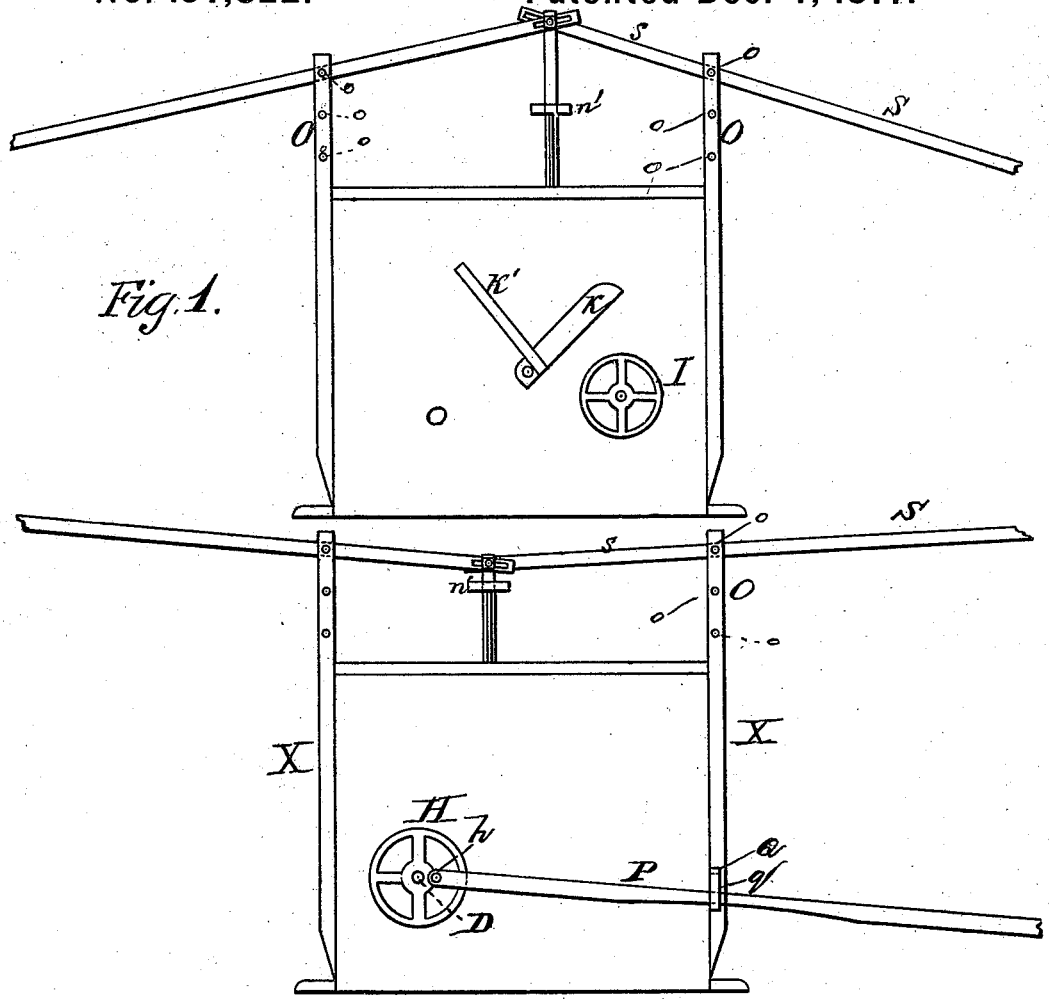

Fig. 1.

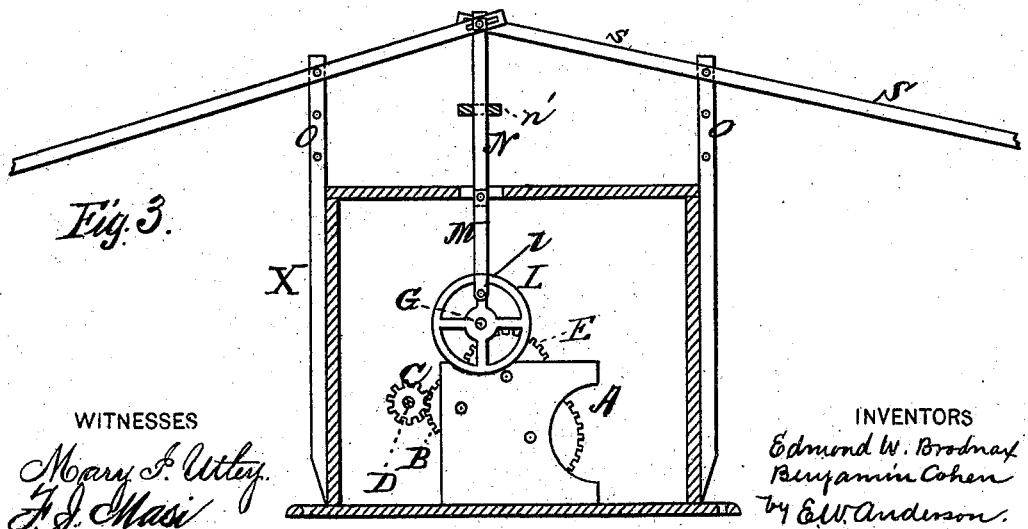

Fig. 3.

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E. W. BRODNAX & B. COHEN.

Spring Motor.

No. 197,822. **Patented Dec. 4, 1877.**

Fig 4

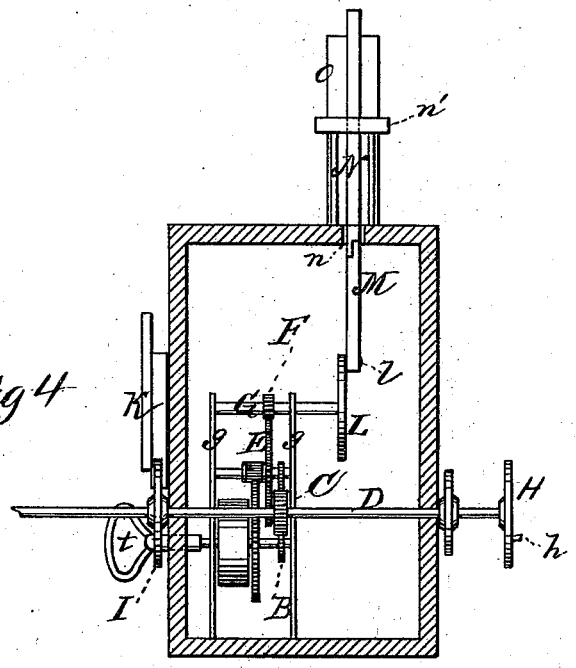
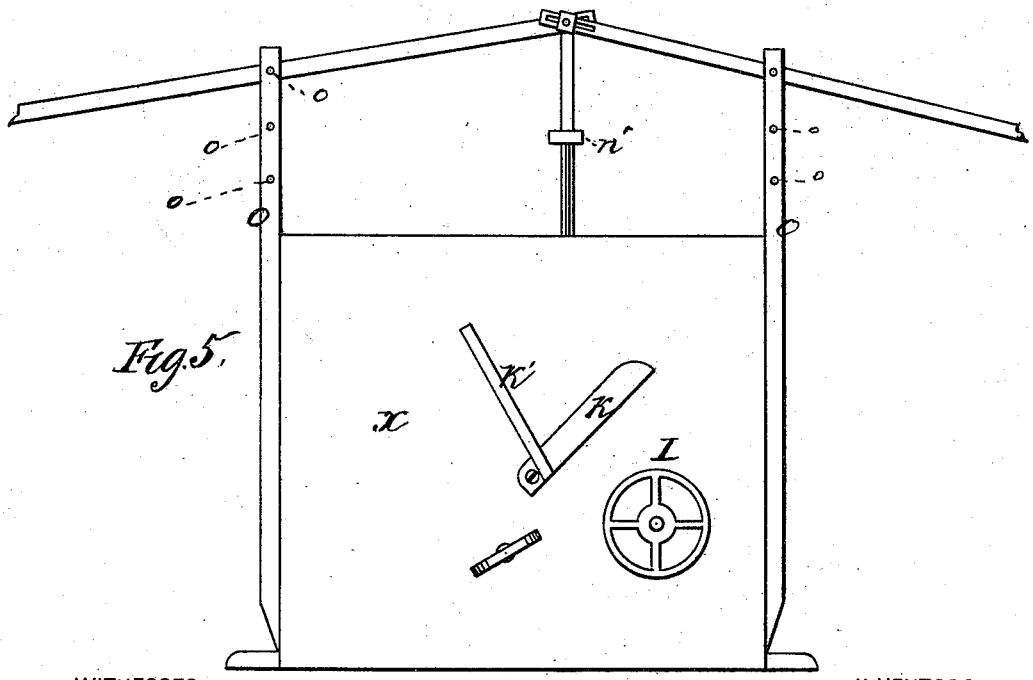


Fig 5.



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3 Sheets—Sheet 2.

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Spring Motor.

No. 197,822. **Patented Dec. 4, 1877.**

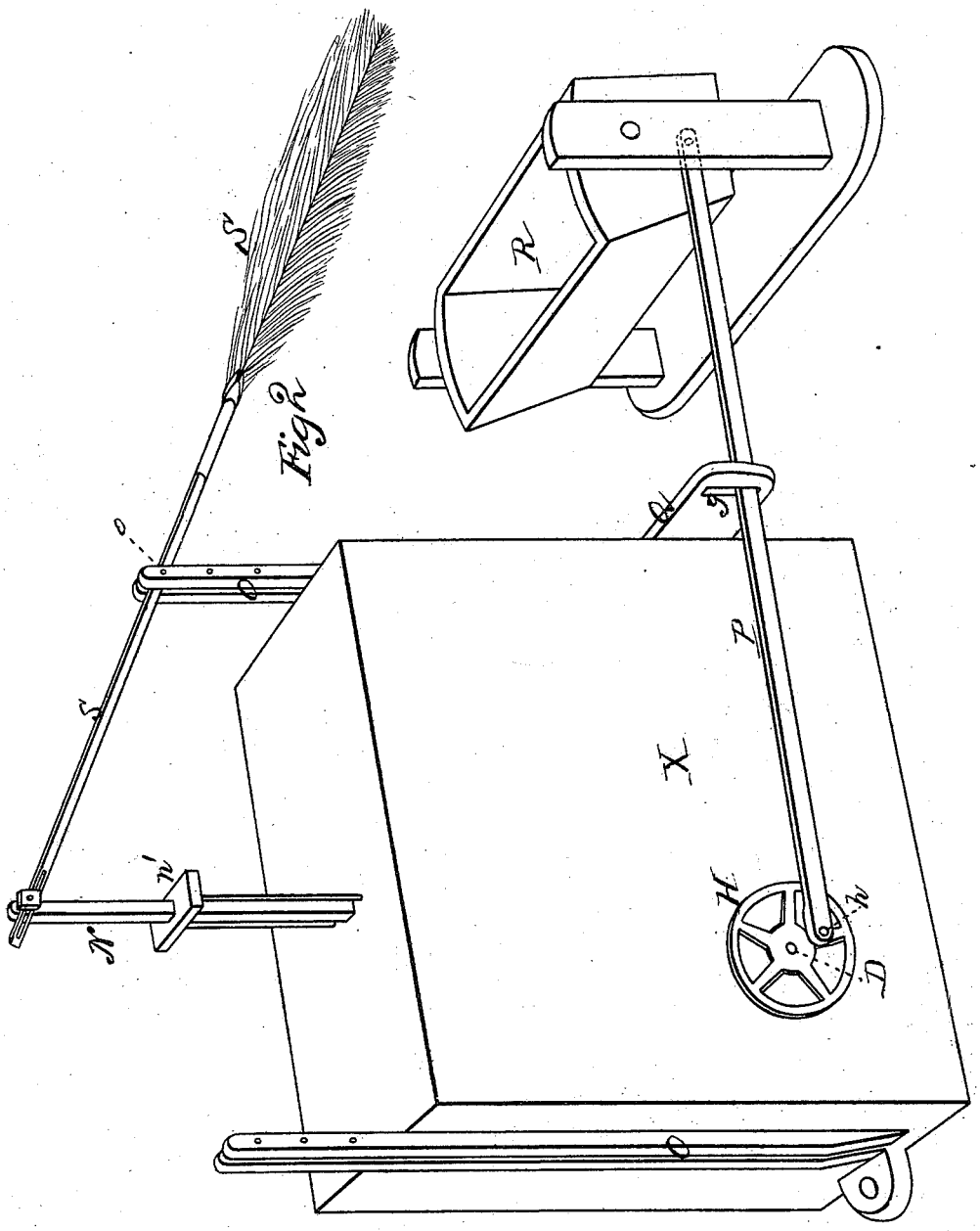

Fig 2

WITNESSES

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UNITED STATES PATENT OFFICE.

EDMOND W. BRODNAX AND BENJAMIN COHEN, OF EUTAW, ALABAMA.

IMPROVEMENT IN SPRING-MOTORS.

Specification forming part of Letters Patent No. **197,822**, dated December 4, 1877; application filed September 15, 1877.

To all whom it may concern:

Be it known that we, EDMOND W. BRODNAX and BENJAMIN COHEN, of Eutaw, in the county of Greene and State of Alabama, have invented a new and valuable Improvement in Motors for Fly-Brushes, Fans, and other articles; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figures 1 and 5 of the drawings are representations of side views of our invention. Fig. 2 is a perspective view thereof. Figs. 3 and 4 are cross-sectional views of the same.

The object of our invention will be hereinafter more fully shown and specified.

In the drawings, the letter A designates a train of gear-wheels operated by a spring. The end wheel B of this train meshes with the pinion C on shaft D, which has its bearings in the side walls of a case, X, and the top wheel E meshes with the pinion F on shaft G. The ends of the shaft D project through the side walls of the case X, one end of the said shaft being provided with a fly-wheel, H, having a crank-pin, *h*, and upon the other end is mounted a friction or brake wheel, I, upon the periphery of which rests the brake K, which may be pressed against the wheel with more or less force by its handle K′, in order to regulate the speed of the apparatus. The shaft G has its bearings in standards *g* projecting upward from the frame of the train, and carries upon one end a fly-wheel, L, having a crank-pin, *l*, to which is connected a short pitman, M, which is also jointed to a reciprocating rod, N, extending upward through a guide-bearing, *n*, in the top of the case, and a guide, *n′*, erected thereupon. From the ends of this case X double or bifurcated standards O O project upward and are provided with holes *o o o* for pivots or fulcrum-pins of levers, which may be mounted at various heights upon said standards.

To the crank-pin *h* of the fly-wheel H is connected a pitman, P, which plays through a guide-slot, *q*, in an arm, Q, projecting from the end of case X. In Fig. 3 this pitman is connected to a swinging cradle, R, and the end of reciprocating rod N is jointed to the long handle *s* of a fly-brush, S, fulcrumed in one of the double standards O, its outer end or brush being arranged directly over the cradle.

When the spring is wound up by means of an ordinary key or winch, as shown by *t*, (said spring being connected with the train, as is the ordinary motive spring of a clock-train,) and the train is in operation, the fly-wheel H reciprocates its pitman P, and gives a swinging motion to the cradle R, while at the same time the fly-wheel L, through its pitman and the reciprocating rod N, communicates a vibratory motion to the fly-brush for the purpose of keeping flies away from the occupant of the swinging cradle, so that by this arrangement we have a combined cradle rocker or swinger and fly-fan.

Instead of to a cradle, the pitman P may be connected to the crank or fly wheel of a coffee-mill, and the reciprocating rod N may be jointed to one end of a lever fulcrumed in one of the standards O, and having its other end jointed to the dash-rod of a churn; or the pitman P may be connected to the crank-pin of a belt-wheel arranged to drive a sewing-machine.

Convenient methods of connecting the motor for the operation of any of the ordinary household machines will readily suggest themselves when needed, and require only a slight degree of handiness.

We claim as our invention—

The spring-motor herein described, consisting of train A, inclosed in a suitable case, X, fly-wheels H and L, horizontal pitman P, guide-slot *q*, vertical pitman M, reciprocating rod N, and a standard, O, for supporting the fulcrum of a lever or its equivalent, the whole adapted for operative connection with various machines, substantially as shown and specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

EDMOND WHITAKER BRODNAX.
BENJAMIN COHEN.

Attest:
WILLY MOBLEY,
STEPHEN H. SMITH.