DENHAM & BRIGGS.

Burglar Alarm.

No. 19,495. Patented March 2, 1858.

Fig. 1.

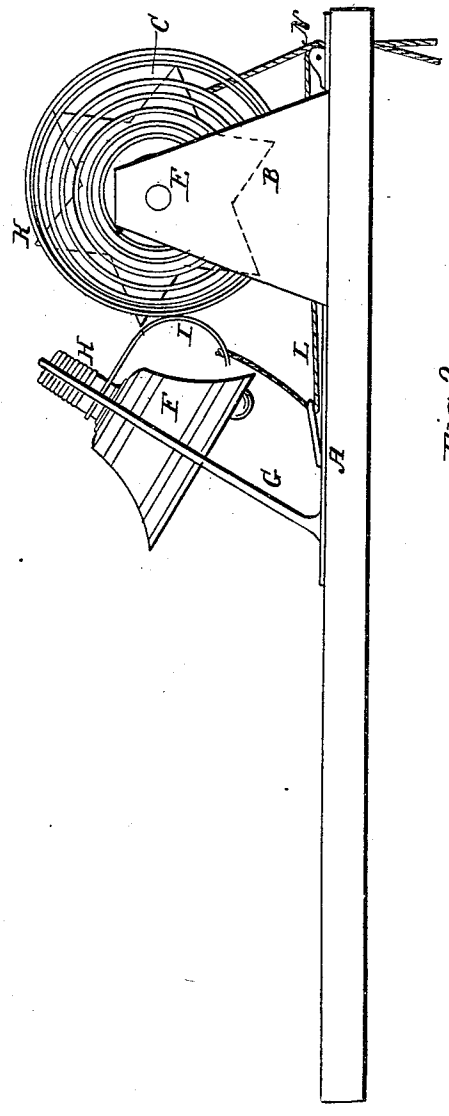
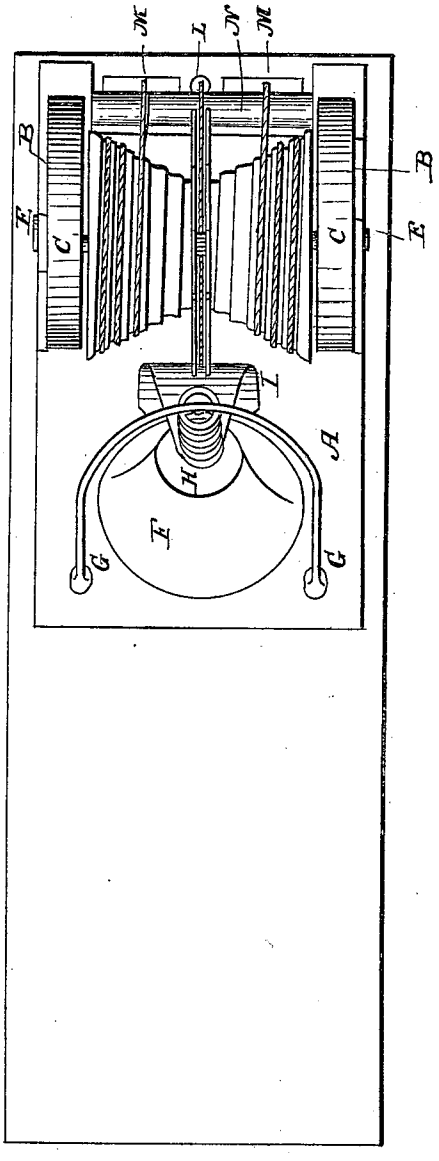


Fig. 2.



UNITED STATES PATENT OFFICE.

THOS. DENHAM AND JOSEPH W. BRIGGS, OF CLEVELAND, OHIO.

ALARM SASH-BALANCE.

Specification of Letters Patent No. 19,495, dated March 2, 1858.

To all whom it may concern:

Be it known that we, THOMAS DENHAM and JOSEPH W. BRIGGS, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Alarm Sash-Balances for Windows; and we do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the spring and its appendages, and Fig. 2, a top view of the same.

Like letters refer to like parts in the different views.

A represents the plate, to which the several parts are attached. B, the standards which support the shaft of the cone pulley. C, the coiled spring that supports the weight of the sash. D the spiral cone pulley, around which the cord passes that is attached to the sash. E, the shaft upon which the spiral cone pulley is placed, and to which the inner end of the coiled spring is secured. The outer end of the coiled spring is secured to the plate A. F the alarm bell. This is supported upon the standard G, which forms an arch in which the bell is suspended by a spiral spring seen at H. From the crown of the bell, projects a curved arm I, which serves to give motion to the bell by means of projecting points K, from the shaft E, which strike against the curved arm I, as the cone pulley revolves in raising or lowering the sash.

L represents a cord attached to the end of the curved arm I, for the purpose of drawing the arm beyond the reach of the points K, so that the window can be moved up and down without ringing the bell, in cases of sickness, &c.

M represents the cord by which the sash is suspended. This cord passes around the cone pulley, and over a friction roller N. In adjusting the spring to the weight of the sash the cord M is attached to the sash, passed over the friction roller N, and secured to the outer edge of the cone pulley. The spring is then adjusted in such a manner by coiling upon itself, that its tension or recoil, shall be just sufficient to hold the weight of the sash. If the sash should be too heavy, for the spring, one or two turns should be given to the spring, by detaching it from the plate A, giving it a turn or two around the shaft, and securing as before. In this manner the spring can be made exactly to balance a sash of any given weight. As the sash ascends, the cord M turns the cone pulley, and this brings the spring to a greater tension, but this increased tension is compensated for, continually, by the increasing distance of the cord from the shaft E, as it unwinds from the cone pulley, consequently the cord will sustain the same weight at any given height. In raising the sash, as the spring becomes weaker, the cone pulley carries the cord nearer to the shaft, by which means the weight of the sash is exactly balanced by the spring. When the sash is either raised or lowered, the arms or points K, successively strike against the curved arm I, and this gives the bell a shaking motion, and thus, in opening a window by burglars, the alarm would be given to the inmates of the house.

The alarm as herein described may be applied to windows when the sash are balanced by means of weights suspended by cords over pulleys—the arms or points K being formed on one side of the pulley.

We are aware that fire alarms and burglar alarms are not new, and we do not claim the separate devices employed by us, but we believe that the particular combination invented by us is new, and a substantial improvement upon all alarms heretofore known.

Having thus fully described our invention, what we claim and desire to secure by Letters Patent of the United States is:

The combination of the alarm with the sash balance and window sash when constructed and arranged substantially as described, for the purpose of alarming the inmates of a house when burglars open the window, as set forth.

THOS. DENHAM.
JOSEPH W. BRIGGS.

Witnesses:
W. H. HUTTON,
W. H. BURRIDGE.