W. W. SNELL.

Bee Swarm Indicator.

No. 50,639. Patented Oct. 24, 1865.

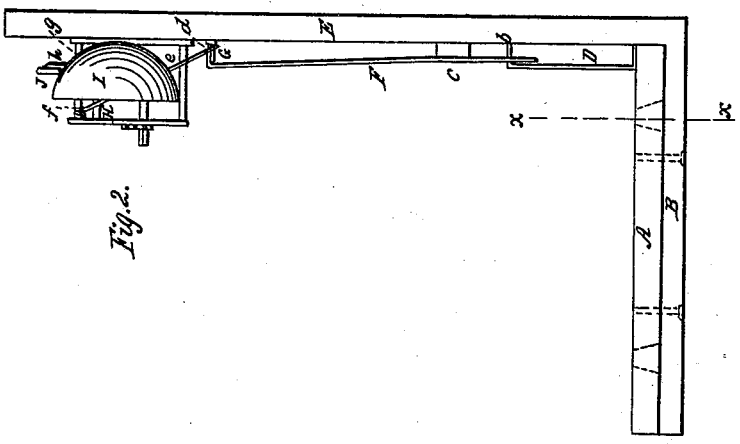

Fig. 2.

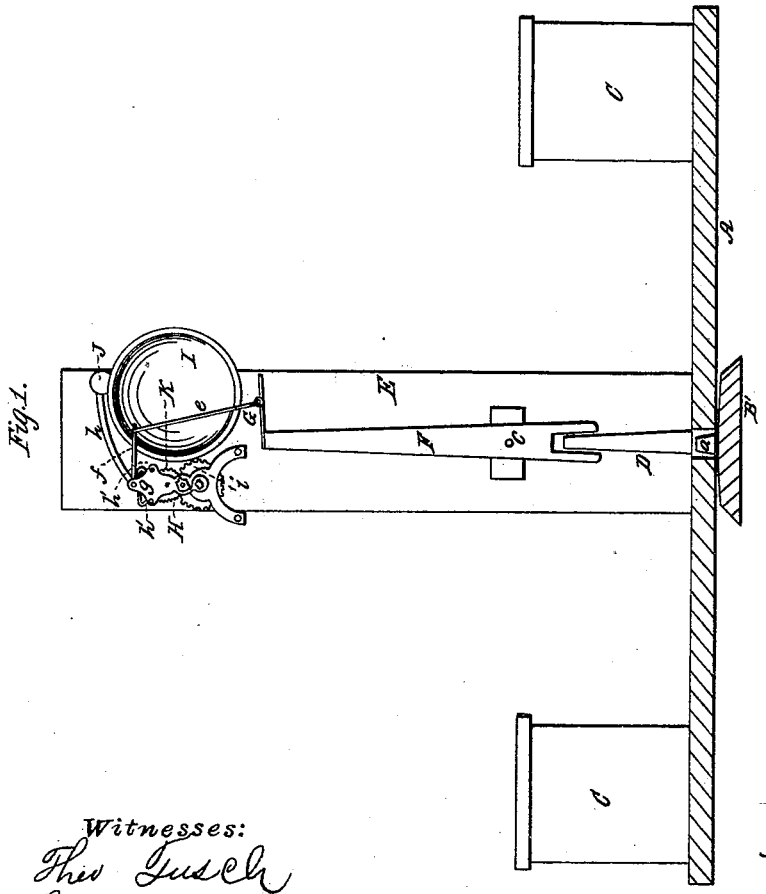

Fig. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

WM. W. SNELL, OF RUSHFORD, MINNESOTA.

IMPROVEMENT IN SWARM-INDICATORS FOR BEE-HIVES.

Specification forming part of Letters Patent No. **50,639**, dated October 24, 1865.

To all whom it may concern:

Be it known that I, WILLIAM W. SNELL, of Rushford, in the county of Fillmore and State of Minnesota, have invented a new and useful Device which I term a "Bee-Sentinel or Swarm-Indicator;" and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of my invention, the platform thereof being in section, as indicated by the line *x x*, Fig. 2; Fig. 2, a side view of the same.

Similar letters of reference indicate like parts.

This invention relates to a novel and simple device for giving notice when a hive of bees are swarming; and it consists in the application of an alarm, which may be constructed similarly to an ordinary clock-alarm, to a tilting platform on which two or more hives are placed, so as to balance said platform, all being so arranged that when a hive commences to swarm, or shortly after, the platform will have its equilibrium destroyed, and the alarm consequently sounded.

A represents a platform, which is fitted on pins *a* in a cross-bar, B, placed on any suitable bench or support, a slight tilting motion being allowed the platform, and the bar B being of such a width as to prevent the platform from tilting too easily.

On this platform A two or more hives, C, are placed in such a manner as to balance the platform, (see Fig. 1,) and to one side of the platform, in line with the pins *a*, there is attached an upright arm, D, the upper end of which is bent over at right angles, as shown at *b* in Fig. 2.

E is an upright, which is attached to one end of the cross-bar B, and has a lever, F, secured to it by a fulcrum-pin, *c*. The lower end of this lever F is forked for the upper end of the arm D to fit therein. The upper end of the lever F is bent over at right angles, as shown at *d* in Fig. 2, to catch and hold down an arm, G, which is pivoted to the upright E, and is connected by a wire or cord, *e*, with a rod, *f*, attached to the pallet-shaft *g* of an alarm, H.

This alarm may be constructed in the same manner as an ordinary clock-alarm, I being a bell, against which a hammer, J, strikes, the latter being at the end of a rod, *h*, which is attached to the pallet-shaft *g*, the pallets *h' h'* being acted upon by a scape-wheel, K, put in motion by a spring through the medium of suitable gearing, *i*. These parts, being all well known, do not require a minute description. The alarm, when wound up, and the arm G is held down by the lever F, is prevented from operating, as the pallets *h' h'* are held stationary, and the arm G is under the upper bent end of the lever F when the platform A is in a horizontal position and in a balanced state. In case one of the hives swarms it of course gradually becomes lighter, and the equilibrium of the platform A is destroyed, the latter then tilting and causing the arm D to actuate the lever F, so that its upper end will pass off from the arm G. The alarm is then sounded, it having been previously wound up so as to be actuated by its spring.

A swarm of bees will weigh about fifteen pounds, and a diminution of weight of about three pounds in a hive will destroy the equilibrium of the platform sufficiently to cause the alarm to be sounded.

This invention has been practically tested, and it operates well, the alarm having been sounded in every instance when a hive has swarmed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The employment or use of an alarm, or an indicator, or signal of any kind, applied to or arranged in connection with bee-hives in such a manner that in case of the swarming of a hive the diminution of the weight thereof produced by the egress of the bees will cause the alarm or indicator to be operated.

2. The tilting platform A, in connection with the arm D, lever F, and the alarm, arranged to operate in connection with the hives substantially in the manner as and for the purpose set forth.

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Witnesses:
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