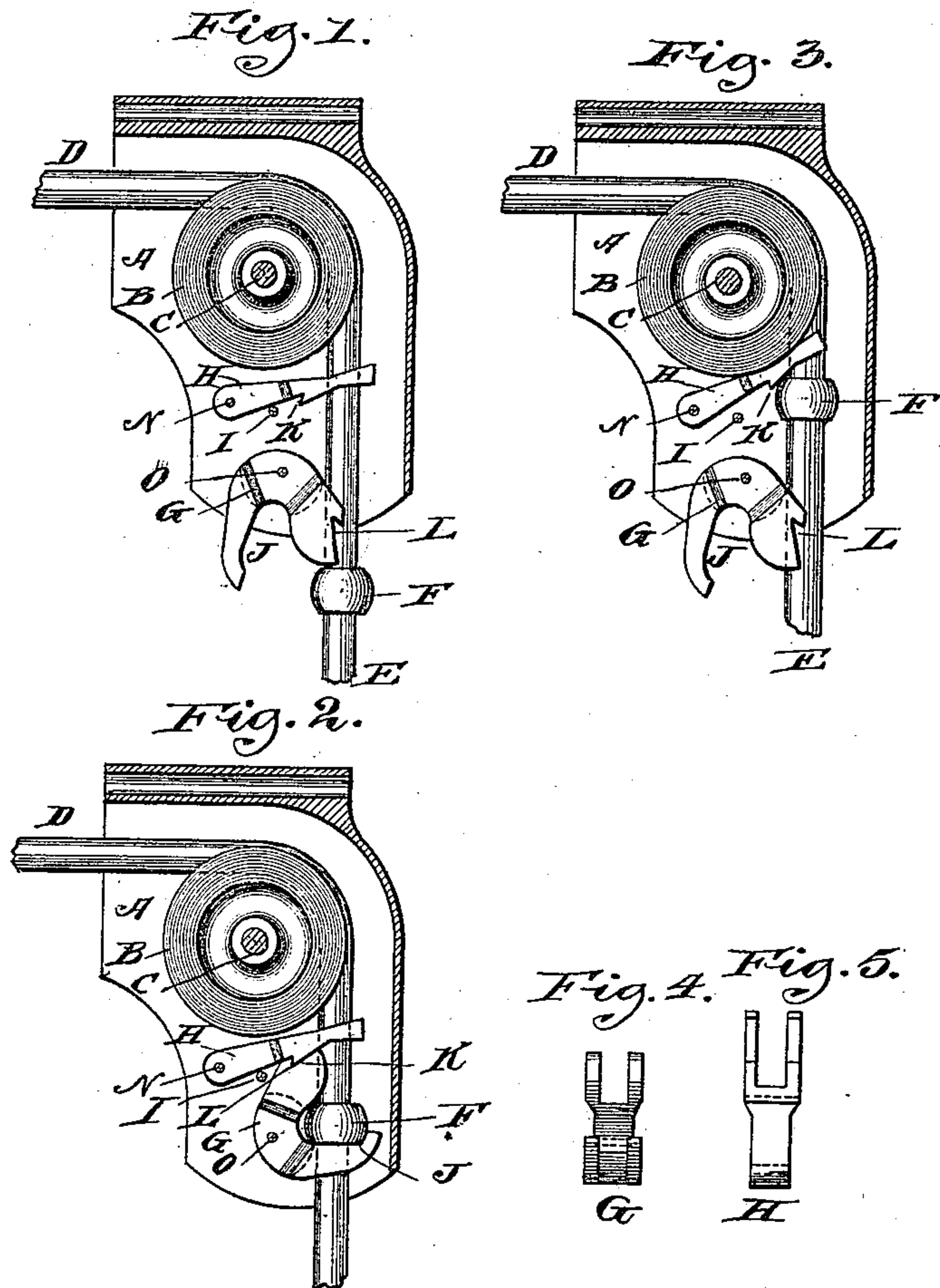


(No Model.)

J. A. LOUNSBURY.
AUTOMATIC SUPPORTING LOCK.

No. 448,970.

Patented Mar. 24, 1891.



Witnesses,
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UNITED STATES PATENT OFFICE.

JAMES ALLEN LOUNSBURY, OF CHICAGO, ILLINOIS, ASSIGNOR, BY DIRECT
AND MESNE ASSIGNMENTS, TO GEORGE CUTTER, OF SAME PLACE.

AUTOMATIC SUPPORTING-LOCK.

SPECIFICATION forming part of Letters Patent No. 448,970, dated March 24, 1891.

Application filed June 6, 1890. Serial No. 354,534. (No model.)

To all whom it may concern:

Be it known that I, JAMES ALLEN LOUNSBURY, a citizen of the United States, residing in the city of Chicago, county of Cook, and State of Illinois, have made certain new and useful Improvements in Automatic Supporting-Locks, of which the following is a specification.

Figure 1 is a sectional side elevation showing the locking device open, with the suspended weight—such as electric-arc light—ready to be elevated. Fig. 2 is a sectional side elevation showing the suspended weight elevated, and with automatic lock in position to hold it in suspension. Fig. 3 is a side sectional elevation showing the locking device disconnected and the suspended weight ready to be lowered. Figs. 4 and 5 are details of the locking device.

The object of this invention is to so provide an automatic supporting locking device in a proper housing that by pulling a cord passing over a pulley a certain distance the suspended weight—such as an electric-arc light—will be held fixedly in suspension, and then by pulling the same cord and slightly elevating the suspended weight the device is unlocked and the suspended weight may be freely lowered.

The locking device is inclosed in any suitable housing to make it sleet-proof.

A is the housing, within which is placed the sheave or pulley B, working on its axis C, which has bearings in the sides of the housing.

H is a pawl revolving on the pin N at one end, and bifurcated at the other, as more clearly shown in Fig. 5. At or near midway between the two ends is the shoulder K. The downward movement of this pawl is restricted by the pin I, and its upward movement is also limited by the sheave B. Below this pawl is placed the bent pawl G, revolving upon the pin O, which is about midway between the two ends. Each end of this pawl is bifurcated or forked, as more clearly shown in Fig. 4, to allow the rope to pass freely. A short distance back of one end is the shoulder L, and at the other end is the seat J.

D is a cord passing over the sheave B and through the bifurcated ends of the two pawls. This cord is provided with a knot or knob F.

To the end E of the cord is attached the weight to be suspended, such as an electric-arc light. When the weight is lowered, the position of the two pawls is shown in Fig. 1—that is, they are disengaged, the upper pawl H resting on the pin I and the lower pawl G freely swinging on the pin O. To the end D of the cord power is applied, which raises the weight to be suspended, the knot or knob F on the cord engaging the end of pawl G nearest to it, and raising it until it strikes against the lower side of the upper pawl H, which is raised until the shoulder L passes the shoulder K on the upper pawl H. At the same time the opposite or free end of the pawl G swings around under the knot or knob F on the cord, and the instant the shoulder L passes the shoulder K the elevating is stopped, and the knot or knob F settles back into the seat J on the lower bifurcated end of pawl G, as shown in Fig. 2. The interlocking of the two shoulders prevents the lower pawl from swinging downward. Hence the electric-arc light or whatever weight is suspended is fixedly held in position and the hoisting-rope relieved of all strain, thus rendering the lamp secure from falling by any accident to the hoisting rope or cord. To lower the suspended weight it is slightly elevated, and by so doing the interlocking shoulders are disengaged, as shown in Fig. 3, when the suspended weight may be freely lowered.

It will be observed that all the operating parts of the locking device are automatic in their action and are controlled and operated by raising and lowering the suspended weight.

I claim—

1. The combination and arrangement, in a proper housing, of two pawls, one above the other, the upper one loosely attached near one end to the housing and provided with a locking-shoulder on its lower side, the lower one in a bent form and loosely attached at or near the apex of its angle to the housing, one end provided with an interlocking shoulder and at or near the other end with a seat, so that when the front end is elevated the two shoulders will interlock, and a seat is provided for the support of the suspended weight.

2. The combination, in a proper housing, of two pawls, one having one end bifurcated and

the other having both ends bifurcated, each provided with interlocking shoulders, one having a seat for the support of the suspended weight, and a suitable cord provided with a knob or knot, all so arranged that by elevating the suspended weight a certain distance the locking device holds it fixedly in suspense, and by elevating the weight a short additional distance the locking device is loosened, allowing the weight to be freely lowered.

3. The combination and arrangement, in a proper housing, of mechanism consisting of

shouldered and bifurcated pawls made to freely move and interlock, one provided with a seat for supporting the suspended weight, and a sheave, whereby by applying power to the same cord or rope the device is locked and holds the weight in suspense, and continuing the application of power the device is unlocked and the suspended weight is freely allowed to be lowered.

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