(No Model.)

# J. H. DAVIS.

## DOOR SPRING.

No. 395,383. Patented Jan. 1, 1889.

FIG. 1.

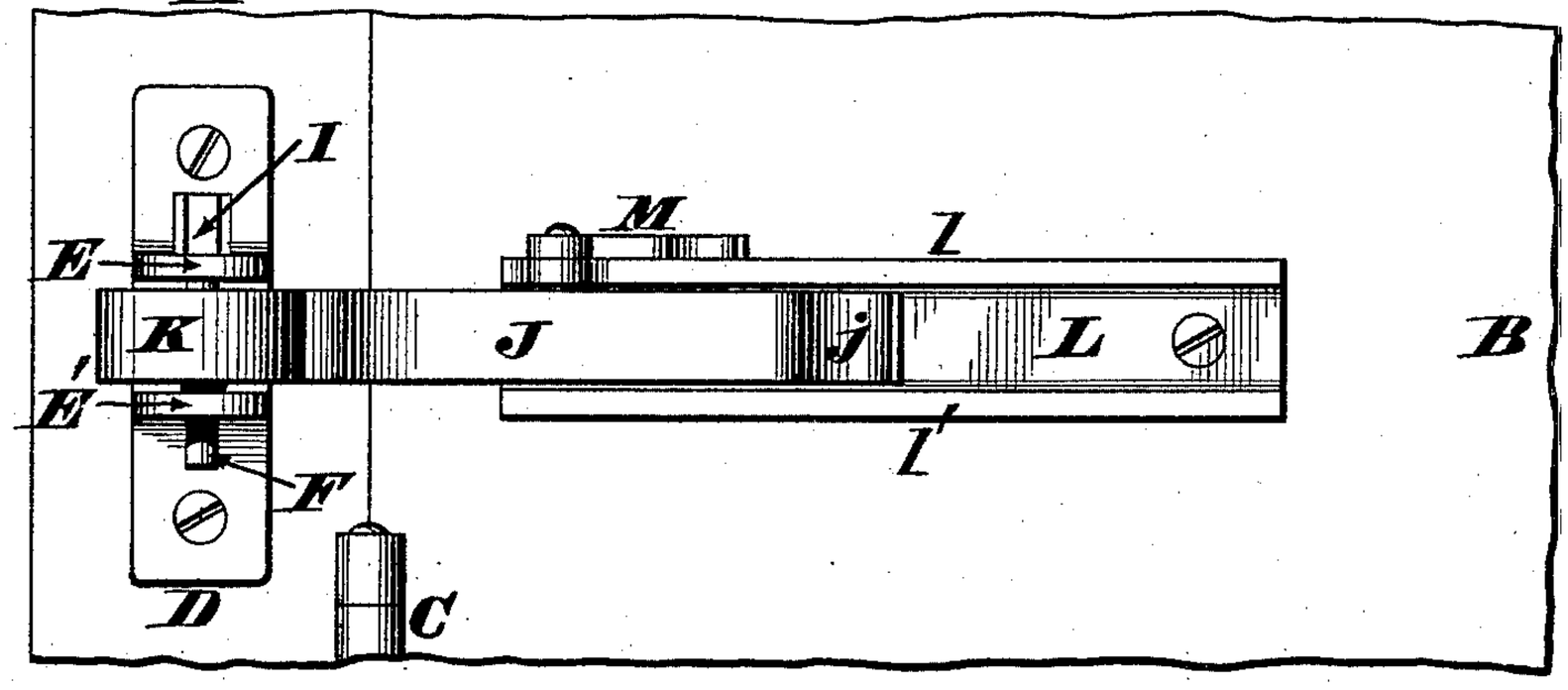



FIG. 2.

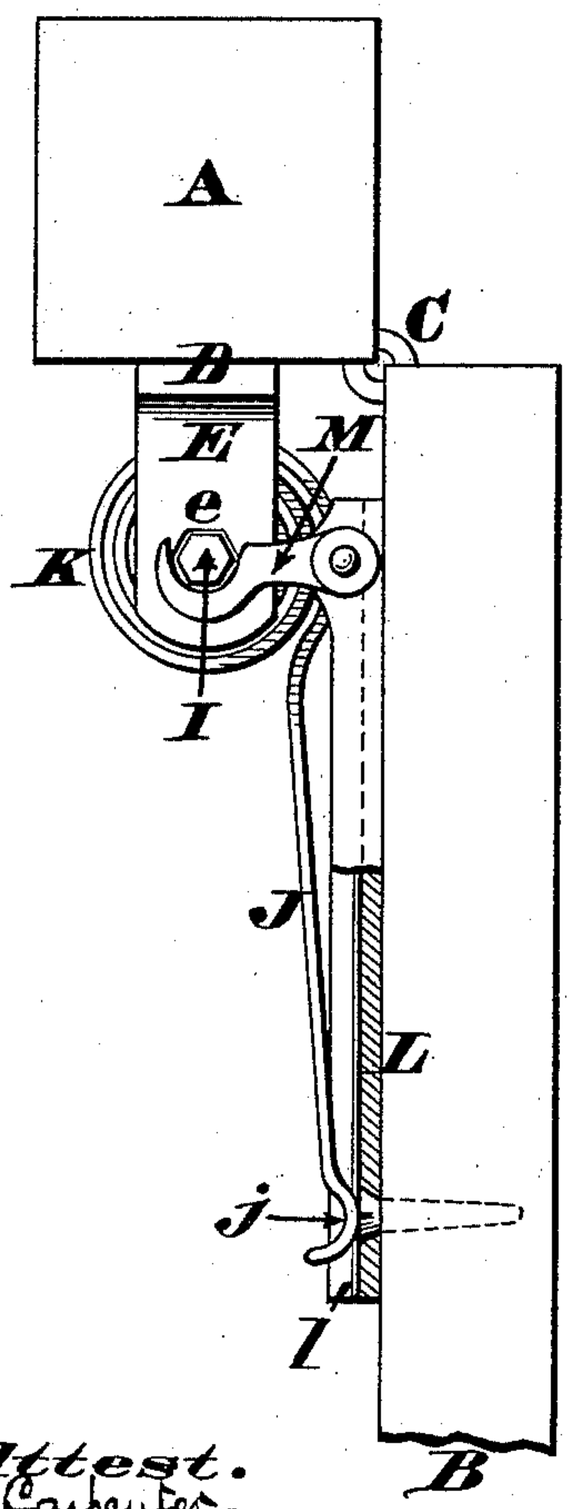



FIG. 3.

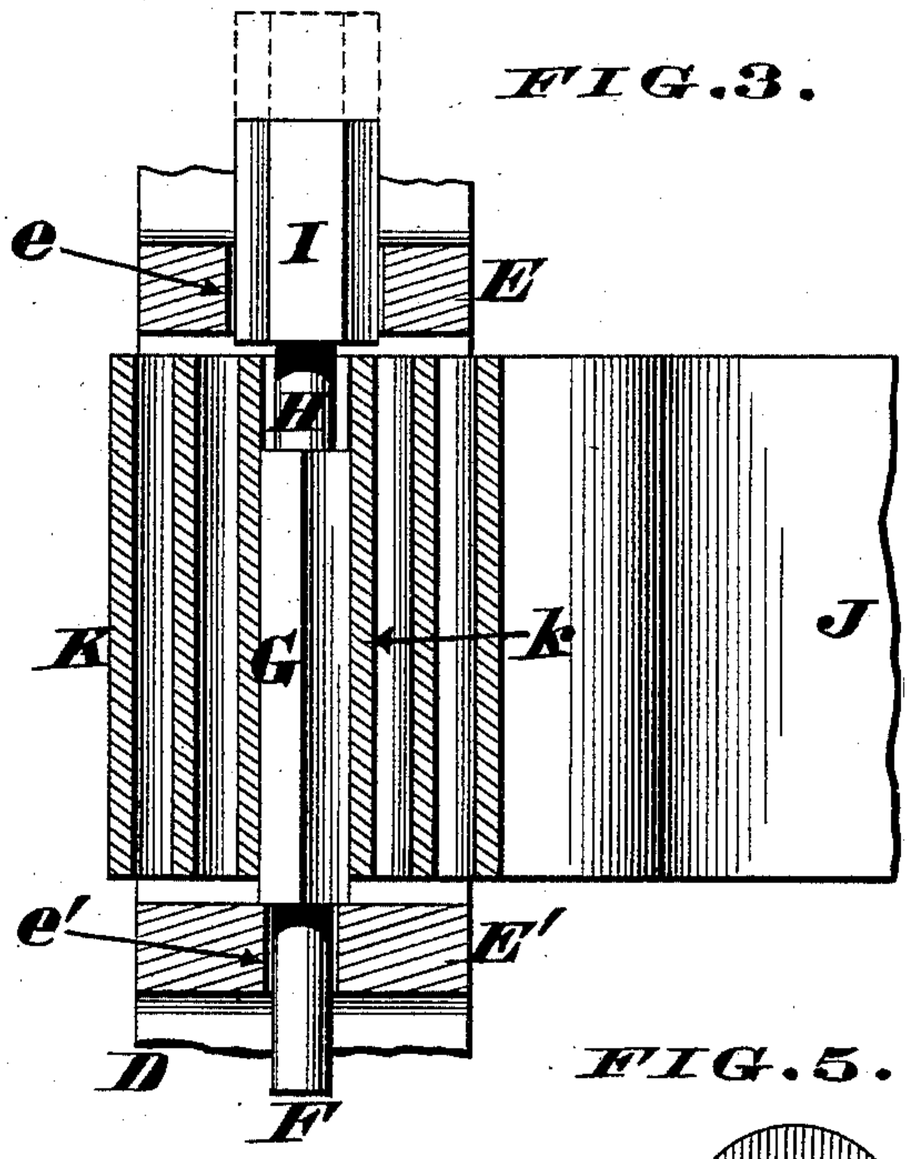



FIG. 5.

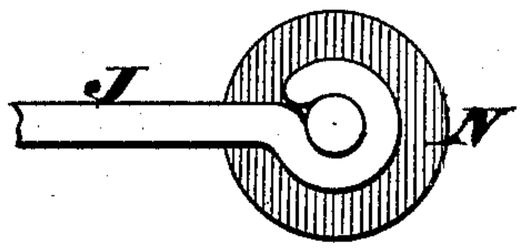
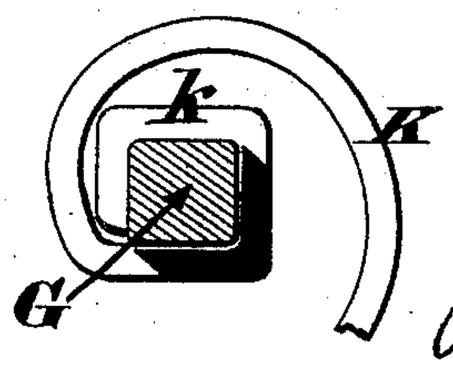



FIG. 4.

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# UNITED STATES PATENT OFFICE.

JOHN H. DAVIS, OF COVINGTON, KENTUCKY.

## DOOR-SPRING.

SPECIFICATION forming part of Letters Patent No. 395,383, dated January 1, 1889.

Application filed May 14, 1888. Serial No. 273,854. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. DAVIS, a citizen of the United States of America, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Door-Springs, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to those springs whose free ends bear against plates secured to doors or gates, the opposite ends of the springs being coiled around tension-adjusting pins, which latter are fitted within lugs or ears projecting from plates attached to supporting posts or frames; and my improvement comprises a specific combination of devices for locking the gate or door when thrown wide open. Said combination includes the bearing-plate, a swinging fastener coupled thereto, and an upward extension or head of the tension-adjusting pin, with which head said fastener is engaged when occasion requires, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a front elevation showing my improved spring applied to a door or gate, the latter being closed. Fig. 2 is a sectionized plan of said spring, the gate or door being thrown wide open and locked by the hook. Fig. 3 is an enlarged vertical section through the coil of the spring and its accessories. Fig. 4 is an enlarged horizontal section through the pin to which the coil of the spring is attached. Fig. 5 represents a modification of my invention.

A represents a post or frame or other similar support to which a gate or door or other swinging appliance, B, is hinged, as at C. Secured to this post is a plate, D, having a pair of forwardly-projecting ears or lugs, E E′, of which projections the upper ear, E, has a hexagonal or other non-circular orifice, *e*, while the lower ear, E′, is pierced with a circular hole, *e′*, traversed by the smooth cylindrical shank F of a pin, G, the latter being provided with a reduced portion or neck, H. Pin G terminates at top with a hexagonal or other non-circular head, I, which normally fits within the orifice *e*.

J is a spring, the free end of which has a bend, *j*, the opposite end of said spring being formed into a coil, K, that terminates with a square eye, *k*, adapted to fit snugly around the pin G, as more clearly seen in Fig. 4. Bend *j* is at all times in contact with a bearing-plate, L, secured to the gate or door B, the opposite edges of said plate being preferably provided with flanges *l l′*, that serve as guides for this bend. Pivoted or otherwise coupled to the upper flange, *l*, is a hook, link, shackle, or other fastener, M, adapted to engage with the pin-head I, as seen in Fig. 2. This fastener is normally turned back so as to rest upon the flange *l*, as seen in Fig. 1, thereby leaving the spring J at liberty to close the gate B, which gate can be readily opened at any time by exerting sufficient force to overcome the tension of said spring; but when it is desired to lock the gate in an open position the fastener M is simply swung around horizontally and its free end is engaged with the head I, which head projects a sufficient distance above the lug E to permit the ready engagement of said fastener. This head, however, is pulled up, as indicated by the dotted lines in Fig. 3, preparatory to regulating the tension of the spring, which vertical pull brings the neck H fairly within the orifice *e*, thereby permitting the pin G to be turned either to the right or left, so as to increase or diminish the stiffness of coil K. After the coil has been properly adjusted the pin is restored to its original position, at which moment the non-circular head I engages with the non-circular orifice *e*, and thus prevents accidental turning of said pin in either direction; finally, a roller, N, (seen in Fig. 5,) may be applied to the free end of spring J, thereby dispensing with the bend *j*.

I am aware that gate and door springs having their coiled ends attached to tension-adjusting pins are seen in the patents of Tucker, No. 91,184; Randall, No. 209,713, and Carrier, No. 321,949. Therefore my claim is not to be construed as an attempt to cover these springs; but the invention is expressly limited to the combination of devices for locking the gate or door when thrown wide open, as herein described.

I claim as my invention—

In combination with a spring having its free end in contact with a bearing-plate secured to a door or gate and its opposite end coiled around a tension-adjusting pin attached to a plate projecting from a post or frame, a swinging fastener coupled to said bearing-plate and engaged with the head of said pin when the door or gate is thrown wide open, as herein described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. DAVIS.

Witnesses:

JAMES H. LAYMAN,

SAML. S. CARPENTER.