No. 635,521. Patented Oct. 24, 1899.

C. S. STOKES.

AUTOMATIC SAFETY LOCK FOR ELEVATORS.

(Application filed Dec. 17, 1898.)

(No Model.)

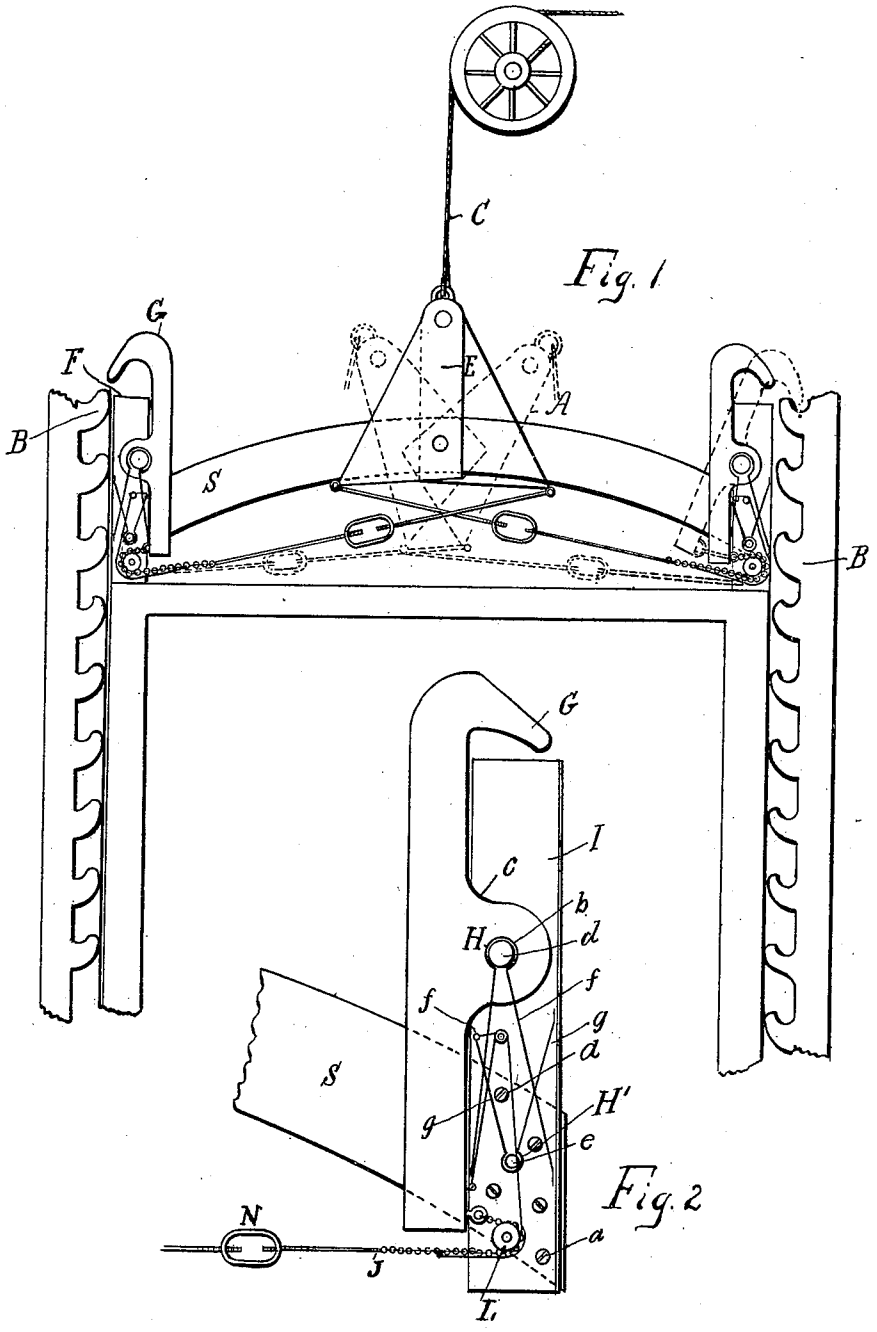

Fig. 1

Fig. 2

WITNESSES:

Jas. L. Estabrook

Samuel Swensen

INVENTOR.

Charles Stanley Stokes.

BY Francis C. Bowen

ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES STANLEY STOKES, OF NEW YORK, N. Y.

AUTOMATIC SAFETY-LOCK FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 635,521, dated October 24, 1899.

Application filed December 17, 1898. Serial No. 699,618. (No model.)

To all whom it may concern:

Be it known that I, CHARLES STANLEY STOKES, a citizen of the United States, and a resident of New York, (Brooklyn,) in the county of Kings and State of New York, have invented a certain new and useful Automatic Safety-Lock for Elevators, of which the following is a specification.

My invention relates to an automatic safety-lock for elevators; and it consists of the novel construction, combination, and arrangement of the parts, as hereinafter more particularly described, pointed out in the appended claim, and illustrated in the accompanying drawings, in which—

Figure 1 represents the portion of an elevator with my invention applied thereto. Fig. 2 represents a view of one of the safety-locks detached and on an enlarged scale.

Similar letters of reference indicate corresponding parts.

The letter A designates the upper portion of an elevator-cage constructed in a well-known manner, and B B indicate the usual racks to hold the elevator-cage in case of an accident.

The letters C C indicate cables attached to a wheel in a well-known manner and to weights E E, attached to the top of the elevator-cage, as shown in dotted and full lines in Fig. 1.

The letters F F indicate two plates secured to the arch S of the elevator by screw-bolts *a a*, one on each side of the top of the elevator. The plates F F have bolt-holes *b*, by means of which the hooks G are pivoted thereto by means of the lugs *c*, formed integral with the hooks.

The letters H H′ are torsion-springs, one, H, secured to the plate and hooks by means of a bolt, as at *d*, and the other, H′, secured to the plate by means of a bolt, as at *e*. Each one of said springs H H′ has extensions *f*, which in their normal state bear against the inner side of the hooks and are held in that condition by chains J, attached to the respective extension of each spring, as *g*, which chains J are attached to lower part of the weights E E on the top of the elevator-cage and are connected to the springs H H′ and the hooks G G. The weights E E are hung out of the center of gravity on the arch S and in falling release the springs H H′ by means of the cables J J over friction-rollers, and thereby cause the elevator to stop by upsetting said weights, one to right and the other to the left, as shown in dotted lines, Fig. 1. In other words, when the cables C C break the weights fall, one to one side and the other to the opposite side, and act on the hook opposite to the direction in which they fall, thereby causing the elevator-car to stop by the hooks G G engaging the rack-teeth B B.

What I claim as new, and desire to secure by Letters Patent, is—

The combination with the elevator-cage of the weights pivoted thereto, the hoisting-rope connecting with said weights, the stationary racks, the hooks pivoted to the cage and adapted to engage the racks, springs adapted when released to act on said hooks to throw them in engagement with said racks, chains connecting said weights and said springs to hold said springs from thus actuating said hooks so long as the hoisting-rope is intact, substantially as described.

CHARLES STANLEY STOKES.

Witnesses:

FRANCIS C. BOWEN,

JAMES W. CAMERON.