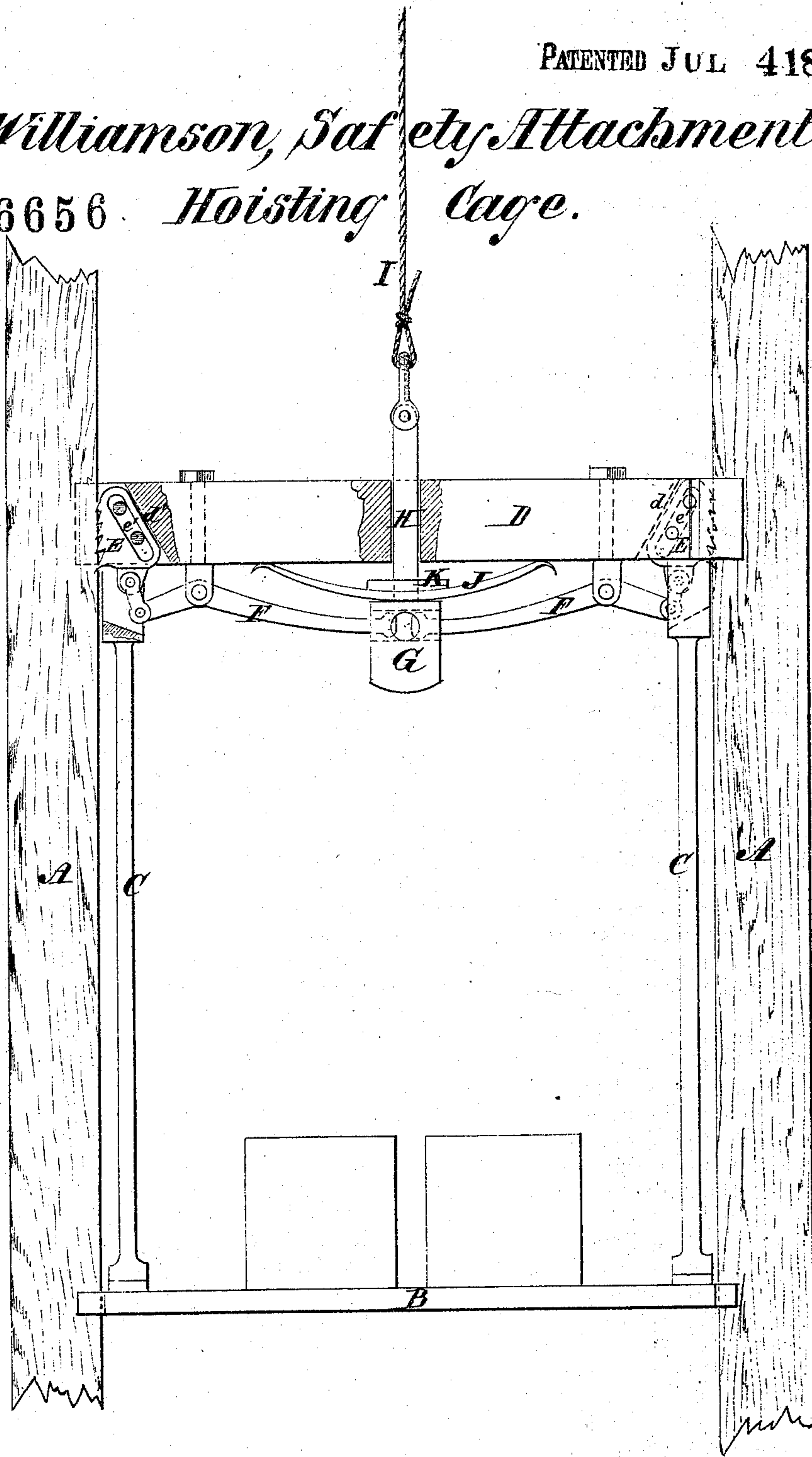


PATENTED JUL 4 1871

W. C. Williamson, Safety Attachment for
116656 Hoisting Cage.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM C. WILLIAMSON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SAFETY ATTACHMENTS FOR HOISTING-CAGES.

Specification forming part of Letters Patent No. 116,656, dated July 4, 1871.

To all whom it may concern:

Be it known that I, WILLIAM C. WILLIAMSON, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Safety Attachment for Hoisting-Cage; 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 drawing forming part of this specification, in which the figure is a side view of the cage and part of the guides of a hoistway, part of the upper cross-bar being broken away to show the construction.

My invention has for its object to furnish an improved safety attachment for hoisting-cages, which shall be simple in construction, and effective and reliable in operation, holding the cage securely in place should the hoisting-rope or chain accidentally break; and it consists in the construction and combination of the various parts of the attachment, as hereinafter more fully described.

A are the guides upon which the cage moves up and down. B is the platform of the cage. C are the upright or side bars, and D is the upper cross-bar. In the ends of the upper cross-bar D are formed inclined or wedge-shaped notches or recesses *d'* to receive the wedge-shaped pawls E, which are kept in their places and guided in their movements by guide-pins *e'* attached to the cross-bar D and entering inclined slots in the pawls E, so that as the cross-bar D moves upward upon the pawls E the said pawls may be drawn from the guides A, and as the said cross-bar moves downward upon the said pawls E the pawls E will be forced outward against the guides A. The pawls E may be forced outward by the pins *e'*, and by the inclined ends of the recesses *d'*, in which the pawls E work, pressing against the inclined sides of the said pawls, either or both. Upon the outer or vertical sides of the

pawls E are formed teeth hooked or inclined downward, and made with notched edges so as to take a firm and sure hold upon the guides A. To the lower ends of the pawls E are pivoted, by means of a short link or bar, the outer ends of the levers F, which are pivoted to supports attached to the cross-bar D, and the inner ends of said levers enter recesses formed in or are otherwise connected with a weight, G, to which is securely attached a short bar, H, which passes up through a hole in the center of the cross-bar D, and to the upper end of which is attached the end of the hoisting-rope or chain I. J is a spring attached to the weight G, and which presses against the under side of the cross-bar D. K is a washer made of rubber, metal, or other suitable material, and which is connected with the spring J and weight G to press against the lower side of the cross-bar D when the spring J is fully compressed. By this construction, should the hoisting-rope or chain break the weight G will be released, will at once operate the levers F to force the pawls E upward and outward to take hold of the guides A, and thus prevent the downward movement of the cage. If desired, toothed racks may be formed upon or attached to the guides A for the teeth of the pawls E to take hold of; but this is not essential to the proper operation of the device.

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

The arrangement of the pawls E, levers F, weight G, and spring J, in connection with each other and with the cross-bar D, hoisting-rope or chain I, and guides A, substantially as herein shown and described, and for the purpose set forth.

WILLIAM C. WILLIAMSON.

Witnesses:

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