

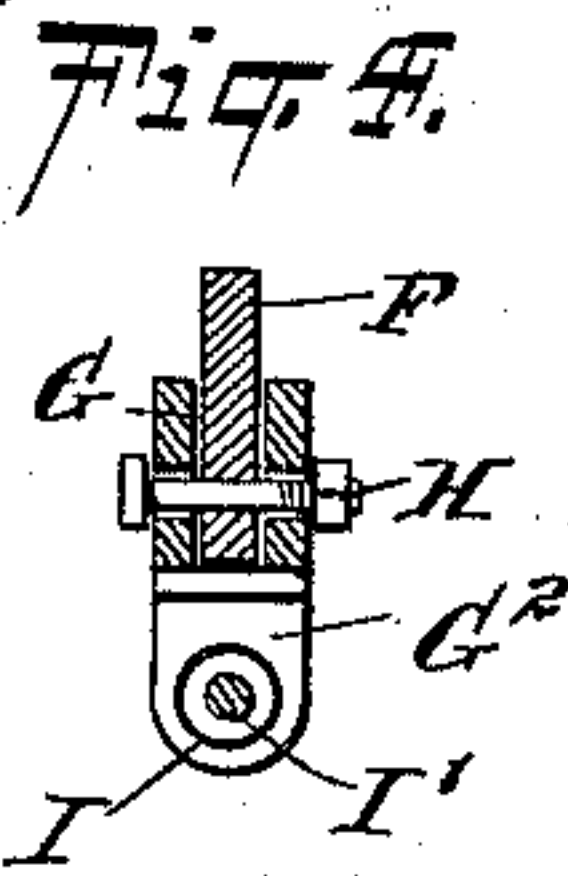
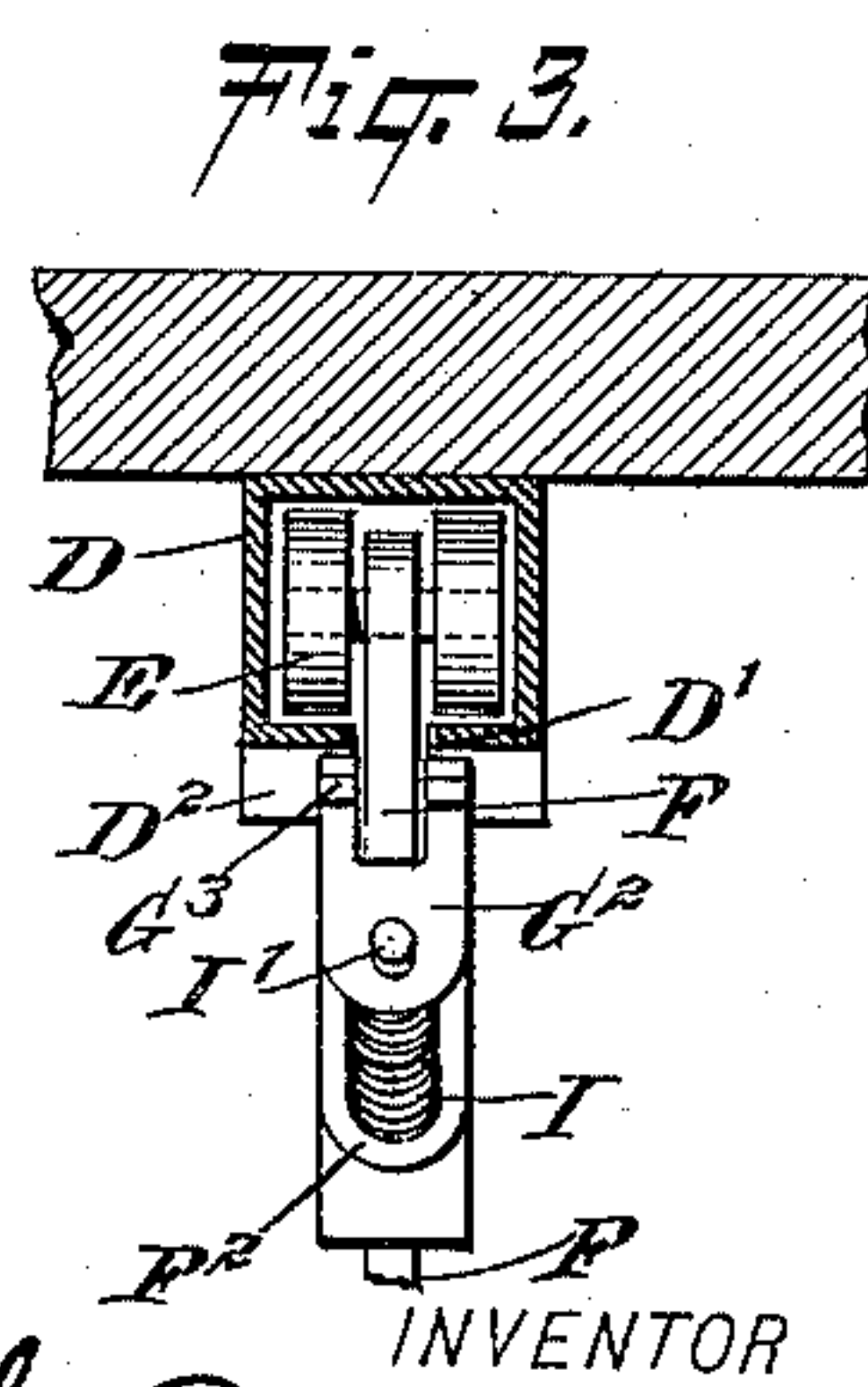
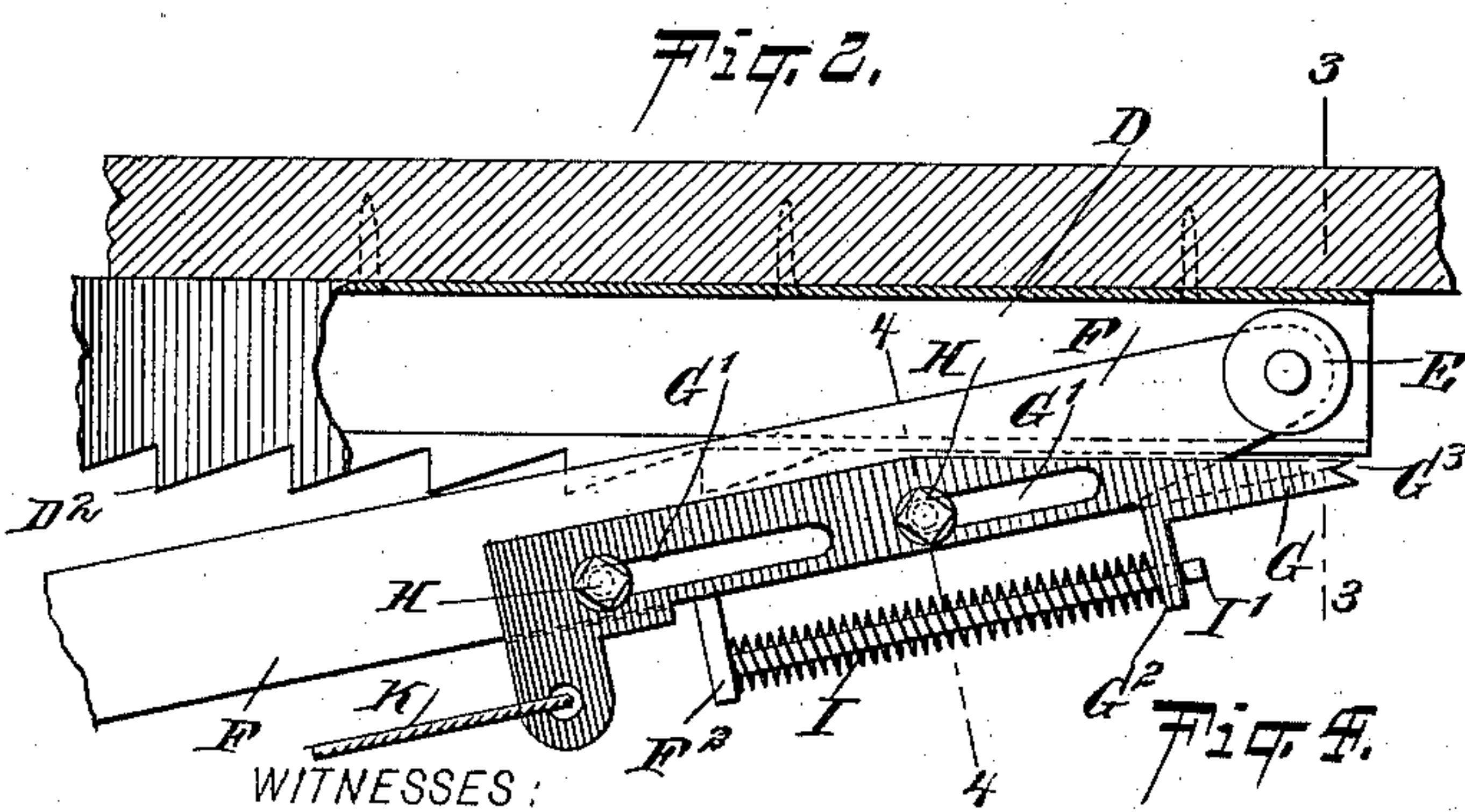
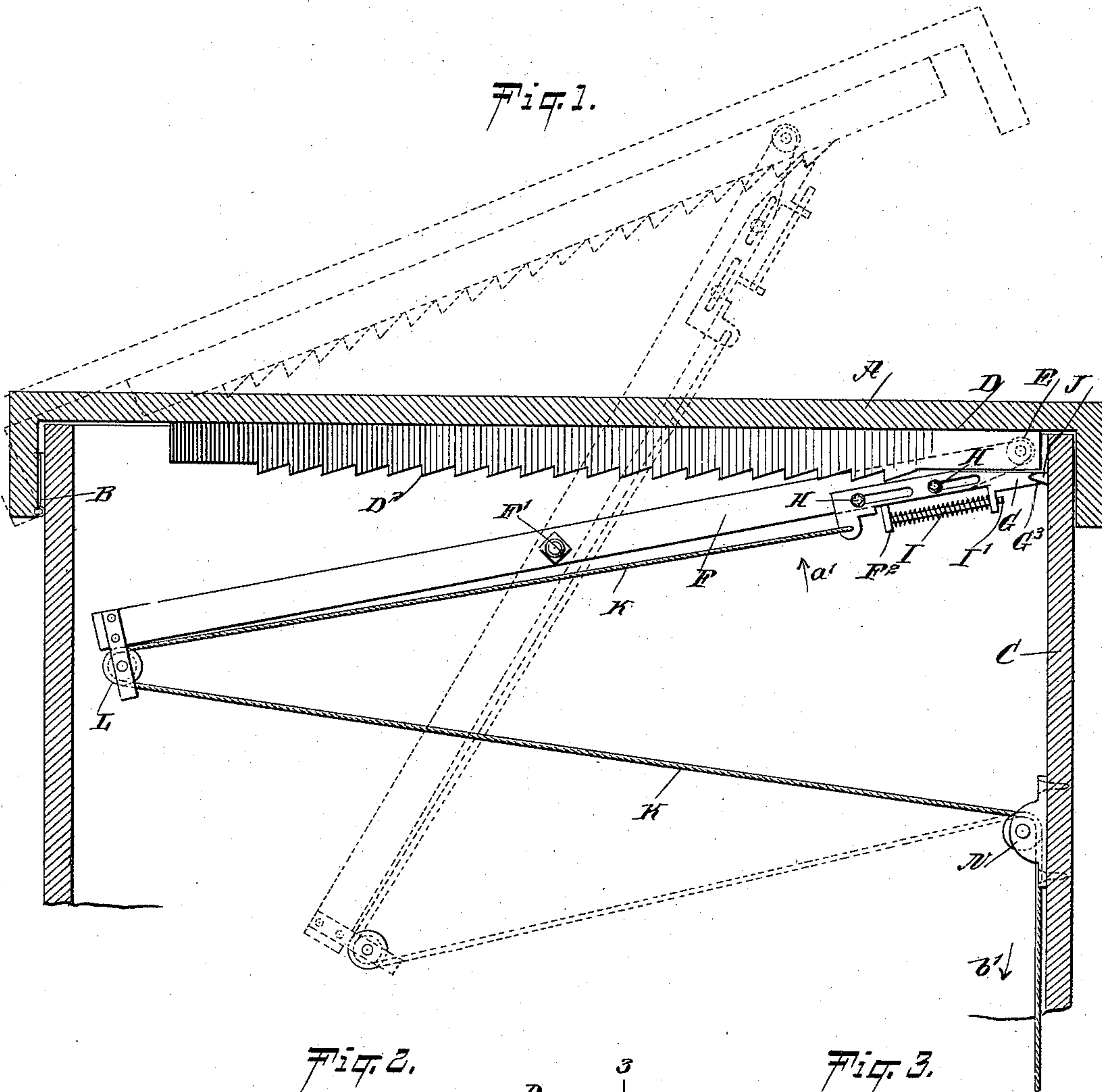
No. 639,139.

Patented Dec. 12, 1899.

G. BICKELHAUPT.
TRANSOM LIFTER.

(Application filed July 6, 1899.)

(No Model.)



WITNESSES:

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TRANSOM-LIFTER.

SPECIFICATION forming part of Letters Patent No. 639,139, dated December 12, 1899.

Application filed July 6, 1899. Serial No. 722,946. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BICKELHAUPT, of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Operating Mechanism for Sashes, Scuttles, Skylights, &c., of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved operating mechanism for sashes, scuttles, skylights, and like devices, and which is simple and durable in construction and arranged to securely lock the skylight, sashes, or like devices in place and to permit the operator to quickly and conveniently swing the same to open position for instant escape of persons in case the building is on fire or for ventilation or other purposes.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional side elevation of the improvement as applied to a scuttle, shown in a closed position. Fig. 2 is an enlarged sectional side elevation of part of the improvement and with the parts in position for swinging the scuttle open. Fig. 3 is a transverse section of the same on the line 3 3 in Fig. 2, and Fig. 4 is a similar view of the same on the line 4 4 in Fig. 2.

The improved operating mechanism illustrated in the drawings is shown applied to a scuttle A, hinged at B to a scuttle-frame C, attached in the usual manner to the roof of a building. On the under side of the scuttle A, preferably at one or at both sides and within the opening of the frame C, is secured a guideway D, extending longitudinally and preferably made of a square tube having a slot D' in the bottom, transversely-extending teeth or notches D² being formed in flanges depending from said bottom at opposite sides of the slot D', as will be readily understood by reference to Figs. 1, 2, and 3.

In the guideway D is mounted to travel one or more friction-rollers E, journaled on

the forward end of a lever F, fulcrumed at or near its middle, at F', on one side of the frame C, so that when a swinging motion is given to the lever F in the direction of the arrow *a'* the friction-rollers E cause an upward swinging of the scuttle A into an open position, as shown in dotted lines in Fig. 1. On the forward end of the lever F is mounted to slide a catch G, having longitudinal slots G', through which extend transverse bolts H, carried by said lever F, to support the catch and to limit its forward and backward sliding motion on the lever. The catch G is held in a forward position by a spring I, coiled on a rod I', secured to a lug F², projecting from the bottom of the lever F, and the free end of the rod I' extends loosely through a shoulder G², projecting from the catch G. The spring I rests with one end on the lug F², the other end resting on the shoulder G², so that when the catch is slid rearward the spring I is compressed, and when the catch is released the spring I forces the catch back into a forward position, as shown in Fig. 1.

The extreme outer end of the catch G is formed with a nose G³, adapted to engage a keeper J, secured to the inside of the frame C, so that when the nose engages the said keeper, as illustrated in Fig. 1, then the scuttle A is locked against opening, as the catch G is held on the lever F and the latter by the friction-rollers E in engagement with the guideway D, secured to the under side of the scuttle.

Now in order to release or withdraw the catch G from the keeper J and to impart an upward swinging motion to the scuttle A, I provide a rope K, secured to the rear end of the catch G and extending along the under side of the lever F to and around a pulley L, journaled at the rear end of said lever. The rope K then extends forward to pass over a pulley N, journaled in the frame J, as shown in Fig. 1, the rope then extending downward to be attached to a cleat and to be within convenient reach of the operator when it is desired to open the scuttle for ventilating, escaping, or other purposes. By reference to Fig. 1 it will be seen that when a pull is exerted on the rope K in the direction of the arrow *b'*, then the rope K imparts a rearward sliding motion to the catch G against the ten-

sion of the spring I, the nose G^3 moving out of engagement with the keeper J. When the catch G reaches its rearward sliding limit by the forward walls of the slots G' abutting against the bolts H, then a further pull is exerted on the rope K in the direction of the arrow b' , which causes a swinging of the lever F in the direction of the arrow a' , so that the friction-rollers E, traveling in the guideway D, cause an upward swinging of the scuttle A, as indicated in dotted lines in Fig. 1. As soon as the scuttle has been swung open the desired distance the operator releases the rope K, so that the spring I forces the catch G forward to engage the nose G^3 with the corresponding tooth D^2 on the bottom of the guideway D, and thereby lock the lever and guideway, together with the scuttle A, in position, as will be readily understood by reference to Fig. 1. When it is desired to again close the scuttle A, the operator pulls on the rope K to first withdraw the catch G from the tooth D^2 , and then upon gradually releasing the rope the scuttle is caused to swing downward owing to its weight, the catch remaining in a withdrawn position until the scuttle has finally closed on the frame C. When the operator now fully releases the rope K, the catch G shoots forward to again engage with its nose G^3 the keeper J to lock the scuttle A in position against opening from the outside without any further fastening devices.

The device is very simple and durable in construction, is not liable to get out of order, and serves to securely lock the skylight, scuttle, sashes, or like device in a closed position and allows of swinging the device into an open position and locking it therein until it is again desired to close it, as above explained.

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

1. An operating mechanism for sashes, scuttles, skylights and like devices, comprising a guideway on the device to be opened or closed, a lever having a sliding connection at one end with said guideway, so that when a swinging motion is given to the lever a corresponding movement is given to the device to be opened or closed, a catch carried by the lever and adapted to engage the guideway of the device, or the frame thereof, to lock the device opened or closed, and flexible means under the control of the operator, for operating the catch and imparting a swinging motion to said lever in one direction only, the return movement of the lever being accom-

plished upon a partial release of the flexible connection by the weight of the actuating device, substantially as shown and described.

2. An operating mechanism for sashes, scuttles, skylights and like devices, comprising a guideway on the device to be opened or closed, a lever having friction-rollers mounted to travel in said guideway, a sliding and spring-pressed catch on said lever for engaging the guideway of the device to lock the device open, or the frame thereof, to lock the device closed, and a flexible means under the control of the operator and connected with said lever and catch, to allow of withdrawing the catch and imparting a swinging motion to said lever, substantially as shown and described.

3. An operating mechanism for sashes, scuttles, skylights and like devices, comprising a guideway on the device to be opened or closed, a lever having friction-rollers mounted to travel in said guideway, a catch on said lever, a flexible means under the control of the operator and connected with said lever and catch, to allow of withdrawing the catch and imparting a swinging motion to said lever, and teeth on the under side of said guideway and adapted to be engaged by said catch, substantially as shown and described.

4. An operating mechanism for sashes, scuttles, skylights and like devices, comprising a guideway on the device to be opened or closed, a lever having friction-rollers mounted to travel in said guideway, a catch on said lever, a flexible means under the control of the operator and connected with said lever and catch, to allow of withdrawing the catch and imparting a swinging motion to said lever, and a fixed keeper adapted to be engaged by said catch when the device is in a closed position, substantially as shown and described.

5. An operating mechanism for sashes, scuttles, skylights and like devices, comprising a guideway made tubular and having a slot in the bottom and transverse teeth on said bottom, a lever extending with its free end into said slot and having at its free end friction-rollers engaging said guideway, a spring-pressed catch mounted to slide on the free end of said lever, and a rope connected with said catch and extending over a pulley on the rear end of the lever and over fixed guideways, to be under the control of the operator, substantially as described.

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Witnesses:

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CHAS. HAAG.