

No. 717,410.

Patented Dec. 30, 1902.

J. W. JOHNSON & W. W. SCARBOROUGH.

HOISTING APPARATUS.

(Application filed Sept. 12, 1902.)

(No Model.)

FIG. 1.

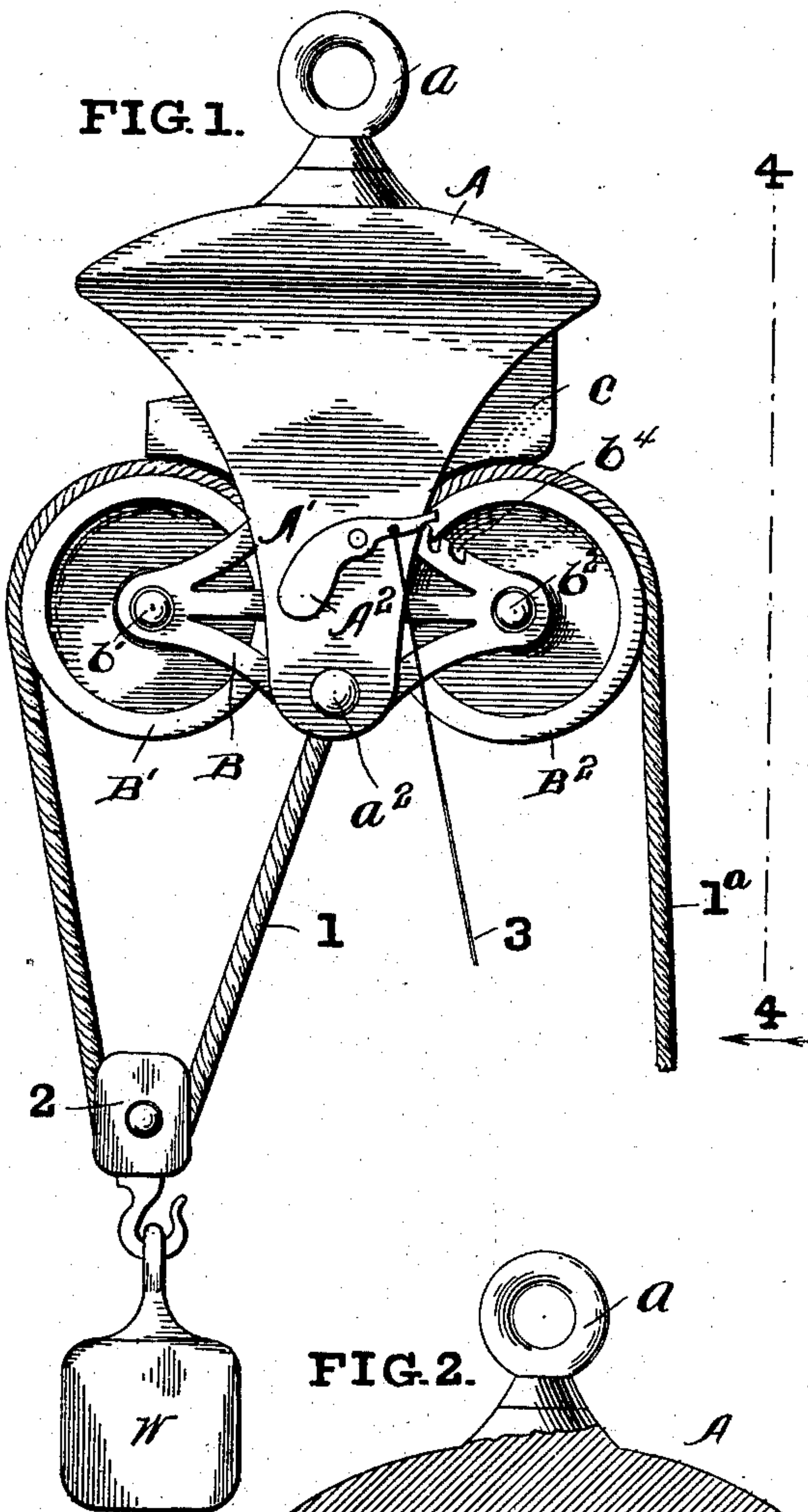


FIG. 3.

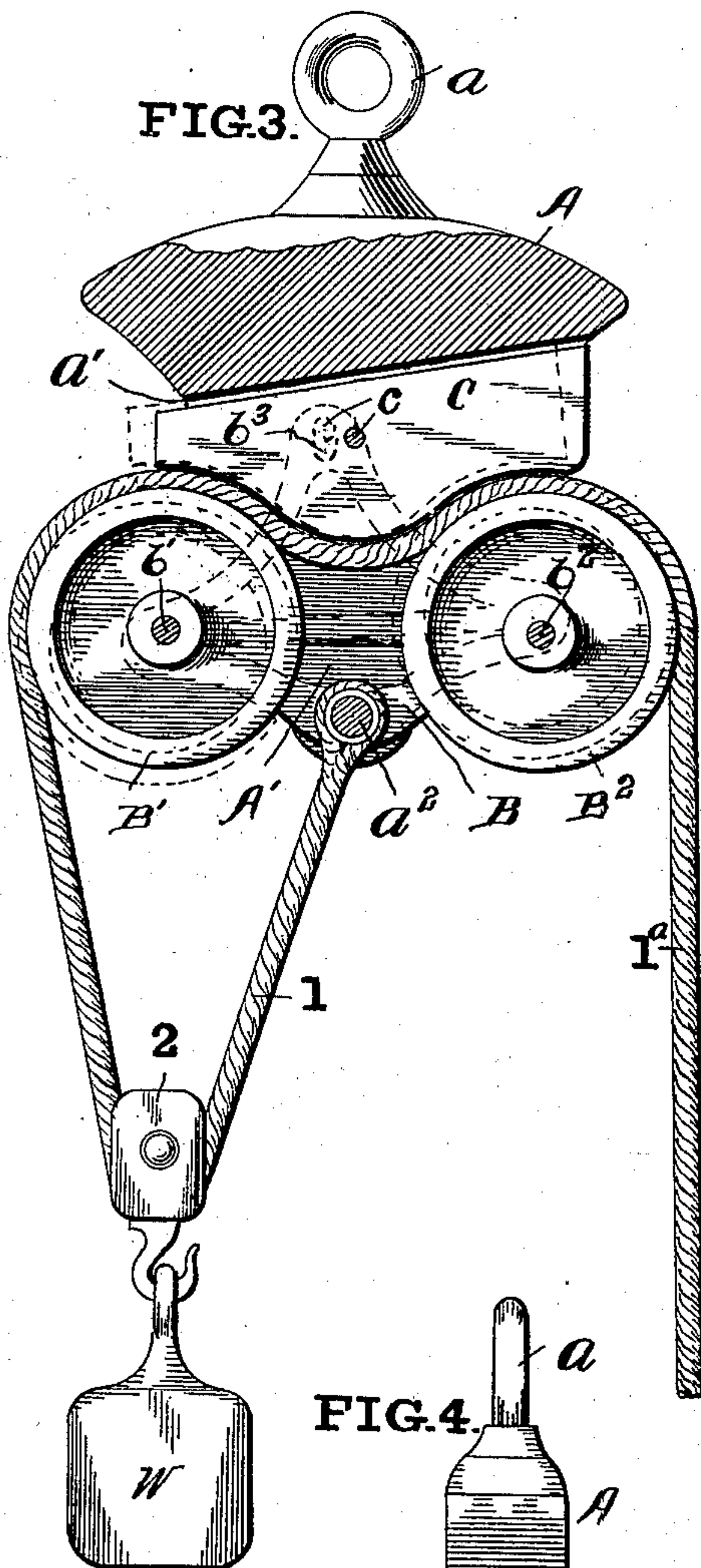


FIG. 2.

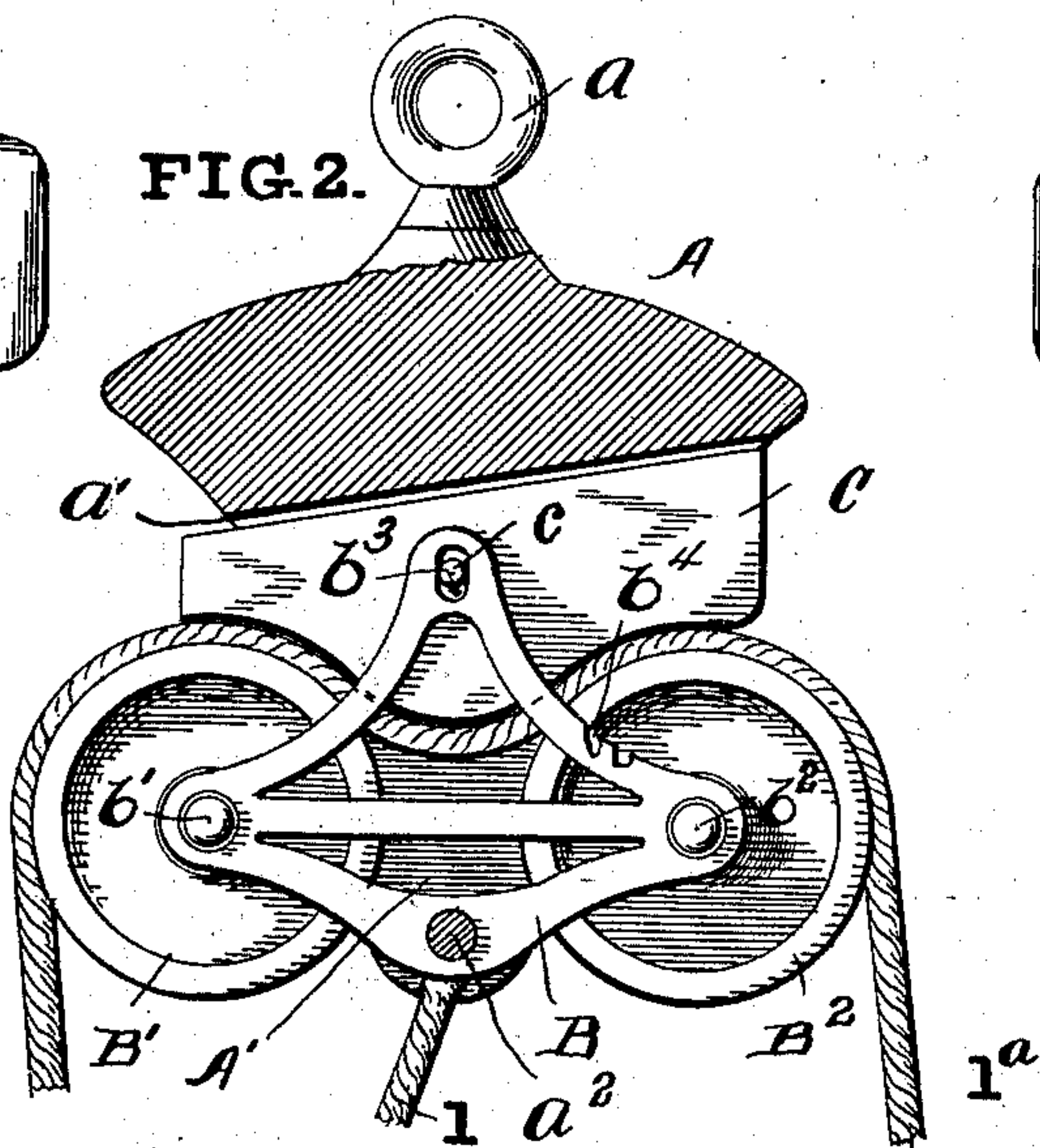
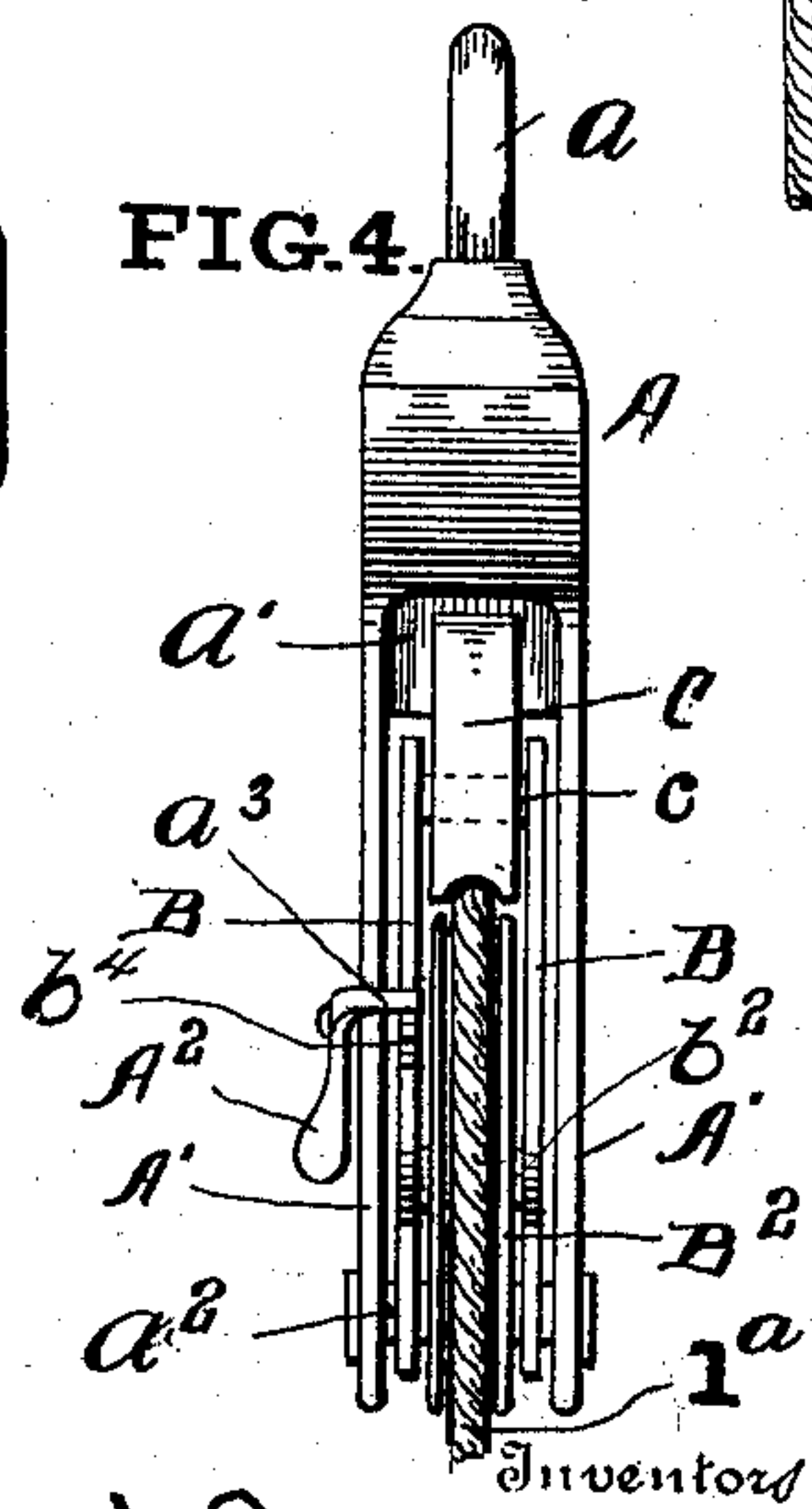


FIG. 4.



Witnesses

Chas. K. Davies.

David Stuart Walters.

By

John W. Johnson  
and William W. Scarborough,  
Attorneys.



# UNITED STATES PATENT OFFICE.

JOHN W. JOHNSON AND WILLIAM W. SCARBOROUGH, OF UPPER  
SANDUSKY, OHIO.

## HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 717,410, dated December 30, 1902.

Application filed September 12, 1902. Serial No. 123,081. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN W. JOHNSON and WILLIAM W. SCARBOROUGH, citizens of the United States, residing at Upper Sandusky, in the county of Wyandot and State of Ohio, have invented certain new and useful Improvements in Hoisting Apparatus, of which the following is a specification.

Our said invention consists in an improved construction of automatically-locking hoisting-pulleys, which is of a simple and inexpensive but at the same time durable construction, and one effective and convenient in operation, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of a hoisting device embodying our said invention; Fig. 2, a similar view with the outside plate of the housing removed; Fig. 3, a view similar to Fig. 2, omitting the outside pivoted bracket; and Fig. 4, an edge view as seen when looking in the direction indicated by the arrows from the dotted line 4 4 in Fig. 1.

In said drawings the portions marked A represent the main housing or frame, B the pivoted frames carrying the sheaves, and C the brake shoe or block.

The housing A may be a single casting or formed of parts suitably secured together and consists of a head or top piece of sufficient size and strength for the purpose and downwardly-projecting arms A' on each side thereof. A suitable eye  $a$  is provided on the top for the purpose of hanging the device wherever it is to be used. The inner surface of the head-piece between its arms A' is formed inclined, as shown most clearly in Figs. 2 and 3, for a purpose to be presently described.

The frames B are preferably of substantially the form shown, being two in number and pivoted on a transverse pivot  $a^2$ , which extends through the lower ends of the arms A'. Between the opposite ends of said frame on each side of said pivot are mounted the sheaves B' and B<sup>2</sup> on pivots  $b'$  and  $b^2$ , suitably mounted in the ends of said frame. Said frames are each provided with an upwardly-projecting arm, in which is formed a

slot  $b^3$  at a point above the line of the tops of the sheaves B' and B<sup>2</sup>.

The brake-shoe C consists of a block mounted in the way between the arms A' and the frames B and above the sheaves B' and B<sup>2</sup>. Its upper edge is formed inclined to correspond with the inclined surface  $a'$  of the housing A. Its lower edge is curved adjacent to the sheaves to correspond with the circumference thereof and is curved downwardly for a distance between said sheaves. One of the frames B is preferably provided with a series of notches  $b^4$ , with which a latch A<sup>2</sup>, pivoted on the outside of the adjacent arm A', is adapted to engage. Said latch is bent at its inner end  $a^3$  to extend across the top of said frame adjacent to said notches. Its end opposite the pivot on which it is mounted being heavier, said latch is normally held from engagement with said notches.

In use the hoisting rope or cable 1 is attached to the pivot-bolt  $a^2$  between the arms B. It is provided with a suitable pulley-block 2, to which the weight W may be attached. Said rope passes through said pulley-block and over the tops of sheaves B' and B<sup>2</sup> beneath the brake-shoe C, which is provided with projecting pins or lugs  $c$ , which engage with the slots  $b^3$  of the upper portion of the frames B. The weight being attached and it being desired to hoist the same power is applied to the outer end 1<sup>a</sup> of rope 1 until the weight is raised to the desired elevation. Said power being then gradually released the weight operates to tilt the frames B in the direction of said weight, which through the connection between said frames and the brake-shoe carries said brake-shoe toward the inclined surface  $a$ , against which it impinges and by which it is forced downwardly to impinge tightly against the rope and lock it from movement, and thus will hold said weight at the desired elevation. The power being again applied the frames will be rocked in the reverse direction upon the pivot  $a^2$ , automatically elevating the brake-shoe to release its grip from the rope and permitting its free movement in a direction to elevate the weight. When it is desired that the rope shall run freely in a direction to allow the weight to descend, the operator through the



cord 3, attached to the latch A<sup>2</sup>, draws said latch into engagement with one of the notches b<sup>4</sup>, which serves to lock the frames B against movement in the direction of the weight and holds the brake-shoe up to permit the free movement of the rope.

Having thus fully described our said invention, what we claim as new, and desire to secure by Letters Patent, is—

10 1. A hoisting device comprising a suitable frame or housing, frames mounted on a pivot in said housing and having sheaves pivoted to their outer ends and a brake-shoe mounted between an inclined surface of said housing and the surface of said sheaves and connected with said pivoted frames, substantially as set forth.

20 2. A hoisting device comprising a suitable housing, pivoted frames in said housing, sheaves carried by said frames, a brake shoe or block mounted to slide in a way between an inclined surface of said housing and the edges of said sheaves and connected with said pivoted frames, substantially as set forth.

25 3. In a hoisting device, the combination, of the housing, the pivoted frame carrying sheaves mounted therein, a brake or locking block mounted in a way between said sheaves and an inclined surface of said housing, said block being connected with said pivoted frame, substantially as set forth.

4. In a hoisting device, the combination, of

the housing, the pivoted frame carrying sheaves mounted in said housing, a sliding brake or block attached to said pivoted frame and mounted between said sheaves and an inclined surface of said housing, and a latch mounted on said housing and adapted to engage with said pivoted frame to hold it against the weight, substantially as set forth.

5. In a hoisting device, the combination, of the housing, sheaves carried by a frame pivoted in said housing, a sliding, wedge-shaped brake between said sheaves and a part of said housing, and a connection between said brake and said pivoted frame, substantially as set forth.

6. In a hoisting device, the combination, of the housing, the pivoted frame therein, the sheaves carried by said frame, the brake or lock connected with said pivoted frame, the hoisting-cable running over said sheaves and a locking device for holding said pivoted frame from rocking on its pivot, substantially as set forth.

In witness whereof we have hereunto set our hands and seals, at Upper Sandusky, Ohio, this 10th day of September, A. D. 1902.

JOHN W. JOHNSON. [L. S.]

WILLIAM W. SCARBOROUGH. [L. S.]

Witnesses:

W. R. HARE,

J. W. GRISELL.