

No. 827,088.

PATENTED JULY 31, 1906.

G. DÜNKELBERG.
STOP MOTION FOR PIT CAGES, HOISTS, &c.
APPLICATION FILED DEC. 8, 1905.

Fig:1.

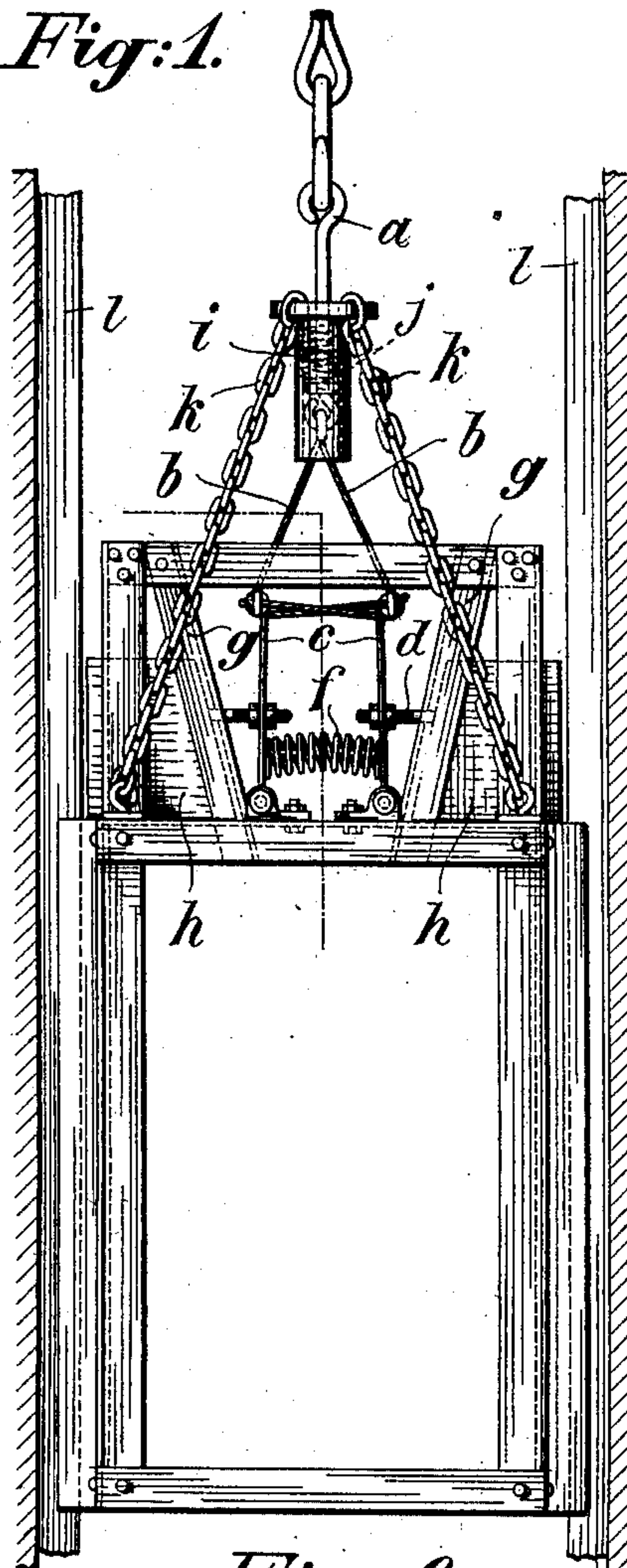


Fig:3.

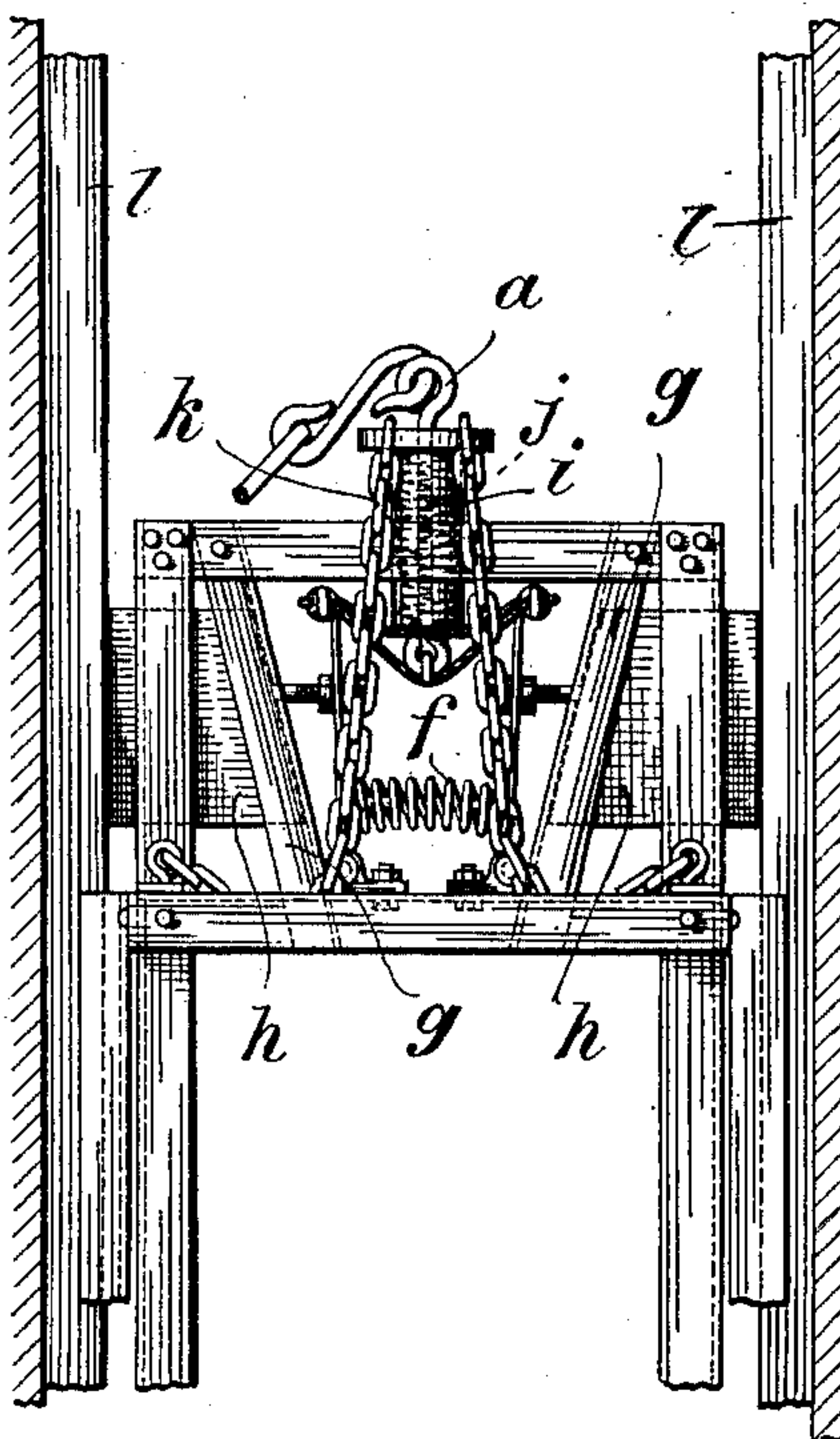


Fig:2.

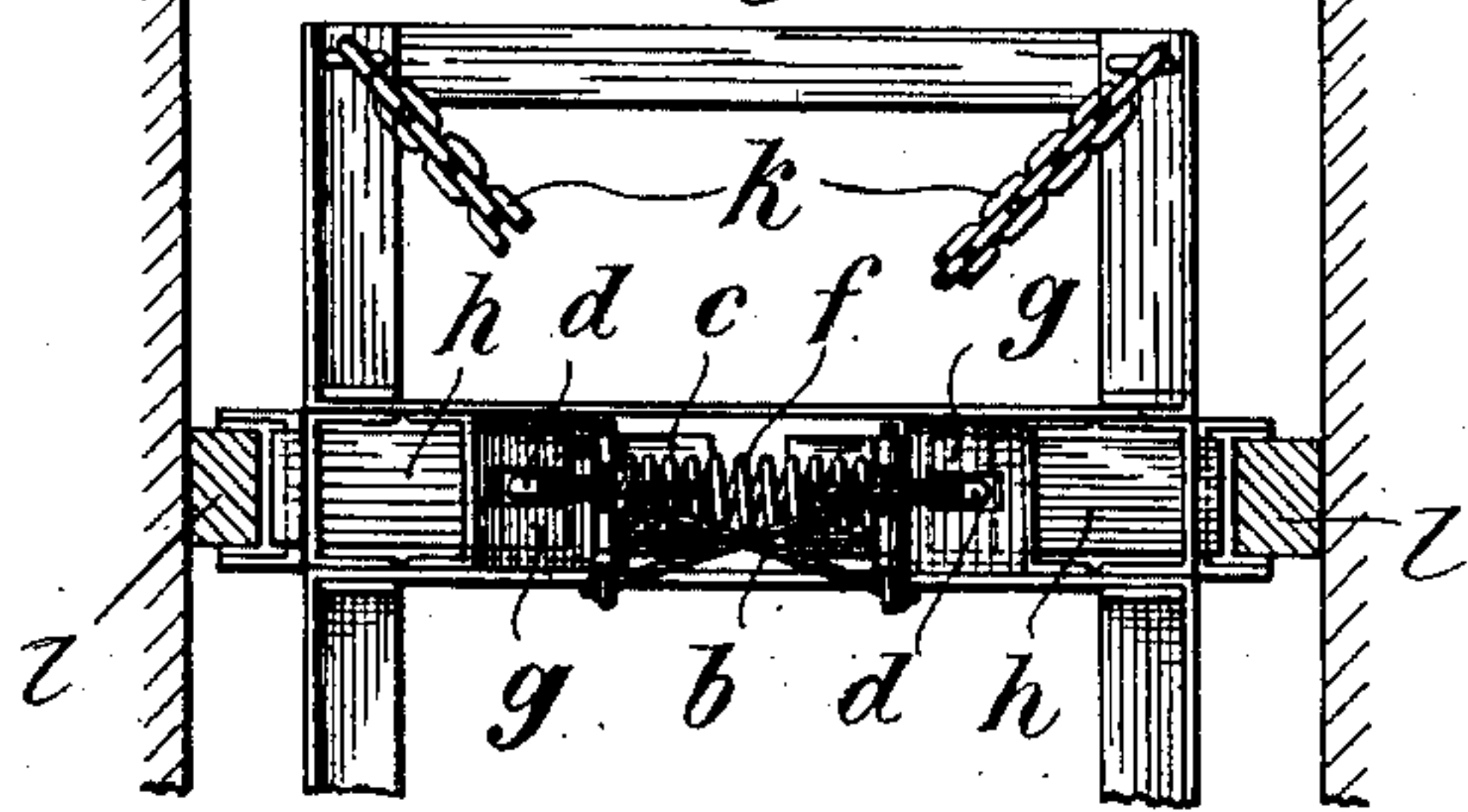
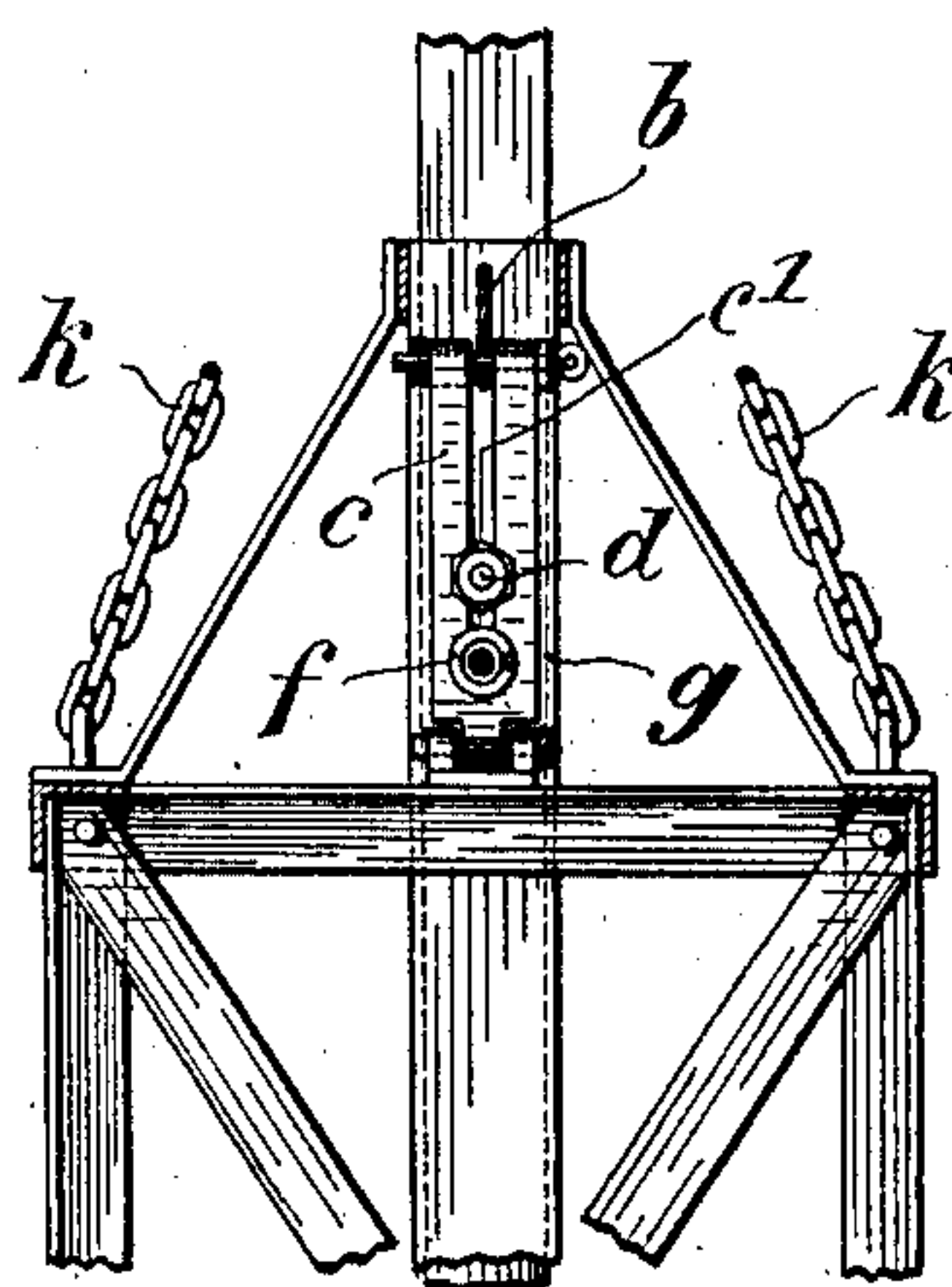


Fig:4.



Witnesses:
William Schuck.
Arthur Junge.

Inventor:
Gustav Dunkelberg
by his attorney
Frank R. Pierce

UNITED STATES PATENT OFFICE.

GUSTAV DÜNKELBERG, OF ESSEN-ON-THE-RUHR, GERMANY.

STOP-MOTION FOR PIT-CAGES, HOISTS, &c.

No. 827,088.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed December 8, 1905. Serial No. 290,865.

To all whom it may concern:

Be it known that I, GUSTAV DÜNKELBERG, a subject of the German Emperor, residing at Essen-on-the-Ruhr, in the Kingdom of Prussia, German Empire, have invented a new and useful Stop-Motion for Pit-Cages, Hoists, &c., of which the following is a full and complete specification.

The object of the present invention is an arrest or stop-motion for pit-cages, lifts, and similar apparatus, and is characterized by having wedges or wedge-shaped bodies which run on a beveled surface and which on the breaking of the rope or cable are pressed against the guide-rails by means of springs and which are then displaced by friction and slip upward between the guides and guide-rails and arrest the movement of the cage.

In the accompanying drawings the apparatus is shown in Figure 1 in front elevation, Fig. 2 being a plan view. Fig. 3 shows the apparatus with broken cable, and Fig. 4 shows the guides for the wedges.

On the cable or rod *a* there are chains or ropes *b*, which are fixed to the hinged arms *c*, that are held apart by flat or spiral springs *f* in such a manner that when the tension on the ropes or chains is released the springs force the arms outward. The stop-wedges or brake-shoes *h* are held in suitably-shaped guides *g*, which are directed obliquely upward and are held away from the guide-rails *l* by the arms *c*. The arms *c* are connected in any suitable manner with the wedge-shaped bodies *h*, such as by rods *d*. The rods *d* engage through slits of the U-shaped guide-rails *g* and are held in slots *c'* of arms *c*, where they are free to move up and down. The connection between the bodies *h* and the

arms *c* may, however, be effected in any other suitable manner, and the rods *d* may be made to embrace the guides *g* and the arms *c*.

In case of the breaking of the cable the rod *a* is drawn downward by a spring *j* in the sleeve *i* in the usual manner, whereby the arms *c* are forced apart. Thus the bodies *h* are pressed against the guide-rails *l* and are forced upward by the friction, so as to wedge themselves between the inclined guides *g* and rails *l*, and thus bring the cage to a standstill. By the spring which actuates the main rod and the cable in a downward direction the release of the arms *c* is safely effected even when the break takes place at a great height or when the cable should happen to loop. The lever-arms *c* may also be replaced by other suitable means. The guide-rails as provided in the present instance may also be replaced by rails in the corners. In this case a body or wedge *h* is provided in each corner, while the arms *c* with the springs should be arranged in duplicate.

What I claim is—

In a safety appliance for elevators, a pair of spring-influenced arms, means for connecting said arms to the suspending-cable, rods movably engaging the arms, means for guiding the rods along the arms, brake-shoes connected to the rods, and inclined guides engaging the brake-shoes, substantially as specified.

Signed by me at Düsseldorf, Germany, this 27th day of November, 1905.

GUSTAV DÜNKELBERG.

Witnesses:

WILLIAM ESSENWEIN,
PETER LIEBER.