

No. 765,096.

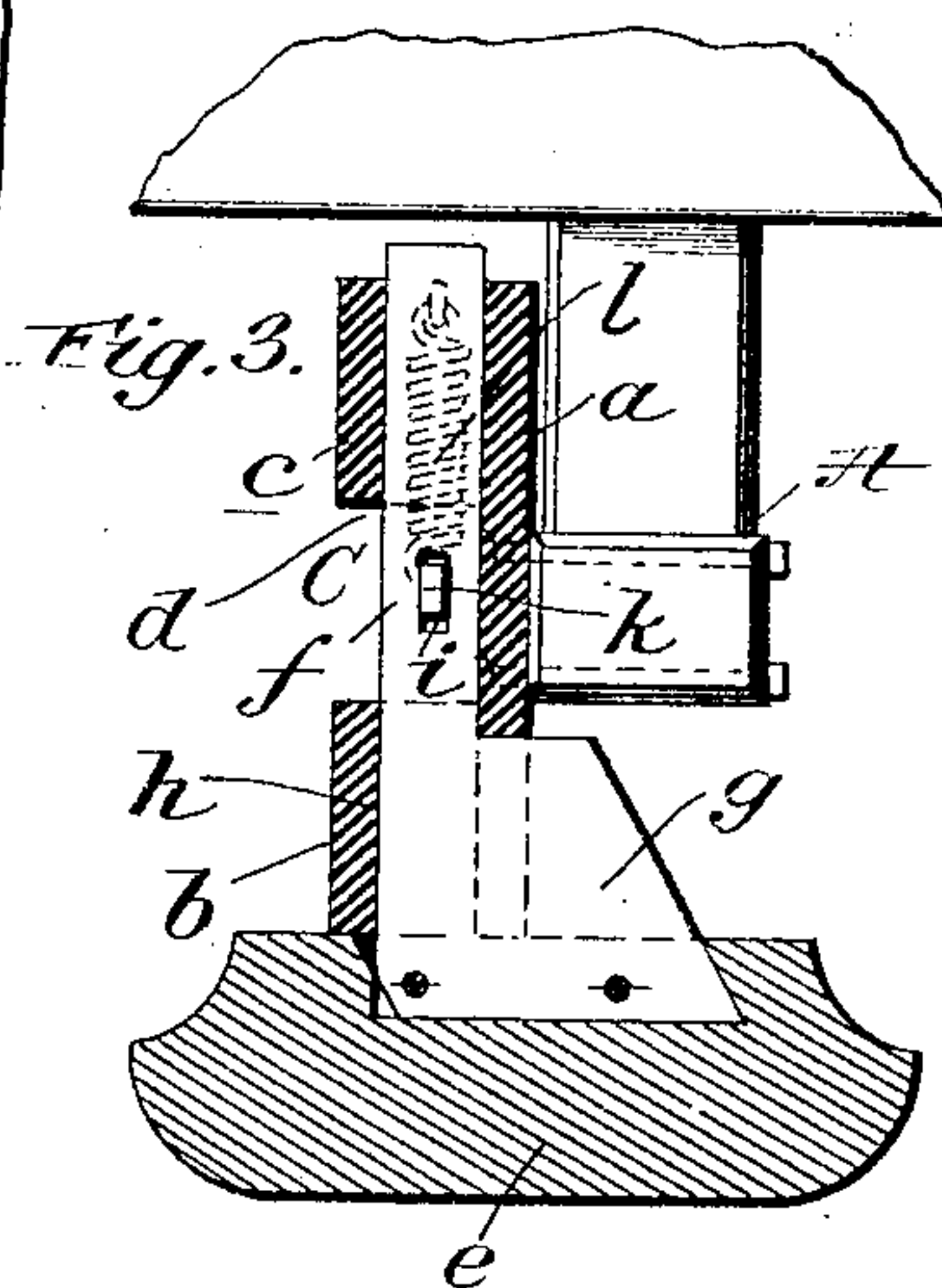
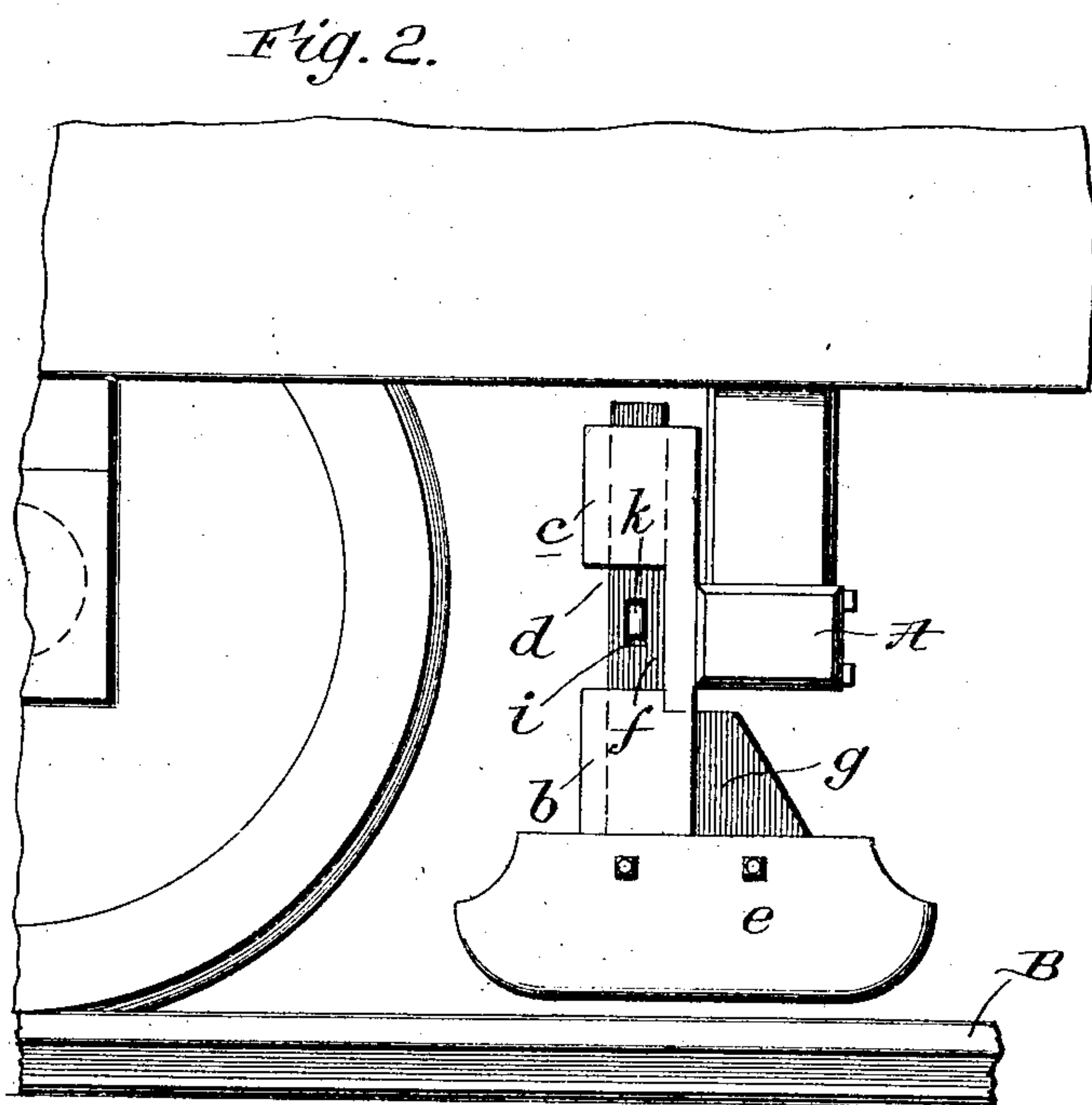
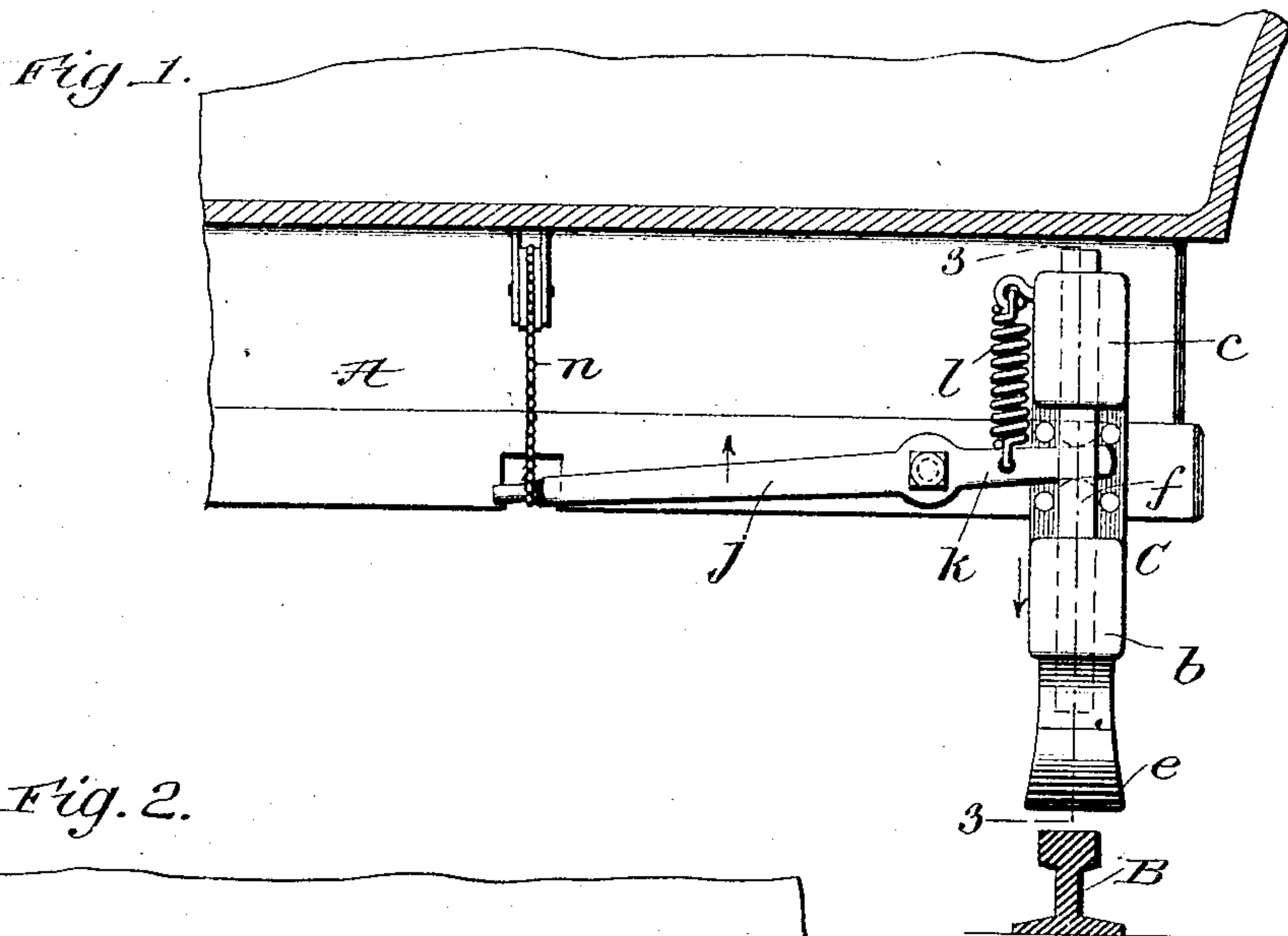
PATENTED JULY 12, 1904.

S. T. NOBLE.

# CAR BRAKE.

APPLICATION FILED MAY 11, 1904.

NO MODEL.



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# UNITED STATES PATENT OFFICE.

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## CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 765,096, dated July 12, 1904.

Application filed May 11, 1904. Serial No. 207,428. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL T. NOBLE, a citizen of the United States, residing at New Concord, in the county of Muskingum and State of Ohio, have invented new and useful Improvements in Car-Brakes, of which the following is a specification.

My invention pertains to car-brakes, more particularly that class of car-brakes in which the brake-shoe is arranged to engage a rail of the car-track in lieu of one of the car-wheels with a view of eliminating the liability of the wheel being flattened; and it has for its object to provide a brake of the type stated which is a material simplification of those extant and one so constructed that the car-driver is enabled to exert great leverage on the brake-shoe and powerfully apply the same to a rail.

With the foregoing in mind the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical transverse section illustrating the arrangement of my improvements relative to a car-truck and a rail of a car-track. Fig. 2 is a side elevation of the same. Fig. 3 is a detail section taken in the plane indicated by the line 3 3 of Fig. 1.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is a part, preferably a bolster, of a car-truck.

B is a rail of the track on which the car is designed to travel, and C is my novel brake as a whole. The said brake is made up of a bar or casting *a*, fixed on the bolster or any other suitable part of the car-truck and having lower and upper vertically-disposed guides *b* *c* and also having a space *d* intermediate of or between the said guides, a shoe *e*, of any material suitable to the purposes of my invention, normally resting above and arranged to frictionally engage the tread of the rail B, a vertical stem *f*, fixed to the shoe *e* or formed integral therewith and having a wide lower portion *g* movable in a bifurcation *h* in the lower guide *b* and also having a reduced upper portion movable in the guides *b* and *c* and

a transverse slot *i* at a point intermediate of the said guides *b* and *c*, a transversely-disposed vertically-movable lever *j*, fulcrumed on the bolster or other suitable part of the truck and having a comparatively short outer arm *k*, the end of which is located in the slot *i* of the stem *f*, and a vertically-disposed coiled spring *l*, arranged at the inner side of and parallel to the guide-casting *a* and connected at its upper end to said casting and at its lower end to the short arm *k* of the lever *j*, whereby it is adapted to return the brake-shoe *e*, the stem *f*, and the lever *j* to and normally hold the same in the positions shown in Fig. 1. The comparatively wide lower portion *g* of the stem *f*, working in the bifurcation *h* of the lower guide *b*, is adapted to hold the shoe *e* and the stem *f* against turning laterally, and hence the upper portion of the stem *f* may be either circular or angular in cross-section, as preferred.

Any suitable means may be employed for transmitting motion from a brake-staff or other operating device (not shown) to the lever *j* of my improvements. When, however, the lever *j* is to be operated through the medium of a rotary staff with which cars are generally equipped, I prefer to effect the connection with a cable *n*, which is connected at one end to the lever *j* and is designed to be passed over a sheave on the car-sill and connected at its opposite end to and wound upon the staff.

In the practical use of my novel brake it will be observed that when the lever *j* is released the spring *l* serves to hold the shoe *e*, stem *f*, and lever *j* in the positions shown in Fig. 1, and hence the shoe in no way interferes with the progress of the car. When, however, the comparatively long inner arm of the lever *j* is raised, the stem *f* and the shoe *e* are depressed against the action of the spring *l* and the shoe is powerfully applied to the tread of the rail B. From this it follows that the shoe applied with the powerful leverage which the driver or motorman is enabled to exert is calculated to quickly stop a car, and this without involving flattening of any one of the wheels of the car or injury of any kind to the track-rail. Subsequent to the stopping



of the car the lever *j* is released, when the spring *l* will return the parts to the positions shown in Fig. 1. With this done the car may obviously proceed at the will of the driver or  
5 motorman.

It will be appreciated from the foregoing that notwithstanding the efficiency of my novel brake the same is simple and inexpensive in construction and at the same time strong  
10 and durable, and therefore well adapted to withstand the rough usage to which car-brakes are ordinarily subjected in practice.

I have entered into a detailed description of the construction and relative arrangement of the parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the said embodiment. I do not desire,  
15 however, to be understood as confining myself to such specific construction and relative arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my invention as  
20 claimed.

25 Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a rail-brake for cars, the combination  
30 of a car-truck, a device fixed on the car-truck and having lower and upper vertically-disposed guides, and also having a space between said guides, a shoe arranged to engage the tread of a track-rail, a stem fixed with respect to the shoe and extending upwardly through

the guides of the said device, a transverse, 35 vertically-movable lever fulcrumed on the truck and having a comparatively short outer arm engaging and arranged to move the stem of the shoe, and a coiled spring connecting the said device and the outer arm of the lever. 40

2. In a rail-brake for cars, the combination of a car-truck, a device fixed on the car-truck and having lower and upper vertically-disposed guides and a space between said guides, and also having a bifurcation *h* in the lower 45 guide, a shoe arranged to engage the tread of a track-rail, a stem fixed with respect to the shoe and extending upwardly through the guides of the said device and having a comparatively wide portion disposed in the bifur- 50 cation of the lower guide, and also having a transversely-disposed slot arranged in the space of the device between the guides thereof, a transverse, vertically-movable lever fulcrumed on the truck and having a compara- 55 tively short outer arm arranged in the slot of the stem, and a coiled spring arranged alongside of the said device and connected at its upper end to the device, and at its lower end to the outer, short arm of the lever. 60

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

SAMUEL T. NOBLE.

Witnesses:

A. R. McCULLOCH,  
JNO. L. LOCKE.