

(No Model.)

2 Sheets—Sheet 1.

J. A. NEICHTER.

CAR BRAKE.

No. 362,773.

Patented May 10, 1887.

Fig. 1.

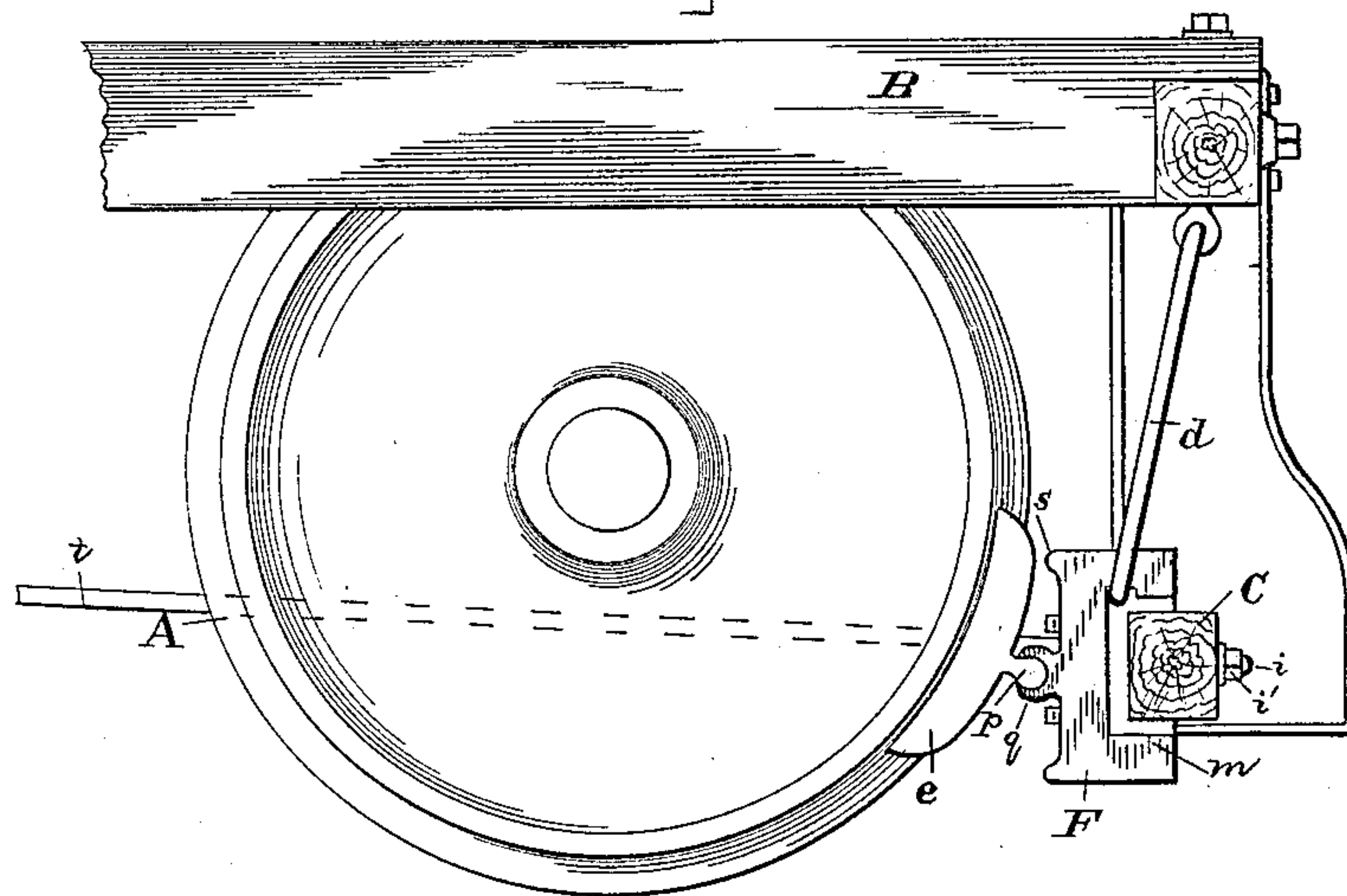


Fig. 2.

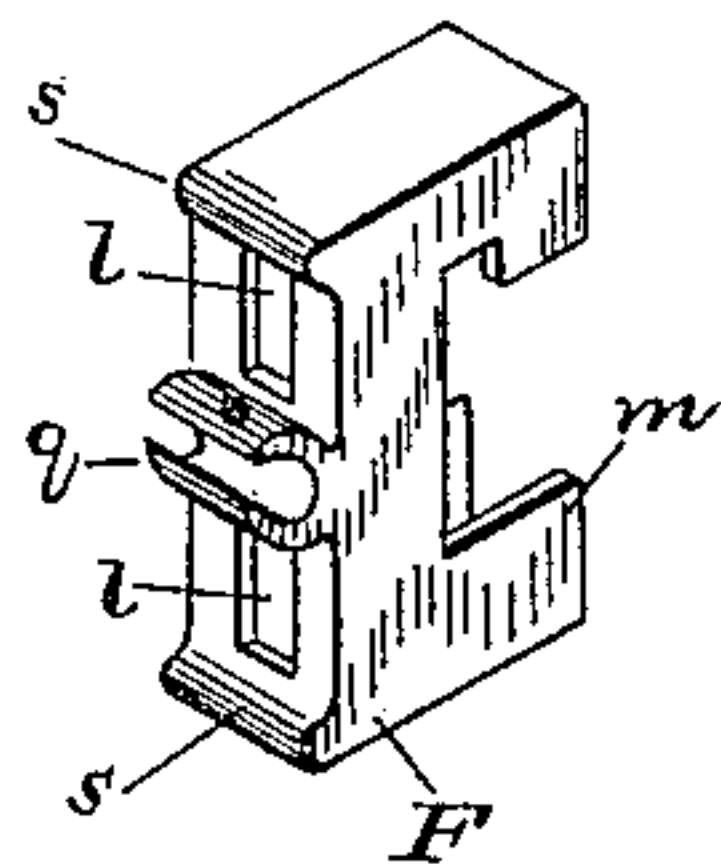


Fig. 3.

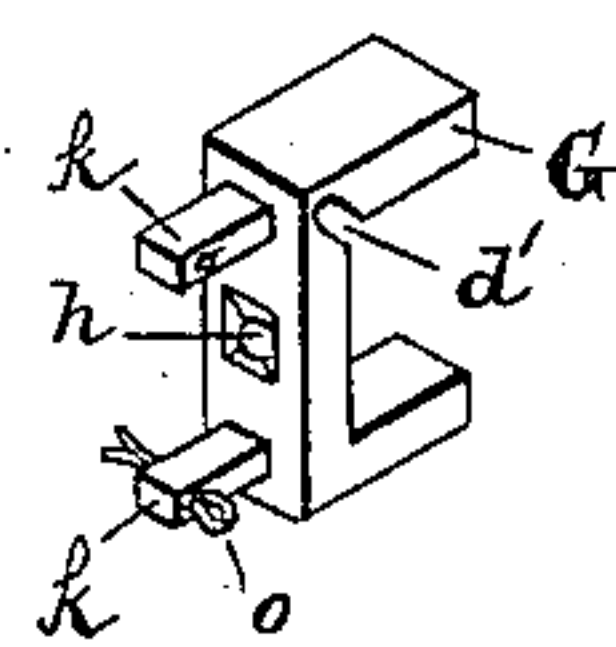


Fig. 4.

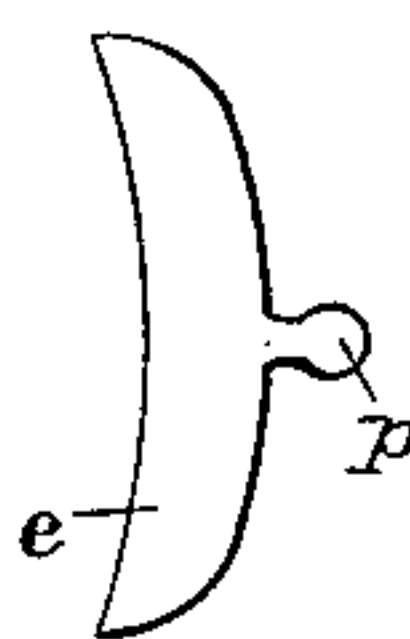


Fig. 5.

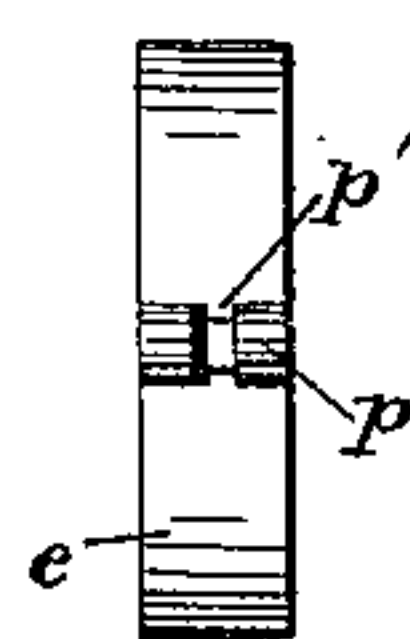
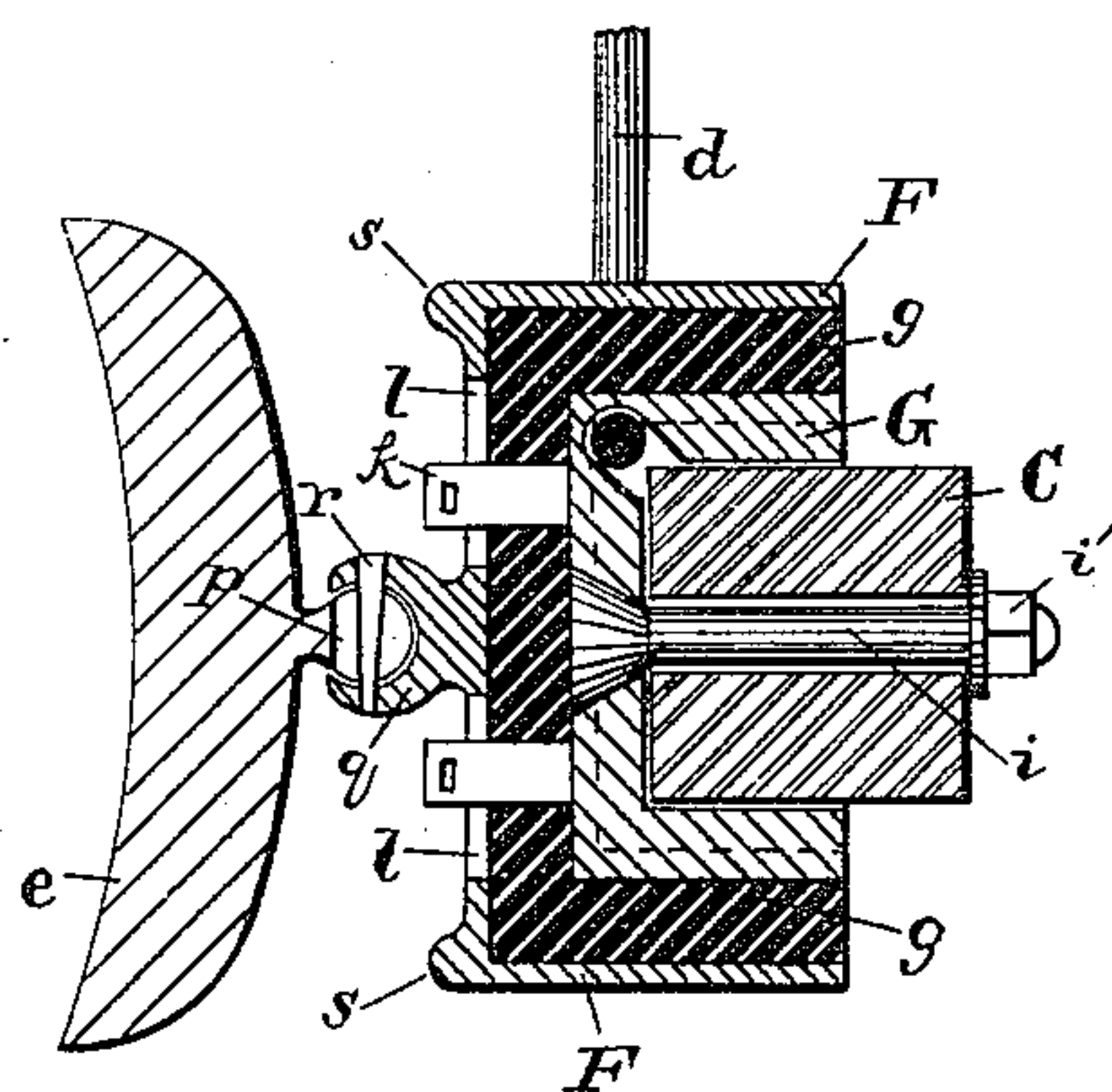


Fig. 6.



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Fig. 7.

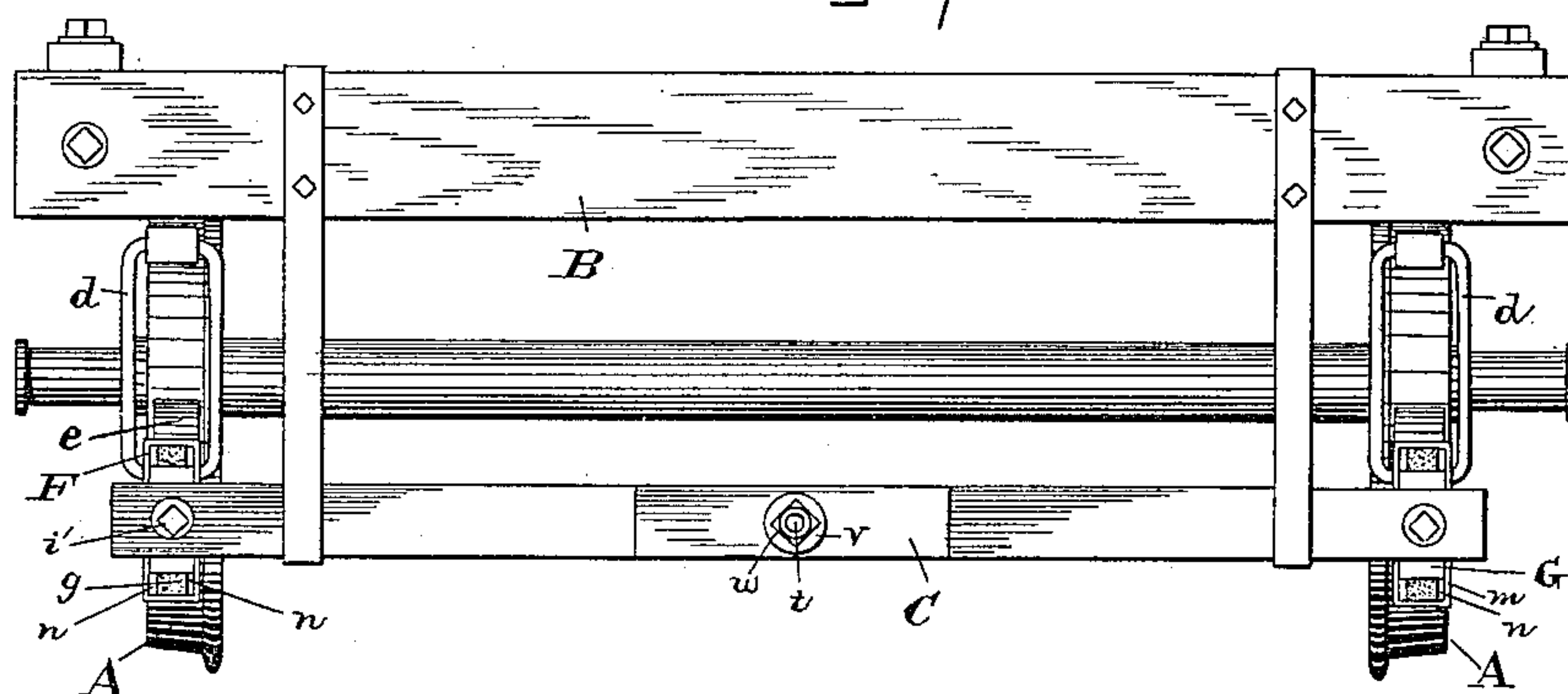


Fig. 8.

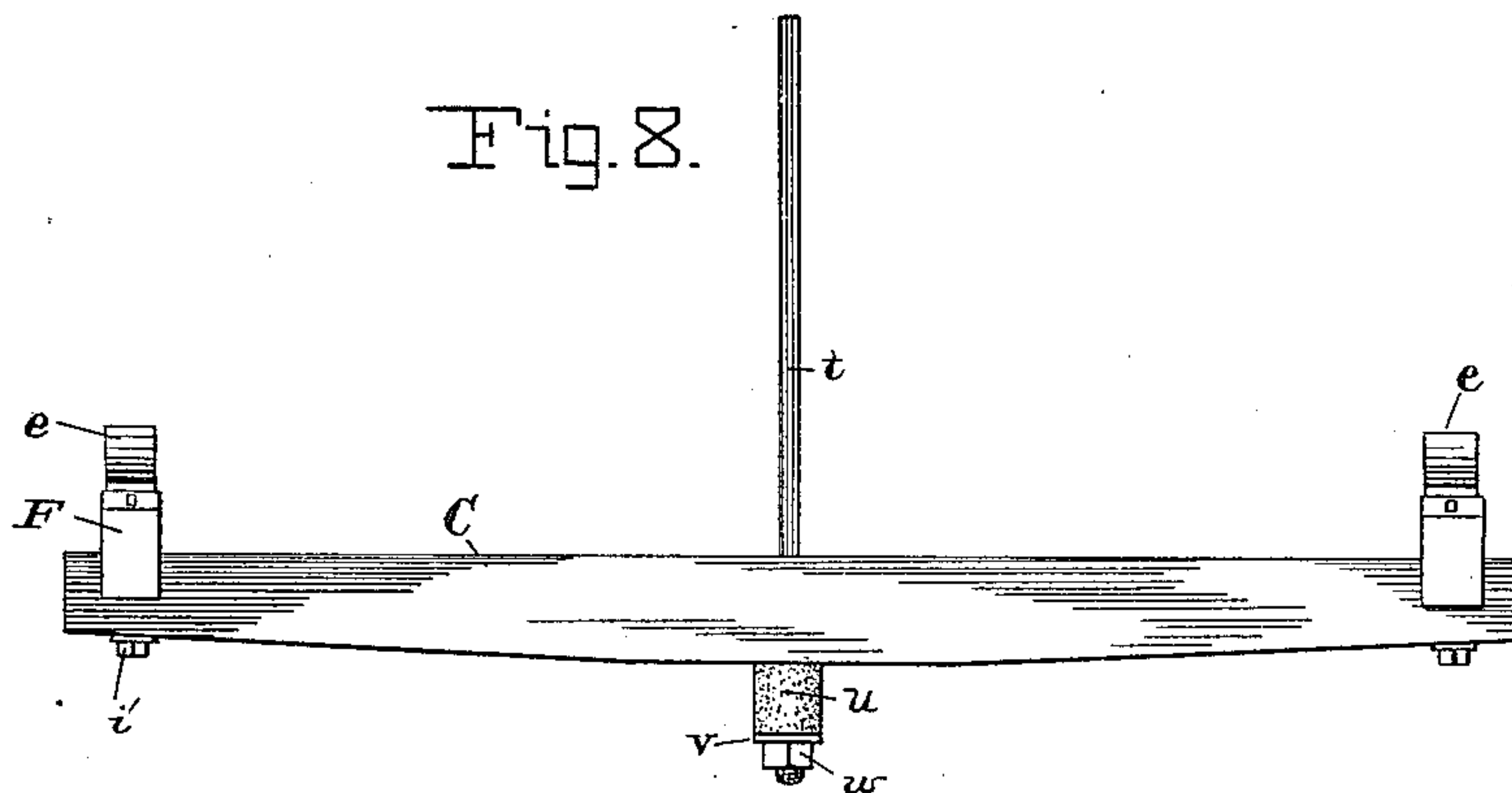
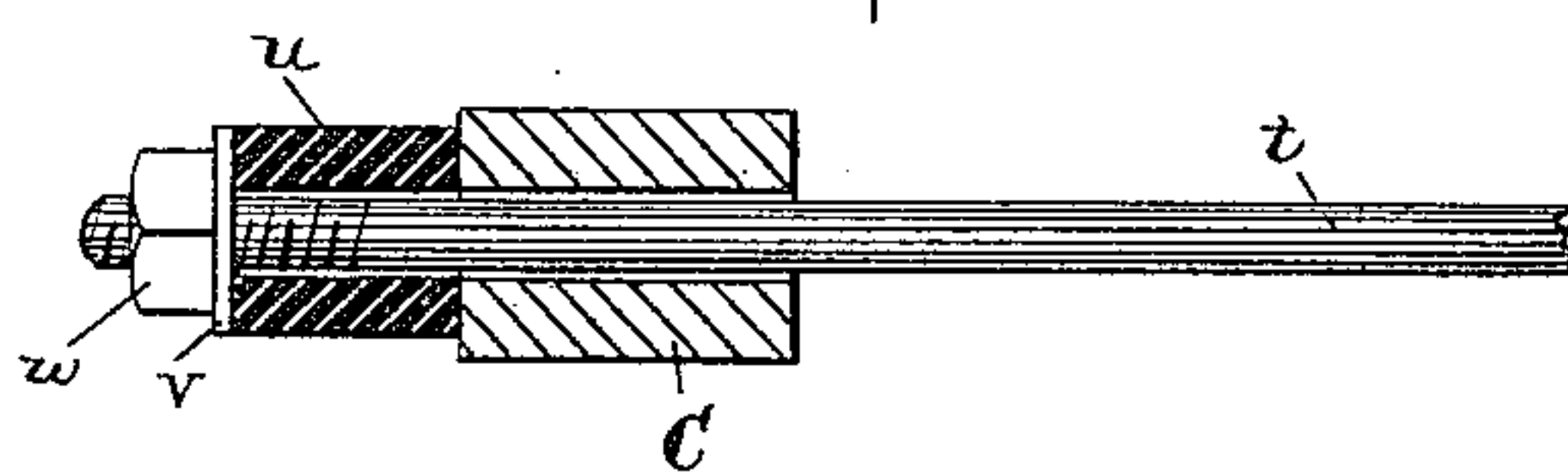


Fig. 9.



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UNITED STATES PATENT OFFICE.

JOHN A. NEICHTER, OF ORRVILLE, OHIO.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 362,773, dated May 10, 1887.

Application filed November 15, 1886. Serial No. 218,844. (No model.)

To all whom it may concern:

Be it known that, I, JOHN A. NEICHTER, a citizen of the United States, residing at Orrville, in the county of Wayne and State of Ohio, have invented certain new and useful Improvements in Car-Brakes, of which the following is a specification.

This invention relates to an improvement in car-brakes, and has for its object to provide means whereby the brake-shoes when applied to the wheels may have an elastic slightly-vibratory motion, instead of a rigid or fixed bearing. This improvement permits the shoes to be applied with the full ordinary pressure without liability of sliding or "skidding" the wheels.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of part of a car-truck, showing my improvement. Fig. 2 is a view of the box. Fig. 3 is a view of the clip. Figs. 4 and 5 are views of the brake-shoe. Fig. 6 is a vertical section of brake-shoe and the parts which attach it to the beam. Fig. 7 is a rear view of a car-truck, showing my improvement. Fig. 8 is a top view of the brake-beam. Fig. 9 is a cross-section of the brake-beam.

The letter A designates a car-wheel; B, the frame of the truck; C, the brake-beam, suspended from the frame by the usual hanger, *d*, and *e* the brake-shoes.

The brake-shoes *e* are attached in some suitable way to a box, F, between which and the beam C is a rubber cushion, *g*. This rubber cushion being interposed between the brake-shoe and brake-beam and there being no rigid connection between those parts, it will be seen an elastic attachment is provided whereby the brake-shoe will yield when pressure is applied, and also the brake-shoe, when pressed against the wheel, may vibrate or tremble independently of the beam to such a degree as will prevent it from causing the wheel to slide on the rail.

The particular construction I employ for attaching the brake-shoes and the rubber cushion is new and useful, and consists of a metal clip, G, having three sides to take on the brake-beam. A hole, *h*, in one side receives a bolt, *i*, which passes through the beam C, and is

made fast by a nut, *j*. The center side of the clip G is provided with one or more lugs, *k*, and at one corner the clip is hollowed out, as at *d'*, to receive the hanger *d*. The rubber cushion *g* fits around the three sides of the clip, and is preferably molded to give it the desired shape. It has a hole in its center side for the passage of each lug *k* on the clip. The box F has three sides, corresponding to the sides of the clip G, and the dimensions of these sides adapt the box to take over and fit close around the said rubber cushion *g*. This box has slots *l* in its center side—one slot for each lug *k* on the clip—and is provided with flanges *m*, which inclose the rubber cushion *g* and partly inclose the clip G. A space, *n*, (see Fig. 7,) is left at each side between the rubber cushion and box-flange *m*. This space allows the rubber to be compressed, and thereby afford motion to the box. The box F is secured to its position on the rubber cushion and clip by suitable pins or keys, *o*, which are passed through the lugs *k*, as seen in Fig. 6.

The brake-shoes *e* are here shown attached to the box F by a knuckle-joint. Each shoe has at its back a knuckle, *p*, which has a vertical slot, *p'*, and each box F has at its center side a socket, *q*, which the shoe-knuckle occupies. This manner of attaching the shoes, separately considered, is not my invention; but this knuckle-joint co-operates with the box and rubber cushion in permitting the desired elastic vibratory motion to the shoe, and I therefore claim the combination. A pin, *r*, passes down through the socket *q* and slot *p'*, and, while confining the shoe to its position, allows it to tilt or vibrate. A boss, *s*, is on the box F above and below the socket, and serves as a stop for the shoe to tilt against.

In order to obviate the effects on the brake-shoes resulting from a rigid connection between the brake-rod *t* and brake-beam C, I provide a rubber spool, *u*, which is slipped on the rod *t* and rests against the beam. A washer, *v*, is against the rubber spool, and a nut, *w*, on the rod is against the washer. This rubber spool *u* affords, when the brakes are on, a desirable degree of elasticity to the beam and greatly favors the vibratory motion of the shoes before referred to.

The advantages of the parts and combina-

tions here shown and described are that the brakes may be applied with the maximum ordinary pressure without liability of sliding the wheels, and the jar and strain on the car-body incident to applying the brakes as ordinarily rigged is almost entirely obviated.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a car-brake, the combination of the brake-beam, a clip attached to the beam and provided on its center side with lugs *k*, a box, *F*, having three sides and flanges, *m*, and provided on its center side with slots *l* for said clip-lugs, a rubber cushion, *g*, between the said clip and box, suitable keys, *o*, through the said lugs to confine the box, and a brake-shoe attached to the box, for the purpose set forth.

2. In a car-brake, the combination of a brake-beam, a clip attached to said beam, a box having three sides and movably attached to said clip, a rubber cushion interposed between the inside of said box and the outside of said clip,

and a brake-shoe attached to said box, for the purpose set forth.

3. In a car-brake, the combination of a brake-beam, a clip, *G*, attached to said beam, a box having three sides and inclosing said clip, a rubber cushion interposed between said clip and said box, the latter having on its center side a socket, and a brake-shoe having a knuckle which fits in said socket, substantially as and for the purpose set forth.

4. In a car-brake, the combination, with a brake-beam, of a clip, *G*, being hollowed out at one corner, the hanger *d*, which passes through said opening, the rubber cushion *g*, the inclosing-box *F*, and brake-shoe *e*, attached to said box, substantially as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN A. NEICHTER.

Witnesses:

JOHN E. MORRIS,
JNO. T. MADDOX.