

No. 666,539.

Patented Jan. 22, 1901.

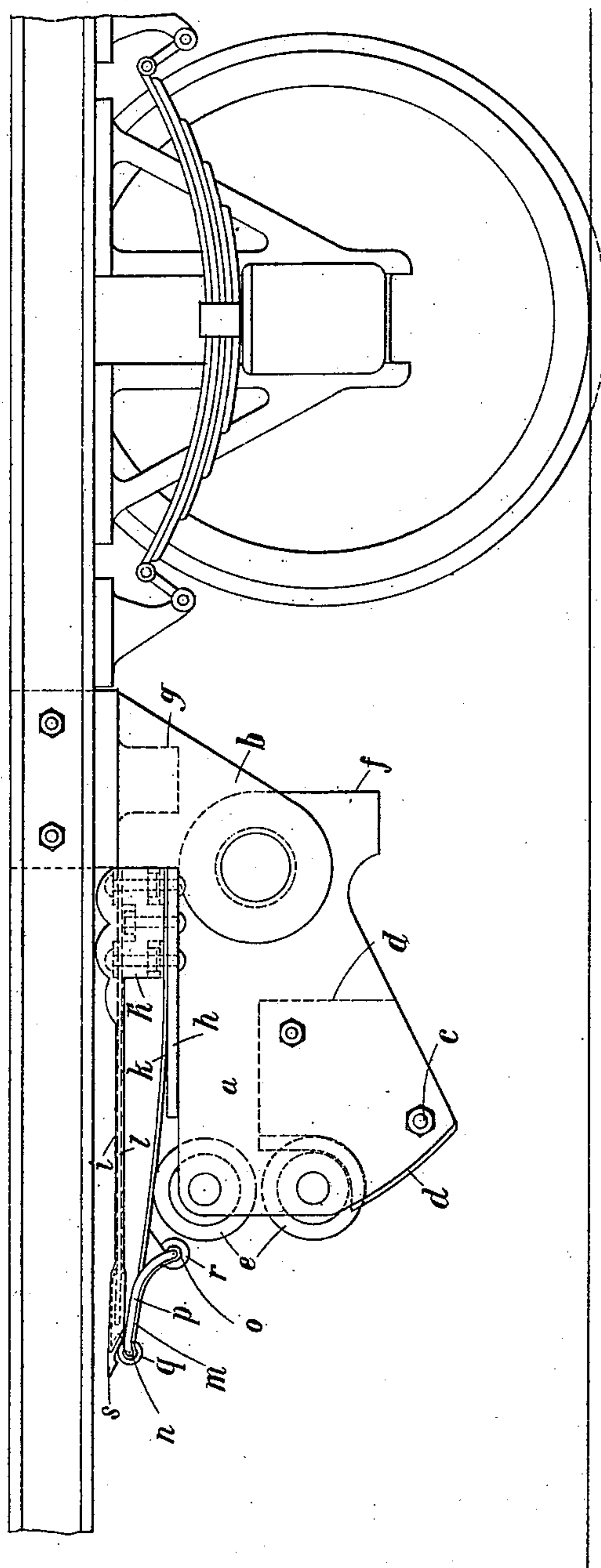
C. H. A. MEYER.
SAFETY DEVICE FOR TRAM CARS, &c.

(Application filed Nov. 17, 1900.)

(No Model.)

4 Sheets—Sheet 1.

Fig. 1.



Witnesses:

John Nickman.

William Schuch

Inventor:

Christopher Heinrich August Meyer

by his attorney

Roeder & Briesen

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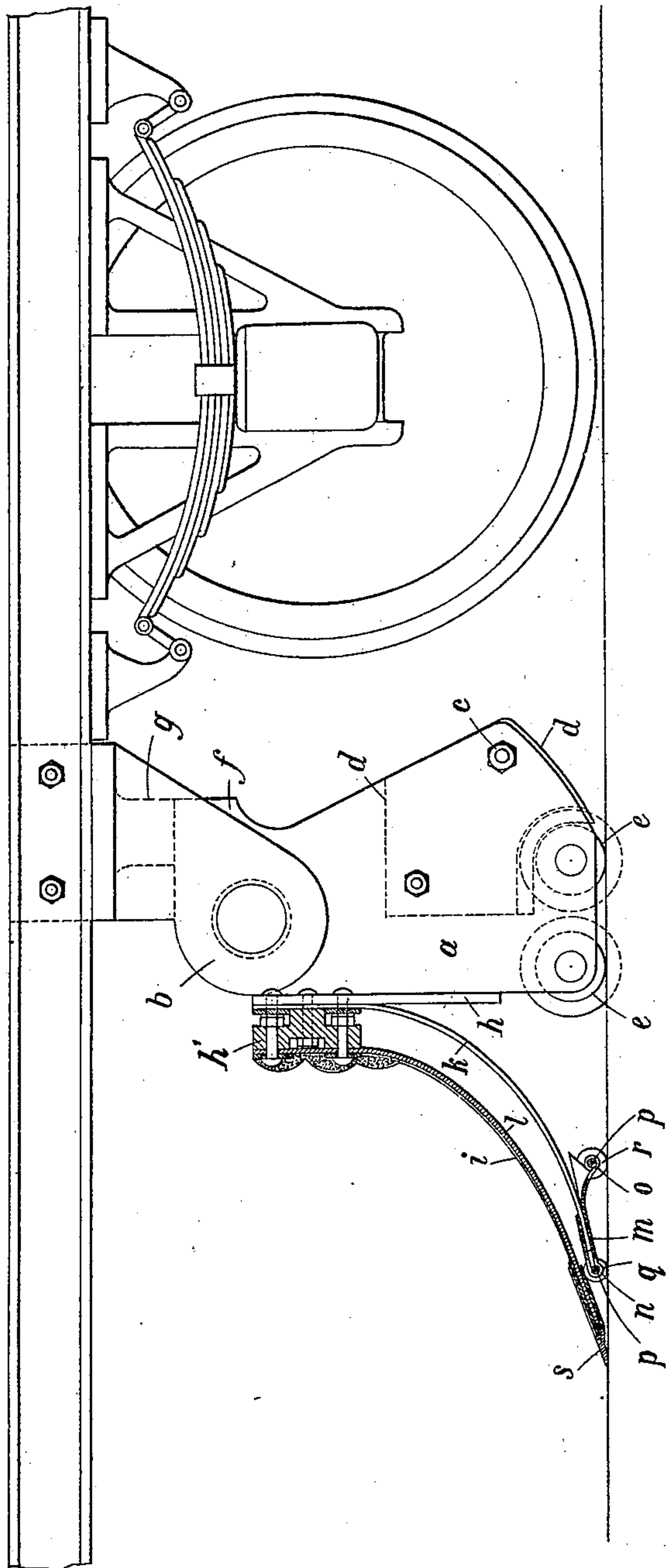
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Fig. 2.



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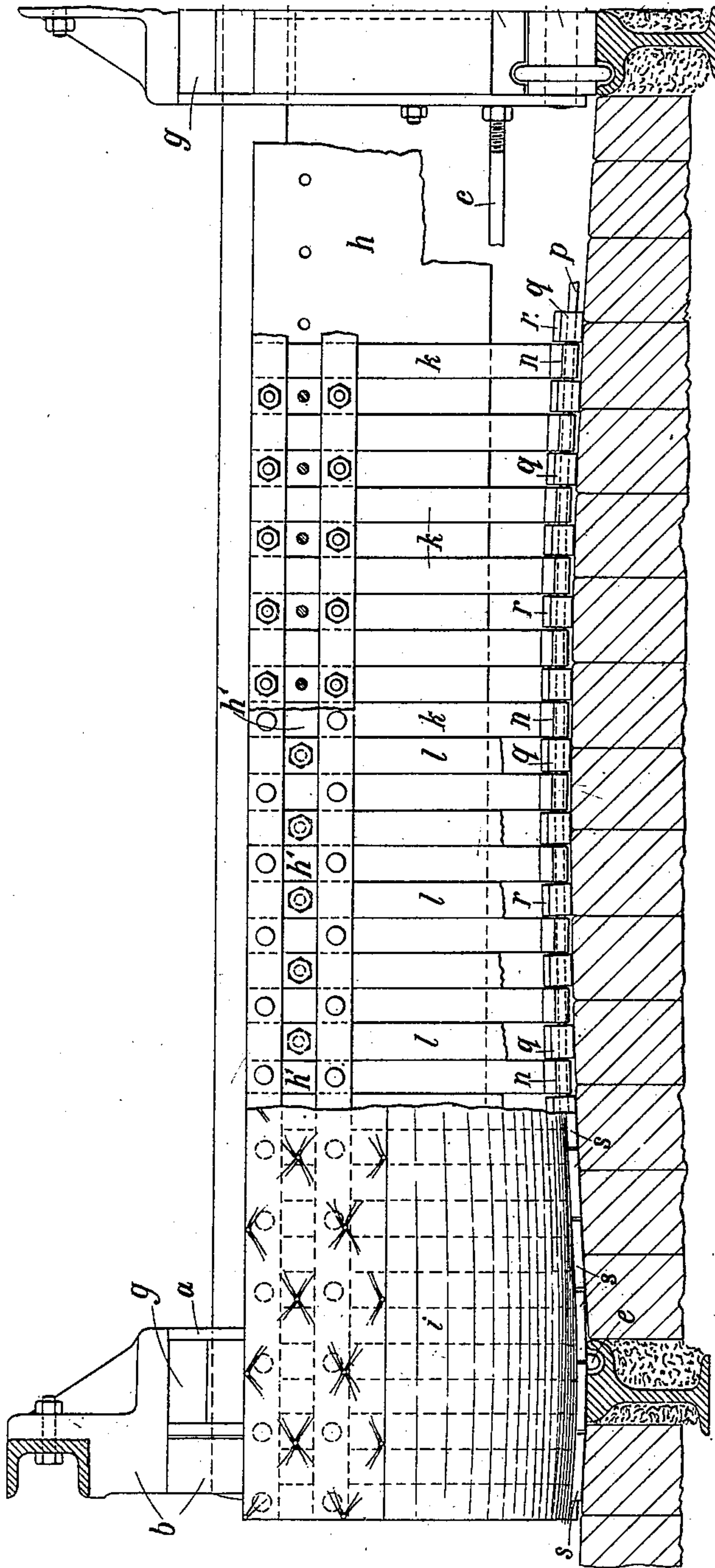
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Fig. 3.



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4 Sheets—Sheet 4.

Fig. 4.

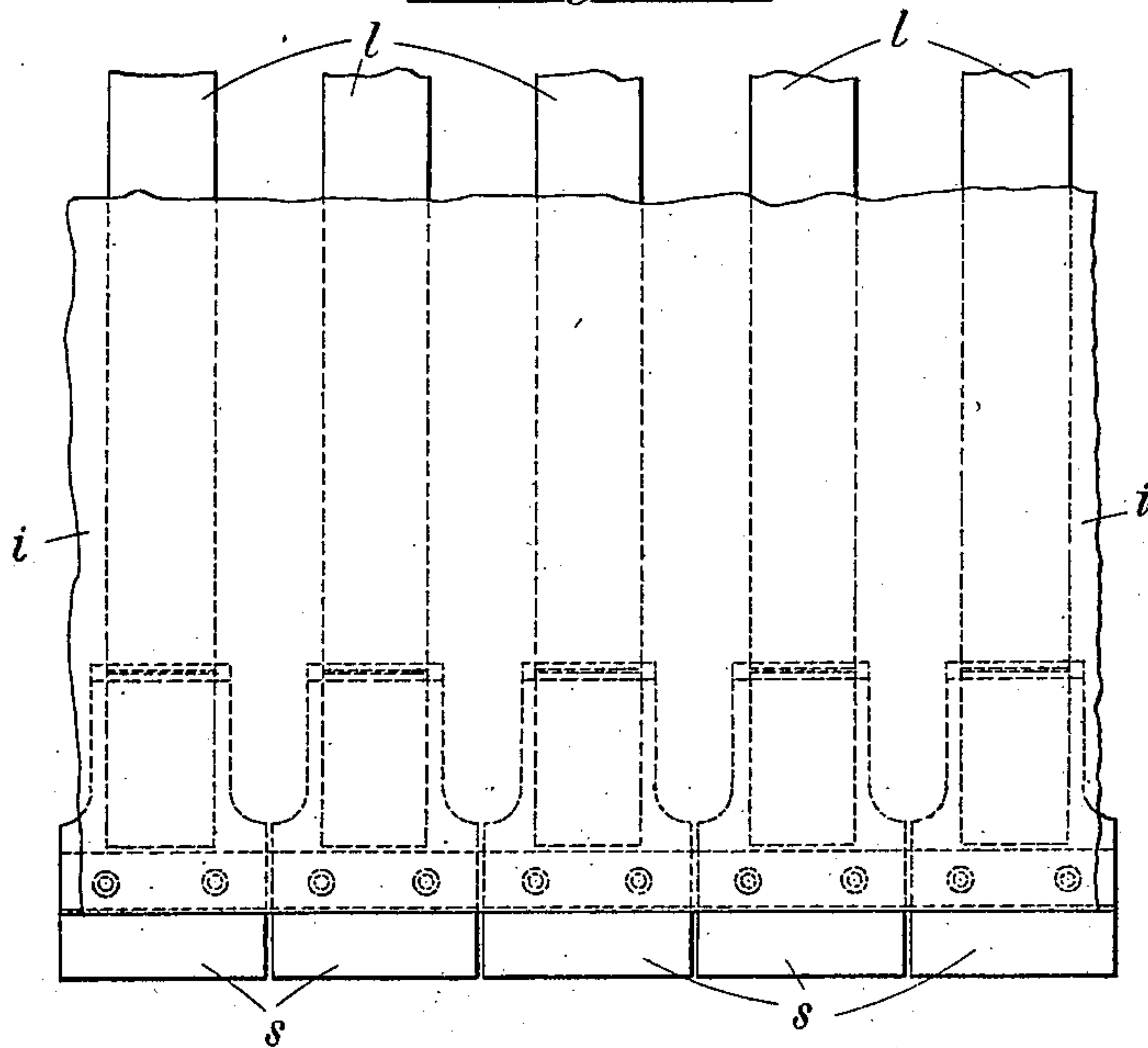


Fig. 5.

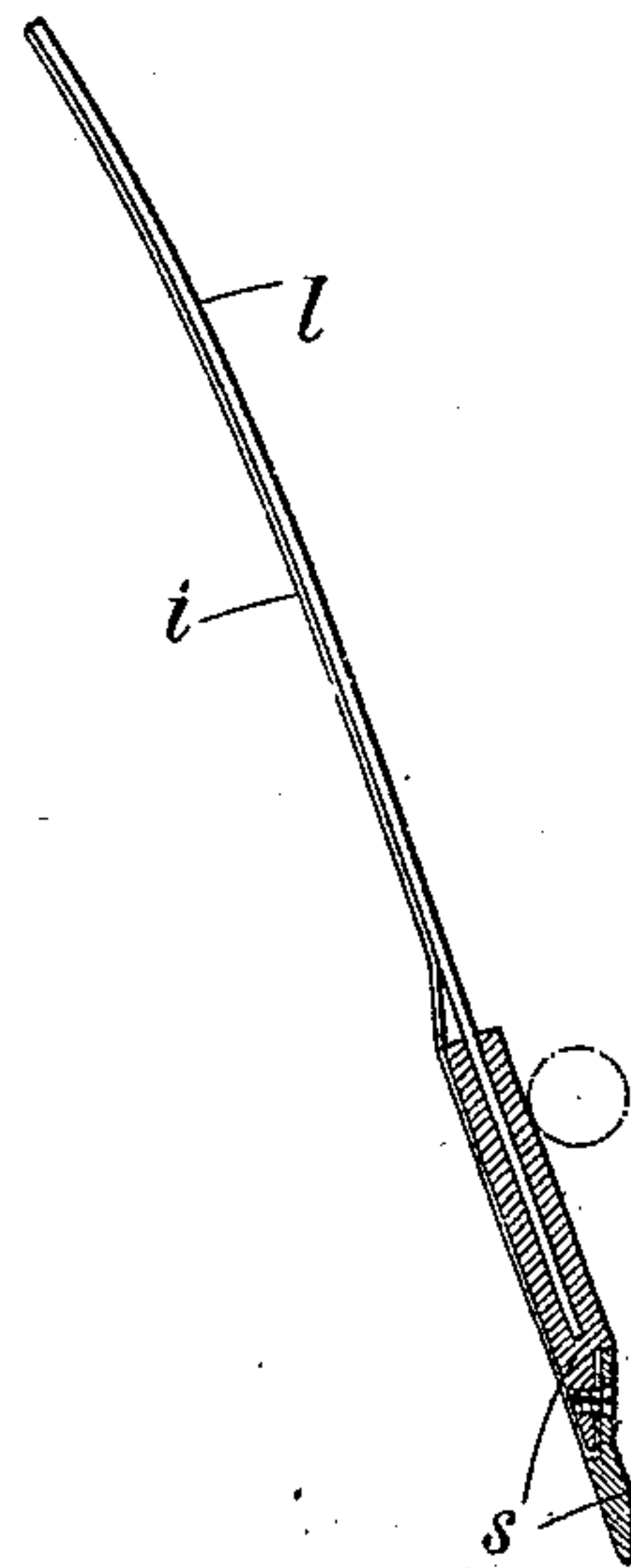


Fig. 6.

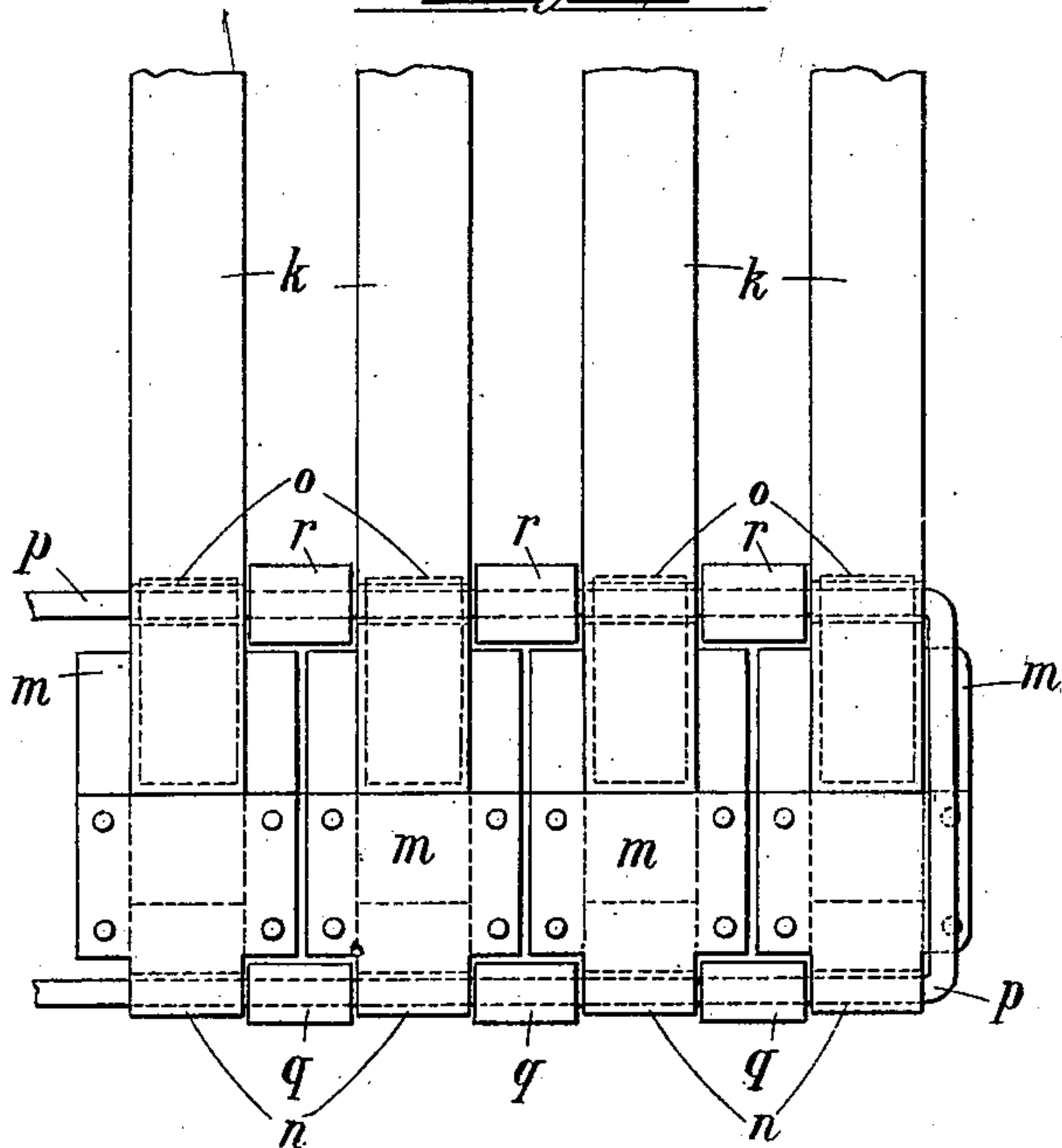
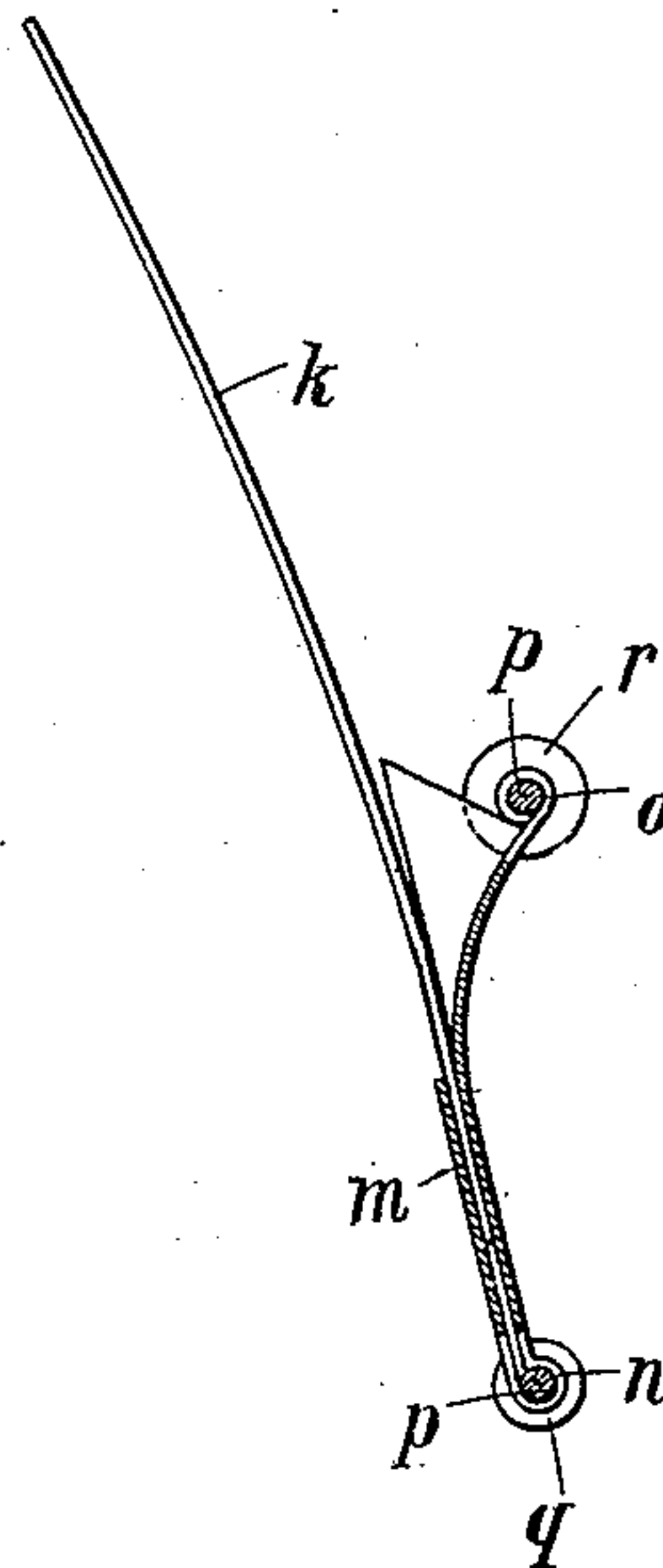


Fig. 7.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHRISTOPHER HEINRICH AUGUST MEYER, OF ALTONA, GERMANY.

SAFETY DEVICE FOR TRAM-CARS, &c.

SPECIFICATION forming part of Letters Patent No. 666,539, dated January 22, 1901.

Application filed November 17, 1900. Serial No. 36,794. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER HEINRICH AUGUST MEYER, a citizen of Germany, and a resident of Altona, Germany, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

This invention relates to a car-fender of novel construction which on being lowered will bodily lift the front car-wheels off the rails and press the apron or guard tightly against the track.

In the accompanying drawings, Figure 1 is a side view of my improved fender, showing it raised. Fig. 2 is a similar view showing it lowered; Fig. 3, a front elevation thereof, partly broken away; Fig. 4, a detail of the forward guard; Fig. 5, a sectional end view thereof; Fig. 6, a detail of the rear guard, and Fig. 7 a sectional end view thereof.

The fender consists, essentially, of a guard or apron adapted to extend across the track and secured to a pair of angle-levers *a*, connected by rods *c* and turning on a shaft hung in brackets *b*. One arm of each angle-lever has the shape of an eccentric *d* and is furnished with two rollers *e*, adapted to engage the rails. The angle-levers are composed of iron frames, while the eccentrics *d* are made of hard wood or other suitable material.

When the fender is lowered, the car will be slightly lifted by the eccentrics, while the rollers *e* will be brought into engagement with the rails. In this position the upper arms *f* of the angle-levers will bear against tappets *g*, formed on the brackets *b*. When the angle-levers are raised, they may be held in position by any suitable means.

To the angle-levers are secured the plates *h h'*, to which the guard proper is attached. This guard consists of two rows of spring-fingers *k* and *l*. The rear springs *k* are secured

at their upper ends to the plate *h*, while the front springs *l* are secured to the plate *h'*. At their lower ends the springs *k* are provided with shoes *m*, having eyes *n o*, through which is drawn a wire or other rope *p*, carrying rollers *q r*. The springs *l* are provided with a shoe *s* and are covered by a net or similar covering *i*. The springs *l* are fixed above the rollers *q* in such a manner that they are supported upon such rollers, and thus when the springs are pushed aside by some obstacle the rotation of the rollers will always cause them to be again moved forward.

If the angle-levers are raised, the guard will become taut, Fig. 1, while when the angle-levers are lowered the guard descends upon the track and is pressed against it firmly by the springs *k* and the tilting of the angle-levers. Thus the front edge of the fender is tightened across the track, and any obstacle encountered will be effectively picked up.

What I claim is—

1. A car-fender composed of a pair of eccentrics adapted to elevate the front of the car when the eccentrics are lowered, and of a guard composed of a series of spring-fingers and directly connected to said eccentrics, substantially as specified.

2. A car-fender composed of a pair of eccentrics adapted to elevate the front of the car when the eccentrics are lowered, combined with a rear row of springs, a front row of springs, shoes connected to the rear springs, a rope secured to the shoes, and rollers carried by the rope, substantially as specified.

Signed by me at Hamburg, Germany, this 2d day of November, 1900.

CHRISTOPHER HEINRICH AUGUST MEYER.

Witnesses:

A. POLHS,
E. H. L. MUMMENHOFF.