

A. G. SAFFORD.  
Sheave for Sliding Door.

No. 216,351.

Patented June 10, 1879.

Fig. 1.

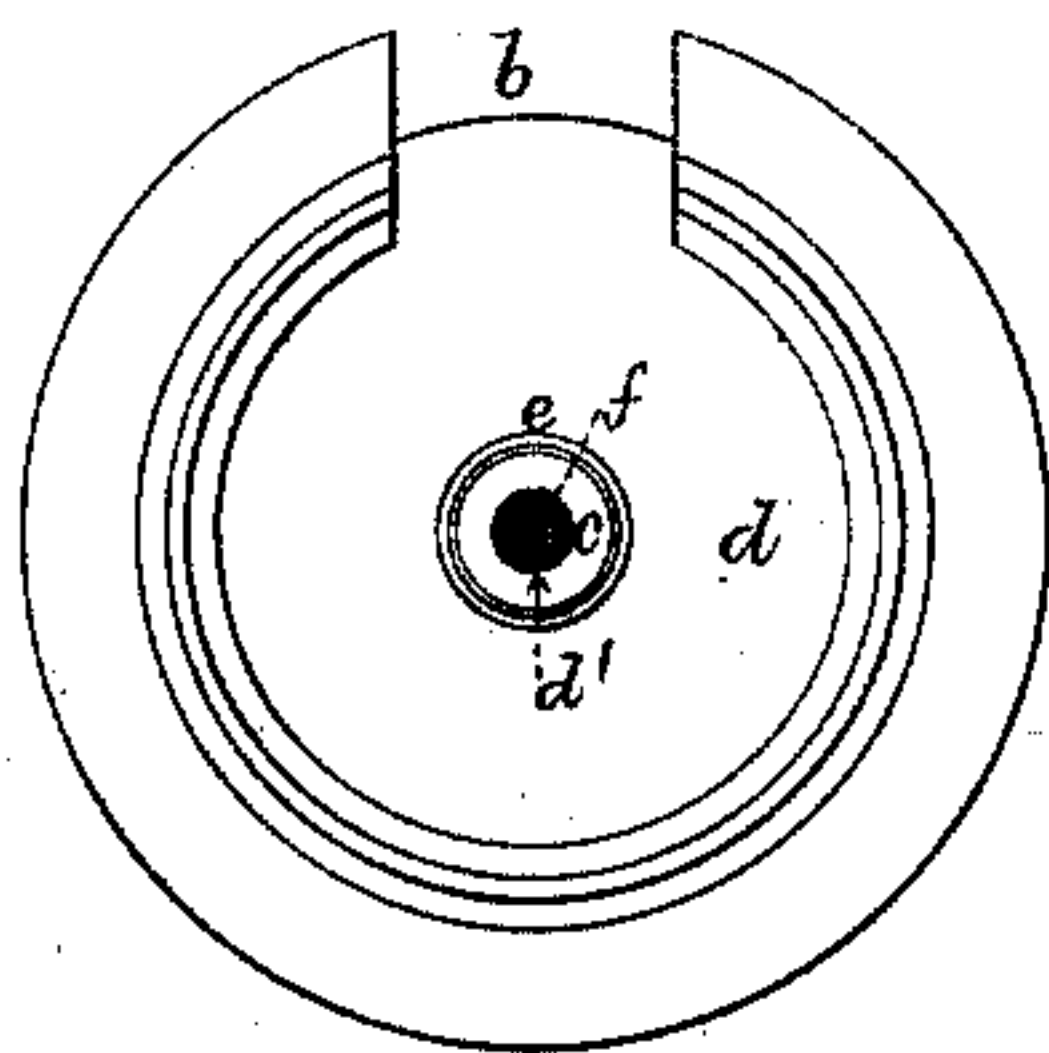


Fig. 2.

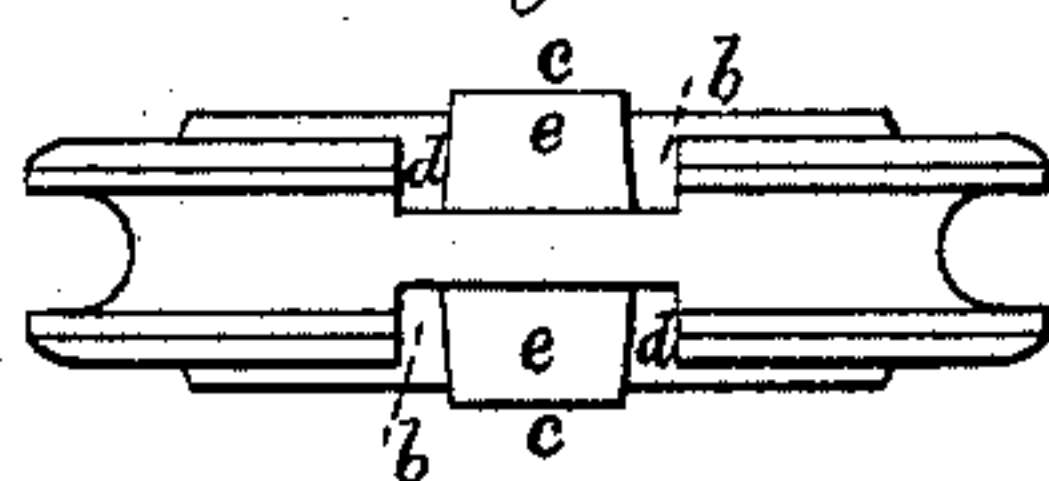


Fig. 3.

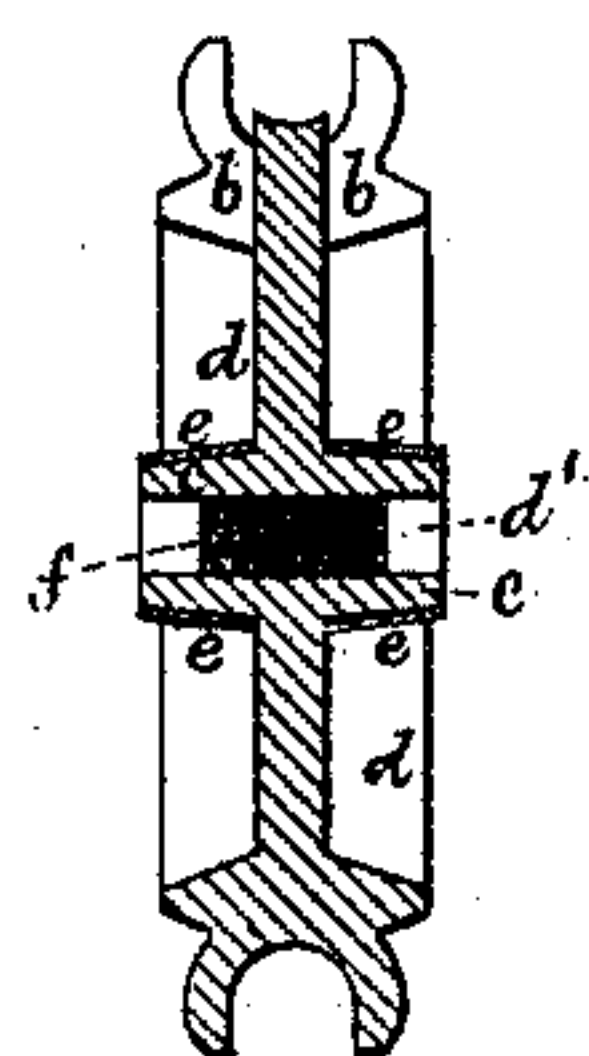


Fig. 4.

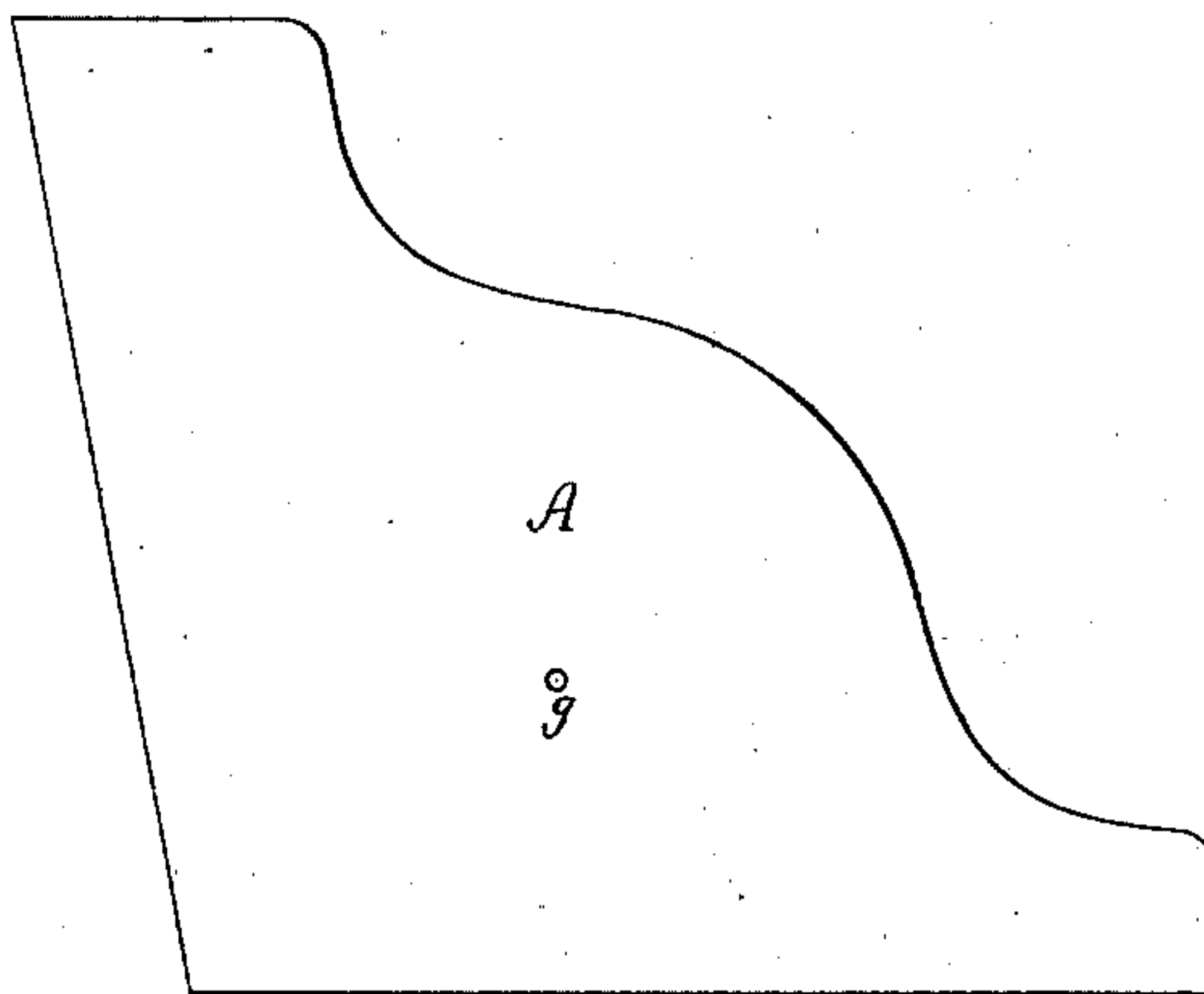


Fig. 6.

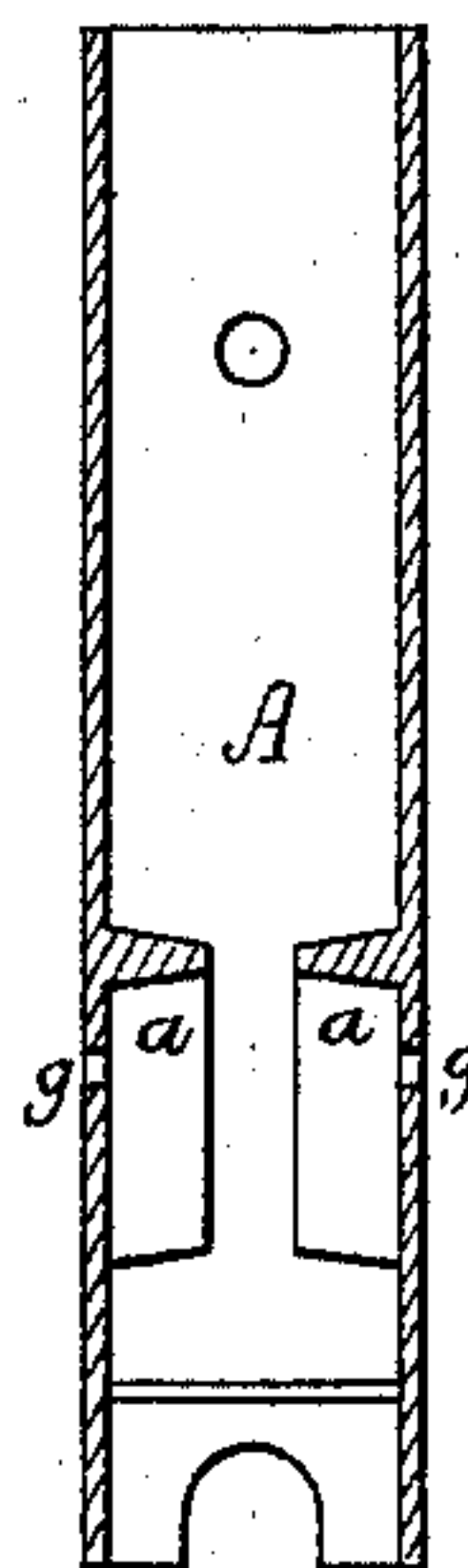
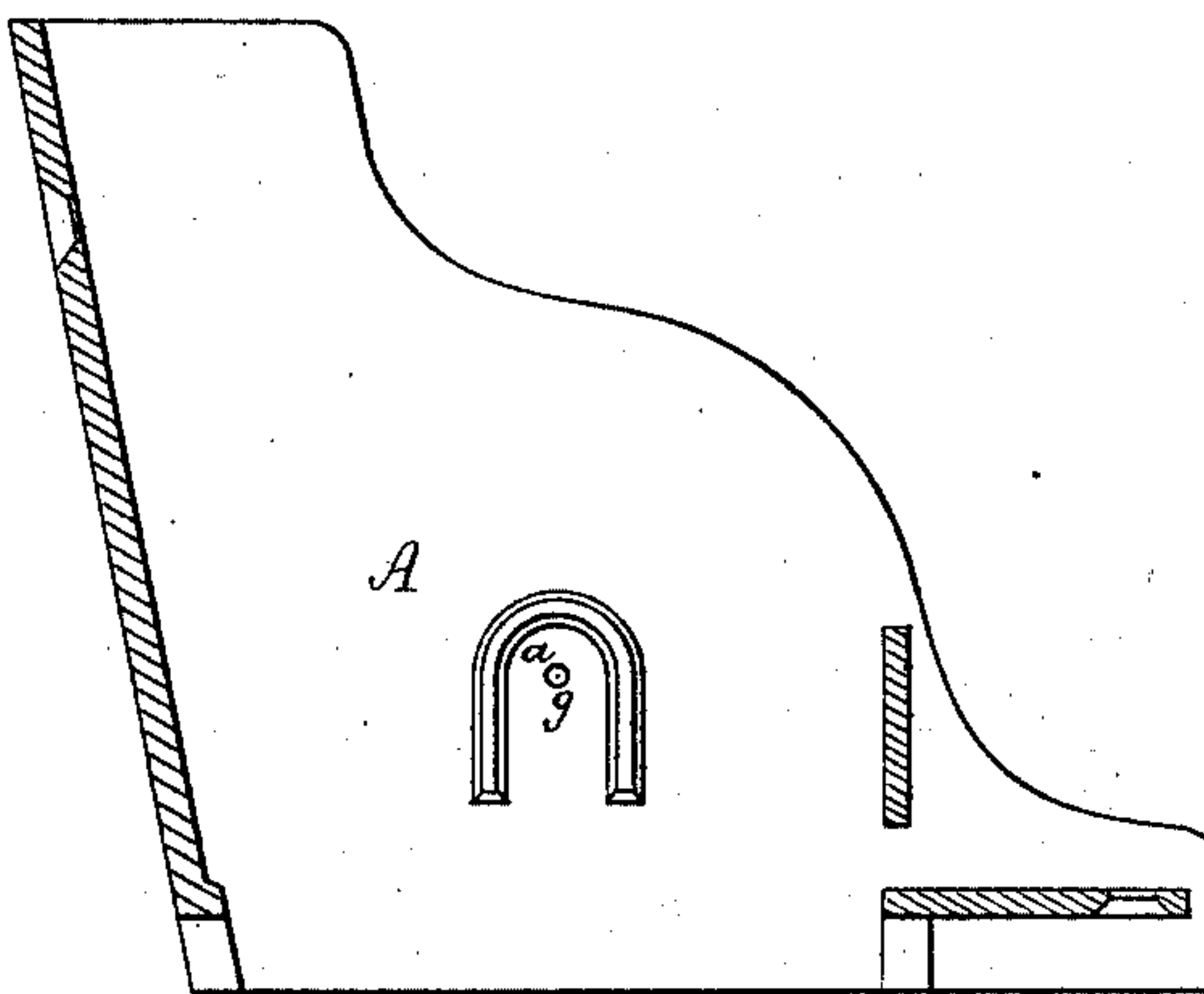


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN SHEAVES FOR SLIDING DOORS.

Specification forming part of Letters Patent No. **216,351**, dated June 10, 1879; application filed April 18, 1879.

*To all whom it may concern:*

Be it known that I, ALBERT G. SAFFORD, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Slide-Door Rollers and their Supporting-Cases; and do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a side elevation, Fig. 2 a top view, and Fig. 3 a transverse section, of a roller or wheel; and Fig. 4 is a side view, Fig. 5 a longitudinal section, and Fig. 6 a transverse section, of its case as provided with my improvement.

The case and wheel are intended for and are adaptable to the lower end of the slide-door of a horse-railway car, the wheel being grooved in its periphery to rest and run upon a rail suitably applied to the threshold or other part of the vehicle.

The case A has within it two arched bearings, *a a*, projecting toward each other from opposite sides of it, they, on insertion of the wheel into the case, passing through the notches *b b* of the wheel, and receiving within them the two journals *c c* projecting from the wheel, and arranged within circular cavities *d d*, made in opposite sides of the wheel.

It is customary to make both the wheel and its case of cast-iron. In practice, when they are so made, it has been found that the journals, while working in the bearings, are apt to produce a very disagreeable noise, which in order to prevent, I apply to each of such journals, which, in form, is a conic frustum, a correspondingly-shaped sleeve, *e*, of brass or cop-

per fitted to and to encompass the journal. In practice these sleeves have been found to be a complete remedy for the noise, and, besides, they prevent the journals from being worn down while in use. Furthermore, I make the wheel with a passage or hole, *d'*, leading through it and the journals, and concentric with each of the latter, and place in each passage a roll, *f*, of wire-gauze, or woven wire, or some proper substitute therefor, such roll being to absorb by capillary attraction and hold oil when injected into the passage through one of the two small holes *g g* made in the sides of the case, and in or about in line with the axis of the wheel when such wheel is in place in such case. By means of the said holes the supplying the wheel-journals and bearings with oil may be affected at such times as may be necessary, much of the oil injected passing into the passage and being absorbed by the roll therein, it being given out therefrom from time to time, so as to keep up the lubrication of the bearing-surfaces, the oil being thrown upon them by centrifugal force while the wheel may be in revolution.

What I claim is as follows, viz:

The wheel, as described, provided with the central passage and the absorbent roll, in combination with the case having arched bearings within it, and an oiling-hole in one or each of its sides, and arranged with the said passage, as set forth.

ALBERT G. SAFFORD.

Witnesses:

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