

C. B. White,

Gib.

N^o 80,376.

Patented July 28, 1868.

Fig. 1

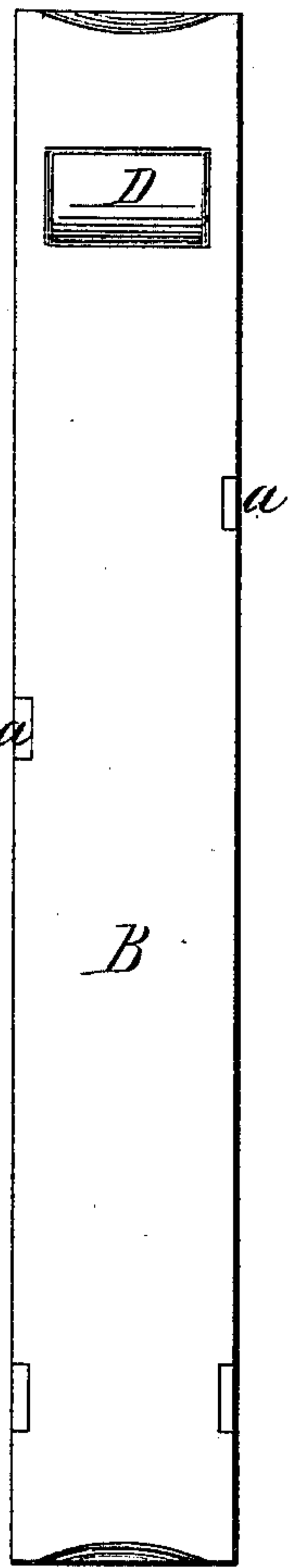


Fig. 2

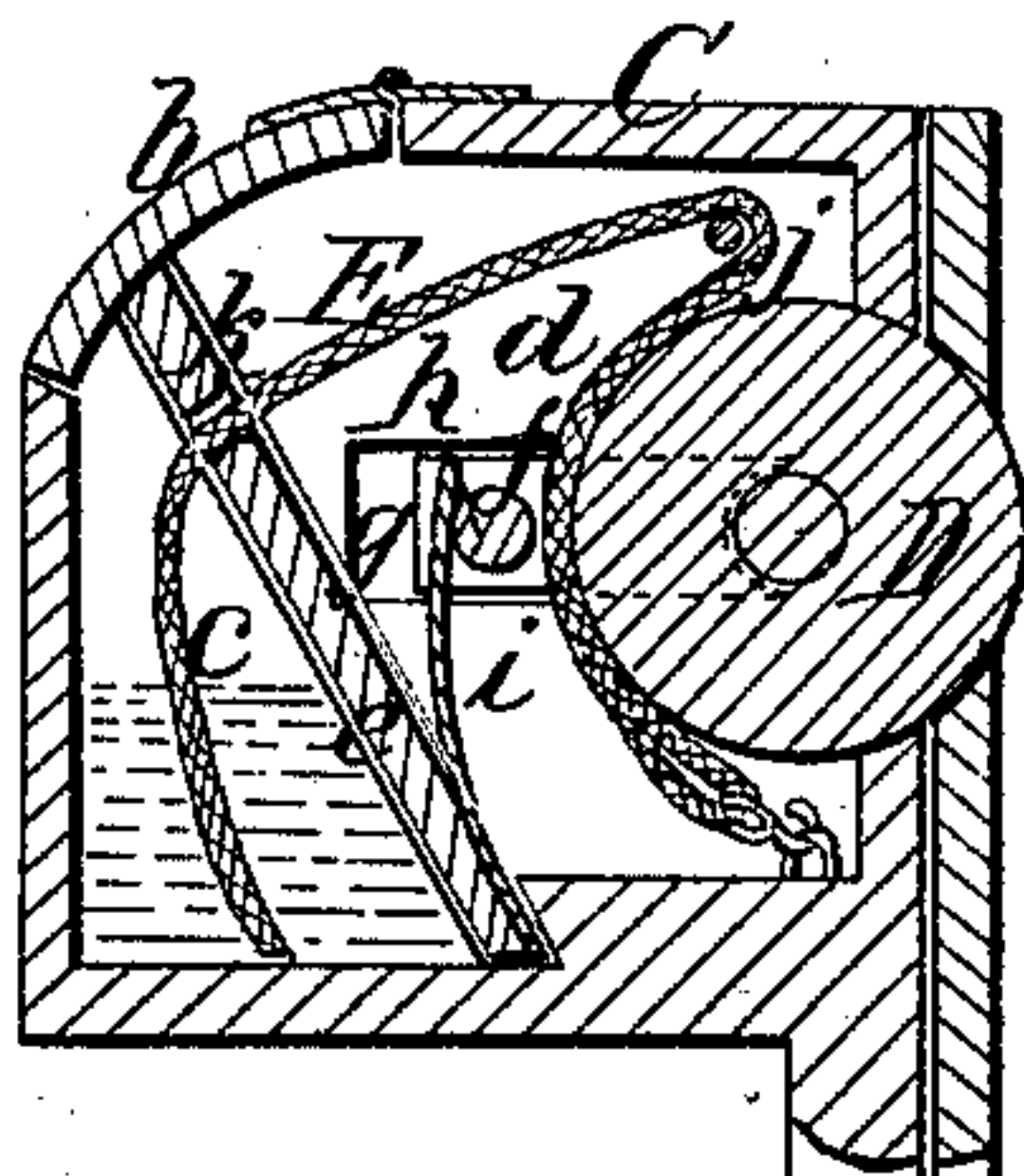


Fig. 3

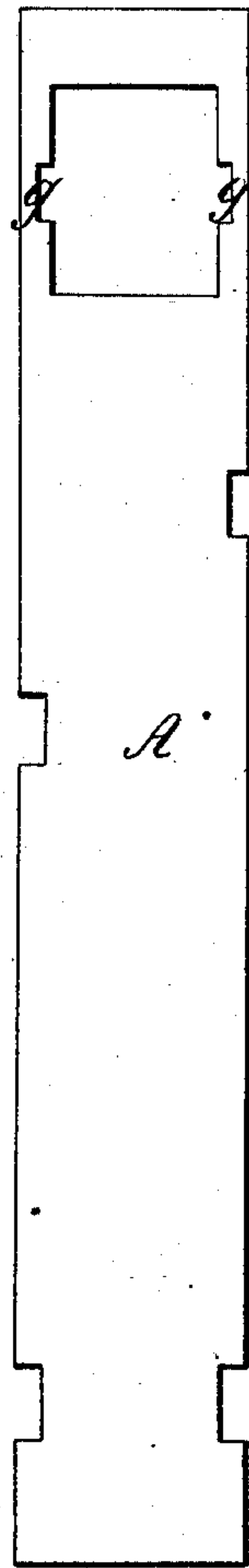
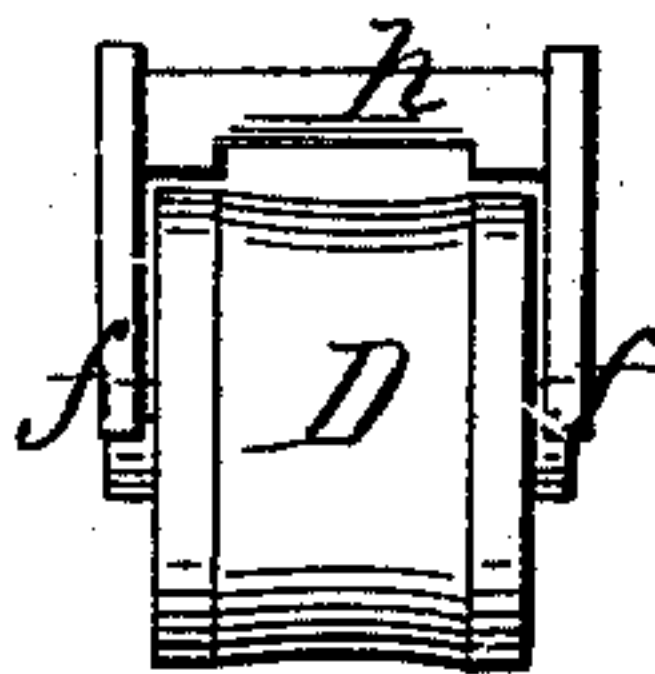


Fig. 4



Witnesses
O. D. Mum.

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CYRUS B. WHITE, OF PORT RICHMOND, NEW YORK.

Letters Patent No. 80,376, dated July 28, 1868.

IMPROVEMENT IN GIB AND SELF-OILER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CYRUS B. WHITE, of Port Richmond, in the county of Richmond, and State of New York, have invented a new and improved Gib and Self-Oiler; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and useful improvement in self-lubricating gibs for steam-engines, and is an improvement on a device for that purpose, patented by William A. Devon, November 19, 1867.

The object of the invention is to avoid the waste of oil caused by the motion of the cross-head, and, while effecting this end, to obtain a perfect or reliable bearing, at all times, of the friction-roller against the guide.

In the accompanying sheet of drawings—

Figure 1 is a front view of my invention.

Figure 2, a side sectional view of the same.

Figure 3, a front view of the same, the friction-plate being removed.

Figure 4, a detachable view of the friction-roller.

Similar letters of reference indicate corresponding parts.

The gib, as in the original patent of Devon, is composed of two parts, A and B, the former, A, being the main portion, and the latter, B, a friction-plate, made of brass, the plate B being provided at each side with two plates or slides, *a a*, which work in grooves in the sides or edges of the part A, and retain the friction-plate in place.

On the upper end of the part A there is an oil-cup, C, provided with a door or flap, *b*, at its upper end. This oil-cup is divided into two compartments, *c d*, by a partition-plate, *e*, which may be fixed or cast with the cup, or made separately from it, and arranged to slide in and out. The compartment *c* is the oil-chamber, and is supplied with oil through the door or flap *b*, as will be understood by referring to fig. 2.

D represents a friction-roller, the periphery of which is made concave, as shown clearly in fig. 4. This roller has its bearings in slides *ff*, which are fitted in grooves *g g*, made in the inner surfaces of the sides of the compartment *d*, said slides being connected by a cross-bar, *h*. These slides are allowed to work or move freely in the grooves *g g*, and a spring, *i*, which is attached to the partition-plate *e*, bears against the cross-bar *h* of the slides *ff*, and has a tendency to keep the roller D in contact with the slide or guide against which the cross-head works, a hole or slot being made in plate B for the roller D to pass through.

E represents a wick, one end of which is attached to the bottom of the compartment *d*, and extends over a rod, *j*, in the upper part of *d*, and thence through a slot, *k*, in the partition-plate *e*, and extends down into the compartment *c*, below the surface of the oil therein. The wick E is kept in contact with the inner side of the roller D, and by capillary attraction supplies the roller D with a sufficiency of oil to insure proper lubrication, the groove in the periphery of roller D serving as an oil-chamber.

In the working of the cross-head, no oil can escape from the compartment *c*, and as no oil is allowed in *d*, of course none can escape around the roller D, through the openings in A and B, through which the roller works. This is the great difficulty attending the original invention of Devon. The cup C has no partition-plate, *e*, the oil being underneath the roller D, and escaping in greater or less quantities around the roller, and also through slots in the sides of the cup C, which slots extend entirely through the sides of the cup, in which slots the slides of the roller work.

Besides this difficulty of the escape and waste of oil, the slots in the sides of the cup frequently become choked up with cinders, ice, and filth, leaving no play for the roller D. These contingencies are fully obviated by my improvement, as the slides *ff* work in grooves in the inner surfaces of the compartment *d*, and cannot become obstructed or filled with cinders, ice, or filth, and the oil being confined in the compartment *c*, none being near the roller, or allowed to come in contact with the same, except what is supplied to it by wick E, no oil can escape or be wasted by the reciprocating movement of the cross-head and gib.

I do not claim the friction-plate B, roller D, and supply-wick E, for they have been previously used, and are now used in the Devon patent.

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

1. The partition-plate *e* in the cup C, for the purpose of separating the oil from the roller D, and preventing the former being discharged from the cup under the reciprocating motion of the cross-head and gib.
2. In combination with the above, I claim the roller-slide *f h*, arranged in grooves *g*, in the sides of the compartment *d*, substantially as described, and for the purpose set forth.
3. The combination of the roller D, wick E, and the cup C, divided into two compartments by the partition-plate *e*, substantially as and for the purpose specified.

CYRUS B. WHITE.

Witnesses:

WM. F. McNAMARA,
J. M. COVINGTON.