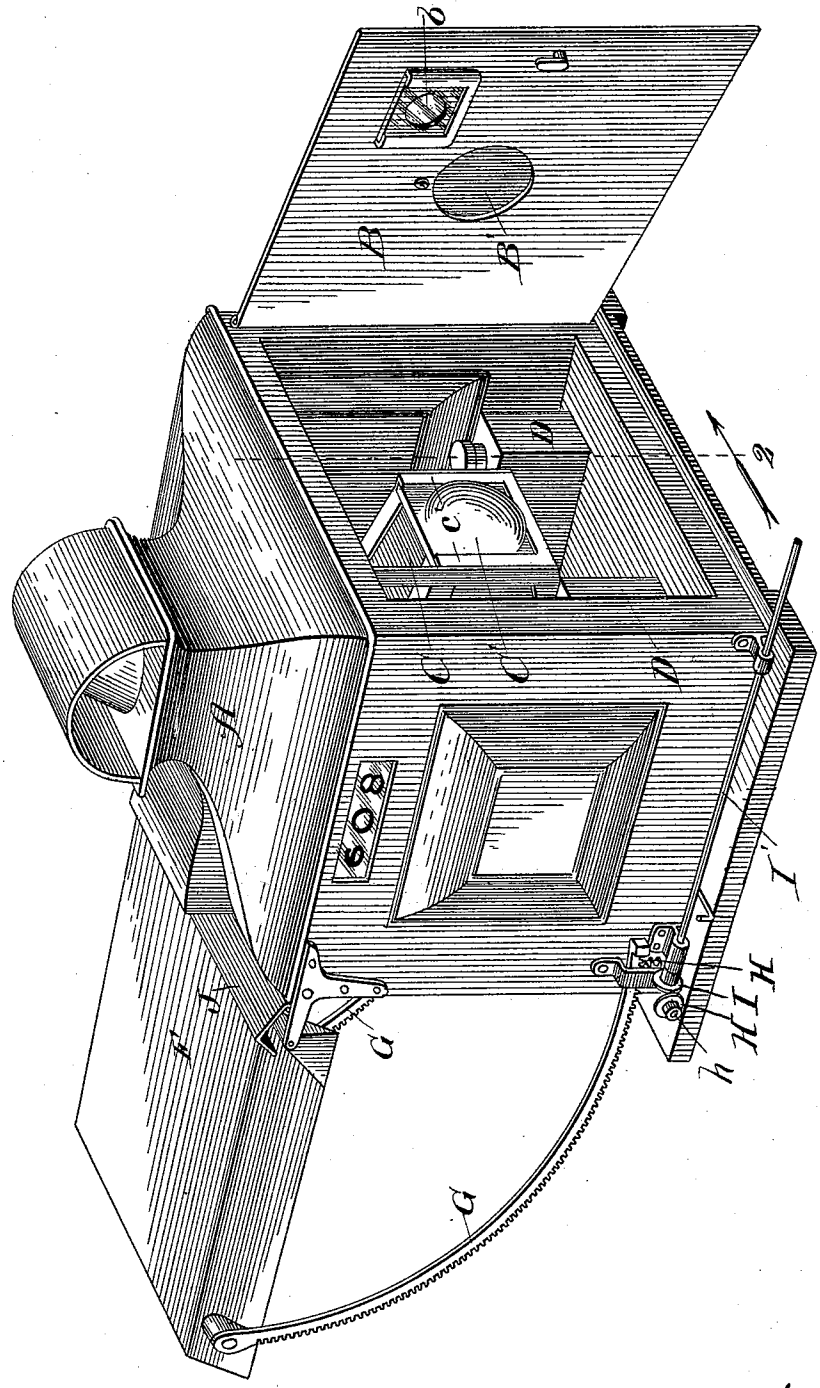
(No Model.) 3 Sheets—Sheet 1.

W. PRESCOTT.

HEADLIGHT.

No. 517,237. Patented Mar. 27, 1894.



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WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 2.

W. PRESCOTT.

HEADLIGHT.

No. 517,237. Patented Mar. 27, 1894.

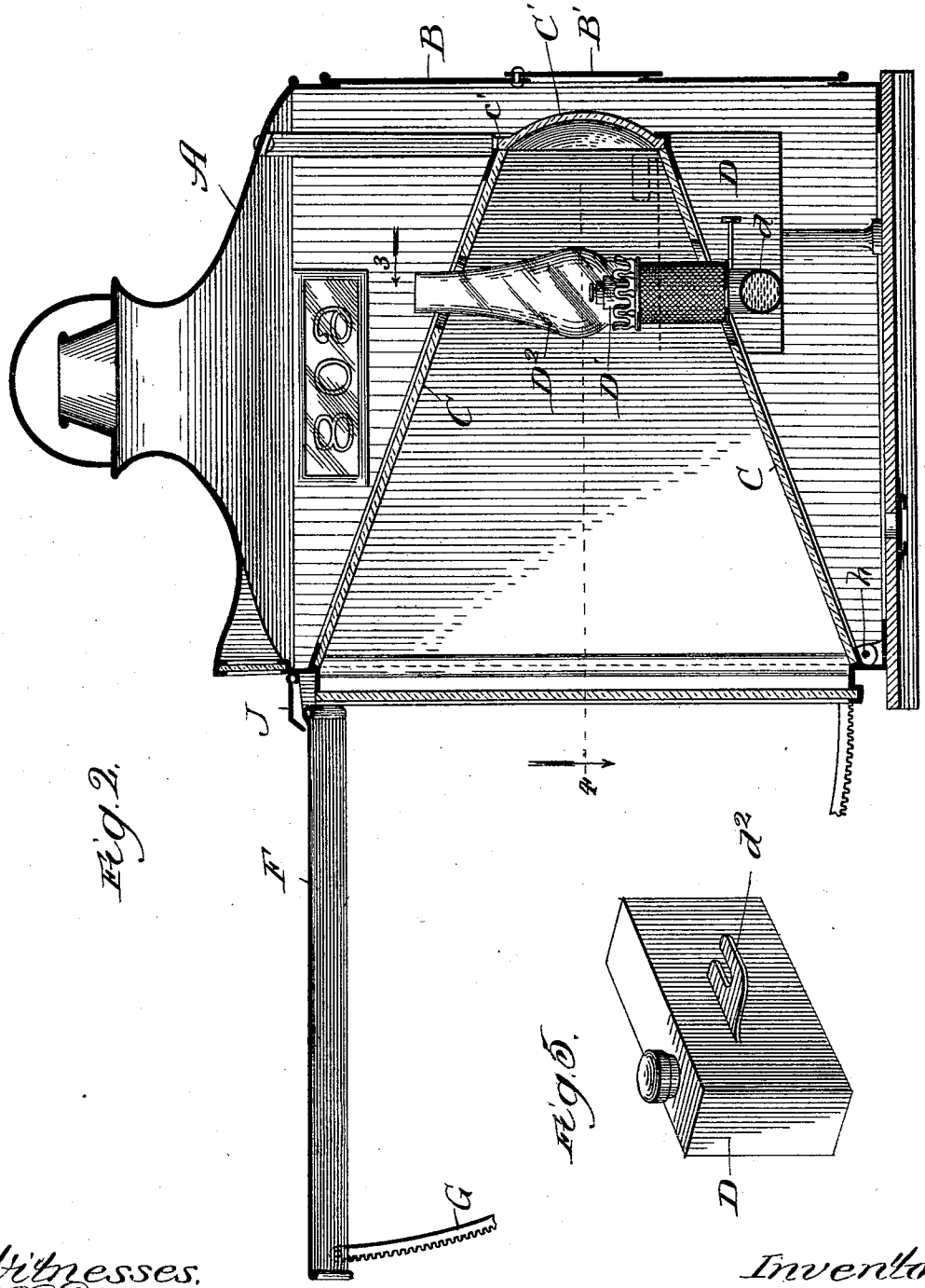

Fig. 2.

Fig. 3.

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(No Model.) 3 Sheets—Sheet 3.

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HEADLIGHT.

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Fig. 3.

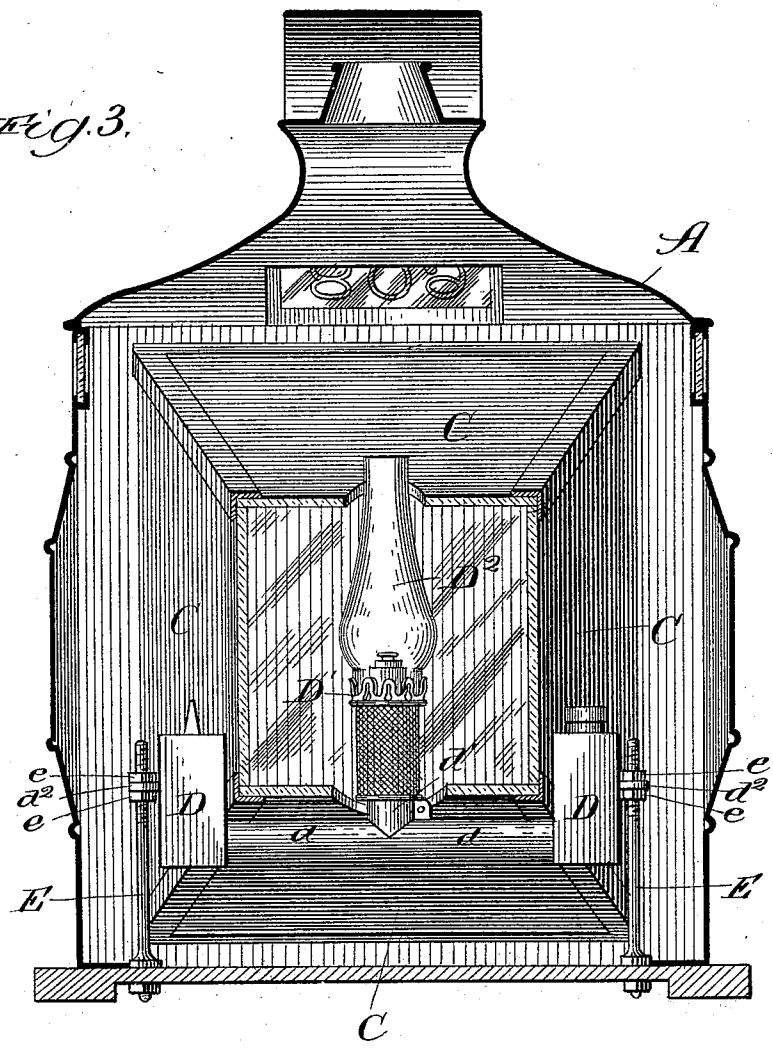
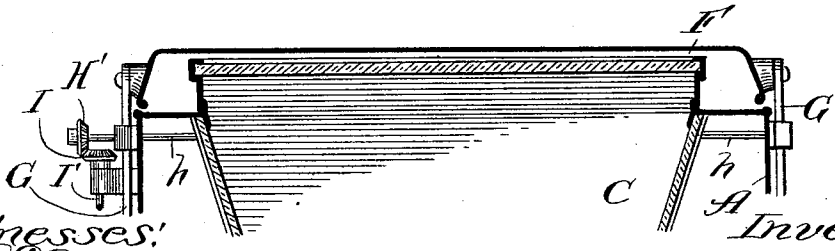


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM PRESCOTT, OF FORT MADISON, IOWA.

HEADLIGHT.

SPECIFICATION forming part of Letters Patent No. 517,237, dated March 27, 1894.

Application filed May 2, 1893. Serial No. 472,721. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PRESCOTT, of Fort Madison, Iowa, have invented certain new and useful Improvements in Headlights, of which the following is a specification.

Under certain circumstances, it becomes desirable or necessary to cover the light when burning. For instance, in case of a locomotive headlight, if the engine is standing upon a switch or siding, it is desirable to cover and hide the light to show the engineer of an approaching train that it is all right for him to go ahead.

The object of my invention is in part to remedy the defects above referred to; and this I accomplish, stated generally, in the following manner: I provide the headlight with a shutter or hood, hinged or secured in any other suitable manner thereto at a point forward of the light; the headlight being preferably provided with mechanism for raising and lowering such shutter as desired. When lowered, the shutter completely hides the light, and when raised, it not only allows the light to escape, but directs it down upon the track, developing the efficiency of the headlight to the highest extent. To remedy the defects incidental to the form of the reflector, and to the material out of which it has been made, I make my reflector out of silvered glass—similar to that used in mirrors—and make it substantially in the shape of a four-sided pyramid—the inner end being closed by a conical cap or piece.

My invention further has for its object the simplification and improvement of the headlight in various other particulars, as will be made apparent from the following description.

My invention consists, therefore, in the details, combinations and features of construction hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a headlight embodying my improvements, the shutter being shown raised and the door at the back of the headlight open; Fig. 2 a section on line 2 of Fig. 1; Figs. 3 and 4 sections on lines 3 and 4 of Fig. 2, respectively; and Fig. 5 a detail—all of the sections being taken in the directions indicated by the respective arrows.

The case, A, is made of any suitable material, of any desired form and dimensions, and, except as hereinafter described, is made in the manner heretofore customary. It is provided at the back with a door, B, in which is a glazed opening *b* and a hand hole B′, normally covered by a sliding door *b′*. Within the case is placed a reflector C, made, as shown more particularly in Fig. 3, out of four suitably shaped pieces of glass of any of the ordinary kinds now in common use for mirrors; the rear end of the reflector being closed by a conical piece or cap C′, which is preferably adapted to slide up and down in guides *c′*, for the purpose hereinafter to be specified.

The oil reservoir, D, is made in two parts, as shown, connected by a tube *d*, a branch *d′* of which passes up through an opening in the bottom plate of the reflector and supports the burner D′ and the chimney D^2—the latter passing out through an opening in the top of the reflector as shown.

In my construction of headlight the burner may be lighted by opening the door B′, inserting the hand through this door, and sliding up the conical cap C′—the glazed opening *b* allowing the operator to look into the interior of the case. Moreover, the reflector being made out of glass, as above stated, will never tarnish, and therefore all the trouble incident to removing the headlight to re-polish it will be avoided.

As shown in Fig. 3, the oil reservoir is supported upon rods E E, the reservoir being provided with hooks d^2, shown more particularly in Fig. 5. These hooks engage the rods, and the reservoir is supported upon such rods by means of suitable nuts *e*. When it is desired to withdraw the reservoir, it may be slid down upon the rods until the branch *d′* has passed beneath the reflector; when, the burner and chimney being removed, the reservoir can be slid out at the back of the case for any desired purpose. To insert it the above steps are reversed, the reservoir being slid into the case until the hooks d^2 come into engagement with the rods E, when the reservoir can be raised into its desired position, where it is held by means of the nuts *e*.

To the front of the headlight, I secure in any suitable manner that will permit of its operation, as hereinafter described, a hood or shutter F. To this hood I preferably secure one or more quadrant shaped arms or racks,

G, engaging, as shown, with pinions H, mounted on a shaft *h*, that is journaled in and extends across the headlight case, as shown in Fig 4. This shaft carries a beveled gear H', which meshes with a similar gear I, on a rod I', that extends back into the cab within convenient reach of the engineer or fireman, so that as this rod is revolved in one direction or the other, the hood will be raised or lowered to any desired point. To cover the space between the upper end of the hood and the headlight, I prefer to provide a hinged flap J, see Figs. 1 and 2. On its lower side (Fig. 1) the hood F is plated or silvered or otherwise provided with a reflecting surface.

From the above construction it results that when the hood is lowered, it completely hides the light, and when it is raised into the position shown in Fig. 2, it forms practically a continuation of the reflector C, and from its position throws the light downward toward the track, concentrating it, and developing to the highest extent the efficiency of the headlight.

While I have described more or less precise forms it is not my intention to unduly limit myself thereto, since I contemplate all proper changes in form, proportions and the substitution of equivalent members. For example, while I have described the hood as "hinged" to the headlight case, and shall use this word in the claims, I do not intend to limit myself thereby to the use of a hinged connection; but contemplate all other means of connecting the hood to the headlight that will allow it to operate in the manner described, and similarly, any suitable mechanism for raising and lowering the hood may be substituted for that shown.

I claim—

1. A headlight provided with a hood hinged thereto, the hood having a reflecting surface on the side toward the light, two quadrantal racks and pinions for raising and lowering the hood located one on each side of the headlight, gear mechanism arranged to operate the pinions on both sides of the hood for actuating such racks simultaneously, and a rod extending backward to the cab of the engine for actuating such gear mechanism, substantially as described.

2. In a headlight, the combination of rods secured to the case thereof at suitable points, a reservoir made in two parts, provided with hooks engaging with such rods and connected by a pipe a branch whereof carries the lamp burner, and nuts for adjustably holding the reservoir at any desired height on the rods, substantially as described.

WILLIAM PRESCOTT.

Witnesses:
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