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PATENTED OCT. 31, 1905.

H. A. BARNUM & O. HALLAWAY.
SAFETY DEVICE FOR HEADLIGHT CHIMNEYS.

APPLICATION FILED MAY 26, 1905.

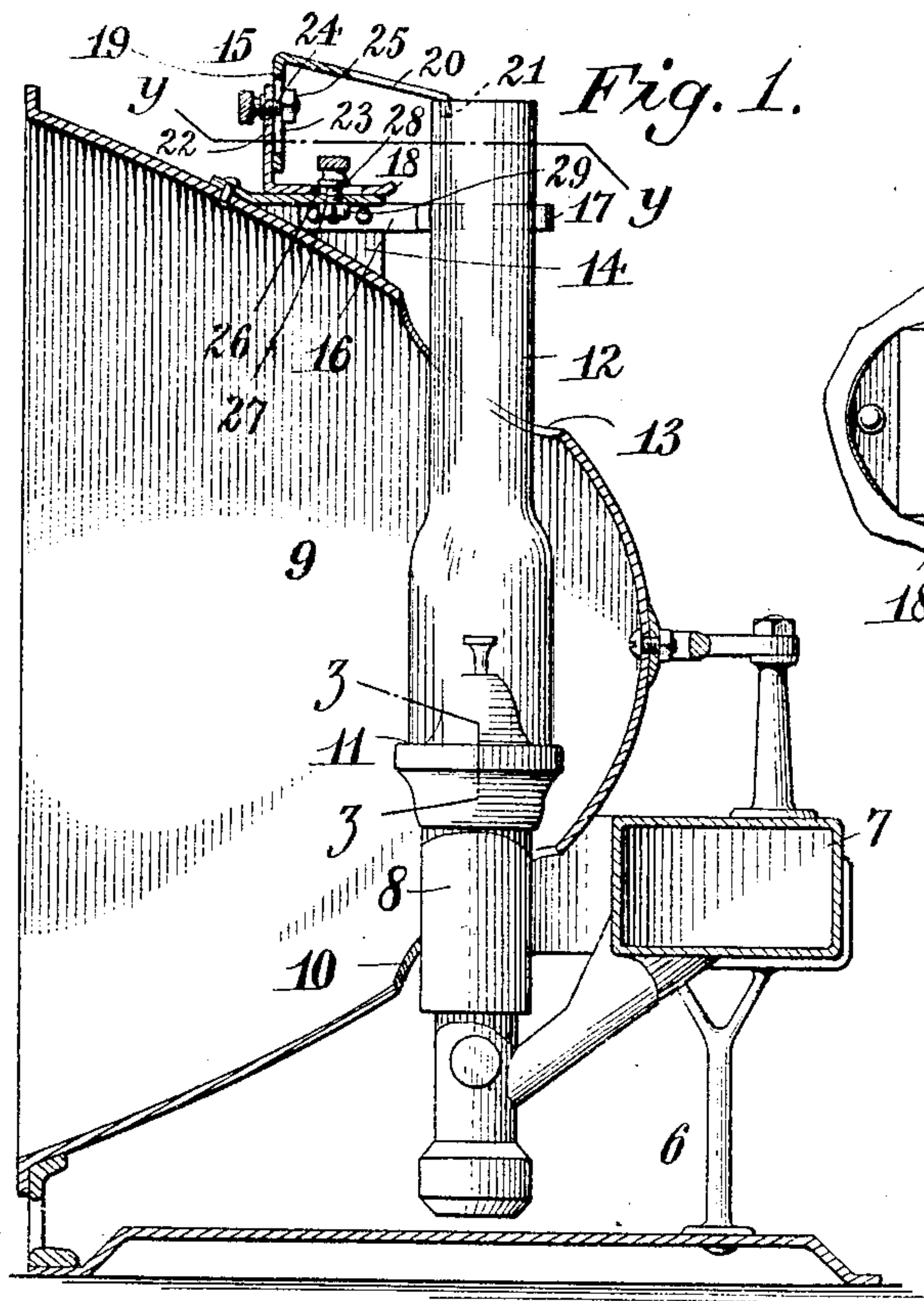


Fig. 2.

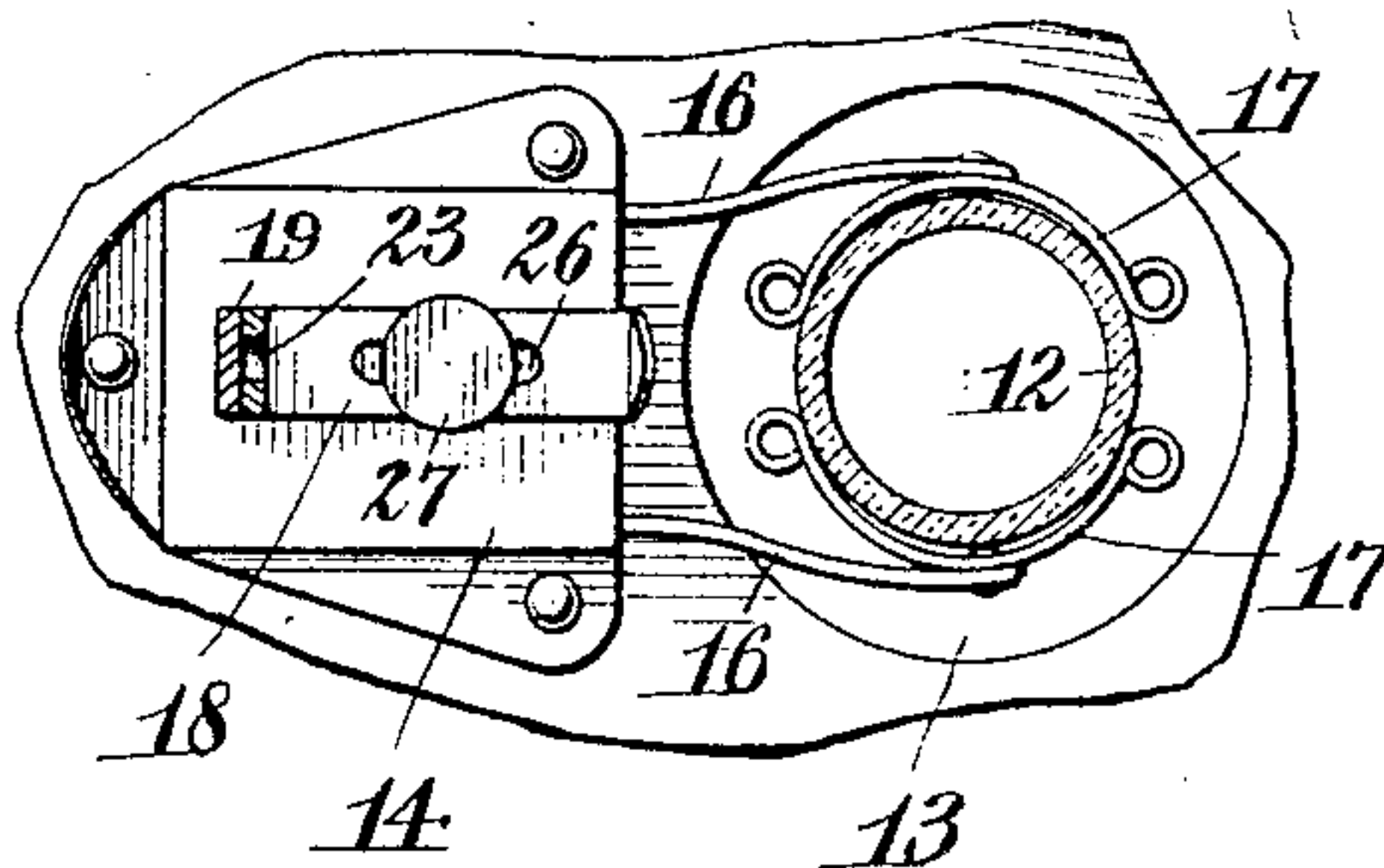


Fig. 3.

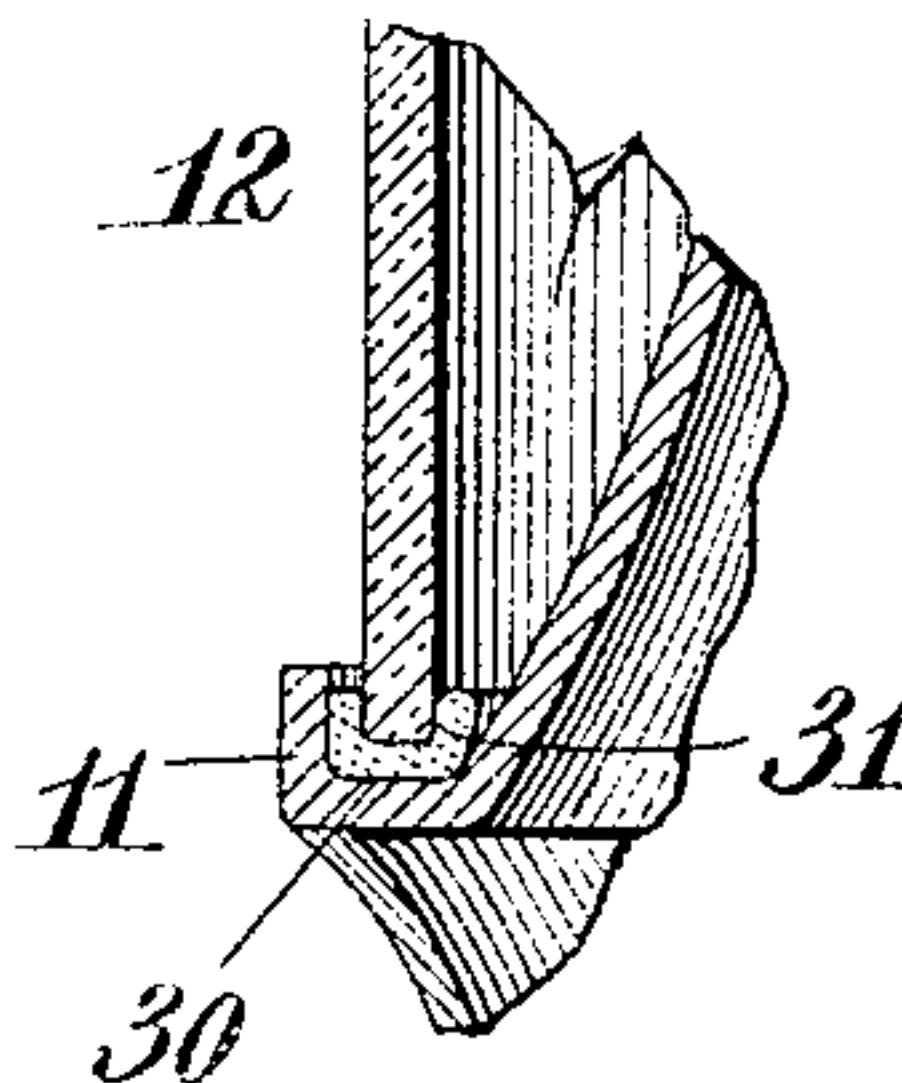


Fig. 4.

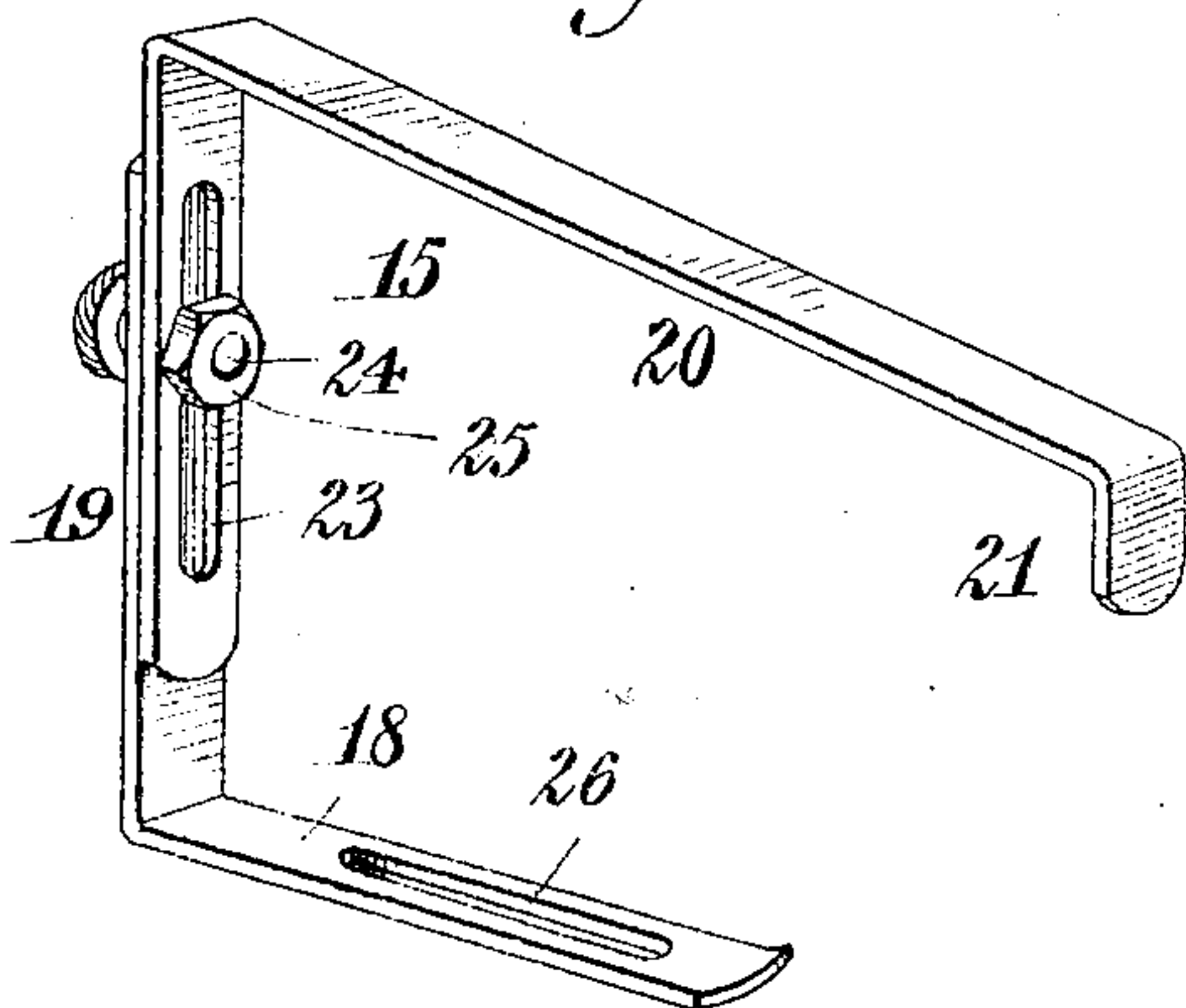
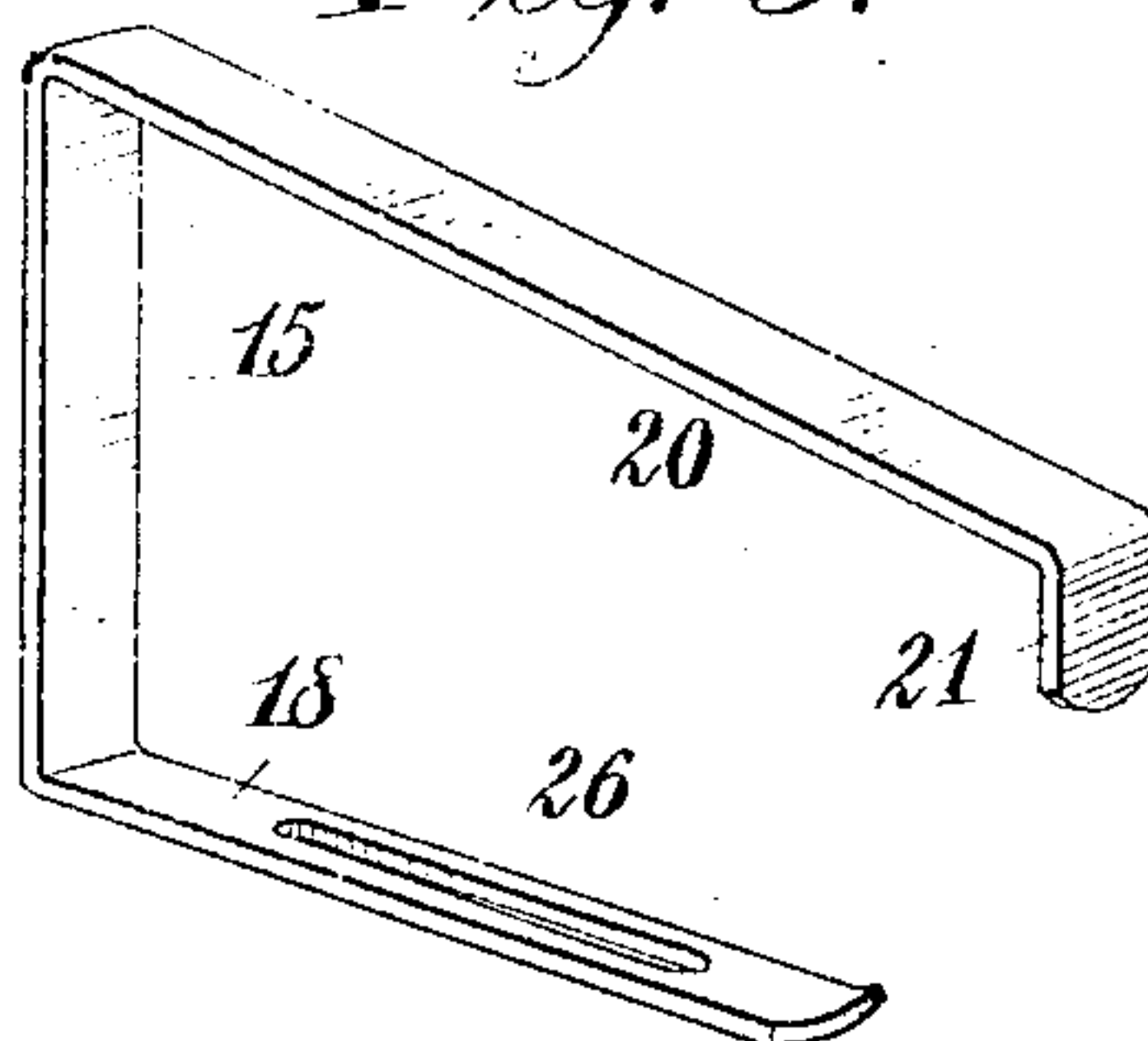


Fig. 5.



WITNESSES:

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SAFETY DEVICE FOR HEADLIGHT-CHIMNEYS.

No. 803,323.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed May 26, 1905. Serial No. 262,438.

To all whom it may concern:

Be it known that we, HENRY A. BARNUM and OSCAR HALLAWAY, citizens of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Safety Devices for Headlight-Chimneys, of which the following is a specification.

This invention relates to improvements in safety devices for headlight-chimneys, its object being to prevent the breaking of chimneys and the provision of simple, inexpensive, and effective means to prevent the unseating and shaking of the chimneys when the locomotive is subjected to jar in crossing switches, cross-roads, or in the coupling of cars.

At the present time the breaking of a headlight-chimney is a common and almost daily occurrence. In fact, on locomotives used within the limits of railroad-yards for shifting cars and making up trains forty to fifty chimneys per month is the average number of chimneys used on each locomotive. This is a continual source of annoyance and a heavy expense, which our invention has completely overcome.

As now almost universally used, the headlights have opposite curved retainers, which, however, simply prevent lateral swaying of the chimney; but they do not prevent the raising of the latter from the burner-gallery and the consequential breaking of the chimney. As headlights are invariably provided with these opposite retainers, we have decided to use the same in connection with our safety device, which we have constructed in the form of an attachment; but in practice we have found that the unseating and breaking of the chimney are entirely prevented by the use of our attachment when used without the opposite retainers.

Our invention consists, broadly considered, in providing retaining means to engage the upper end of the chimney for the purpose of preventing unseating of the same, and in particular form it consists in a retainer bent in substantially U-shaped form and provided with means of adjustment to permit engaging chimneys of different heights and with a depending lip at one end thereof, which enters the top of the chimney.

Our invention further consists in the novel construction, arrangement, and combination of parts and devices to be hereinafter described, and particularly pointed out in the appended claims.

In the drawings, Figure 1 is a central vertical section of a headlight equipped with our invention. Fig. 2 is an enlarged horizontal section taken on line *y y*, Fig. 1. Fig. 3 is an enlarged vertical section taken on line *z z*, Fig. 1. Fig. 4 is an enlarged detached perspective view of our improved safety device. Fig. 5 is a similar view of a modified form of our invention.

Referring now to the drawings in detail, like numerals of reference refer to like parts in the several figures.

The reference-numeral 6 designates the frame, on which is supported the oil-reservoir 7, the lamp 8, and the reflector 9. The lamp extends through an opening 10 in the reflector, as is common. Seated on the gallery 11 of the lamp is the chimney 12, which extends through an opening 13 in the reflector. Secured to the latter in front of the opening 13 is a bridge-piece 14, providing a horizontal ledge, to which our safety device 15 is secured. To the sides of said bridge-piece rearwardly-extending spring-arms 16 are secured, and to the free ends of the latter opposite curved retainers 17 are secured, said retainers being of common construction and serving to prevent lateral swaying of the chimney.

Our safety device is in the form of a clip and comprises a horizontal securing-arm 18, a vertical adjustable arm 19, and a substantially horizontal spring retainer-arm 20, having a depending lip 21 at its free end, which enters the upper end of the chimney and bears against the inner face of the same. In order to obtain adjustability of the clip for use in connection with chimneys of varying heights, the clip is made in two parts, each bent at a right angle, or substantially so, one part having a bolt-hole 22 and the other a longitudinal slot 23. Through said hole and slot a bolt 24 is passed, which takes into a nut 25 and holds the two parts of the clip in their adjusted relation. In this manner the spring retainer-arm can be brought against the upper end of the chimney with the desired tension, and owing to said retainer-arm being yielding the possibility of chipping the chimney is avoided. The lower or horizontal securing-arm 18 is also provided with a longitudinal slot 26, through which and a bolt-hole 27 in the ledge 14 a securing-bolt 28 is passed, a nut 29 being provided on the under side of the ledge to securely hold the clip to said ledge in any adjusted position. By means of the slot 26 the clip can be easily adjusted to bring the de-

pending lip 21 on the retainer-arm in contact with the inner side of the chimney, thereby positively preventing unseating and swaying of the latter.

- 5 The gallery of the lamp-burner is provided with an annular groove 30, in which is laid a ring 31, of asbestos, felt, or other yielding material, which serves to take up the slight jars to which the chimney may be subjected and
10 which may not be entirely avoided by the spring retainer-arm of the clip.

In Fig. 5 we have shown the retainer-clip made in one integral piece, no adjustment being provided in the vertical arm of the clip,
15 as in the preferred construction.

Having thus described our invention, what we claim is—

1. The combination with a reflector and a chimney, of a retainer secured to the reflector
20 and having a yielding arm bearing against the upper end of the chimney and a depending lip at the free end of said arm entering said chimney and in contact with the inner end thereof.

2. The combination with a reflector and a
25 chimney, of a retainer adjustably secured to the reflector and comprising a horizontal securing-arm, an adjustable vertical arm, and a horizontal retainer-arm bearing against the upper end of the chimney.

- 30 3. The combination with a reflector and a chimney, of a retainer secured to the reflector and comprising a slotted securing-arm, an ad-

justable vertical arm, and a yielding retainer-arm bearing against the upper end of the chimney and having a depending lip entering
35 the chimney and in contact with the inner side thereof.

4. A retainer for headlight-chimneys comprising a U-shaped clip provided with a lip at one end adapted to enter the upper end of the
40 chimney and having its other end suitably secured to the headlight.

5. A retainer comprising a U-shaped clip having its intermediate portion adjustable, one end portion slotted, and its other end por-
45 tion provided with a lip adapted to enter the upper end of a chimney.

In testimony whereof I, the said HENRY A. BARNUM, have affixed my signature, in the presence of two subscribing witnesses, at Buf-
50 falo, New York, this 18th day of May, 1905.

HENRY A. BARNUM.

Witnesses:

ARTHUR R. BARNUM,
EMIL NEUHART.

In testimony whereof I, the said OSCAR HALLAWAY, have affixed my signature, in the presence of two subscribing witnesses, at Lake-
wood, Ohio, this 23d day of May, 1905.

OSCAR HALLAWAY.

Witnesses:

NELS LARSON,
SOPHIA GOETZFRIED.