No. 668,699. Patented Feb. 26, 1901.

A. WEISS.

SMOKE COLLECTING DEVICE FOR USE IN INSTANTANEOUS PHOTOGRAPHY.

(Application filed Feb. 23, 1899.)

(No Model.)

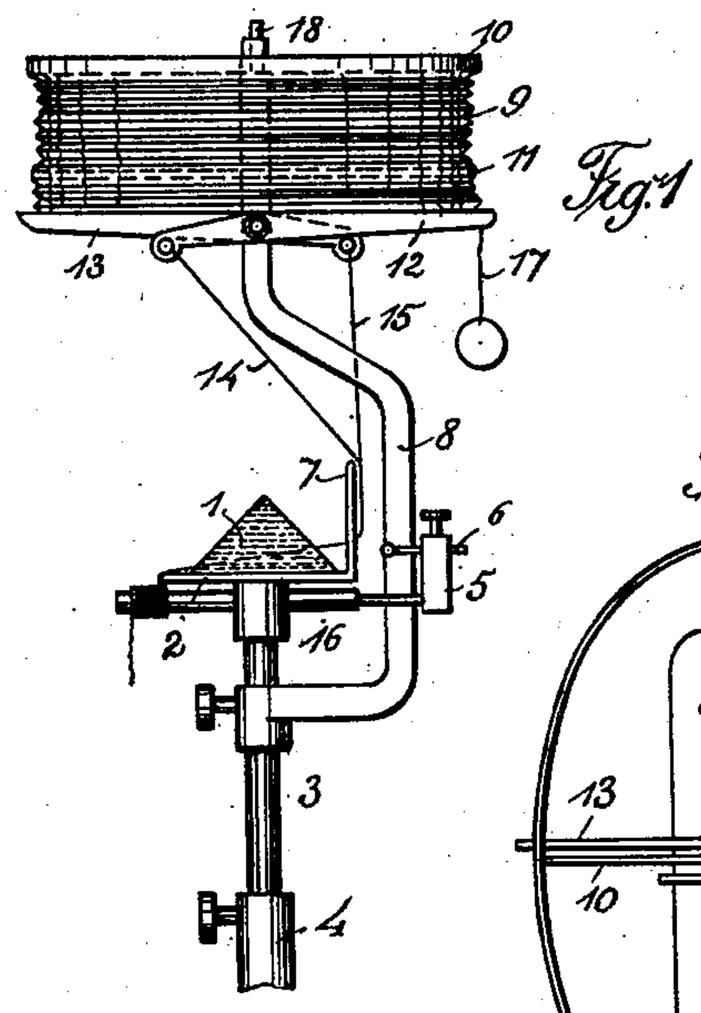


Fig. 1.

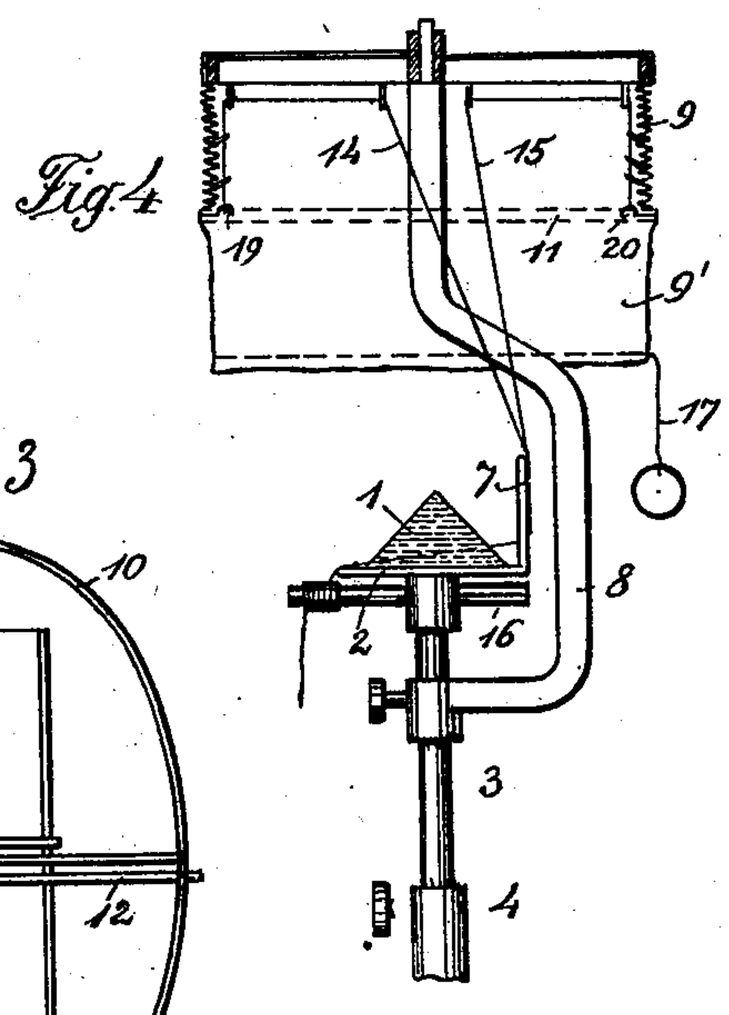
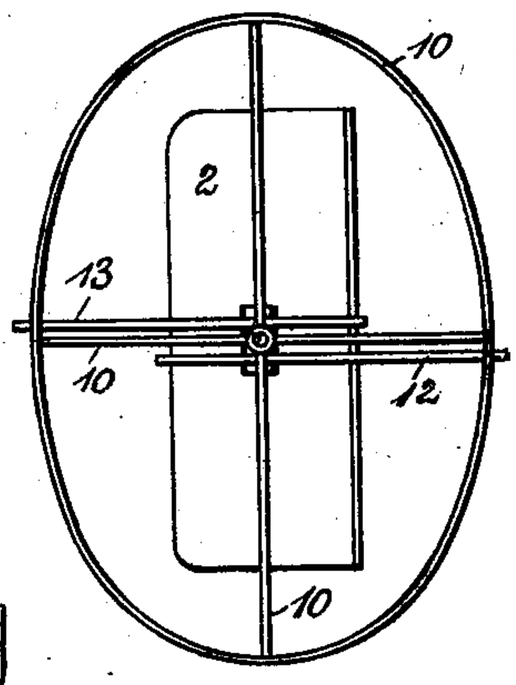


Fig. 4.

Fig. 3.



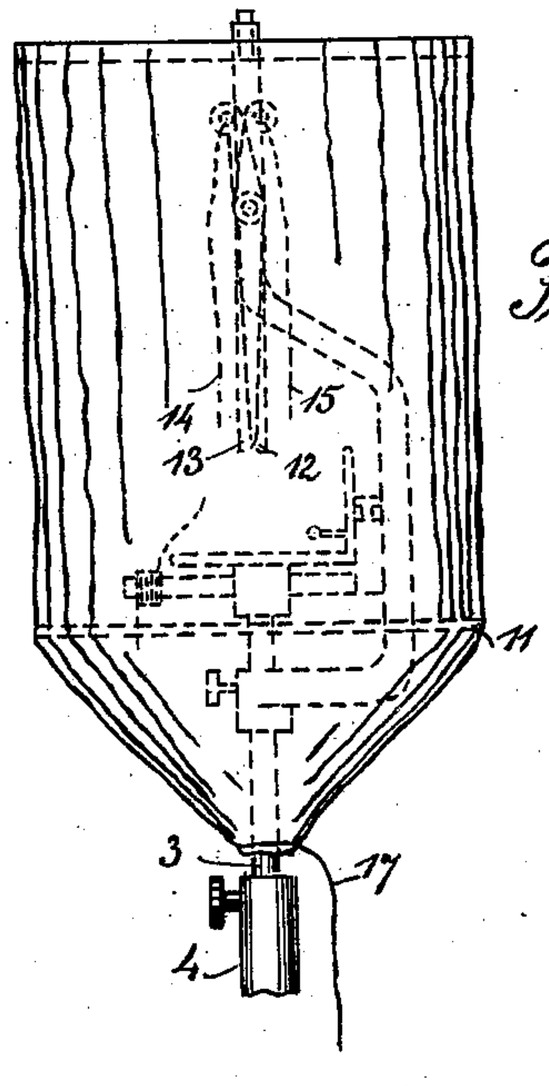


Fig. 2.

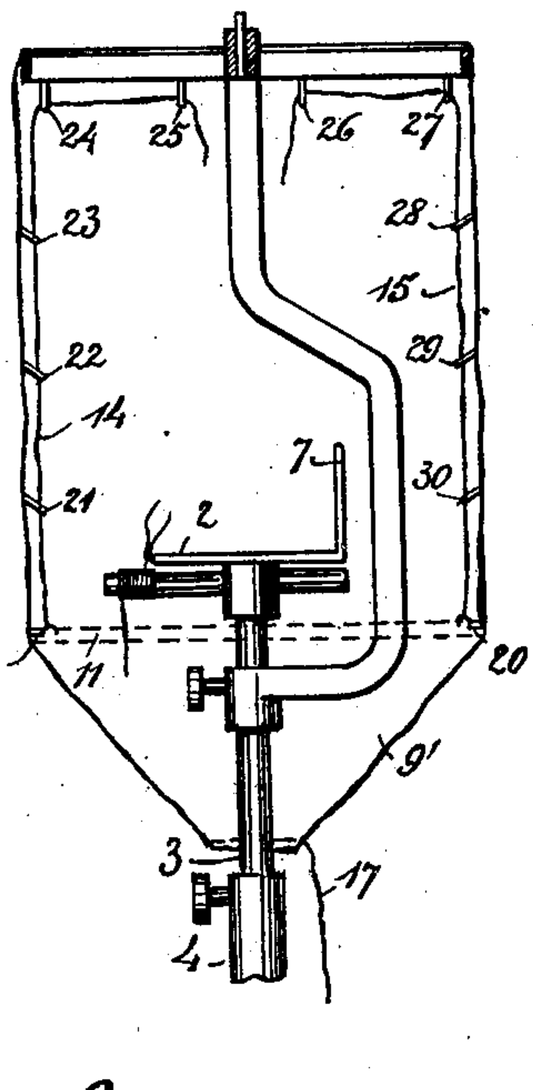


Fig. 5.

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AUGUST WEISS, OF STRASBURG, GERMANY.

SMOKE-COLLECTING DEVICE FOR USE IN INSTANTANEOUS PHOTOGRAPHY.

SPECIFICATION forming part of Letters Patent No. 668,699, dated February 26, 1901.

Application filed February 23, 1899. Serial No. 706,542. (No model.)

To all whom it may concern:

Be it known that I, AUGUST WEISS, a subject of the German Emperor, residing at Strasburg, in the Province of Alsace, Germany, have invented new and useful Improvements in Smoke-Collecting Devices to be Used in Instantaneous Photography by Artificial Light, of which the following is a specification.

The object of my invention is to provide an automatically-working apparatus for collecting and inclosing the smoke and fumes generated through the igniting of flash-powder employed in the taking of instantaneous photographs.

The essential feature of the invention is the arranging of a bag above the instantaneous-light apparatus, this bag being in a folded-up state before the igniting of the flash-powder and leaving the lamp for the instantaneous lighting free; but after the ignition of the powder it unfolds automatically by means of the flame and then incloses the instantaneous-light apparatus, together with the smoke resulting from the ignition.

Figures 1 and 2 are side elevations of one form of the apparatus in connection with a lamp for instantaneous light, Fig. 1 illustrating the position of the parts before the igniting of the flash-powder and Fig. 2 their position when actually effective after the ignition, while Fig. 3 is a plan view of a detail. Figs. 4 and 5 are sectional views of a slightly-modified form of the apparatus corresponding to Figs. 1 and 2, respectively.

The flash-powder 1 to be ignited lies on a table 2, which is fixed on a stand 3 4. It is ignited, for example, by the forward motion of a carrier 5 with a match 6, the match being rubbed on a friction-surface, which is not shown, and entering the body of the powder through an opening in the back 7 of the table. The powder may, however, be ignited in any other manner. This construction forms no part of the present invention and is set forth and claimed in my application, Serial No. 677,732, filed April 15, 1898.

To the rod 3 of the stand an arm 8 is fixed. This arm carries the smoke-bag 9, which is open at its lower end and closed at the top. The bag is placed over a frame 10 (plan view, Fig. 3) and has sewed into it a spreading-ring 11, the function of which is to keep the lower end of the bag open and weighted. To the arm 8 levers 12 13 are pivoted, these levers when in their horizontal position supporting and bearing the bag 9 in the folded state, Fig. 1. To the shorter ends of the levers cords 14 15 are fastened, which are kept stretched and carried through the flash-powder or reach of the flame. In Fig. 1 the cords 14 15 are carried through an opening in the back 7 of the table, then through the body of powder 1 or in reach of the flame, and are kept stretched in any suitable manner—for example, by being wound around the guiding-sleeve 16 of the carrier 5. In this condition the smoke-collector apparatus is ready for use.

If the flash-powder be now ignited and at the same moment the photograph be taken, the flame produced burns through the cords 14 15, so that the levers 12 13 lose their hold and the bag, which is loaded or charged with the ring 11, sliding down from the levers unfolds. Thereby the lamp for the instantaneous light and the ascending smoke will be entirely surrounded and the latter intercepted, this latter operation being completely effected by pulling the cord 17, which serves for contracting the lower end of the bag, which cord is suitably inclosed within a hem around the lower end of such bag. Fig. 2 shows the apparatus in this position, in which the levers 12 13 assume a vertical position by their own weight after the cords are burned through. In order to make the apparatus again ready for use, the separate cords are united again or new cords fastened to the levers 12 13.

The arm 8 is arranged suitably adjustable on the rod 3 of the stand.

The frame 10 is arranged on a pin 18 at the upper end of the arm 8 by means of a central socket. Having regard to the fact that the table 2 is conveniently of an oblong form, it is advisable to make the frame elliptical and the bag of corresponding shape.

Figs. 4 and 5 illustrate in section a simplified form of the invention, in which the levers 12 13 are dispensed with. The cords 14 15 are in this case fastened to hooks 19 20, rove through eyes or loops 21 22 23 28 29 30 in the bag and eyes or loops 24 25 26 27 on the cross-stay of the frame, and farther on as arranged in Fig. 1. Fig. 4 shows the bag 9

in the folded state, the lower part 9′ hanging down free. When the cords 14 15 are burned through, the bag unfolds through the dropping of the ring 11, Fig. 5, whereupon the lower part 9′ is closed by pulling the cord 17.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a smoke-collector for flash-light lamps, the combination of a vertical arm conveniently connected to the framework of the lamp, a horizontal frame-piece supported by the said arm and placed above the lamp, a bag put with its closed end over the horizontal frame-piece, and charged with a horizontal spreading-ring near its open end to keep the bag open and increase its weight, and means for keeping the bag in a folded-up condition by stretched cords passing within reach of the flame to be developed, substantially as and for the purposes described.

2. In a smoke-collector for flash-light lamps, the combination of a vertical arm conveniently connected to the framework of the lamp, a horizontal frame-piece supported by the said arm and placed above the lamp, a bag put with its closed end over the horizontal frame-piece and charged with a horizontal ring near its open end to keep the bag open and increase its weight, levers pivoted to the said vertical arm to keep the bag in a folded-up condition by supporting the horizontal ring, and cords connected to the supporting-levers and passing in a stretched condition within reach of the flame to be developed, substantially as and for the purposes described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

AUGUST WEISS.

Witnesses:

MAX J. BAEHR,

MAX ADLER.