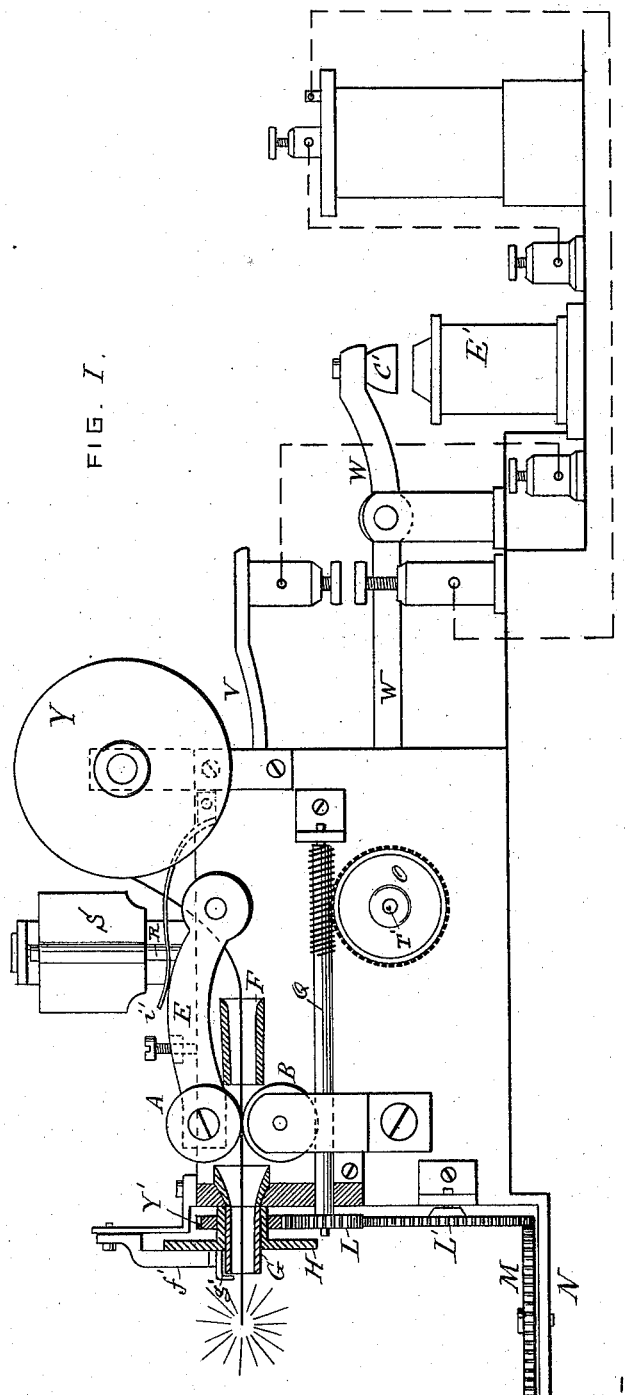
(No Model.) 3 Sheets—Sheet 1.

T. WEISSER.

MAGNESIUM LAMP.

No. 385,393. Patented July 3, 1888.

FIG. I.



WITNESSES

Wm. A. Lowe

Alfred Jonghmans.

INVENTOR.

T. Weisser.

per Bakewell & Briesen

Attorneys.

(No Model.) 3 Sheets—Sheet 2.

T. WEISSER.

MAGNESIUM LAMP.

No. 385,393. Patented July 3, 1888.

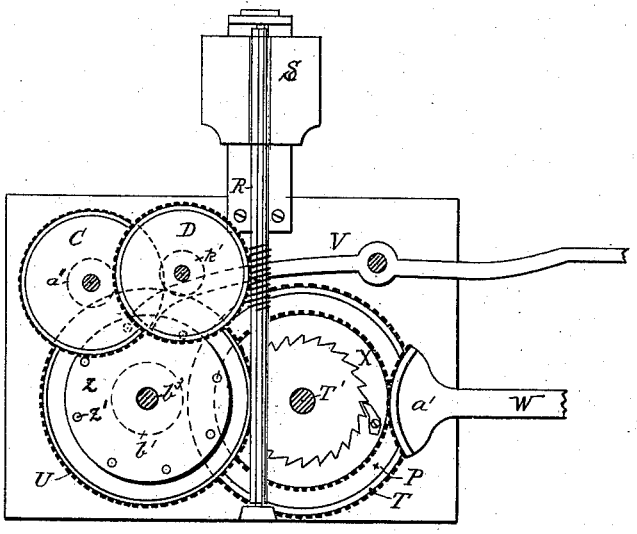


FIG. III.

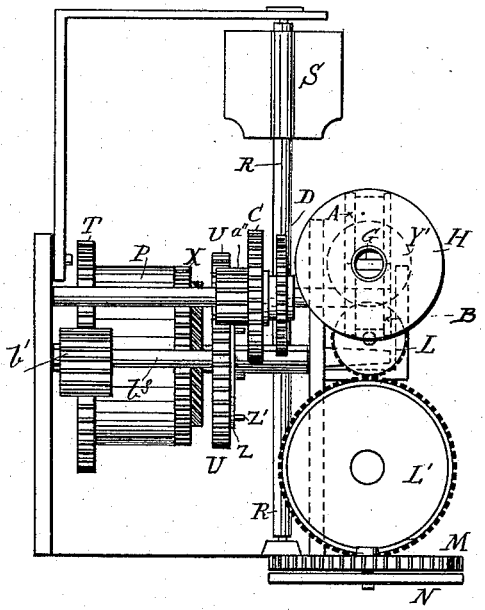


FIG. IV.

WITNESSES.
Wm. A. Lowe.
Alfred Jonghmans.

INVENTOR.
Th. Weisser
per Reader & Briesen.
Attorneys.

(No Model.) 3 Sheets—Sheet 3.

T. WEISSER.

MAGNESIUM LAMP.

No. 385,393. Patented July 3, 1888.

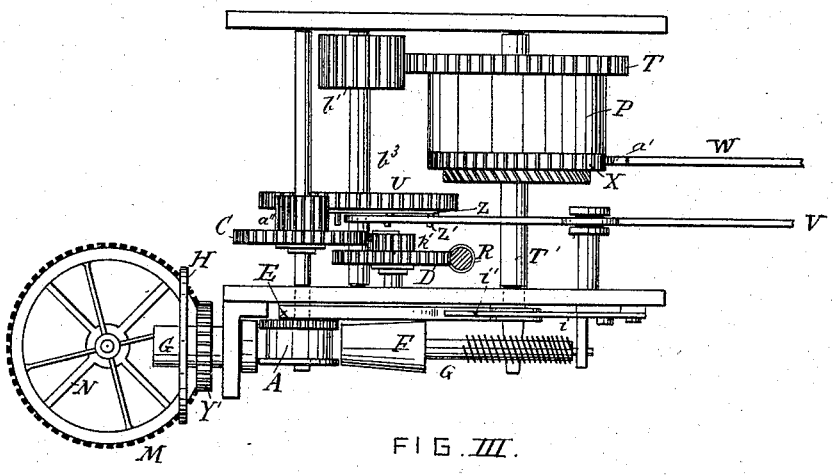


FIG. III.

WITNESSES.
Wm. A. Lowe.
Alfred Jonghmans.

INVENTOR.
T. Weisser.
Bar Rader & Briesen.
Attorneys.

UNITED STATES PATENT OFFICE.

THEODOR WEISSER, OF VÖHRENBACH, NEAR VILLINGEN, BADEN, GERMANY.

MAGNESIUM LAMP.

SPECIFICATION forming part of Letters Patent No. 385,393, dated July 3, 1888.

Application filed August 9, 1886. Serial No. 210,485. (No model.)

To all whom it may concern:

Be it known that I, THEODOR WEISSER, of Vöhrenbach, Germany, have invented a new and Improved Magnesium Lamp, of which the following is a specification.

This invention relates to a magnesium lamp, and more particularly to the mechanism for feeding the band, cutting off the consumed strip, and discharging the ashes.

The invention consists in the various features of construction hereinafter more fully pointed out and claimed.

In the accompanying drawings, Figure I represents a side view of my improved lamp, partly in section, together with the electro-magnet operating the driving-wheel and gearing. Fig. II is a perspective view of the driving-wheel and gearing removed from the lamp. Fig. III is a top view of the lamp and gearing without the electro-magnet. Fig. IV is a front view of the lamp and electrical winding device.

T is the driving-wheel, at the side of which a spring-box, P, is placed containing a winding-up spring. By the pressure of the winding-up spring, which is constantly kept at nearly the same tension, by means hereinafter described, the axle T′, and consequently the driving-wheel T, fixed upon this axle, will be kept in continual rotation. This driving wheel T meshes with a small gear-wheel, b', which drives the gear-wheel U, mounted on the same shaft, b^3. On this shaft b^3 is also mounted a wheel, Z, provided with pins Z′ on its side. The pins Z′ on this wheel Z, as it revolves, lift at short intervals one end of a lever, V, which is connected with an electric battery, E′, as shown in Fig. I. The other end of said lever V is thus depressed at intervals, closing an electric circuit, thereby magnetizing the electro-magnet E′, which then attracts the weighted end C′ of the lever W. This lever W is provided at the other end with a segment, a', of a gear-wheel, which meshes with the gear-wheel X, which, by means of a ratchet and pawl, moves the box P, mounted on the same shaft, T′, with the wheel X. Hence the movement of the wheel Z will wind up the spring in the box P.

The gear-wheel U meshes with a small gear-wheel, a'', placed above, which has on its axle a gear-wheel, C. This wheel C meshes into a small transmission-wheel, k', mounted upon the same axle with a gear-wheel, D, and which latter engages the spiral worm of the axle R of a wind-fan, S, and thus turns the latter.

On the same axle with the wheel a'' is mounted a gear-wheel and flanged roller, B. Above this wheel, and meshing with it, is a similar gear-wheel and a second flanged roller, A. This gear-wheel and roller A are mounted in a pivoted lever, E. A spring, i', presses on the lever E, and hence tends to hold the roller A in contact with the roller B. A magnesium band coiled upon a roller, Y, and passing through a pipe, F, will be grasped by the two rollers, rotating one above the other, and conducted by them through the tube G at its mouth, where the band is lighted. The tube G is fixed in a cog-wheel, Y′, and a disk, H. The cog-wheel Y′ meshes with a gear-wheel, L, which on its part is turned by an axle, Q, which is provided with a spiral thread meshing with a gear-wheel, O, fixed on the axle T′ of the driving-wheel T. The gear-wheel L meshes with a gear-wheel, L′, and the latter on its lower edge with a horizontal gear-wheel, M, mounted in a fixed cross-shaped support, N. The burned magnesium band will hang down from the mouth of the tube G, and coming between the arms of the revolving wheel M and the arms of the fixed support N, will be broken or cut off by these arms. The disk H prevents the ashes from clogging the running-gear. A vertical scraper, f', is placed so that its edge will rub the face of disk H and keep it free from ashes. A cutter, g', at the lower end of the scraper f'', and bearing against the edge of the tube G, will remove the ashes from the edge of this tube G.

What I claim is—

1. In a magnesium lamp, the combination of the tube F, the rollers A and B, the rotating tube G, and means for operating said rollers and tube, substantially as described.

2. In a magnesium lamp, the combination of the rotating tube G, with disk H, and stationary scraper f'', with cutter g', substantially as set forth.

3. In a magnesium lamp, the combination of the rollers A and B, pinion a'', wheel U, wheel Z, with pins Z', lever V, an electric motor, pinion b', wheel T, and the lever W, with segment a', wheel X, provided with pawl and ratchet, and spring-box P, substantially as and for the purpose described.

In testimony that I claim this as my own invention I have hereunto subscribed my name in the presence of two subscribing witnesses.

THEODOR WEISSER.

Witnesses:
J. C. MONAGHAN,
U. S. Consul.
CHAS. GUIDO KRÜGER.