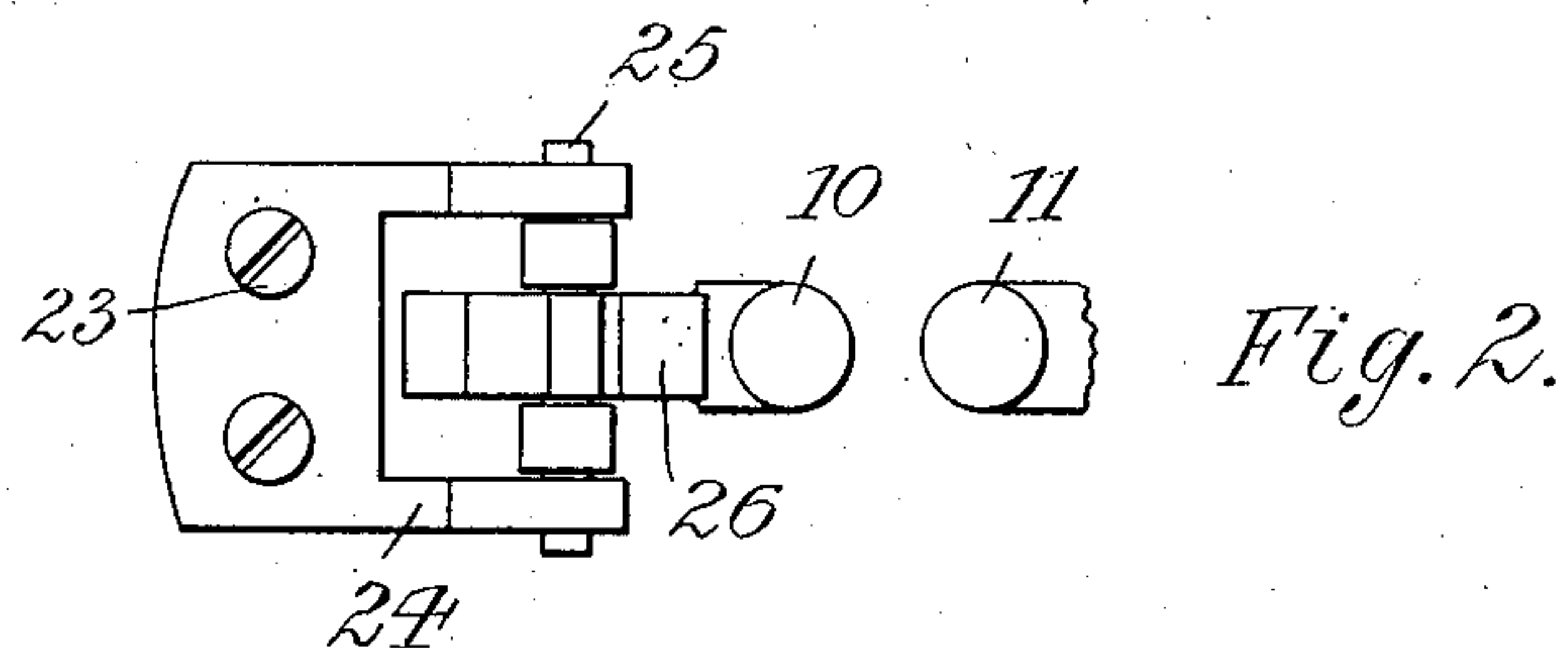
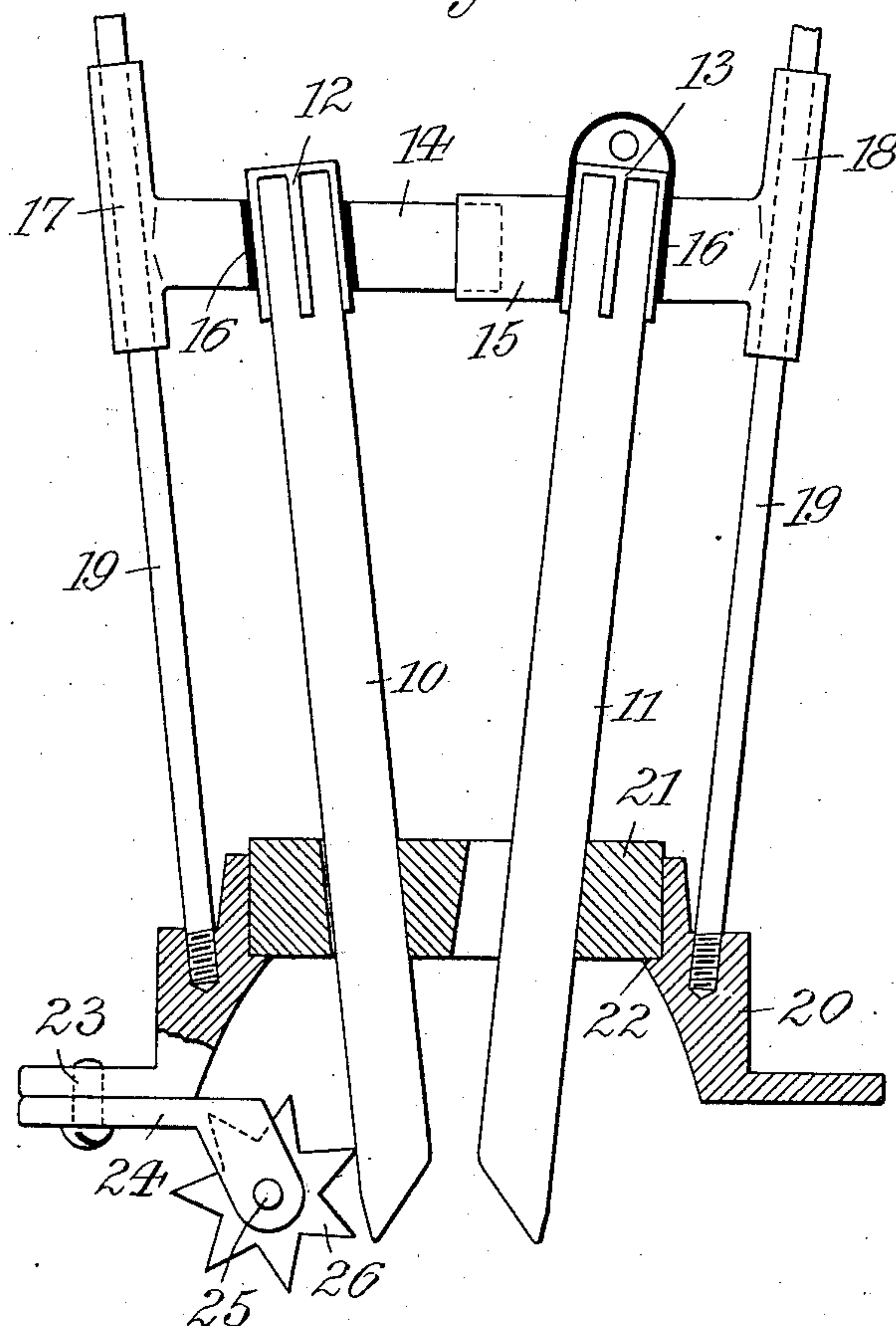


R. FRITZ.  
CARBON FEEDING DEVICE FOR ARC LAMPS.  
APPLICATION FILED FEB. 28, 1908.

917,041.

Patented Apr. 6, 1909.

Fig. 1.



Witnesses:  
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H. R. Schulz.

Robert Fritz Inventor  
By his Attorney  
Frank H. Bessner

# UNITED STATES PATENT OFFICE.

ROBERT FRITZ, OF WEST HOBOKEN, NEW JERSEY.

## CARBON-FEEDING DEVICE FOR ARC-LAMPS.

No. 917,041.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed February 28, 1908. Serial No. 418,172.

*To all whom it may concern:*

Be it known that I, ROBERT FRITZ, a citizen of the United States, residing at West Hoboken, Hudson county, State of New Jersey, have invented new and useful Improvements in Carbon-Feeding Devices for Arc-Lamps, of which the following is a specification.

This invention relates to an electric arc lamp provided with novel means for causing an automatic intermittent feed of the electrodes as their tips are burned off, so that the lamp remains operative until the carbons are consumed.

In the accompanying drawing: Figure 1 a side elevation, partly in section, of my improved carbon feeding device, and Fig. 2 a detail bottom view of the star-wheel and adjoining parts.

The two converging carbons 10 and 11 are so mounted within the lamp as to be capable of simultaneous axial downward movement. To this effect the upper ends of the carbons are engaged by holders 12, 13, connected to telescoping tubes 14, 15, from which they are insulated as at 16. Tubes 14, 15, are provided with sleeves 17, 18, movable on converging guide rods 19 tapped into a supporting frame 20. Near their lower ends the carbons pass through a perforated base plate 21 seated upon a rabbet 22 of frame 20. Below plate 21 there is secured to frame 20, at 23, the forked bearing 24 for a shaft 25 upon which turns loosely a toothed wheel 26. This wheel is preferably made star-shaped as shown and is so mounted with relation to one of the carbons, say carbon 10, that one of its points bears against such carbon near its lower end.

In use, the active point of the star-wheel

by bearing against the carbon, in the manner described, jams it against plate 21, which thus constitutes an abutment, and thereby sustains both carbons in their operative position. As the carbons gradually burn off toward the point engaged by the wheel, the carbon 10 will finally slip over the point of the star wheel which supports it and will then slide down by gravity and so turn the succeeding point into contact with the carbon. In this way the further descent of the carbon is temporarily checked until the same is again burned away to the point of its contact with the star wheel. Carbon 10 and carbon 11 coupled thereto, in the manner described, are thus caused to descend intermittently until consumed. Wheel 26 should be so dimensioned that the proper length of carbon is caused to be exposed at each downward movement thereof. The descent of the carbons in the manner described is permitted by the sleeves 17, 18, moving along guide rods 19, while the tubes 14, 15, will telescope more and more as the carbons descend.

I claim:

In a device of the character described, a carbon capable of axial descent by gravity, combined with an abutment for said carbon, and with a star wheel engaging the carbon below the abutment, said star wheel being adapted to frictionally hold the carbon against said abutment, substantially as specified.

Signed by me at New York city, (Manhattan,) N. Y., this 27th day of February, 1908.

ROBERT FRITZ.

Witnesses:

EMILE F. LANGE,  
W. R. SCHULZ.