

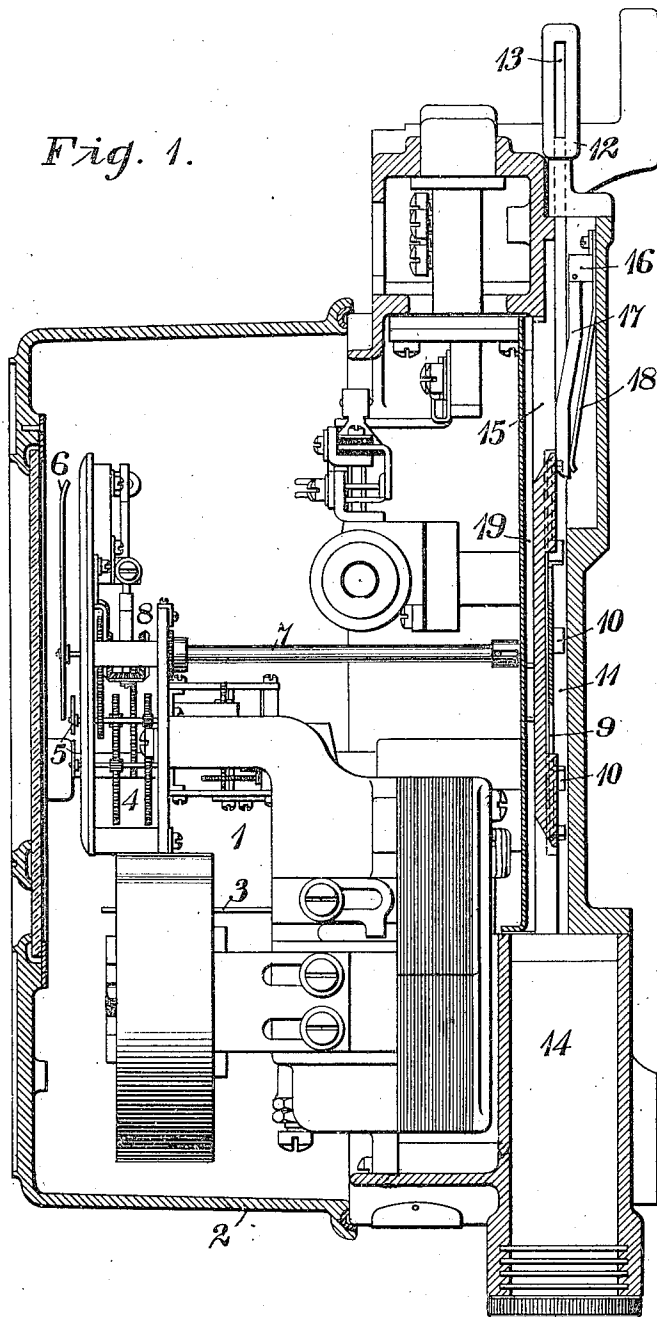
F. CONRAD.
PREPAYMENT METER.
APPLICATION FILED AUG. 2, 1905.

1,017,082.

Patented Feb. 13, 1912.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

Fred H. Miller
Otto S. Schairer.

INVENTOR

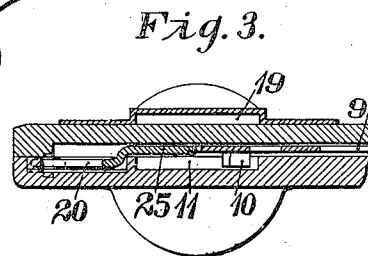
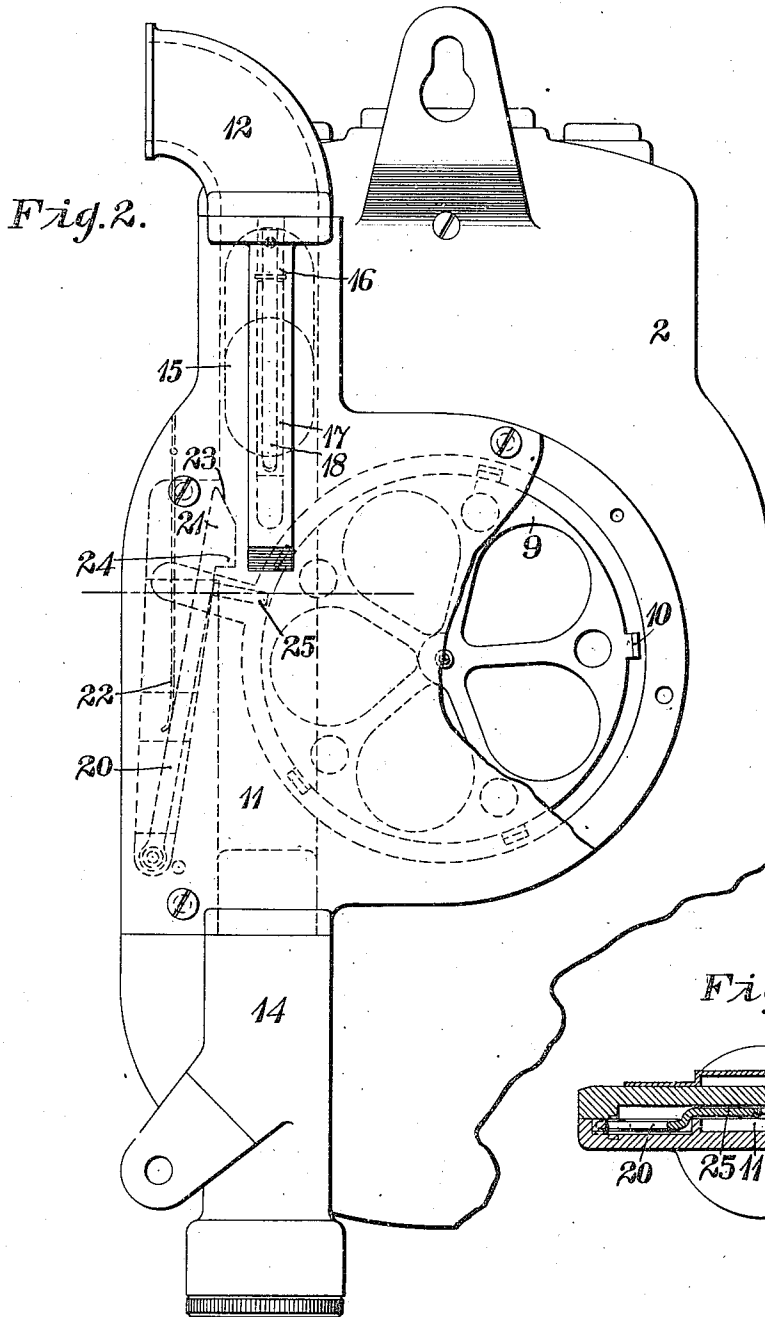
Frank Conrad
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Otto S. Schaefer

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UNITED STATES PATENT OFFICE.

FRANK CONRAD, OF EDGEWOOD PARK, PENNSYLVANIA, ASSIGNOR TO WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

PREPAYMENT-METER.

1,017,082.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed August 2, 1905. Serial No. 272,438.

To all whom it may concern:

Be it known that I, FRANK CONRAD, a citizen of the United States, and a resident of Edgewood Park, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Prepayment-Meters, of which the following is a specification.

My invention relates to prepayment meters and particularly to prepayment instruments for measuring electrical energy though not necessarily limited to this particular type of instrument.

The object of my invention is to provide means for preventing the withdrawal of a coin which has been utilized for adjusting the prepayment mechanism of measuring instruments.

In the accompanying drawing, Figure 1 is a vertical section through an electric wattmeter equipped with my improvements. Fig. 2 is a rear elevation of the instrument shown in Fig. 1, parts of the frame or casing being broken away and Fig. 3 is a detail, sectional view of a portion of the mechanism shown in Fig. 2.

While my invention may be utilized in connection with any operative form or type of meter, I have shown it as applied to an instrument like or similar to that set forth in Patent No. 757,439, granted April 19, 1904 to Westinghouse Electric & Manufacturing Company, upon an application filed by me, and the structural details which are not specifically described herein may be understood by reference to the said patent.

The operating parts 1 of the wattmeter, which are inclosed in a suitable casing 2 and which may be of usual construction, embody an armature or rotatable member 3 that is rotated at a speed corresponding to the energy supplied to the actuating or field coils so as to drive a train of gearing 4 and through said train to actuate the registering hands 5 in the usual manner. In order that the energy consumed may be paid for in advance and the registering mechanism stopped as soon as the amount paid for has been used, a large pointer 6 is operated by means of a shaft 7, suitable gearing 8 and a coin wheel 9 in substantially the manner set forth in the patent hereinbefore mentioned and the registering operation is controlled by suitable circuit making and breaking devices which are not here speci-

cally set forth but which are also fully shown and described in the said patent.

The coin wheel 9 is provided with a plurality of laterally projecting lugs 10, five of these lugs being shown in the present instance, and the rim, which is provided with the lugs, projects into a coin chute 11, the upper end 12 of which is curved to present a side opening 13 for the reception of coins of the required denomination. Each coin of the proper size, as it falls through the chute, engages one of the projections 10 and rotates the wheel a sufficient distance to bring the next succeeding lug 10 into position to be engaged by another coin and thus rotate the wheel an equal distance to bring the next succeeding lug into position to be actuated. Each coin, as it moves the wheel a sufficient distance to drop from the lug which it engages, falls through the lower end of the chute into a receptacle 14.

In order to guard against the operation of the coin wheel by means of coins of smaller size than those for which the instrument is designed, one side of the chute 11 may be provided with an oblong opening 15, the width of which is slightly less than that of the chute and the length of which is or may be somewhat greater. Pivoted to a lug 16 that projects inwardly from the rear side of the casing is a tongue 17 that extends across the opening 15 and back of the same. The tongue is normally pressed inward by a spring 18 so that its lower end engages the side of the chute just below the opening 15. The spring 18 is sufficiently flexible so that when a coin of the proper dimensions is dropped into the chute, it will force the tongue 17 rearwardly against the action of the spring and drop upon the adjacent lug of the coin wheel. In case a coin of smaller dimension is dropped into the chute, however, it will be forced through the opening 15 by the tongue 17 and will drop through an auxiliary chute 19 into the receptacle 14.

In order to guard against the possibility of rotating the coin wheel by means of a coin and thereafter withdrawing the coin, I provide an arm or lever 20 the lower end of which is pivoted to the casing and the upper end of which is provided with a head 21 that is normally pressed into the coin chute by means of a spring 22. The head 21 is provided with an inclined or beveled in-

ner face 23 and the lower end of the head constitutes a shoulder 24 so that as a coin is dropped into the chute it will engage the inclined surface 23 and force the arm 20 outwardly until it passes the shoulder 24 when the spring 22 will again force the head into the chute and thus prevent the withdrawal of the coin in case an attempt should be made to withdraw it.

- 10 Projecting inwardly and laterally from the arm or lever 20 is a lug or supplemental arm 25 that is offset laterally from the plane of the arm 20 so as to permit coins to pass through the chute but is in position to engage a coin wheel lug 10 and thus prevent reverse rotation of the wheel.

The outward movement of the head 21 by means of a coin effects corresponding outward movement of the lug 25 so as to permit the next coin wheel lug to pass, but as soon as the coin has passed beyond the shoulder 24 the lug 25 will assume its original position and thus prevent any backward movement of the wheel, as above stated.

- 25 The details of construction may be modified from what is here specifically shown and described and the protective devices may be applied to means of different structure and utilized for different purposes, if desired, without departing from my invention.

I claim as my invention:

1. In a prepayment meter, the combination with a coin-wheel adapted to be engaged by a coin and actuated by the weight thereof, and a chute into which the wheel projects, of a spring-actuated device that normally prevents rotation of the wheel but is movable out of its path by a coin of the proper size.

2. In a prepayment meter, the combination with a coin-wheel adapted to be engaged by a coin and actuated by the weight thereof, having lugs and a chute into which the wheel projects, of a device that normally projects into the path of movement of the wheel lugs and is movable out of said path by coins of the proper dimensions.

3. In a prepayment meter, the combination with a coin-wheel adapted to be engaged by a coin and actuated by the weight thereof, and a chute into which the wheel projects, of a device having a part that normally projects into the coin chute and a part that normally projects into the path of movement of the wheel lugs.

In testimony whereof, I have hereunto subscribed my name this 29th day of July 1905.

FRANK CONRAD

Witnesses:

WM. BRADSHAW,
BIRNEY HINES.