

R. W. GALLAGHER.
STATEMENT DELIVERY MECHANISM FOR METERS.

APPLICATION FILED JULY 25, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

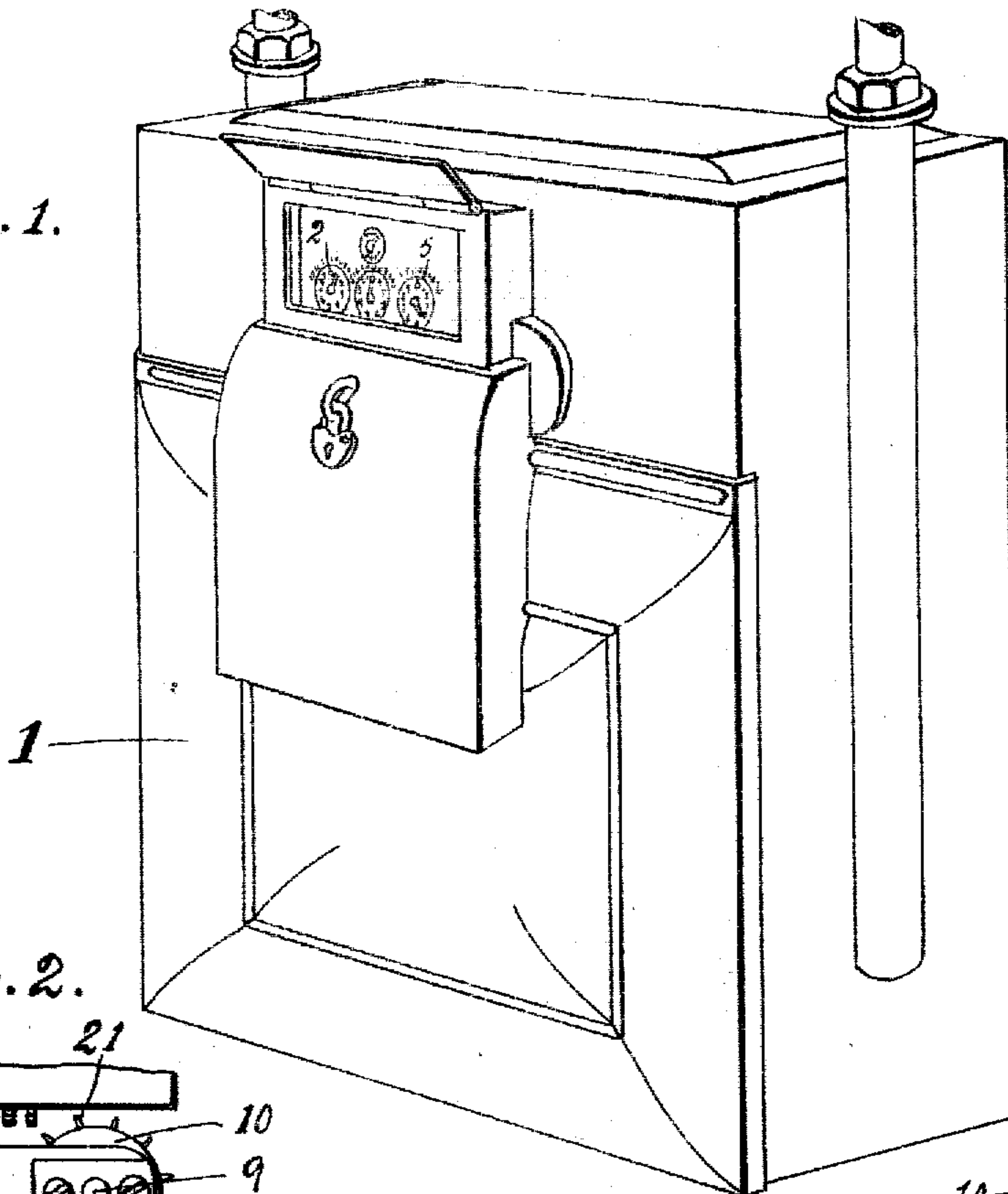


Fig. 2.

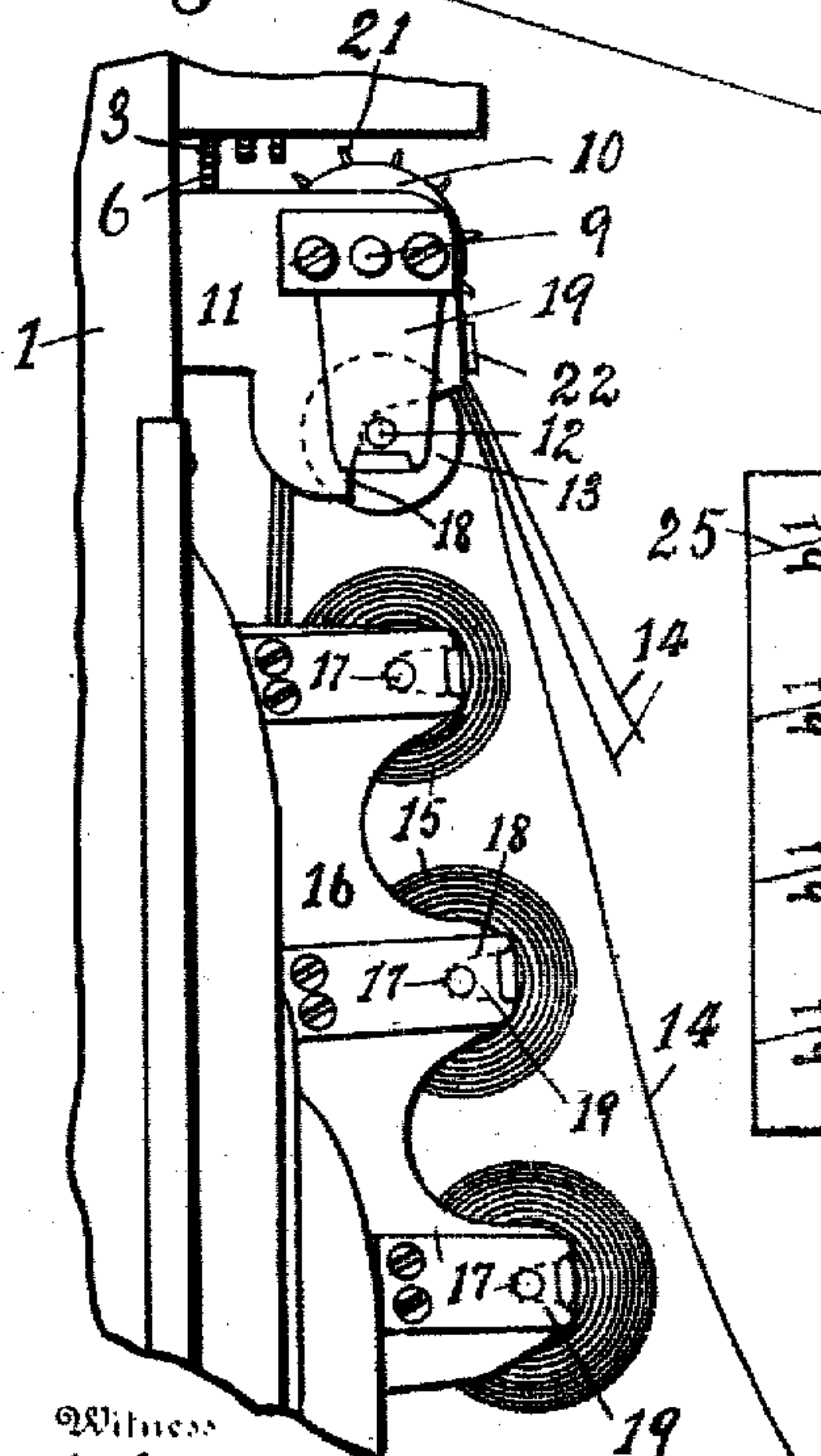


Fig. 4.

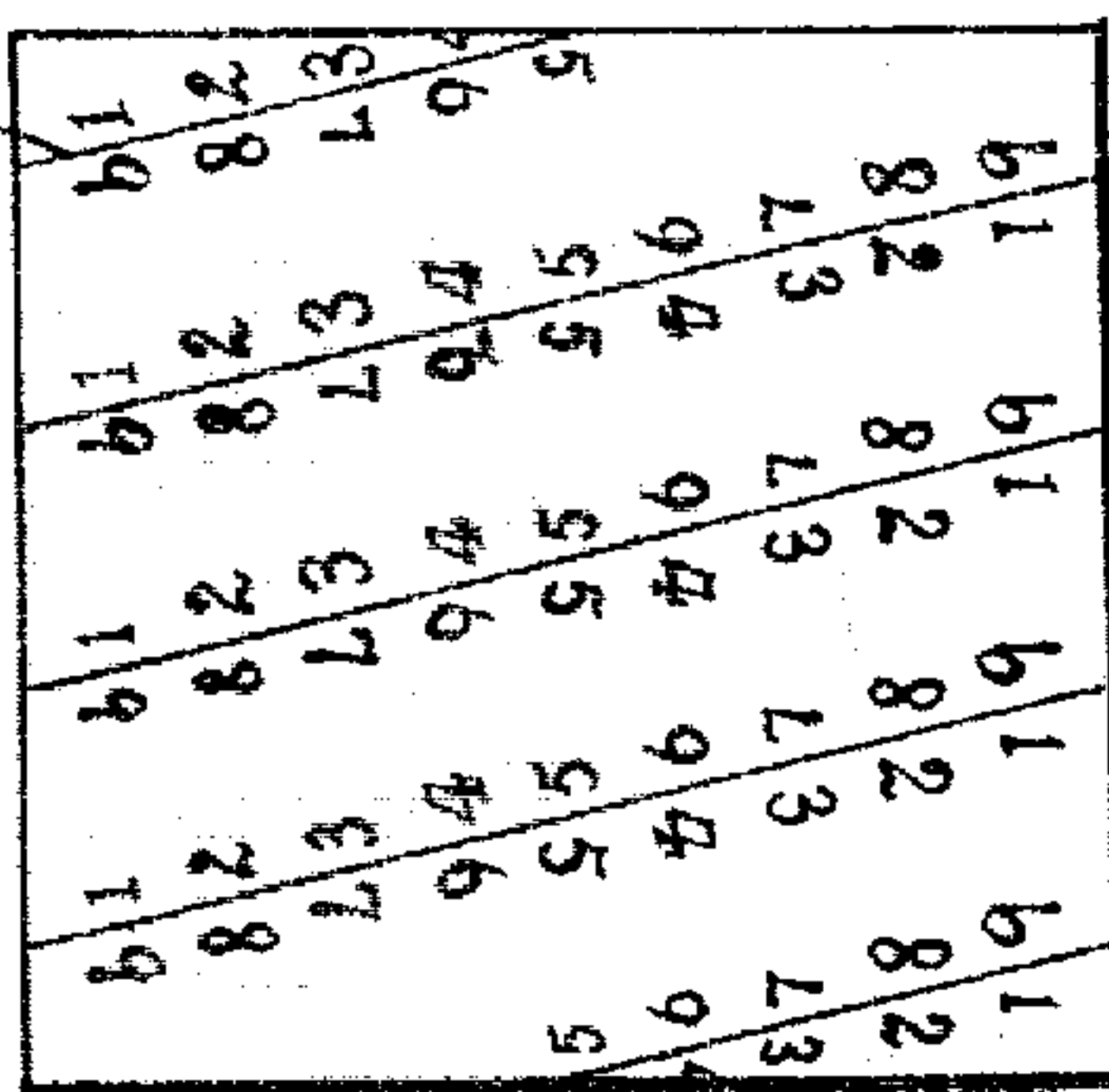
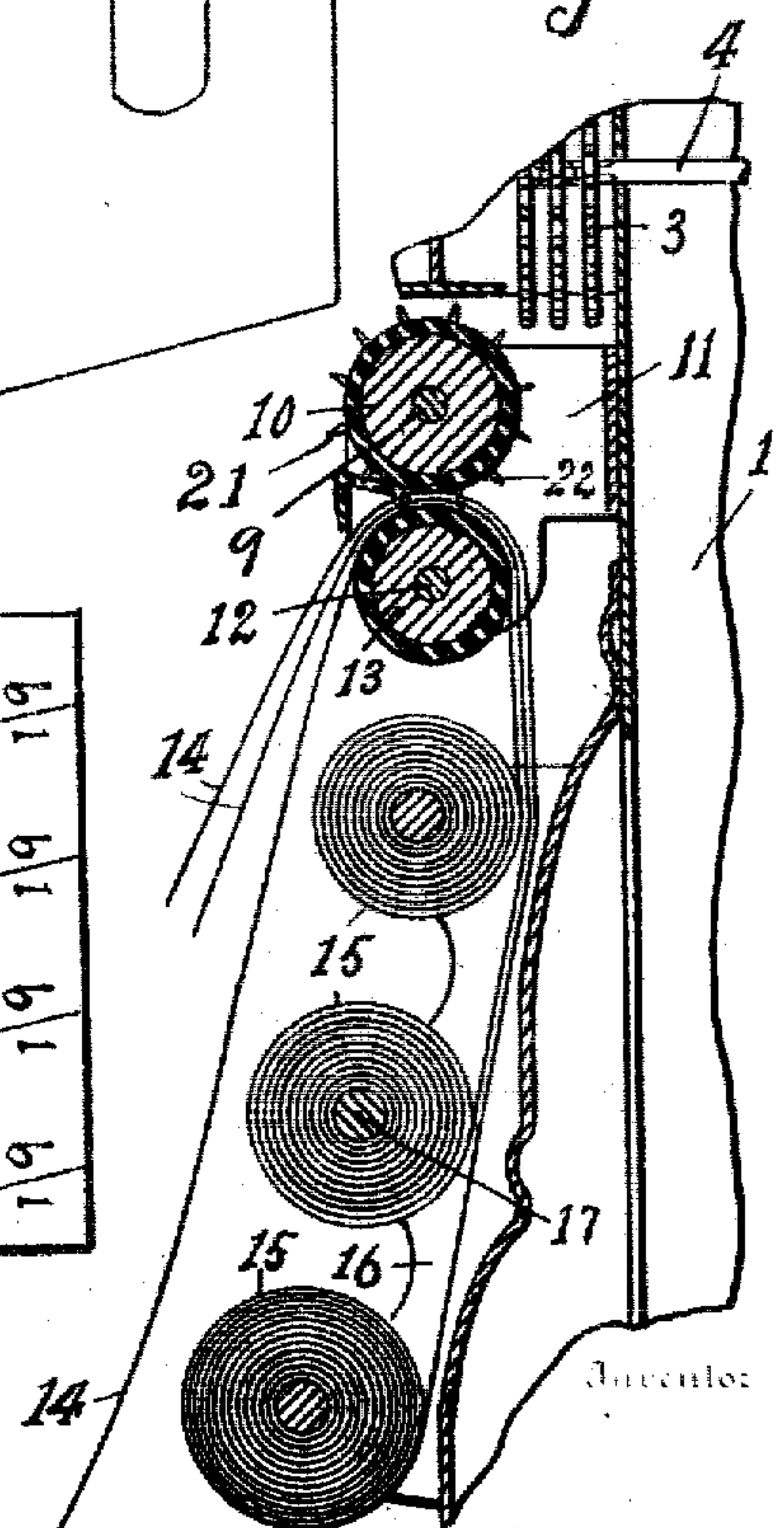


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 5.

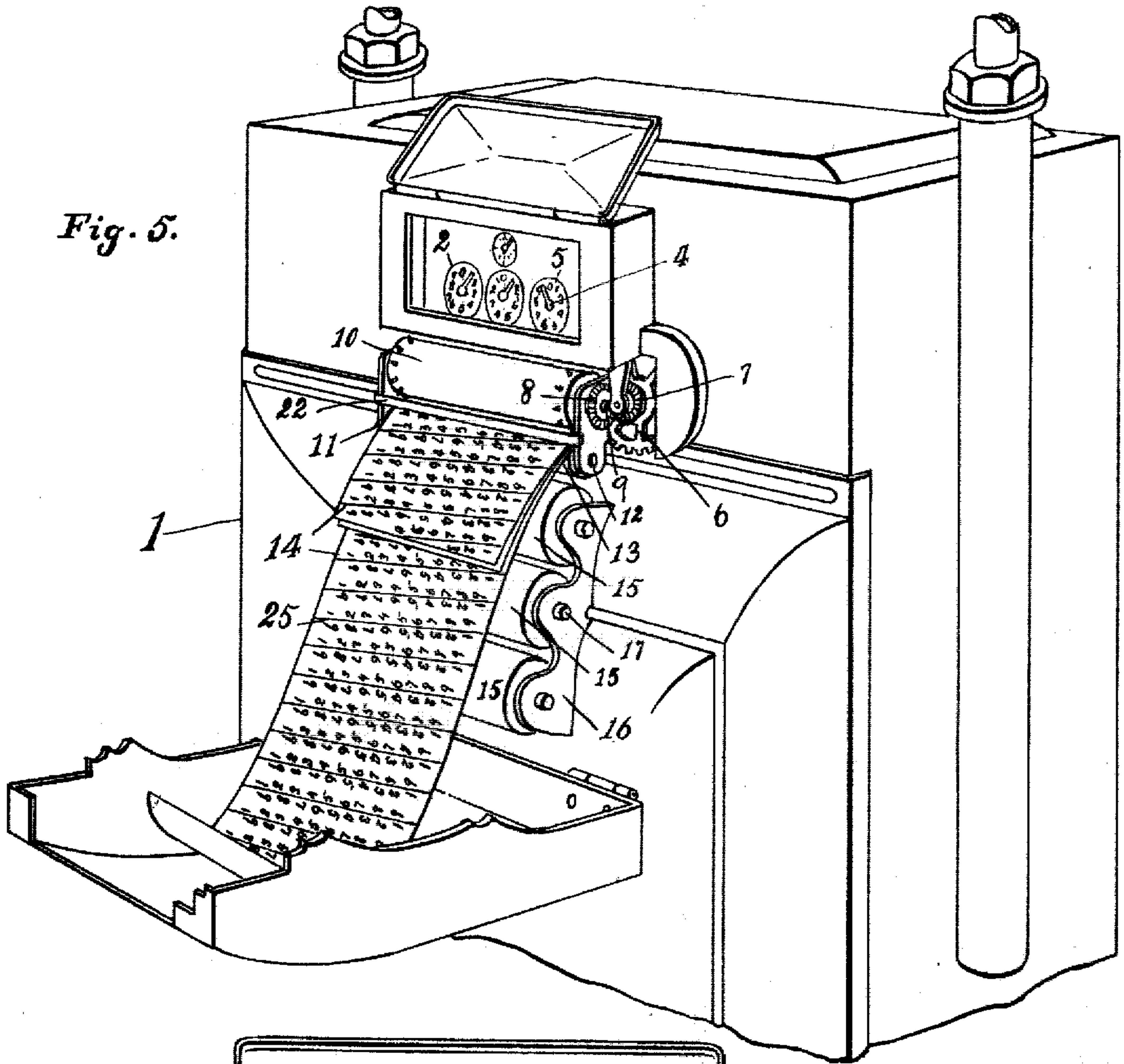
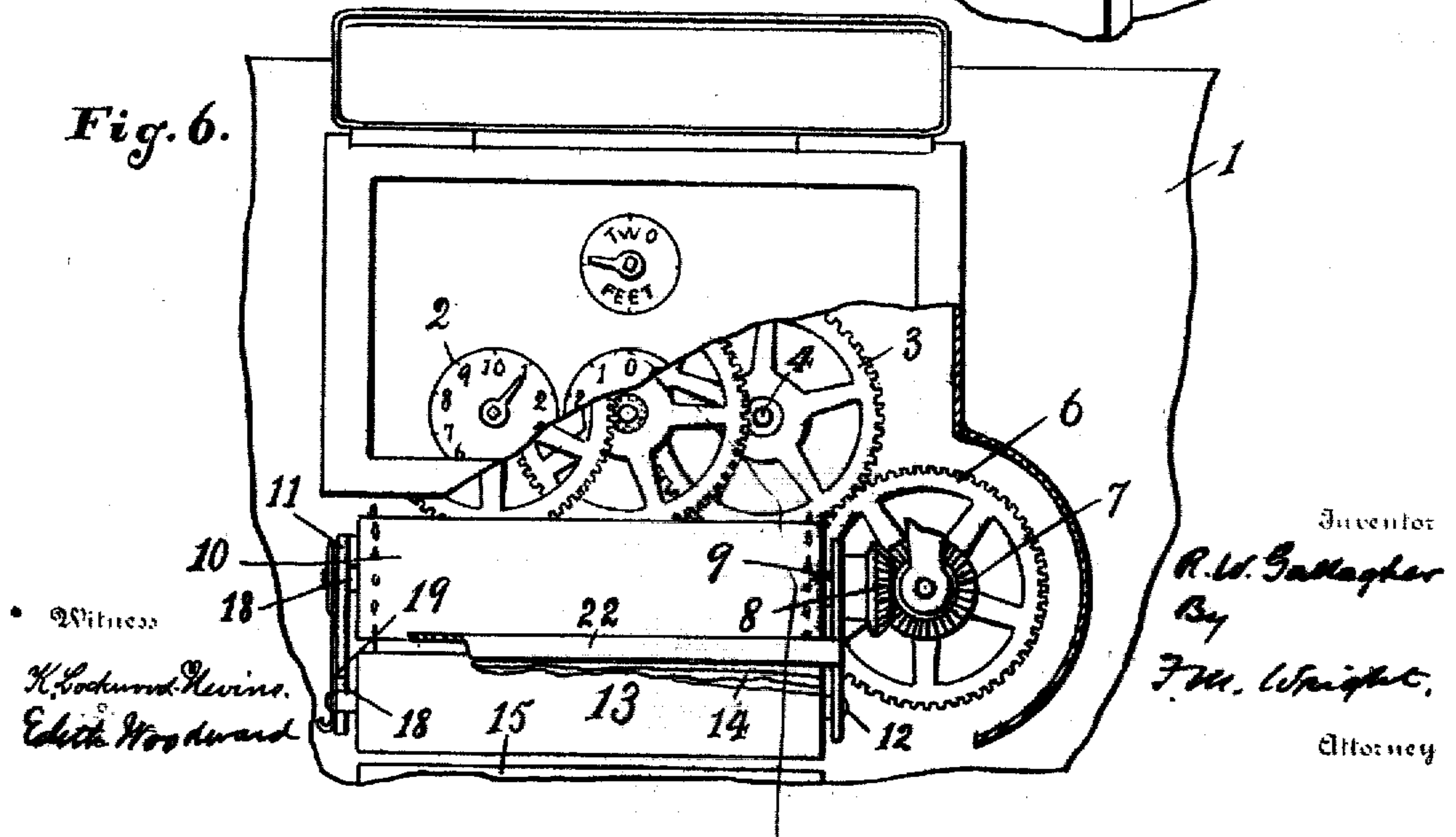


Fig. 6.



UNITED STATES PATENT OFFICE.

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STATEMENT-DELIVERY MECHANISM FOR METERS.

No. 825,451.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed July 25, 1905. Serial No. 271,147.

To all whom it may concern:

Be it known that I, RICHARD WILLIAM GALLAGHER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Statement-Delivery Mechanism for Meters, of which the following is a specification.

This invention relates to mechanism for delivering statements from meters—such as gas-meters, electric meters, or the like—the object of the invention being to provide an apparatus by means of which statements may be obtained at any time in duplicate or triplicate or in greater numbers, if desired, of the amount of gas, electricity, or other fluid consumed.

An especial object of the invention is to provide a device of this character which can be readily attached to meters already in use with little expense.

In the accompanying drawings, Figure 1 is a perspective view of a meter equipped with my improved statement-delivery mechanism. Fig. 2 is a side elevation of the statement-delivery mechanism. Fig. 3 is a vertical section of the statement-delivery mechanism. Fig. 4 is a front view of a portion of one of the record-strips. Fig. 5 is a perspective view of the upper portion of the meter, the cover of the delivery mechanism being open. Fig. 6 is a broken front elevation of the upper portion of the delivery mechanism.

Referring to the drawings, 1 represents a gas-meter having a series of indicating-dials 2 meshing with the gear-wheel 3. On the shaft 4 of the hundreds-dial 5 is a gear-wheel 6, which carries on its shaft a bevel-gear 7, meshing with bevel-gear 8 upon the shaft 9 of a roller 10, said shaft having bearings in a frame 11, secured to the face of the meter.

12 is another shaft, its bearings in said frame and carrying an idle roller 13, which revolves in close proximity to the roller 10. Between said rollers 10 and 13 pass statement-sheets 14, of which there are here shown three in number. These sheets are drawn from three rollers 15, having bearings in a frame 16, attached to the face of the gas-meter. The shafts 12 and 17 of the rollers 13 and 15 are easily removed, passing at one end into recesses 18 in the frames 11 and 16 and

being held in said recesses by springs 19. It will be seen that with this construction when the meter is in operation the roller 10 is revolved, thereby revolving also the roller 13, and in order to insure this movement of the two rollers in unison the roller 10 has pins 21, which enter the surface of the lower roller 13. By this means all the three statement-sheets are passed between said rollers in exact proportion to the amount of gas consumed. By removing the idle roller the sheets can at any time be adjusted.

The meter inspector will at regular intervals unlock the casing of the statement-delivery mechanism and will tear off the upper two sheets 14, a tearing-strip 22 of metal secured on the frame 11 being provided to enable this more accurately and conveniently to be done. The third sheet may be left in the casing for future inspection by a general inspector and will serve as a check or tally on the other sheets. These sheets may be ruled or marked in any desired manner which will conveniently represent the amount of gas consumed by the length of the sheet torn off. For instance, parallel diagonal lines 25 at suitable regular intervals may be ruled upon the sheets, each line representing the consumption of a thousand feet of gas and each line being divided into ten equal spaces to represent hundreds of feet of gas. Thus the piece of the sheet of paper torn off will at once show how many feet of gas have been consumed—namely, a thousand feet for every complete diagonal line thereon, and one hundred feet for each space in the two fractional end lines, and by adding these together and to the thousands for the number of diagonal lines on the paper the amount of gas consumed can be at once seen. In Fig. 4 is shown one of said pieces torn off to record the amount of gas consumed, having thereon three whole diagonal lines, each representing the consumption of one thousand feet of gas, and two fractional terminal lines, each of which in this case contains approximately five of the ten equal spaces into which each diagonal line is divided, said fractional lines thus together representing the consumption of one thousand feet, making a total of four thousand feet represented by this record. If the paper had been torn off so as to cut one of the diagonal lines two spaces

from its end, and the other diagonal lines six spaces from its end, then the record would represent a consumption of three thousand eight hundred feet of gas. Of the two sheets
5 torn off the meter inspector will turn in one at the office and will retain one himself as a check, which may be used by him to compare with that taken at the next inspection of the meter.

10 I claim—

1. In combination with the casing and indicating-dials of a meter, a pair of rollers, bearings for the shafts for said rollers supported upon said casing, an operative connection between one of said shafts and an indicating-dial, a feed-roller having a roll of paper
15 thereon arranged to be passed between said pair of rollers, bearings for the shaft of said feed-roller supported upon said meter-casing, and a casing movably secured to said meter-casing and arranged in one position to inclose all of said rollers, substantially as described.

2. In combination with a horizontal series of indicating-dials of a meter, and the casing
25 for said meter, a pair of horizontal rollers arranged beneath the indicating-dials, bearings for the shafts of said rollers supported upon said meter-casing, an operative connection between one of said shafts and one of the indicating-dials, a plurality of horizontal feed-

rollers beneath the pair of rollers, bearings for the shafts of said feed-rollers supported on the meter-casing, and a casing movably secured to the meter-casing and arranged in one position to inclose all of said rollers and
35 said operative connection, substantially as described.

3. In combination with the casing and indicating-dials of a meter, a pair of rollers, bearings for the shafts for said rollers supported upon said casing, an operative connection between one of said shafts and an indicating-dial, a feed-roller having a roll of paper thereon arranged to be passed between
40 said pair of rollers, bearings for the shaft of said feed-roller supported upon said meter-casing, a tearing-strip for tearing off the part of the sheet fed forward between the pair of rollers, said sheet being marked to indicate the amount of advance, and a casing movably secured to said meter-casing and arranged in one position to inclose all of said
50 rollers, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.
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RICHARD WILLIAM GALLAGHER.

Witnesses:

M. FEEHAN,
F. M. WRIGHT.