

No. 780,442.

PATENTED JAN. 17, 1905.

F. J. PERKINS.
LEATHER MEASURING MACHINE.

APPLICATION FILED JAN. 14, 1904.

2 SHEETS—SHEET 1.

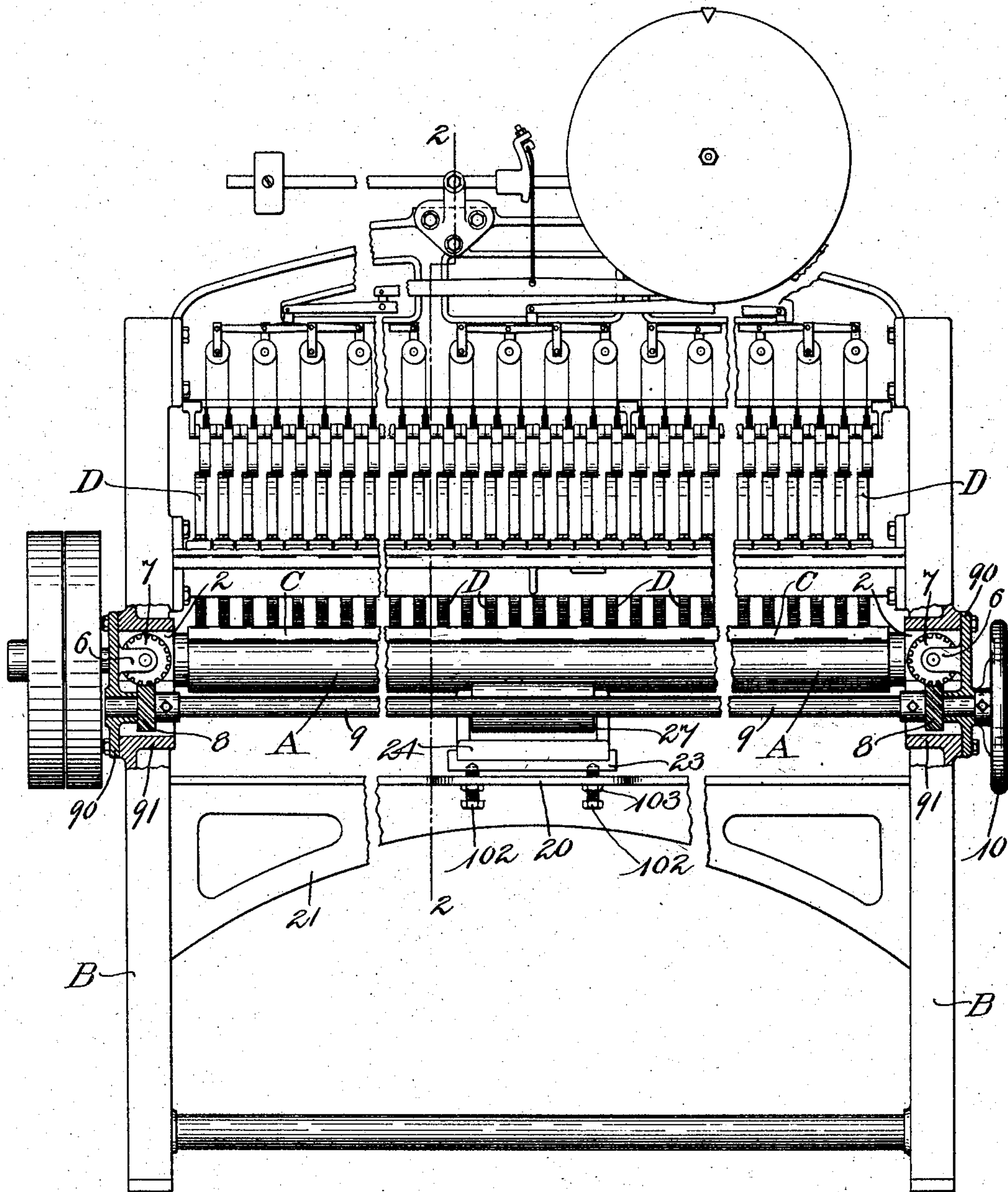


FIG-1

WITNESSES:

Franklin E. Low

Oscar F. Hill

INVENTOR:

Franklin J. Perkins,
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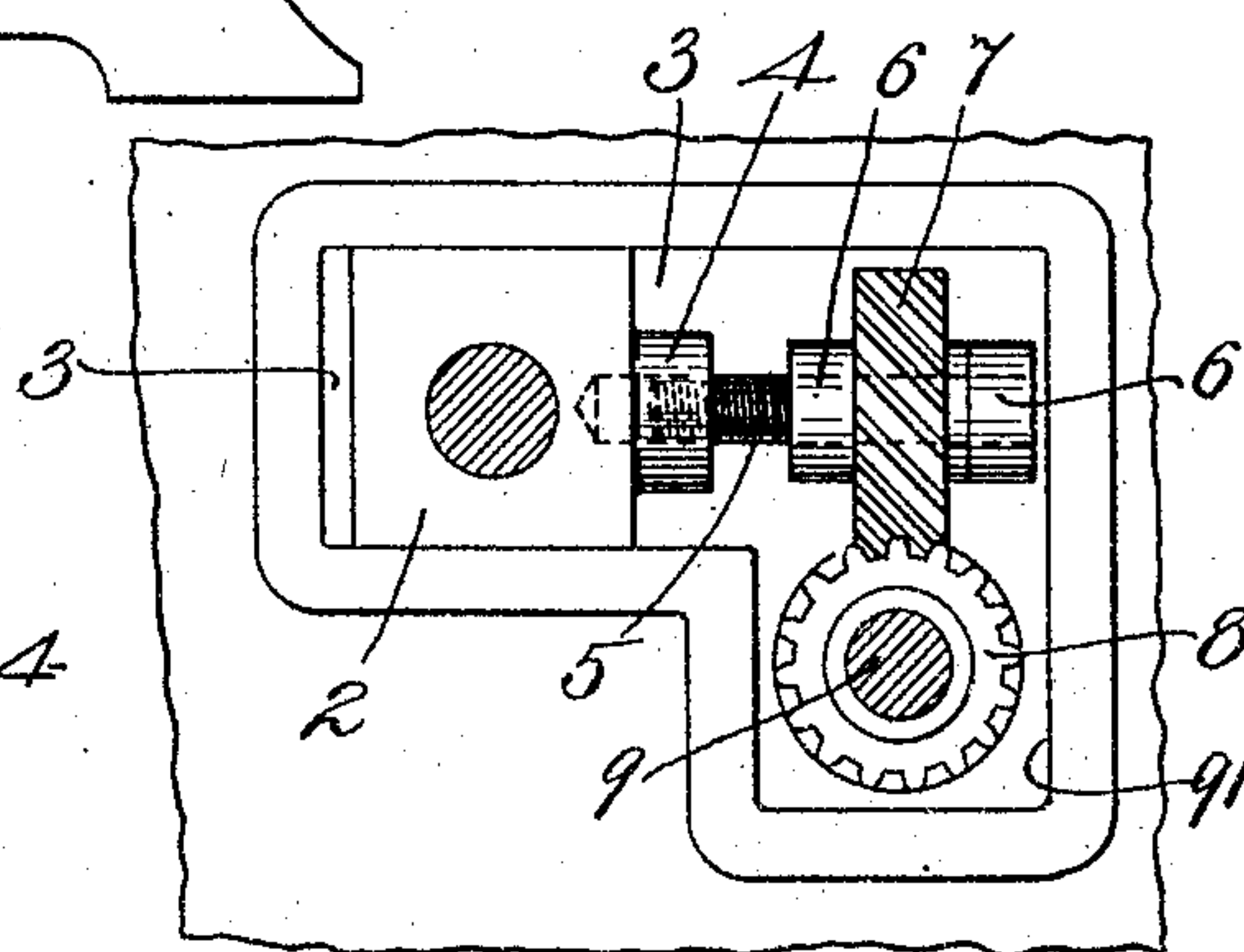
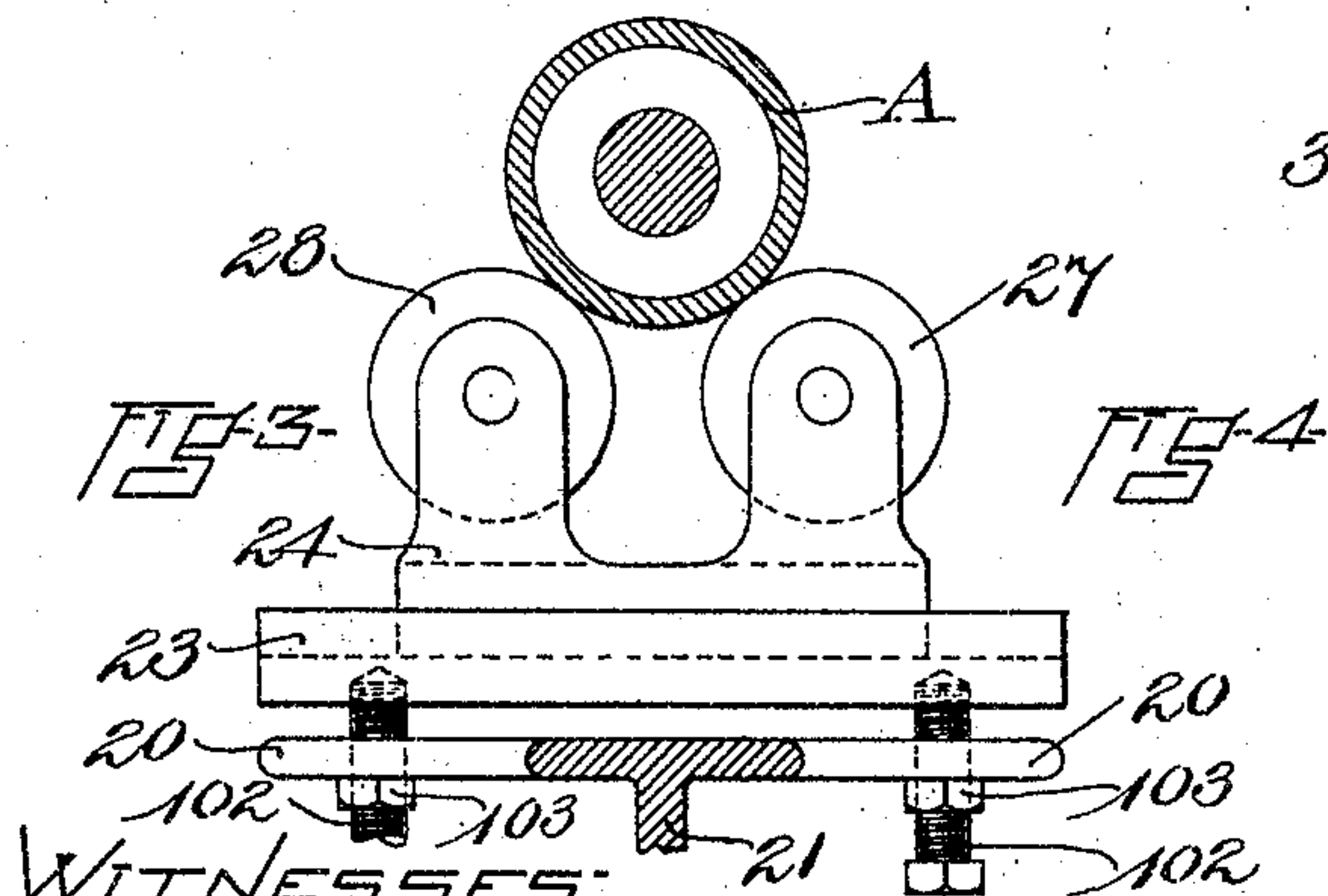
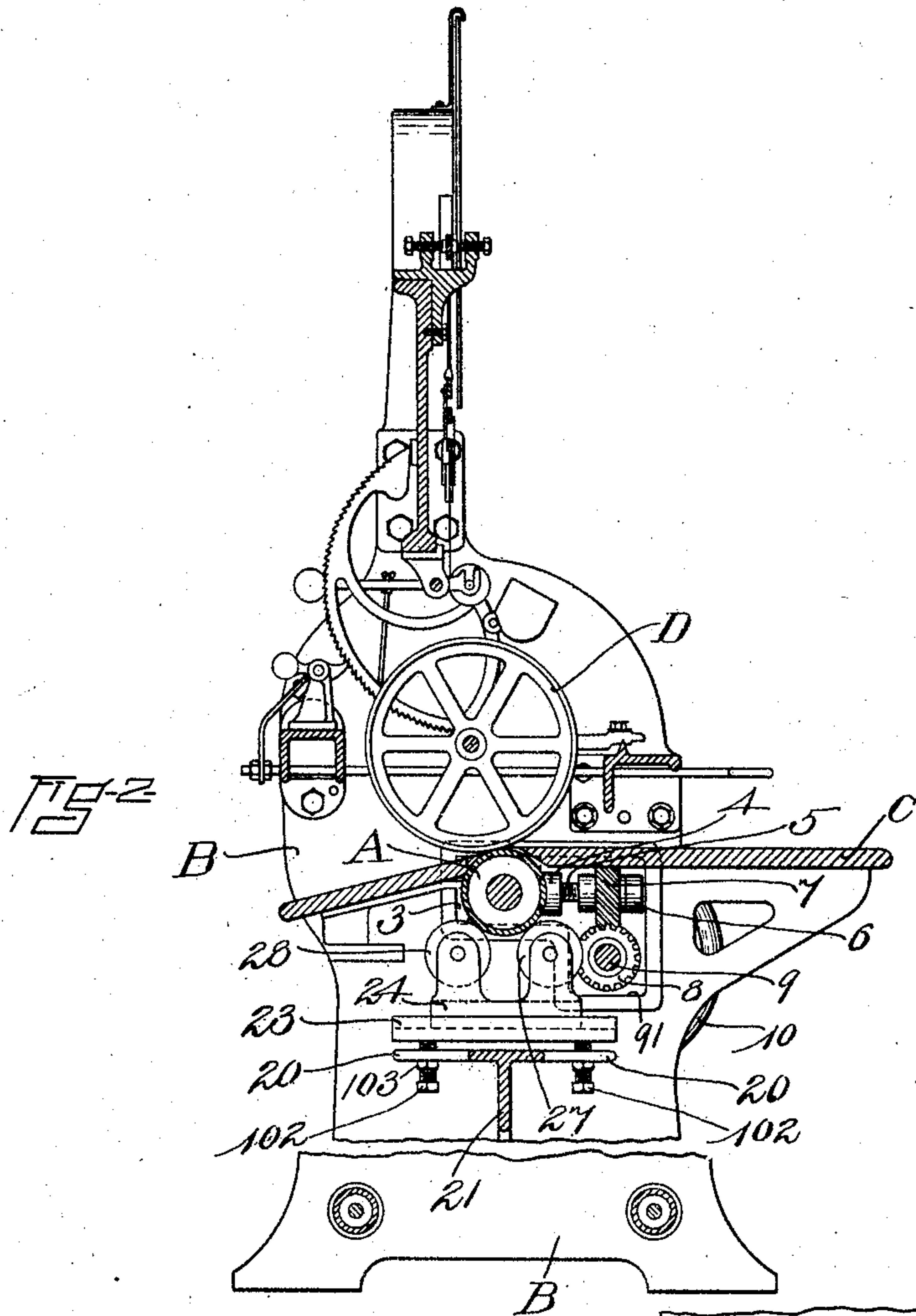
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2 SHEETS—SHEET 2.



WITNESSES:
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Oscar F. Hill

INVENTOR:
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UNITED STATES PATENT OFFICE.

FRANKLIN J. PERKINS, OF WOBURN, MASSACHUSETTS, ASSIGNOR TO
VAUGHN-ROOD MACHINE COMPANY, OF PEABODY, MASSACHU-
SETTS, A CORPORATION OF MAINE.

LEATHER-MEASURING MACHINE.

SPECIFICATION forming part of Letters Patent No. 780,442, dated January 17, 1905.

Application filed January 14, 1904. Serial No. 189,063.

To all whom it may concern:

Be it known that I, FRANKLIN J. PERKINS, a citizen of the United States, residing at Woburn, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Leather-Measuring Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object an improvement in leather-measuring machines of the kind in which the leather is measured by passing it between a feed-roll and a series of measuring-wheels.

The character of the invention is fully set forth in the following description, reference being had to the accompanying drawings, and the novel features thereof are pointed out and clearly defined in the claims at the close of the specification.

In the drawings, Figure 1 is a front elevation of a machine having my invention applied thereto, certain details being shown in section for greater clearness. Fig. 2 is a vertical section on line 2 2, Fig. 1, viewed from the left of said figure and having certain parts broken away. Fig. 3 is a detail showing the feed-roll and its supporting-carriage. Fig. 4 is a detail view, on an enlarged scale, of the feed-roll support, parts of the machine structure being in section for clearness of illustration.

Leather-measuring machines of the kind to which my invention is applied as shown in the accompanying drawings are of well-known construction and do not require to be described in detail. They comprise a feed-roll A, journaled at either end in boxes supported in the frame parts B. By means of the feed-roll A the leather to be measured is fed over a table C, and where it passes the feed-roll A it is nipped between said roll and a series of measuring-rolls D, which by their revolution effect the measuring of the surface of the leather in order to indicate the area thereof in a manner which will be clear to those skilled in the art.

Since the leather to be measured varies in thickness, it becomes desirable to provide an accurate and delicate adjustment for the feed-

roll in order thereby to accurately adjust the space between the said feed-rolls and the measuring-wheels. As will be clear from Fig. 2, the axis of the feed-roll is not directly underneath the axis of the measuring-wheels, but is located back of a vertical line passing through the axis of the measuring-wheel. It follows, therefore, that the adjustment of the feed-roll may be effected by simply moving the feed-roll laterally—that is, toward or from the front of the machine. I have provided a simple and efficient means by which this adjustment may be accurately and speedily obtained. The feed-roll A is journaled in boxes 2, one at each end thereof, which slides in a recess or opening 3, provided therefor in the frame of the machine. Each box is provided with a boss 4, having a screw-threaded hole therein into which an adjusting-screw 5 enters. The adjusting-screw is journaled in brackets 6 on the cap 90 of the gear-box 91, which is secured outside of the frame of the machine, and said screw is provided between the said brackets 6 with a spiral gear 7, which meshes with a gear 8, fast on the shaft 9, which extends from side to side of the machine and is journaled at either end in the cap 90 of the gear-box 91. The shaft 9 is provided at one end of the machine with a hand-wheel 10. It will be understood that the gear and screw mechanism above described is duplicated at each end of the machine. By turning the hand-wheel 10 the operator will cause the adjusting-screw 5 to turn and the feed-roll will be moved either toward or from the front of the machine. In this way a very delicate adjustment of the feed-roll may be effected and uniformity and evenness of the adjustment from end to end of the roll is insured, while no additional device is required to lock the roll in any given position of adjustment.

It is frequently desirable to construct measuring-machines of considerable length from end to end. In such machines the feed-roll, which it is necessary shall maintain throughout its entire length a uniform and definite relation to the measuring-wheels, is apt to bend or yield in the central portions thereof,

and thus the relation between the feed-roll and the measuring-wheels will be caused to vary, the said roll being farther away from the center measuring-wheels than from those
5 near the ends of the feed-roll. For the purpose of avoiding this difficulty I provide a tie-piece 21, extending between and bolted to each end frame. The web 20 of the piece 21, midway of the length thereof, is widened out,
10 and I mount thereon a bed or shoe 23 by means of screws 102, which are threaded through the said web 20 and provided with check-nuts 103 in the usual manner. The said screws permit the vertical adjustment of the
15 bed 23 as may be desired. On the bed 23 I place a carriage 24, which is free to slide on said bed toward or from the front of the machine. The carriage 24 is provided with two
20 rolls 27 and 28, which are journaled therein and which are located underneath and in contact with the feed-roll. (See Fig. 3.) The roll 27 is in front of the axis of the feed-roll, and the roll 28 is at the rear of the axis of the feed-roll A, so that the feed-roll projects
25 downwardly between the said rolls 27 and 28. The rolls 27 and 28 serve as a support for the feed-roll and prevent it from bending or yielding downwardly when leather is being
30 the supporting-carriage so that it may slide on the bed 23 the carriage will move with the feed-roll when the latter is adjusted by means of the hand-wheel 10 in the manner herein previously described.

35 By the employment of my invention a uniform, accurate, and delicate adjustment of the feed-roll may be quickly made, and the uniform relation of the feed-roll to each of the measuring-wheels is maintained without separate
40 adjustment of the supporting means and regardless of the location of the measuring-wheel lengthwise of the roll.

What I claim is—

45 1. In a measuring-machine, the combination with measuring-wheels, of a feed-roll journaled at its ends in bearings movable horizontally toward and from the measuring-wheels, an adjusting-screw engaging each of said bearings, a shaft, means for turning the

shaft by hand, gears intermediate the said 50 shaft and the said screw, whereby the latter may be turned as the shaft is turned and the horizontal adjustment of the feed-roll effected, and a feed-roll carriage to support the said feed-roll between its ends, substantially 55 as described.

2. In a measuring-machine, the combination with measuring-wheels, of a feed-roll mounted at its ends in bearings which are horizontally adjustable with reference to said 60 measuring-wheels, a carriage for said feed-roll to support said feed-roll between its ends, said carriage being movable with said feed-rolls and in the same plane and having rolls which engage said feed-roll and form a moving 65 support therefor, substantially as described.

3. In a measuring-machine, the combination with measuring-wheels, of a feed-roll mounted at its ends in bearings which are horizontally adjustable with reference to the said 70 measuring-wheels, a supporting-carriage for said feed-roll to support said feed-roll between its ends, said carriage being movable with said feed-roll and in the same plane and having rolls which engage said feed-roll and form 75 a moving support therefor, and means for adjusting the said supporting-carriage vertically.

4. In a measuring-machine, the combination with measuring-wheels, of a feed-roll 80 mounted at its ends in bearings which are horizontally adjustable with reference to the said measuring-wheels, a supporting-carriage for said feed-roll to support said feed-roll between its ends, said carriage being movable with 85 said feed-roll and having rolls which engage said feed-roll and form a moving support therefor, and means for adjusting the said supporting-rolls in two planes, said adjusting means being between the supporting-carriage 90 and the frame of the machine.

In testimony whereof I affix my signature in presence of two witnesses.

FRANKLIN J. PERKINS.

Witnesses:

WM. A. MACLEOD,
ALICE H. MORRISON.