

(No Model.)

H. F. BEIMLING.
TESTING DEVICE.

No. 411,570.

Patented Sept. 24, 1889.

Fig. 1.

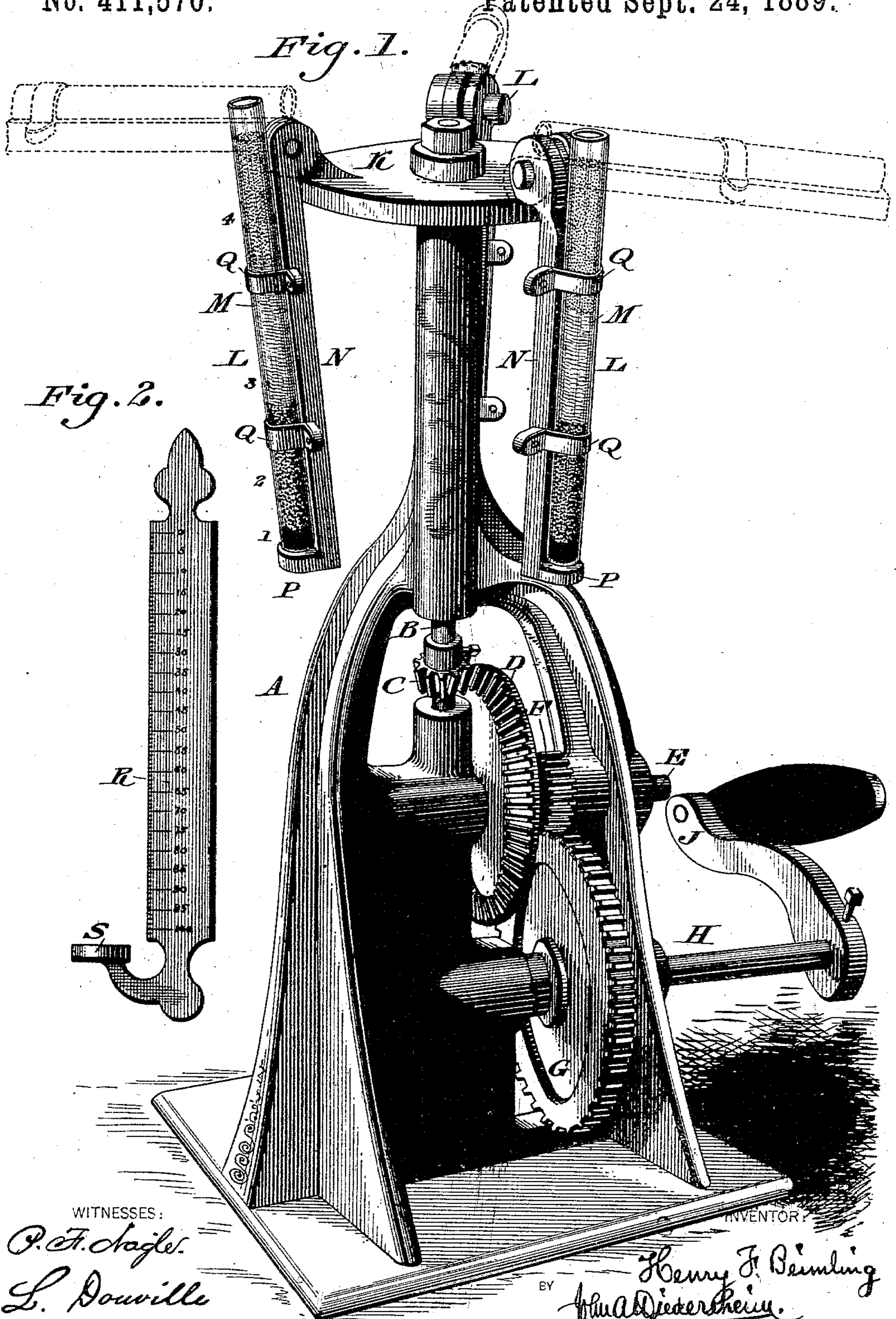
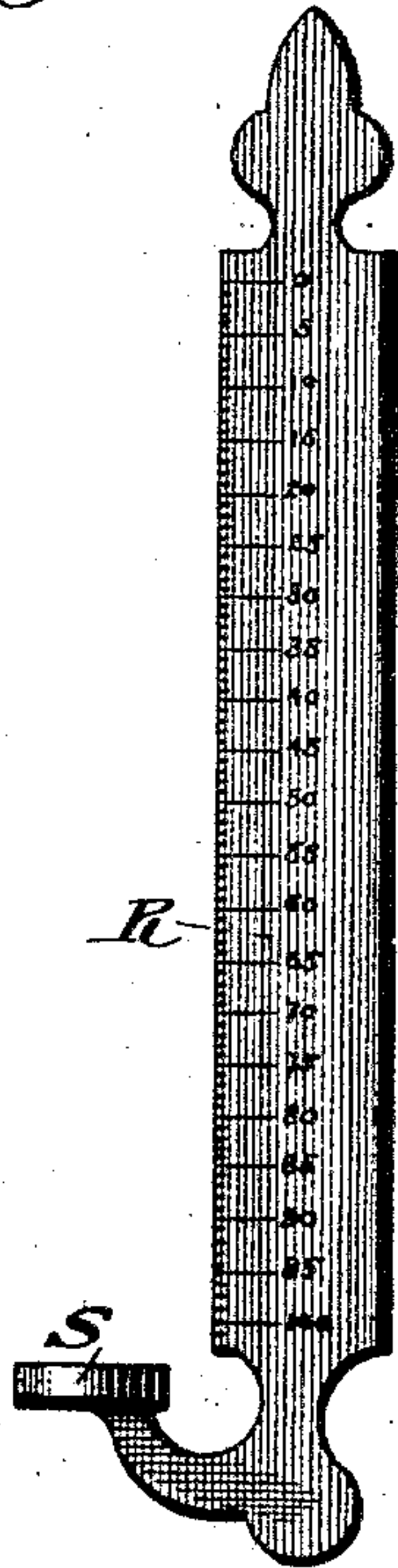


Fig. 2.



WITNESSES:

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TESTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 411,570, dated September 24, 1889.

Application filed May 15, 1889. Serial No. 310,816. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. BEIMLING, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Testing Devices, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a device for testing fluids or liquids, the same embodying novel features, as will be hereinafter set forth and definitely claimed.

The description hereinafter will be limited to the operation of a device for testing milk and cream.

Figure 1 represents a perspective view of a testing device embodying my invention. Fig. 2 represents a side elevation of the gage employed.

Similar letters of reference indicate corresponding parts in both figures.

Referring to the drawings, A designates a stand or frame on which is mounted a vertical shaft B, the lower end of which has secured to it the bevel-pinion C, with which meshes a bevel-wheel D, whose shaft E carries a pinion F, which meshes with a spur-wheel G, secured to the shaft H, the shafts E and H being properly mounted on the stand A, and said shaft H having fitted to it a crank-handle J when it is desired to operate the device by hand.

Connected with the upper end of the shaft B is a head K, to which are pivoted or hinged the carriers L, for the glass or transparent testing-tubes M, said carriers consisting of pieces N of suitable material, metal being preferred, having at their lower ends the feet P, on which the tubes rest and straps Q, intermediate of their ends, embracing the tubes and retaining the same in position. At the upper ends of the pieces are ears or butts, which are connected by pintles with ears or butts on the head K, thus providing pivotal or hinged joints for the carriers in their attachment to the said head.

R designates a gage, consisting of a plate which is graduated—say from 0 to 100, as desired—and coincides with the length of the tubes M, said gage having at its lower end a foot S, on which a tube may rest, so as to make the tests with precision.

The operation is as follows: Milk is placed in the tubes and the shaft H operated, where-

by the shaft B and carriers N are rotated, and the tubes L thrown out on their pivots, hinges, or axes by centrifugal action to the position shown in dotted lines. The constituents of the milk separate, the heavier matters seeking the bottom of the tubes, and the lighter matters seeking the upper ends thereof, the several matters assuming positions shown, respectively, at 1, 2, 3, and 4, indicating in their order impurities, cheese, water, and cream.

When the work is accomplished, power is removed from the shaft H, and the tubes are permitted to return slowly to their normal positions, the tubes then being removed and applied to the gage, whereby the percentage of the different matters may be readily read off.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A rotatable shaft, in combination with a transparent tube, and with a tube-carrier hinged or pivoted to the same and formed with a foot and a strap, said tube being removably sustained by said plate, foot, and strap, substantially as described.

2. A testing device for milk, &c., consisting of a frame or stand, a shaft mounted in said frame, means for rotating the shaft, a tube-carrier hinged or pivoted to said shaft, and a transparent tube removably fitted to said carrier, said parts being combined and operating substantially as described.

3. A testing device for milk, &c., consisting of a frame, a vertical shaft journaled therein, mechanism, substantially as described, mounted in said frame for rotating said shaft, a head at the upper end of said shaft having ears or lugs at or near its outer edge, carriers having ears at their upper ends pivotally connected to said head, and transparent tubes secured to said carriers, said parts being combined substantially as described.

4. In a testing device for milk, a rotary head with ears at or near its periphery, in combination with a carrier having a foot at its lower end and ears at its upper end, a transparent tube resting on said foot and secured to said carrier by the straps Q, the said ears of the head and carrier having a pivotal connection, substantially as described.

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Witnesses:

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