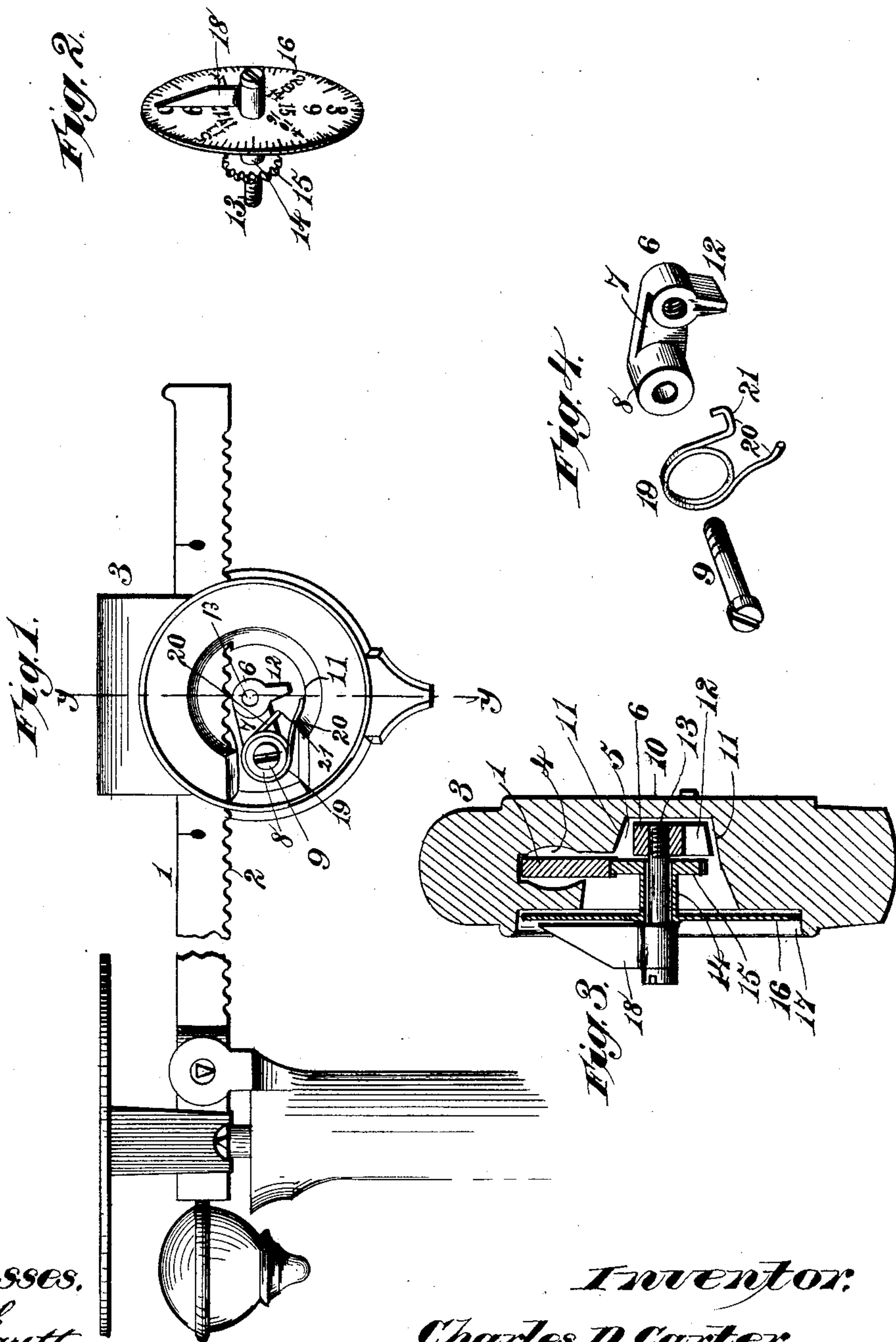


(No Model.)

C. D. CARTER.
POISE FOR SCALE BEAMS.

No. 309,925.

Patented Dec. 30, 1884.



Witnesses,
Robert Emmett.

Chas. J. Allen

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Atty.

UNITED STATES PATENT OFFICE.

CHARLES D. CARTER, OF DETROIT, MICHIGAN, ASSIGNOR TO THE HENRY C. HART MANUFACTURING COMPANY, OF SAME PLACE.

POISE FOR SCALE-BEAMS.

SPECIFICATION forming part of Letters Patent No. 309,925, dated December 30, 1884.

Application filed February 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. CARTER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Poises for Scale-Beams, of which the following is a specification.

This invention relates to improvements in that class of poises for scale-beams in which the poise contains a gear-wheel engaging a rack on the lower edge of the beam, so that as the poise is adjusted along the beam an index is caused to travel around a stationary dial for obtaining the correct weight of an object or material on the platform or on the scale-pan, as the case may be.

The objects of my invention are to simplify the construction of such poises, rotate the dial instead of the index, and provide novel means whereby the dial driving wheel is held in engagement with the scale-beam by a yielding pressure, which at the same time permits the poise to be easily adjusted by the application of but little force. These objects I accomplish in the manner and by the means hereinafter described and claimed, reference being had to the accompanying drawings, illustrating my invention, in which—

Figure 1 is a side elevation of a scale-beam, showing the interior of the poise, the dial, the gear-wheel and its axle or shaft, and the index or pointer being removed; Fig. 2, a detached perspective view of the axle or shaft, the gear-wheel, the dial, and the index or pointer; Fig. 3, a sectional view on the line *y y* of Fig. 1; and Fig. 4, detail perspective views of the swinging support, its pivot, and the spring.

Referring to the drawings, the number 1 indicates a scale-beam hung at one end portion in the manner usually practiced, and provided on its lower edge with rack-teeth 2. The poise 3 is a hollow casting having a passage, 4, for the scale-beam, and within the chamber 5 of the poise is a support, 6, composed, as here shown, of an arm, 7, having a sleeve, 8, through which passes a pivot-pin, 9, said pin preferably consisting of a metal screw, which, after passing through the sleeve, is screwed into the

rear wall, 10, of the poise in such manner that the support or arm is adapted to oscillate on the pin, the upper and lower walls, 11, of the chamber 5, in connection with a stop, 12, on the support, confining the oscillations within certain limits. The support 6 for the axis of the drive-wheel 15 is provided with an attached axle or shaft, 13, preferably in the form of a metal screw, on which is loosely arranged a sleeve, 14, having the gear-wheel 15 rigidly secured at its inner end, and a dial, 16, similarly secured at its outer end, the dial being arranged in an annular cavity, 17, at the front of the poise. The axle or shaft projects in front of the dial, and to such projecting end is secured an index or pointer, 18, held in a stationary position after its proper adjustment to the dial by the frictional contact between its sleeve and the axle or shaft. The sleeve 8 of the swinging support 6 is extended at one end to receive a spring, 19, coiled on the sleeve, and having two arms, 20, one of which bears against a fixed part of the poise—as, for example, the lower wall, 11—while the other arm is bent laterally, as at 21, to bear against the under side of the arm 7 of the support. The resiliency of the spring tends to throw the support and its attached axle or shaft toward the rack-teeth on the scale-beam, and hence holds the gear-wheel in mesh therewith by a yielding pressure, so that while the gear-wheel is thereby compelled to engage the rack-teeth the poise can be freely adjusted by a slight pressure, since the support will yield to permit the gear-wheel to more easily ride over the rack-teeth. When the poise is moved, the gear-wheel rotates, and with it the sleeve, thereby rotating the dial, the graduations on which, in connection with the index or pointer, serving to obtain the correct weight of an article or material on the scale-pan or the scale-platform, as the case may be.

The invention provides a very simple and efficient poise especially designed for use on scales to be used for light work in stores, factories, or households, and no handles and pinions are essential to rotate the dial driving wheel, as by a slight pressure on the poise itself the latter can be very easily adjusted.

Having thus described my invention, what I claim is—

1. The combination, with a poise for a scale-beam, of a pivoted swinging support, an axis
5 carrying a driving-wheel and supported by said swinging support, and a spring acting on the support to hold the driving-wheel in yielding engagement with the beam, substantially as described.
- 10 2. The combination, with a poise for a scale-beam, of a spring-impelled support, a shaft supported by said support, a sleeve loose on the shaft, a driving-wheel on the inner portion of the sleeve, a dial on the outer portion
15 of the sleeve, and an index or pointer on the

shaft in front of the dial and sleeve, substantially as described.

3. The combination of a scale-beam, a poise, a pivoted support, a shaft supported by the pivoted support, an indicator driving wheel, 20 and a spring acting on the pivoted support, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHARLES D. CARTER.

Witnesses:

H. S. SPRAGUE,
JAY CLARK.