D. G. & A. H. SANSBURY.

ICE BOX AND REFRIGERATOR SCALE.

APPLICATION FILED NOV. 5, 1908.

942,286.

Patented Dec. 7, 1909.

3 SHEETS—SHEET 1.

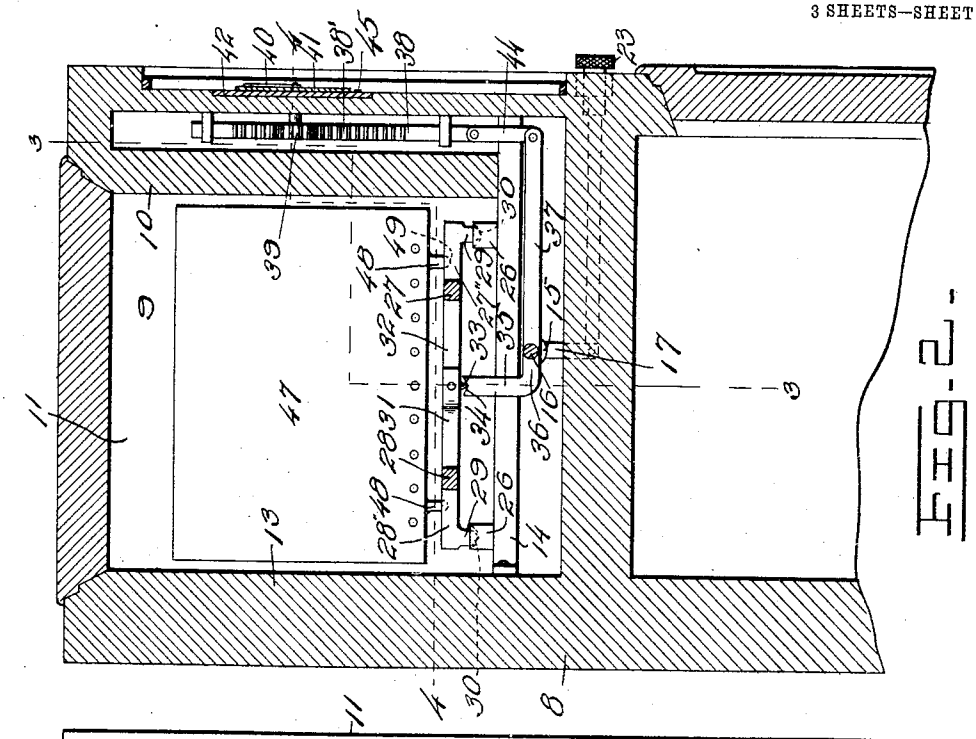


Fig. 2.

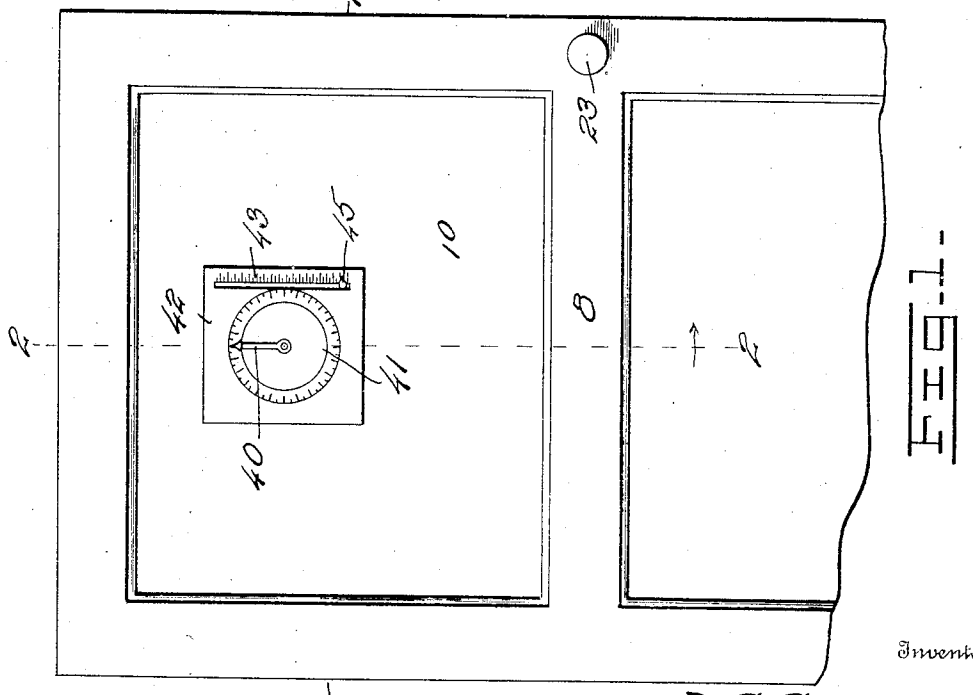


Fig. 1.

Witnesses

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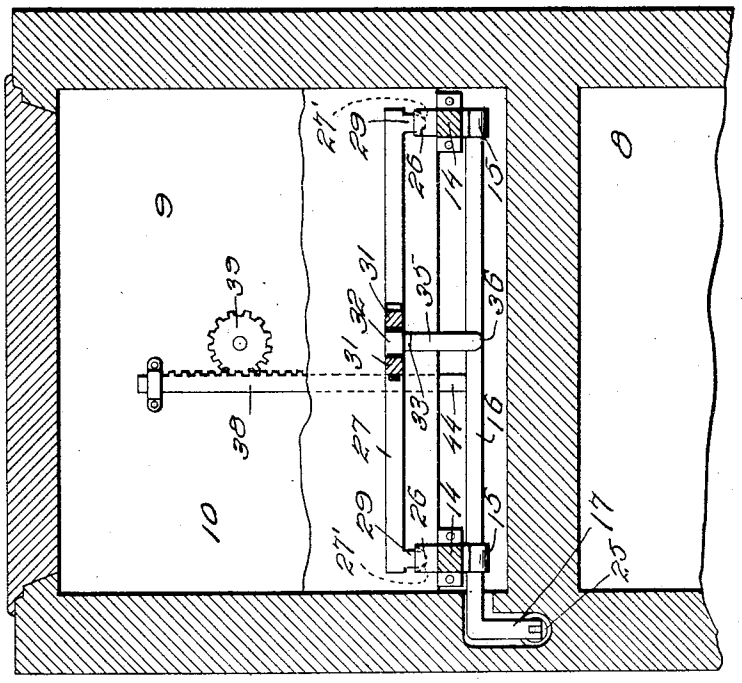


Fig. 2.

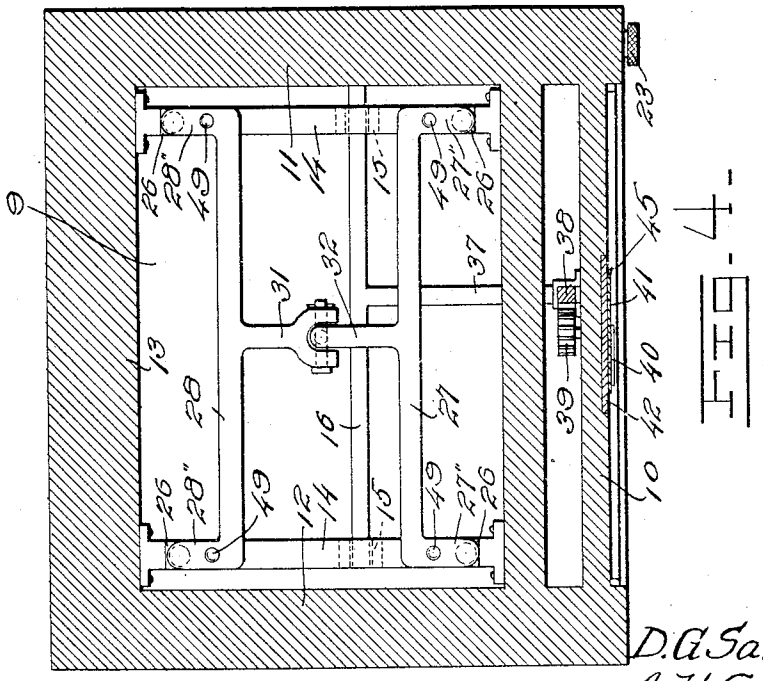


Fig. 4.

Witnesses

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3 SHEETS—SHEET 3.

Fig. 5.

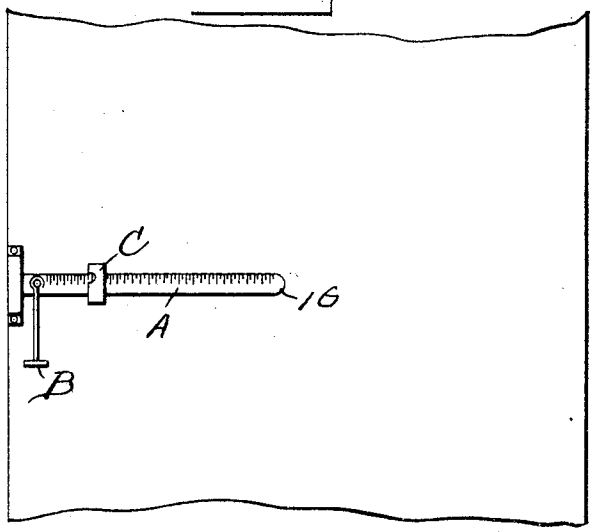


Fig. 6.

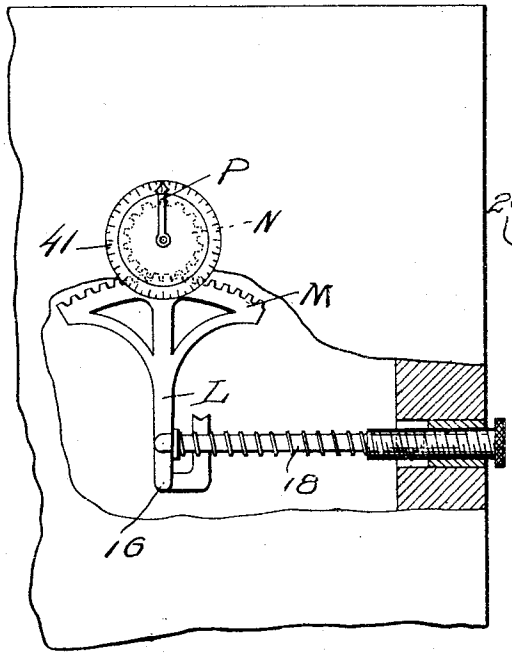
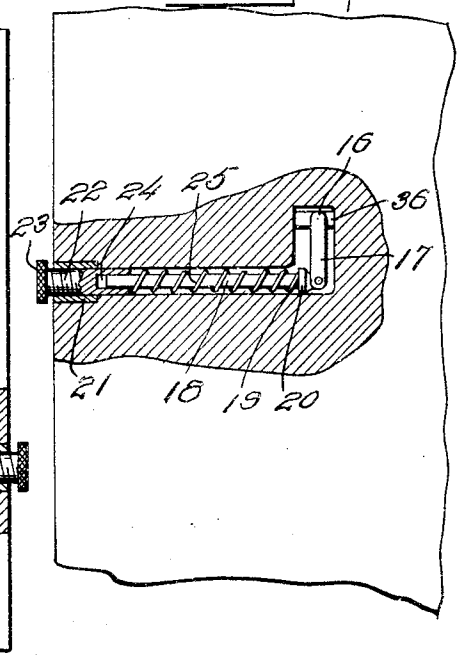


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

DUDLEY G. SANSBURY AND ADELINE H. SANSBURY, OF BROOKLYN, NEW YORK.

ICE-BOX AND REFRIGERATOR SCALE.

942,286. Specification of Letters Patent. Patented Dec. 7, 1909.

Application filed November 5, 1908. Serial No. 461,249.

To all whom it may concern:

Be it known that we, DUDLEY G. SANSBURY and ADELINE H. SANSBURY, citizens of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Ice-Box and Refrigerator Scales, of which the following is a specification.

This invention relates to scales and has for its object to provide a scale incorporated in a refrigerator and arranged to show the weight of ice contained within the refrigerator, thus making it possible to ascertain whether or not a proper quantity of ice has been deposited, and also to determine when a new supply of ice is needed.

Another object is to provide a scale arrangement which will be especially adapted for use in connection with a refrigerator, and which will be relatively simple and cheap.

Other objects and advantages will be apparent from the following description and it will be understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like characters of reference indicate similar parts in the several views, Figure 1 is a front elevation of a refrigerator provided with the present invention, Fig. 2 is a vertical section taken on line 2—2 of Fig. 1, Fig. 3 is a section taken at right-angles to Fig. 2 on line 3—3 of that figure, Fig. 4 is a section on line 4—4 of Fig. 2 with the ice container removed, Fig. 5 is a side elevation showing a slightly different form, Fig. 6 is a side view showing a different form of indicator, Fig. 7 is a sectional view through the adjusting screw, rod and spring.

Referring now to the drawings, there is shown an ice box of the usual type, indicated at 8, having an upper interior chamber 9. The ice box has a front wall 10, side wall 11 and 12, and a back wall 13.

Secured at their ends to the front and back walls 10 and 13, there are a pair of horizontal parallel bars 14. These bars 14 have a pair of transversely alining depending brackets 15, which receive a horizontal rock shaft 16, extending at one end laterally beyond the adjacent bar 14, and having at this laterally extending portion a depending arm 17 to the lower portion of which there is pivoted a forwardly extending horizontal rod 18, having an enlargement 20 at its rearward end, resulting in a shoulder 19 surrounding the rod.

An interiorly threaded sleeve 21 is carried by the forward wall of the refrigerator, and engaged within this threaded sleeve there is a threaded plug 22, having an adjusting finger piece 23 at its outer end and having in its inner end face a longitudinally extending recess 24 which receives the outer end of the rod 18. A helical spring 25 is engaged with the rod 18 between the inner end of the plug 22 and the shoulder 19, and thus the arm 17 is held yieldably against forward movement at its lower end. The plug may be operated to vary the tension of the spring as will be readily understood.

Each of the bars 14 has a pair of spaced upwardly directed fingers 26, one of these fingers 26 being located adjacent to each end of each bar, and these fingers are provided in their upper surface with arcuate sockets 27′.

A pair of horizontal spaced members 27 and 28 are disposed above the bars 14, these members extending at right angles to the bars, the member 27 being located adjacent to the forward wall of the refrigerator, and the member 28 being located adjacent to the rearward wall of the refrigerator. These members have outwardly directed laterally turned end portions 27″ and 28″ respectively, these end portions having depending feet 29 at their extremities which are rounded at their lower ends as shown at 30, and which are engaged in the sockets of the fingers 26, these sockets being indicated at 27′.

The curvature of the sockets is greater than the curvature of the feet 29, so that the feet are free to move pivotally within the sockets.

The member 28 has a forwardly extending central yoke member 31, and the member 27 has a rearwardly extending arm 32 which is pivoted at its rearward end within the yoke member 31. This point of pivotal connection is thus movable vertically, the mem-

bers 27 and 28 rocking upon their feet 29 as will be understood.

A depending knife edge 33 is carried by the arm 32 alining vertically with the axis upon which the members 31 and 32 move with respect to each other and this knife edge is received in a clutch 34 formed in the upper end of an arm 35 extending vertically and having a forwardly turned lateral lower portion 36 adjoining the shaft 16. The vertical plane of the arm 35 is thus located rearwardly of the vertical plane of the shaft 16, so that when the arm 35 is moved downwardly, the shaft 16 will be rocked to move the arm 17 forwardly at its lower end against the action of the spring 25.

A forwardly extending lever 37 is carried by the shaft 16 and is thus movable vertically at its forward end. A vertical rack bar 38 is pivoted to the lever 37, for vertical movement therewith, and has its rack 38′ meshed with a pinion 39 carrying a pointer 40, which is movable to indicate different points upon a circular scale 41 and thus indicate the weight of ice as will be later brought out.

The pinion 39 is mounted upon a plate 42, which also carries a vertical scale 43, this scale being arranged parallel with the rack bar 38, and having extended thereover a pointer 45 which is carried by the rack bar. The scale 43 is marked to correspond with the proportionate contents of the refrigerator, so that by inspecting the scale 43 and the point indicated by the pointer 45, it may be ascertained whether the ice chamber, to be later described, is one-third, one-half, or three-quarters full or the exact amount of ice contained therein as will be understood. The rack bar 38 includes a link 44, pivotally connected with the lower portion of the rack bar and pivoted to the lever 37, for proper operation of the mechanism.

A rectangular ice receiving member 47 has rounded feet 48 which are located in sockets 49 formed in the upper faces of the member 27 and 28, and it will be seen that the weight of ice within the receptacle 47 will cause the members 27 and 28 to rock upon their feet 29, thus moving the knife edge 33 downwardly and operating the indicating mechanism.

Suitable drain and air circulating openings will of course be provided, as will be understood.

In Fig. 5 there is shown a form of the invention in which a balance arm A is connected with the shaft 16, and has a depending weight plate B and a sliding poise C. This balance arm may or may not be used in connection with the indicator described in the foregoing.

In Fig. 6, there is shown a different form of indicator, in which the shaft 16, is provided with an upwardly extending fixed arm L having a rack segment M at its upper end, meshing with a pinion N, corresponding to the pinion 39, and carrying a pointer P corresponding to the pointer 40 and movable over a circular scale 41. In this form of the invention, the arm 17 is omitted, and the rod 18 is pivoted directly to the upwardly extending arm L.

What is claimed is:—

1. The combination with an ice box, of a pair of supporting bars mounted therein, said supporting bars having sockets in their upper faces, a pair of pivotally connected members, rounded feet carried by the pivotally connected members and engaged in the sockets, the pivot point of the members lying inwardly of the feet, a shaft pivotally connected with the supporting bars for rocking movement, connections between the pivot point of the two members and the shaft for rotation of the shaft when the pivot point is mounted downwardly, an indicator mounted upon the outer surface of the ice box, connections between the indicator and the shaft for operation of the indicator when the shaft is rocked, and adjustable means for holding the shaft yieldably against rocking motion.

2. In a scale structure, the combination with parallel members, of a transverse shaft pivotally connected with the members, upwardly extending projections carried by the members, said projections having arcuate sockets in their upper faces, a pair of spaced members disposed transversely of the supporting members and extending across the space between the supporting members, said second named members having outwardly turned end portions, depending rounded feet carried by the end portions and engaged in the sockets of the projections, inwardly extending members carried by the second named members, said inwardly extending members being pivotally connected, said second named members having arcuate sockets in their upper faces inwardly of their feet, an ice receptacle having depending rounded projections engaged in the sockets of the second named members, a laterally and upwardly extending arm carried by the shaft, said arm having a notch at its upper end, a knife edge, connected with the pivoted members and resting in the notch of the arm, a lever connected with the shaft and extending oppositely from the arm, a rack bar connected with the lever and extending upwardly therefrom, an indicator connected with the rack bar, said indicator being arranged to show the weight of matter within the receptacle, a scale located adjacent to the rack bar, a pointer carried by the rack bar and arranged to indicate different points upon the scale, a depending arm

carried by the shaft, a forwardly extending rod pivotally connected with the depending arm, a helical spring engaged with the rod and arranged to hold the lower end of the depending arm against forward movement, and means for varying the tension of the spring.

In testimony whereof we affix our signatures, in presence of two witnesses.

DUDLEY G. SANSBURY.
ADELINE H. SANSBURY.

Witnesses:
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HARRY OTTENS.