

(Model.)

2 Sheets—Sheet 1

M. KNOTTS.
Grain Tally.

No. 243,072.

Patented June 21, 1881.

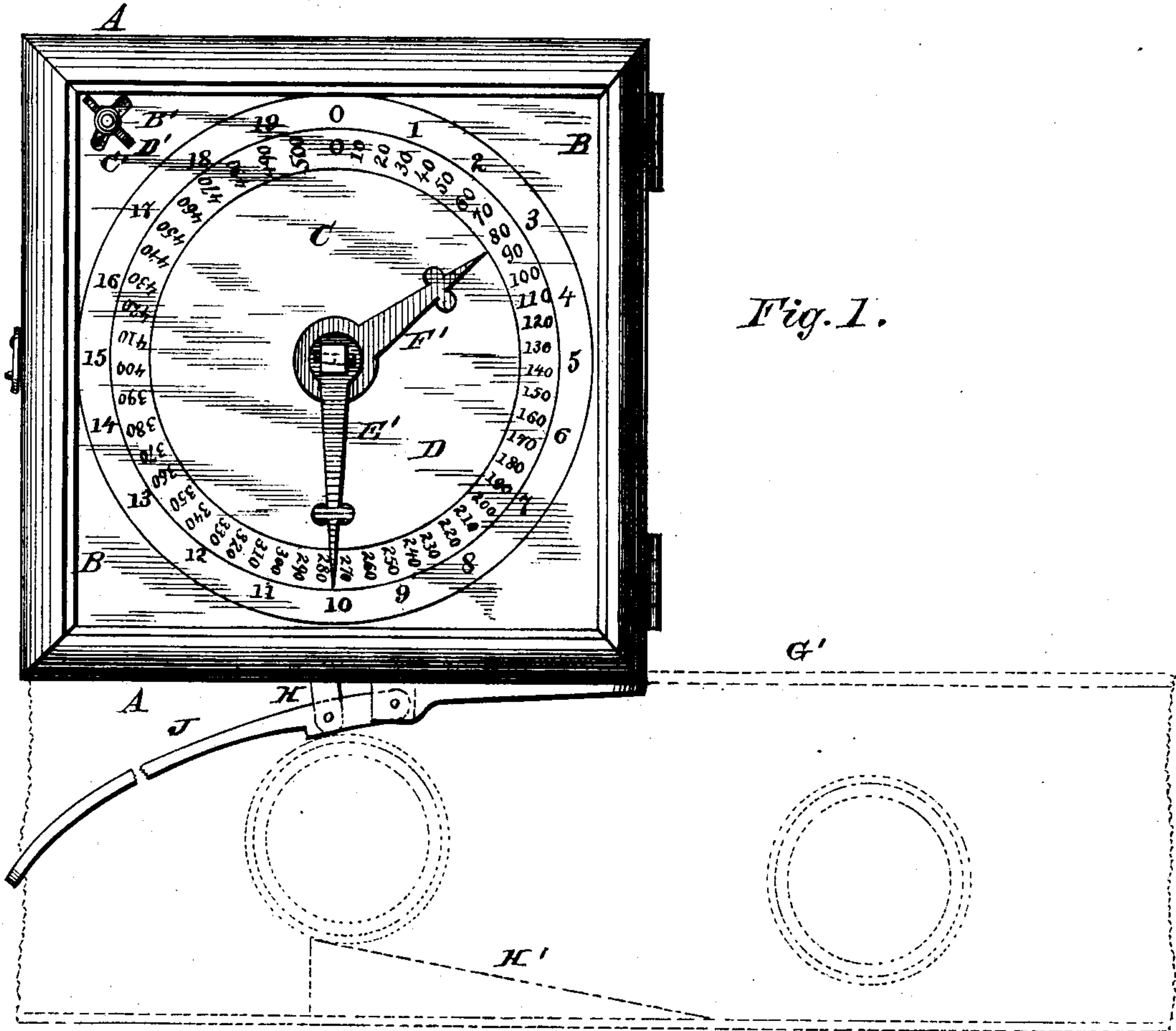


Fig. 1.

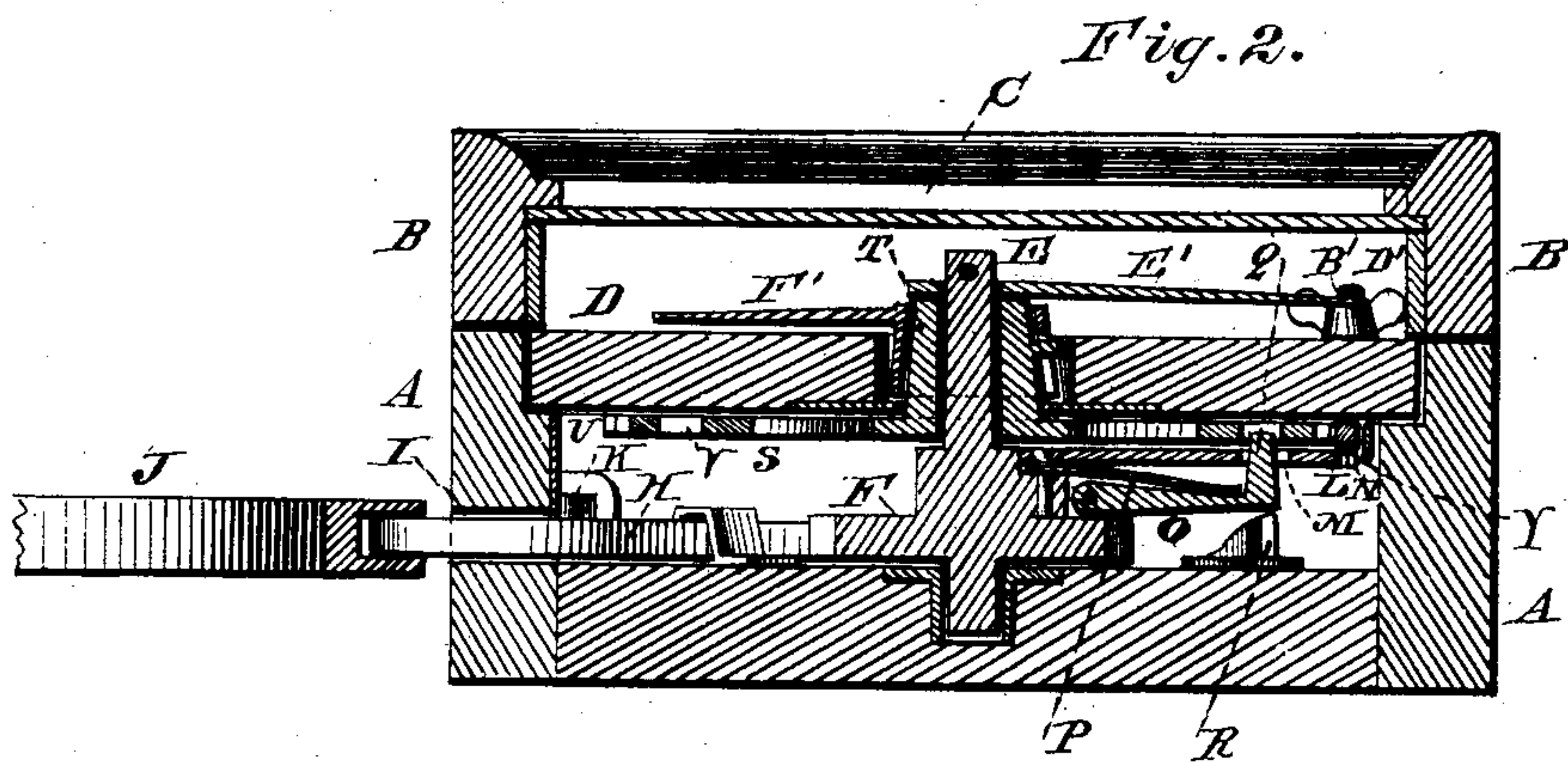


Fig. 2.

WITNESSES

Wm. L. Dietrich,
P. C. Dietrich.

By *his* Attorneys

INVENTOR

M. Knotts,
C. A. Snow & Co.

(Model.)

2 Sheets—Sheet 2.

M. KNOTTS.
Grain Tally.

No. 243,072.

Patented June 21, 1881.

Fig. 3.

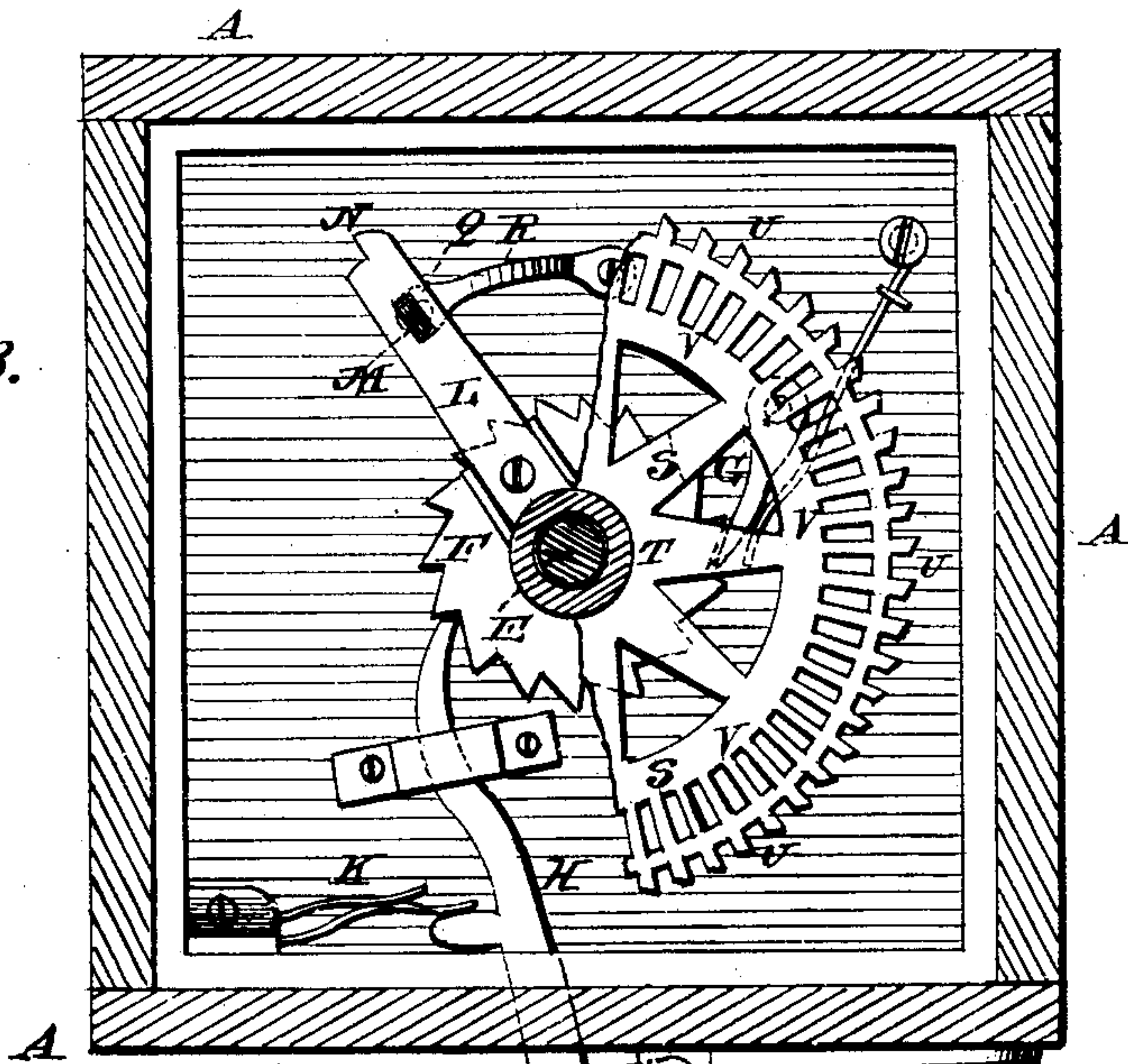


Fig. 4.

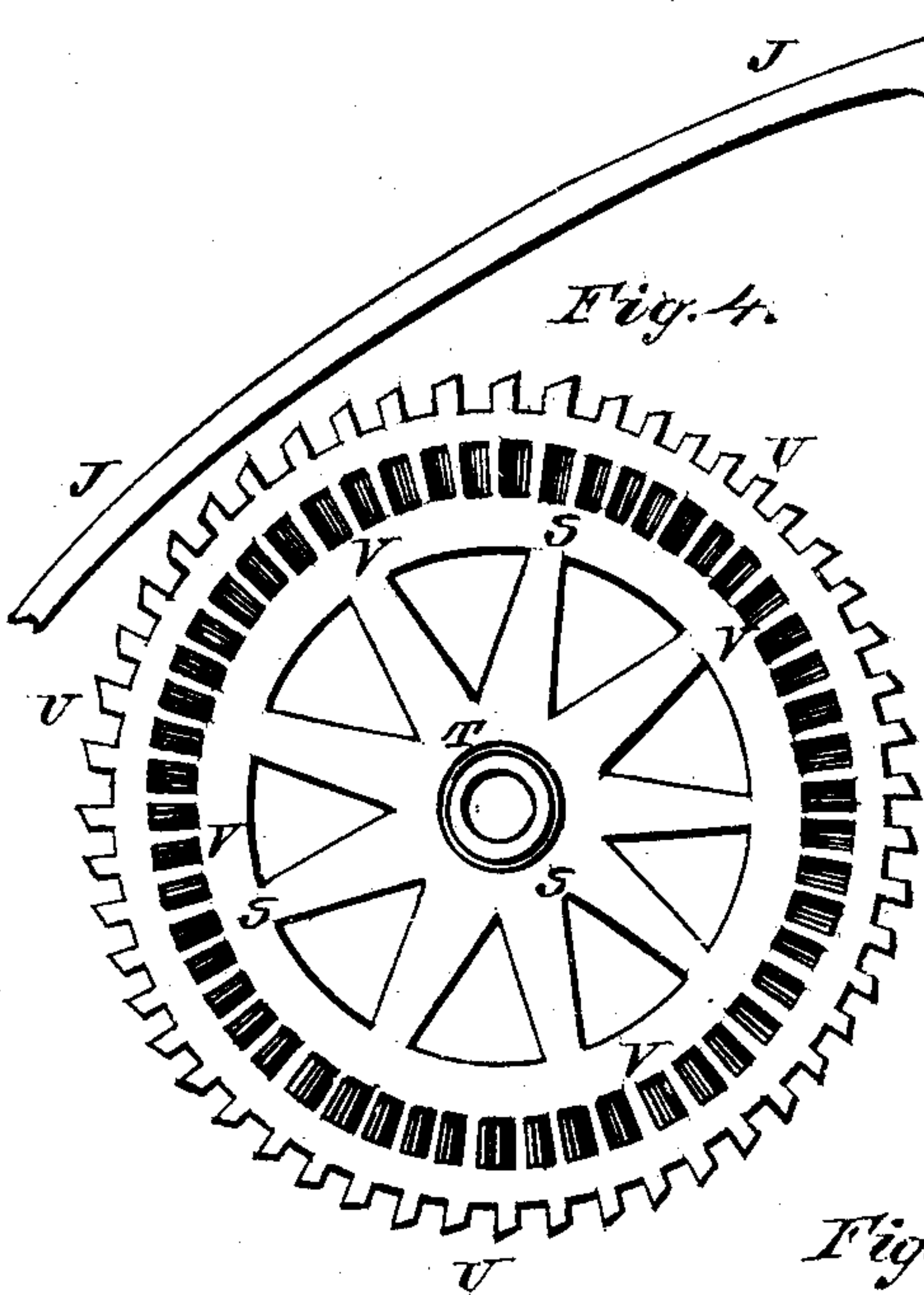


Fig. 5.

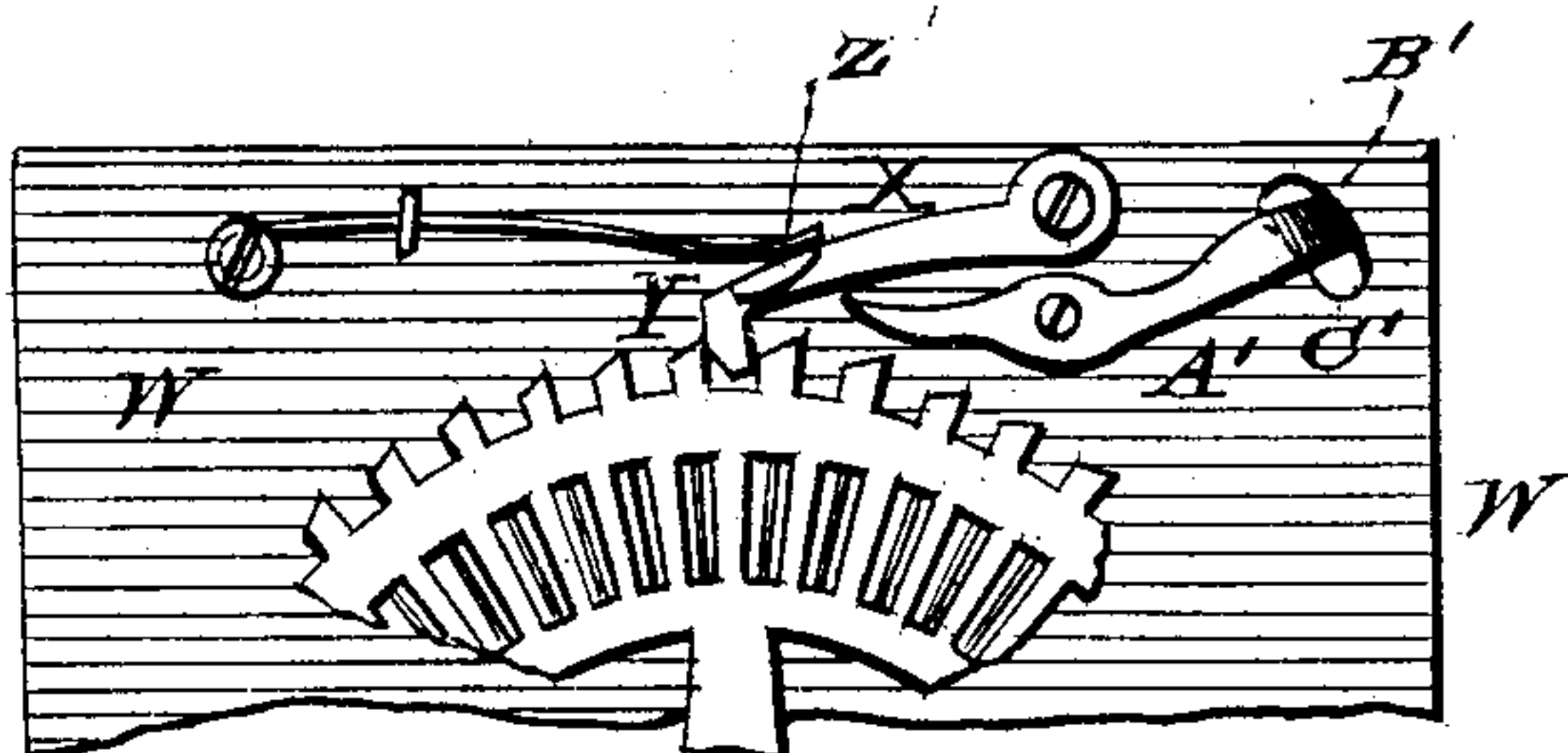
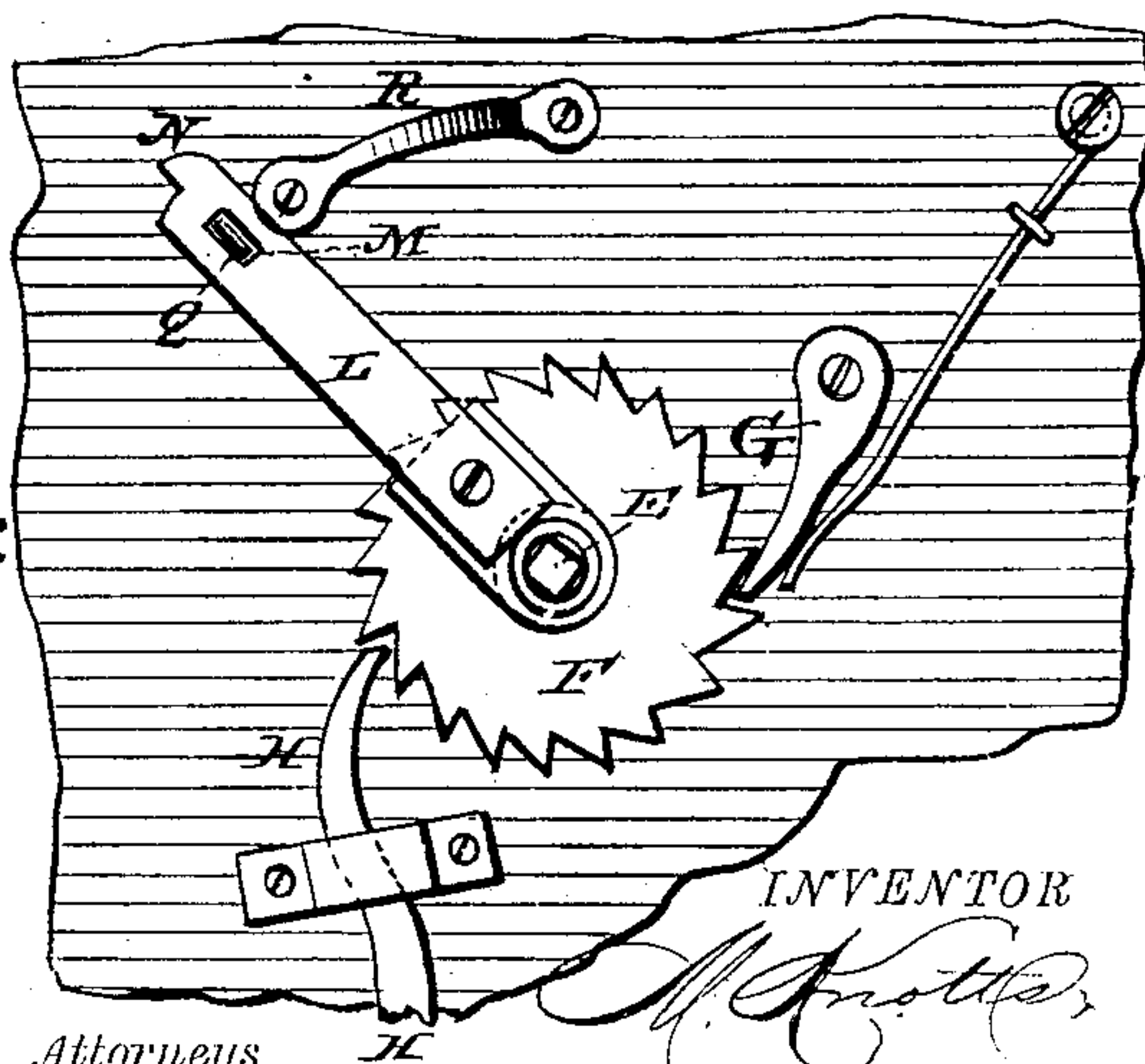


Fig. 6.



WITNESSES

Fred. L. Dieterich
F. B. Dieterich

By his Attorneys

Chas. Snow & Co.

INVENTOR

M. Knotts

UNITED STATES PATENT OFFICE.

MARCELLUS KNOTTS, OF FELLOWSVILLE, WEST VIRGINIA.

GRAIN-TALLY.

SPECIFICATION forming part of Letters Patent No. 243,072, dated June 21, 1881.

Application filed March 23, 1881. (Model.)

To all whom it may concern :

Be it known that I, MARCELLUS KNOTTS, of Fellowsville, in the county of Preston and State of West Virginia, have invented certain
5 new and useful Improvements in Grain-Registers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use
10 the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a plan view of my improved grain-register, showing the same in position
15 for operation in connection with a slide-board or trough. Fig. 2 is a vertical sectional view of the register. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail view of the main dial-wheel. Fig. 5 is a detail view of the stop or
20 pawl mechanism for holding the same, and Fig. 6 is a detail view of the operating mechanism.

Corresponding parts in the several figures are denoted by like letters of reference.

25 This invention relates to measuring dials or registers; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claims.

30 In the drawings hereto annexed, A represents a suitable box, the cover of which, B, is provided with a glass or pane, C, through which the dial D may be plainly seen. A vertical spindle or arbor, E, mounted centrally in the
35 box A, carries a ratchet-wheel, F, having, say, twenty (20) teeth. A spring-pawl, G, pivoted in the bottom of the box, engages the ratchet-wheel F to hold it in any desired position to which it may be moved by a dog, H, extending
40 through a slot, I, in the side of the box, and pivoted to a lever, J, by which it is operated. A spring, K, is suitably arranged to force the dog H in an outward direction, as shown, thus carrying the lever J to an outward-extended
45 position, for the purpose which will be hereinafter fully described.

The ratchet-wheel F is provided with a radially-extending arm, L, having near its end a vertical slot, M, and at its end a beveled
50 tooth, N. A lever, O, pivoted to the under side of arm L and forced in a downward direc-

tion by a spring, P, carries at its end a beveled tooth, Q, fitting in the slot M of arm L, through which it may be forced upwardly by pressure exerted upon the under side of lever
55 O. Such pressure is exerted or applied once in each revolution of the ratchet-wheel F by an inclined stud, R, fixed in the bottom of box A, so as to strike the under side of lever O at the proper time.

60 S is the main dial-wheel, which is provided with a collar, T, by which it is journaled upon the arbor E above the fixed ratchet-wheel F. The wheel S is provided with a circumferential series of beveled teeth, U—say fifty in number—adjoining each of which is formed a beveled radial recess or slot, V.

W is the dial, upon the under side of which is pivoted a spring-pawl, X, having a beveled tooth, Y, engaging the teeth of the wheel S,
70 so as to retain the latter in any position to which it may be adjusted, and a downward-projecting tooth, Z, adapted to be struck or engaged by the beveled tooth N of arm L when the ratchet-wheel F revolves. A lever, A', pivoted to the under side of the dial, may be employed to force the pawl X in an outward direction, so as to disengage the tooth Y from the dial-wheel, which may then revolve freely.
75 The said lever A' is provided at its outer extremity with an upward-projecting arm, B', working in a segmental slot, C', in the dial, and provided with a thumb-nut, D', by which it may be secured in any desired position.

80 The arbor E carries a long hand, E', pointing to figures from 1 to 20 upon the dial, indicating from one to twenty half-bushels; and the collar T of the dial-wheel S carries a short hand, F', pointing to figures from 10 to 500 upon the dial, indicating so many bushels.

90 The device is, by preference, to be attached to a board or trough, G', beyond the face of which the lever J projects, as shown. The opposite side of the said trough is provided with an inclined or triangular guide, H', as shown. 95 When a measure—say one half-bushel—placed at the front end of the trough is full, it is to be drawn back till it strikes the guide H', by which it is forced over against and past lever J, which is thereby operated, thus operating
100 the register. The lever J, when forced back, forces the dog H in an inward direction, thus

rotating the ratchet-wheel F for the space of one tooth and moving the long hand or pointer forward one space upon the dial. When the ratchet-wheel F has completed one revolution the arm L strikes the tooth Z of spring-pawl X, thus releasing the latter from the teeth of the dial-wheel and permitting the latter to be moved forward for the space of one tooth by the tooth Q of lever O, which has at the same time been forced upward through slot M in arm L by means of the incline R, thus engaging one of the beveled recesses or slots V in the dial-wheel S. The short hand is thus moved forward one space upon the dial, indicating that ten bushels of grain have been measured.

To set the device for operation, the thumb screw or nut D' of lever A' is released, thus enabling the said lever to be moved forward to disengage the spring-pawl X from the dial-wheel. The said wheel S may then be moved by means of the short hand until the latter reaches zero. The long hand may then be adjusted to the same position, and the device is ready for operation.

My improved registering device is simple, inexpensive, convenient, easily operated, and cannot get out of order by ordinary usage.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a grain-register, the combination of the arbor E, having ratchet-wheel F, provided with arm L, having slot M, beveled tooth N, and spring-lever O, having tooth Q, the beveled stud R, the dial-wheel S, having teeth U, and radial recesses or slots V, mechanism, substantially as described, for operating the ratchet-wheel F and for arresting the dial-wheel S, and suitable indicators or pointers, all arranged and operating substantially as herein described, for the purpose shown and specified.

2. The herein-described dial-wheel S, having beveled teeth U and radial beveled slots or recesses V, substantially as herein described, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

MARCELLUS KNOTTS.

Witnesses:

ROBERT E. HANWAY,
PHILIP S. KNOTTS.