No. 720,507. PATENTED FEB. 10, 1903.

C. M. VAN HORN.

TRAMMEL.

APPLICATION FILED JUNE 30, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1,

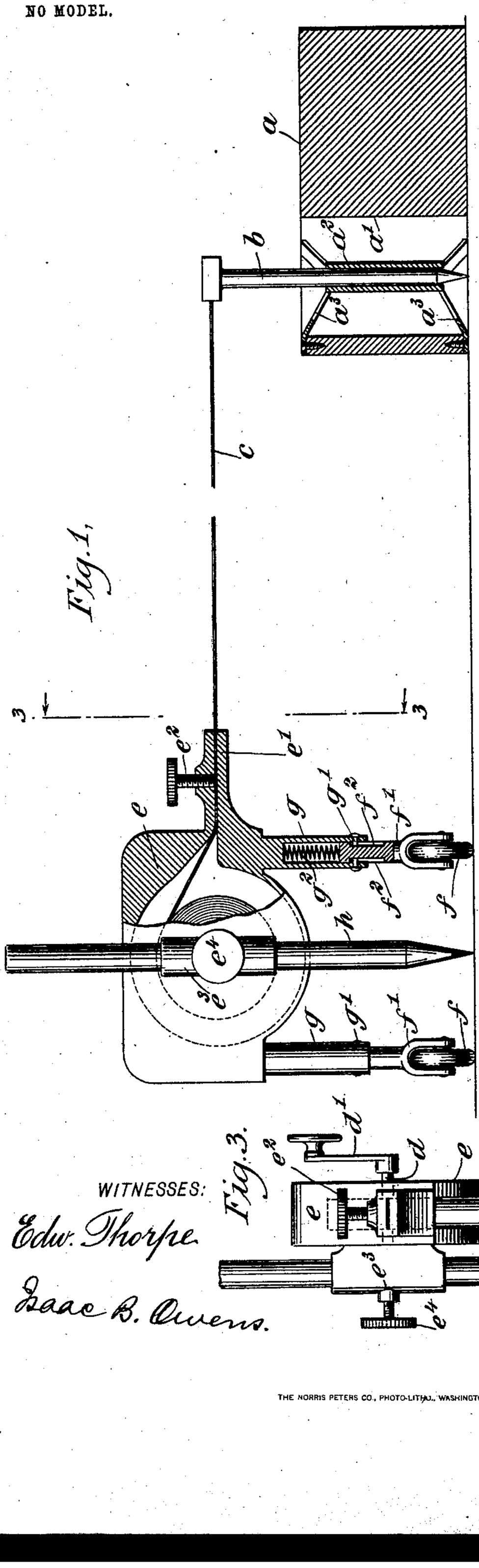
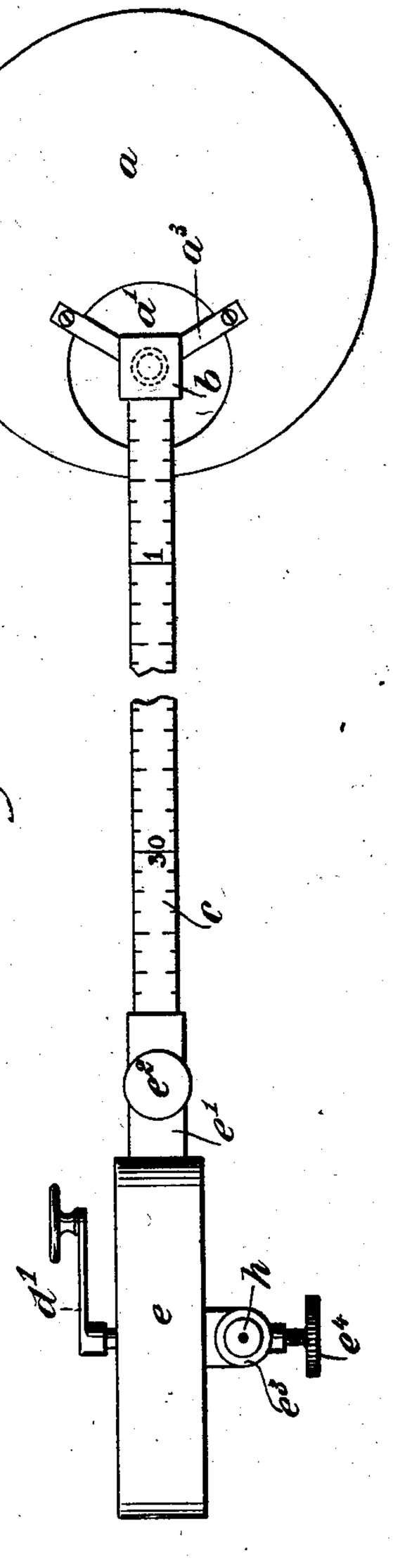


Fig. 2,



WITNESSES:

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Isaac B. Owens.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

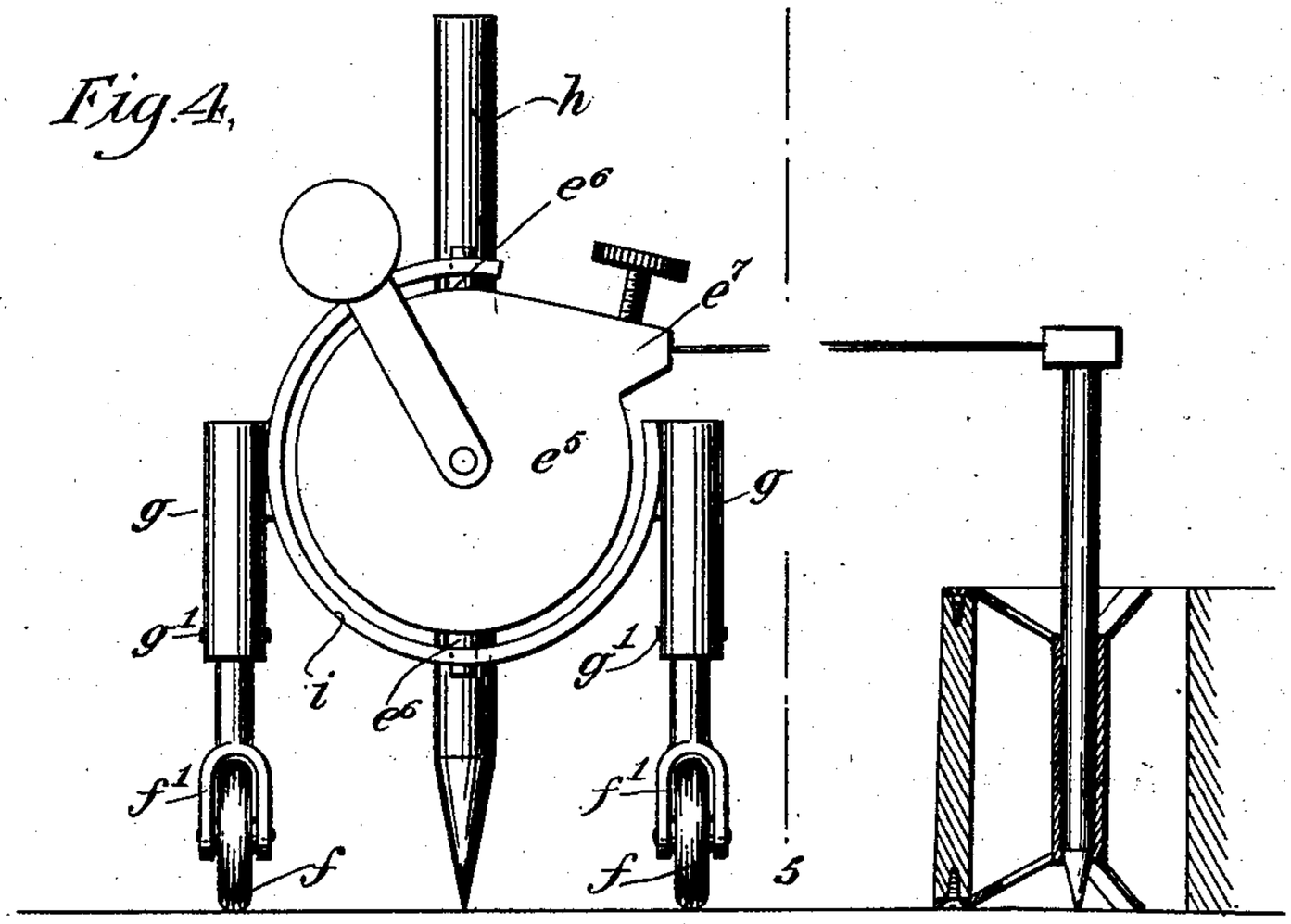
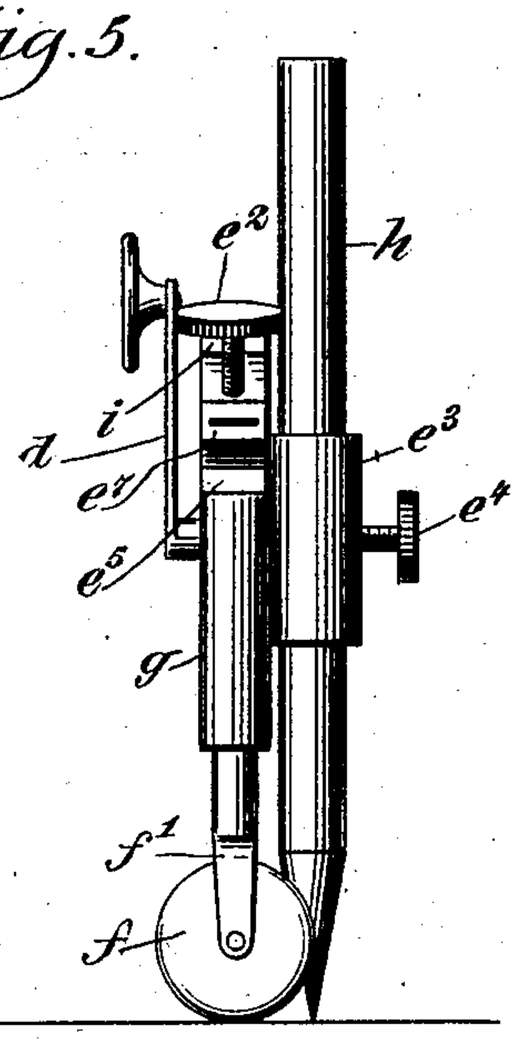


Fig. 5.



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CHARLES M. VAN HORN, OF PRINCEBAY, NEW YORK.

TRAMMEL.

SPECIFICATION forming part of Letters Patent No. 720,507, dated February 10, 1903.

Application filed June 30, 1902. Serial No. 113,790. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. VAN HORN, a citizen of the United States, and a resident of the city of New York, Princebay, borough of Richmond, in the county of Richmond and State of New York, have invented a new and Improved Trammel, of which the following is a full, clear, and exact description.

The purpose of this invention is to enable arcs and radii of circles to be accurately described, particularly on large circles, such as are employed in architectural work. To this end I employ a peculiarly-constructed marking instrument, to which is connected one end of a tape, the other end of the tape being connected with a center pin and holding device. By running the marker along the tape any desired radius may be attained and the arc described by sweeping the marking device around the center pin.

This specification is an exact description of two examples of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional elevation of the invention. Fig. 2 is a plan view thereof. Fig. 3 is an end elevation of the marking device with the tape in section on the line 3 3 of Fig. 1. Fig. 4 is a side view of the improvement, showing a slight modification of the marking device; and Fig. 5 is an end elevation with the tape in section on the line 5 5 in Fig. 4.

a indicates the holding-block for the center pin b. This block is formed with a central orifice a' at one side of the center, and in this orifice is held a vertically-disposed sleeve a^2 by means of braces, as shown. The center pin b is pointed at its lower end and fits loosely in the sleeve a^2. To the upper end of the center pin is connected the tape c, the end of the tape being firmly connected to the center pin, as shown. The other end of the tape is wound around a spindle or shaft d, mounted to turn in a case e and having a handle d' attached, over which the tape is wound. The intermediate portion of the tape runs loosely through the mouth e' of the case, and a set-screw e^2 works in the mouth, so as to fasten the tape therein. The case is provided with carrying-wheels f, which are mounted in forks f', the stems of which are formed with longitudinal slots f^2, loosely receiving pins g', carried by the socket pieces or tubes g of the case e. The stems of the fork f' are freely movable in the socket pieces or tubes g within the limits of the slots f^2. They are prevented from turning by the engagement of the pins g' with the walls of these slots.

g^2 indicates springs, which are fitted in the tubes g and serve yieldingly to support the case e.

h indicates the marking-tool or pencil, and this is held in a sleeve e^3 in the case e, and a set-screw e^4 is provided to permit the adjustment of the marking-tool or pencil.

In the use of the invention, as shown in Figs. 1 to 3, the pencil h is adjusted so that under the action of the springs g^2 its point will lie normally above the surface on which the instrument is rested. The holding weight or block a should then be adjusted with the pin b directly in the center of the arc which is to be struck. This pin is then pressed slightly into the floor or other surface on which the apparatus is rested. The set-screw e^2 should then be loosened and the marking device run out on the tape until the desired distance is reached. Then the set-screw e^2 should be tightened. The distance between the set-screw e^2 and the pencil h should previously have been ascertained and provision for this made by altering the graduations on the tape, so that the tape when read at the mouth e' of the case e will show the actual distance between the pencil h and the center pin b. After the radius has been adjusted by swinging the marking device around on its wheels f and keeping the tape c taut the arc will be described.

The device may be used to describe an arc of any radius within the limit of the tape, and large arcs may be very conveniently and accurately marked much more readily than heretofore, where the long stick or rod of wood was employed very much in the manner of the well-known beam-compass.

The modification shown in Figs. 4 and 5 is essentially the same as the construction shown in Figs. 1 to 3, with the exception that

the case e^5 is held by pivots e^6 in a frame i, this frame carrying the case and also carrying the pencil h. The frame i is sustained by the wheels f and their appurtenant parts, as described with reference to the other figures. The pivots e^6 are extended vertically, and therefore the case e is capable of turning around a vertical axis. This enables the case to be swung to any position desired without disturbing the proper alinement of the tape. The frame i is preferably of arc-shaped form, describing almost a circle, and the break in said circle permitting the mouth e^7 of the case to project outward without interference with the other parts.

Various changes in the form and details of my invention may be resorted to at will without departing from the spirit thereof. Hence I consider myself entitled to all forms of the invention as may lie within the intent of my claims.

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

1. A trammel, comprising a marking device, a tape carried by the marking device, and a weighted holding device consisting of a block having an opening therein, and a pin movably mounted in the said opening with its upper end projecting above the block and to which the free end of the tape is secured.

2. A trammel, comprising a marking device, a tape, a holding device connected with the marking device by the tape, said holding device comprising a weight with an eccentric opening therein, a sleeve held in the opening, and a center pin loosely fitted in the sleeve and having the tape connected therewith.

3. In a trammel, a marking device comprising a case, sliding and spring-pressed supports mounted in the case, wheels carried by said supports, a shaft mounted in the case, a tape winding on the shaft, and a marking-tool or pencil carried by the case.

4. A trammel, comprising a wheeled support, a marker carried by the support, a shaft mounted in said support, a tape winding on said shaft, and a weighted holding device to which one end of the tape is secured.

5. A trammel, comprising a marking device consisting of a wheel-supported casing, a marker, and a shaft mounted in the casing, a holding device having a pin movable therein, and a tape winding on the shaft of the casing and secured to the holding device.

6. A trammel, comprising a tape, a case, means carried by the case containing the tape for winding and unwinding the tape, a frame in which the case is pivotally mounted, and a marking-tool sustained on the frame.

7. A trammel, comprising a tape, a case having a mouth through which the tape is movable, a winding device in the case and connected with the tape, a frame in which the case is pivotally mounted, said frame being broken away to permit the mouth to project beyond it, and a marking-tool carried by the case.

8. In a trammel, a case having a mouth and provided with sockets, forks in which rollers are mounted working in the sockets, springs in the sockets and engaging the ends of the shanks of the forks, a tape carried by the case and extending out through the mouth thereof, and a marking-tool or pencil carried by the case.

9. A trammel, comprising a holding device consisting of a block and a pin movably mounted therein, a case having an opening in one side and mounted upon spring-pressed wheels, a shaft mounted in the case, a tape having one end secured to the shaft and its other end to the pin of the holding device, and a marker or pencil carried by the case.

10. A trammel, comprising a wheel-supported frame, a case pivotally mounted in the frame, a shaft mounted in the case, a tape winding on the shaft and extending out through the case, and a marking-tool carried by the case.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES M. VAN HORN.

Witnesses:
ISAAC B. OWENS,
JNO. M. RITTER.