

(No Model.)

V. ANGERER.
RAILWAY SWITCH.

No. 504,649.

Patented Sept. 5, 1893.

FIG. 1.

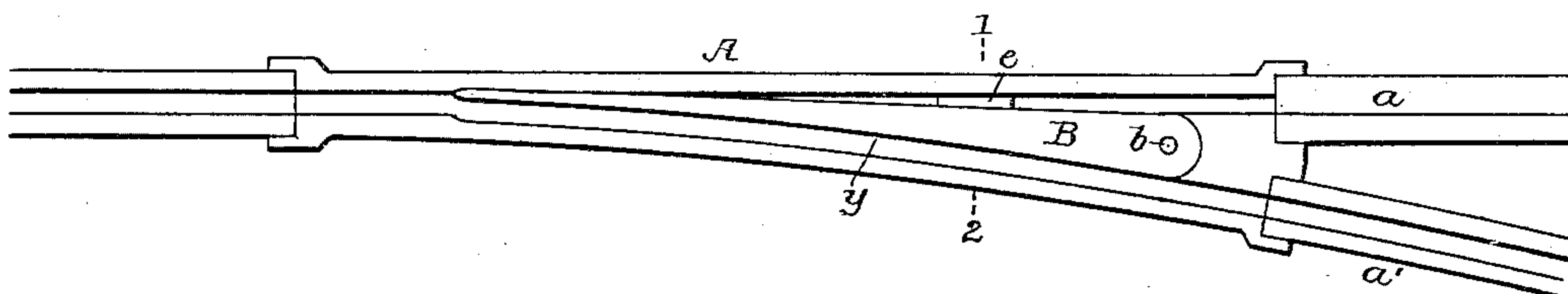
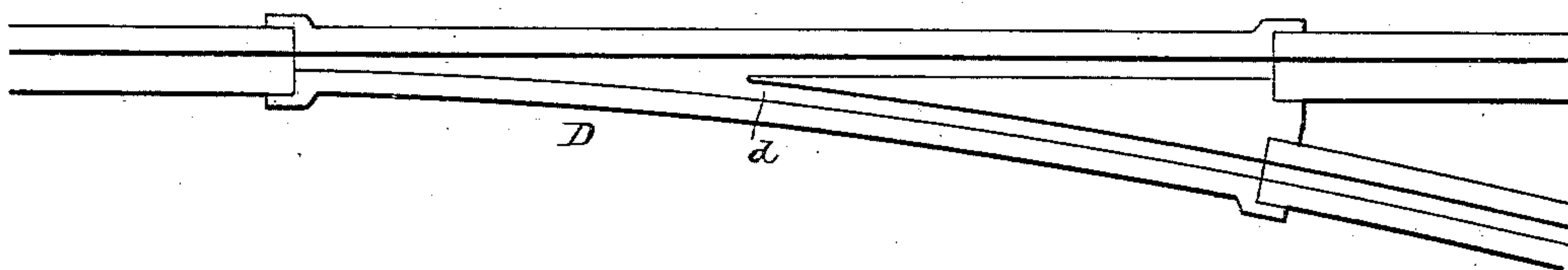


FIG. 2.



FIG. 3.

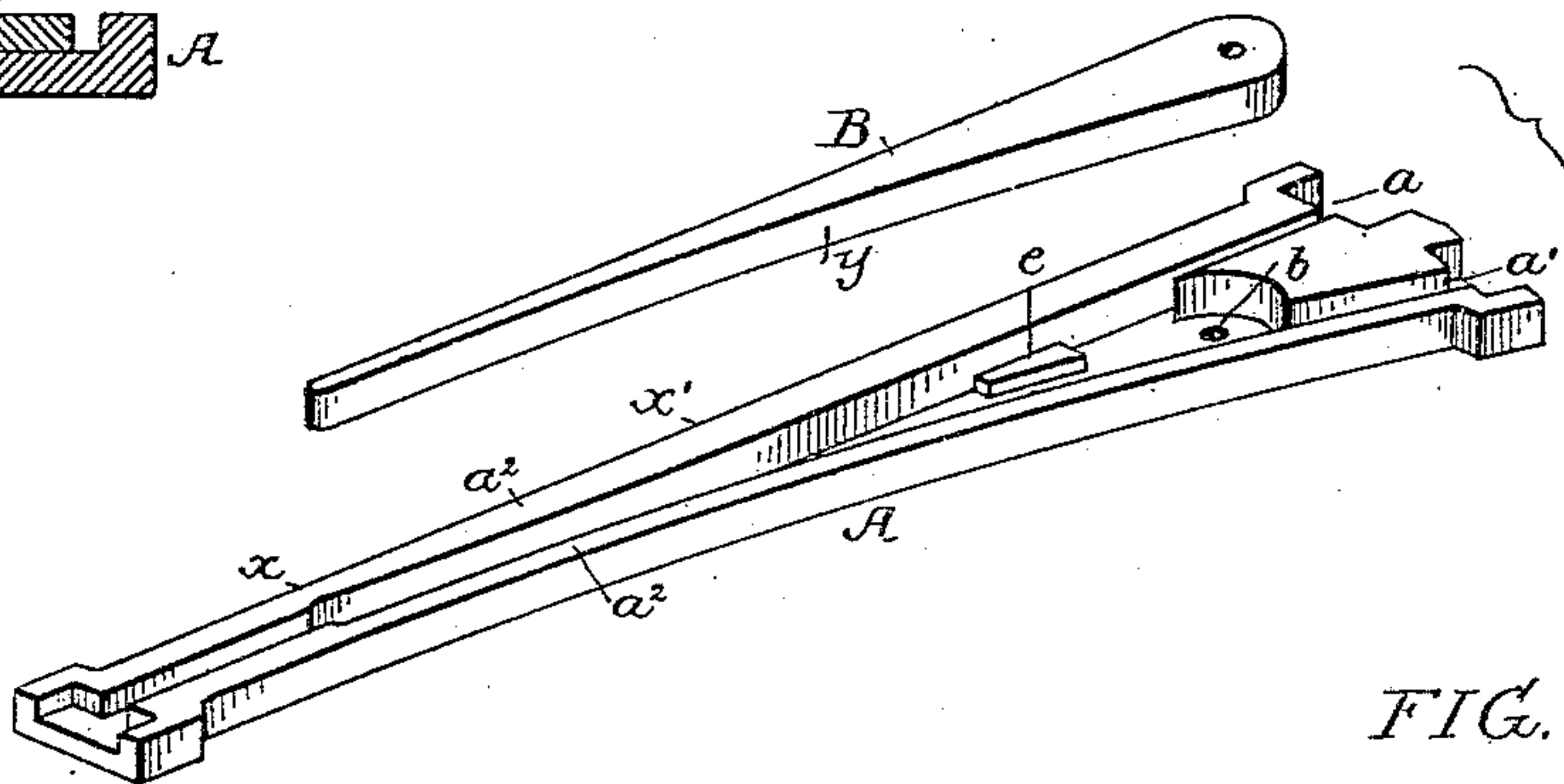
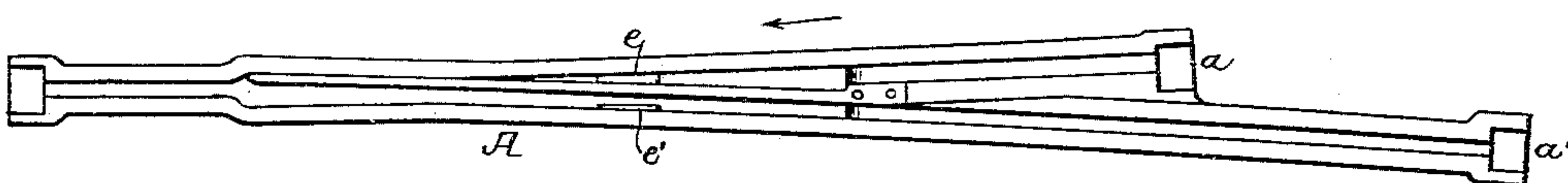


FIG. 4.



FIG. 5.



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UNITED STATES PATENT OFFICE.

VICTOR ANGERER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
WILLIAM WHARTON, JR., & COMPANY, INCORPORATED, OF SAME PLACE.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 504,649, dated September 5, 1893.

Application filed January 5, 1893. Serial No. 457,302. (No model.)

To all whom it may concern:

Be it known that I, VICTOR ANGERER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Railway-Switches, of which the following is a specification.

The object of my invention is to counteract the tendency of the movable tongue of a railway switch, of the street railway type, to spring or bend sidewise by the thrust of the car wheel, striking it. When the wheels pass from the main track to the siding or turn out, they are apt to strike the tongue midway between the pivot and the supported end, and bend the tongue sufficiently so that the flange of the wheel running on the mate is liable to strike hard against the point thereon, and it is to overcome this objection and to prevent the bending of the movable tongue that my invention relates.

In the accompanying drawings:—Figure 1, is a plan view illustrating my invention as applied to the ordinary movable tongue switch. Fig. 2, is a sectional view on the line 1—2, Fig. 1. Fig. 3, is a perspective view of the switch casting with the tongue removed to more clearly illustrate my invention. Fig. 4, is a view of a modification of my invention; and Fig. 5, is a view illustrating my invention as applied to a spring tongue switch.

A is the switch having the groove *a* for the flanges of the wheel traveling the main track, and grooves *a'* aligning with the siding track.

B is the movable tongue pivoted at *b* to the switch piece, and its point is adapted to rest in recesses *a*² on either side of the same. The bearing for the switch tongue B extends from the line *x* to the line *x'*, but from the line *x'* to the pivot *b* the tongue is unsupported, and as the tongues are long and slender, there is a considerable portion of the tongue unsupported.

When a car is to be transferred from the main track to the turn out or siding, the wheels will in many cases, strike the tongue at the point *y*, and will often cause the tongue to yield sufficiently to prevent the wheel on

the opposite side from aligning correctly, and its flange will strike the point *d* of the mate D, thus in time wearing it away, and at the same time causing a jar to the car. To overcome this I preferably cast a stop *e* on the switch piece between the line *x'* and the pivot, this stop projecting sufficiently so that the tongue will bear against the stop, but the stop must not project into the path of the flange of the wheel traversing the main track. Thus when the tongue is moved to the position shown in Figs. 1 and 2, it will rest against the stop, and will resist the thrust of the car wheel, and prevent the springing of the tongue, and insuring the proper alignment of the wheel traversing the mate. This stop may in some instances, extend from the pivot point to the point where the tongue is supported by the guard, and the stop may be formed of a separate piece and secured to the switch piece, or may form part of the tongue as shown in Fig. 4.

In Fig. 5, I have shown my invention as applied to a spring tongue switch. In this case it is very essential, as the tongue must have sufficient spring to allow a car wheel to open it when moving in the direction of the arrow; consequently the tongue is weak, and will readily yield to any side pressure, and by inserting the stop *e* as shown at the point indicated, it will resist the pressure upon the tongue. A stop *e'* may in some instances, be placed on the opposite side of the tongue as shown in Fig. 5, without departing from my invention.

The invention can be applied to any switch piece formed at rails as well as to switch pieces consisting of solid castings.

I claim as my invention—

1. The combination in a movable tongue switch, of the tongue pivoted in said switch and having a side support at the opposite end of said tongue, and a stop situated along-side of the tongue between the pivot point and said support adapted to resist the side thrust of the wheels and limit the bending of the tongue, substantially as described.

2. The combination, in a movable tongue

switch, of the pivoted tongue, a bearing for
the outer end of the tongue and a stop situ-
ated alongside of the tongue between the
bearing point and the pivot, said stops form-
5 ing part of the switch and adapted to resist
the side thrust of the wheels, substantially
as described.

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

VICTOR ANGERER.

Witnesses:

WILLIAM D. CONNER,
JOSEPH H. KLEIN.