

No. 661,540.

Patented Nov. 13, 1900.

C. F. KRESS, JR.
RAILWAY SWITCH.

(Application filed Mar. 19, 1900.)

(No Model.)



Fig. 1.

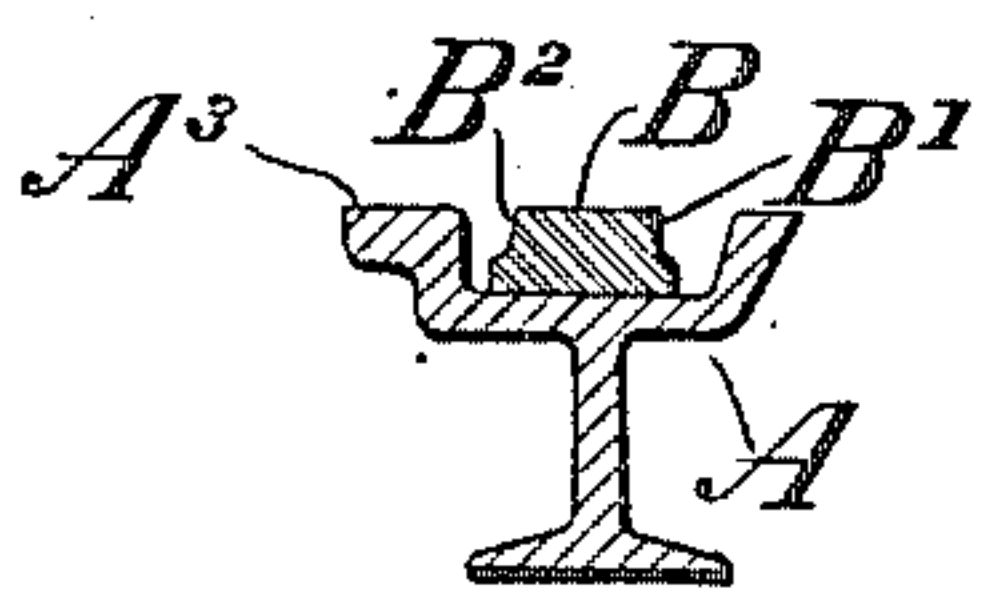


Fig. 2.

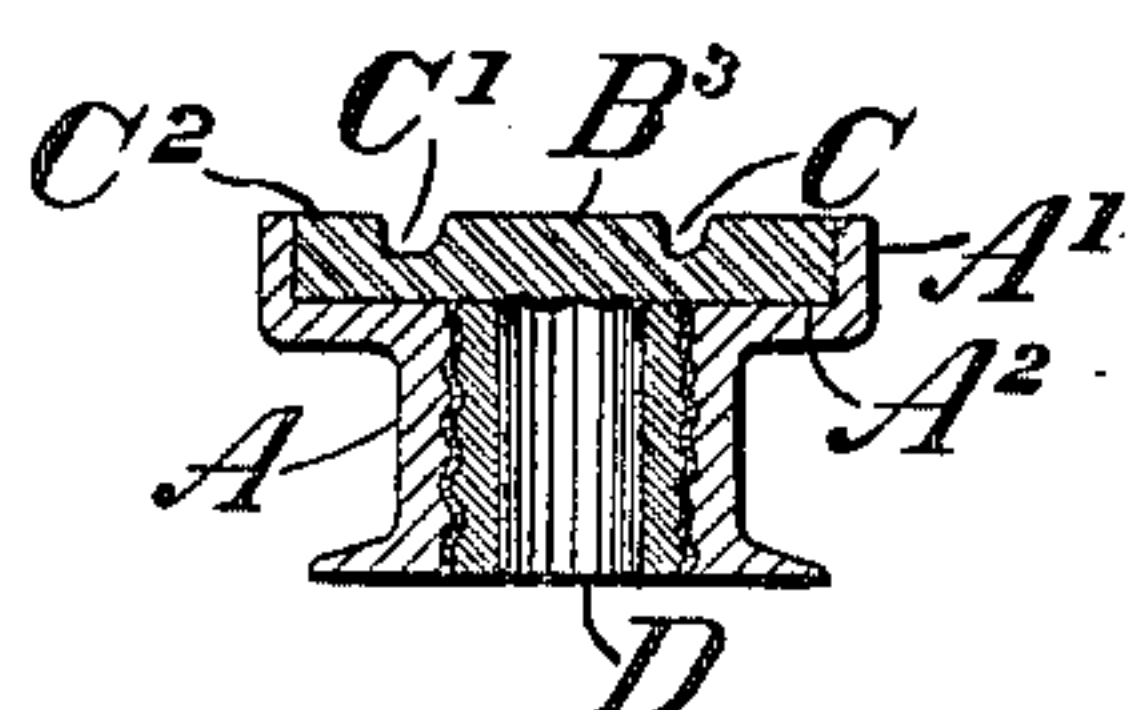


Fig. 3.

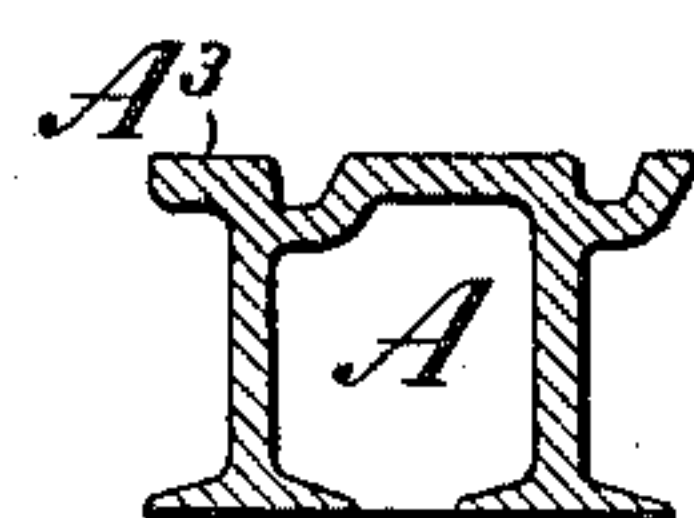


Fig. 4.

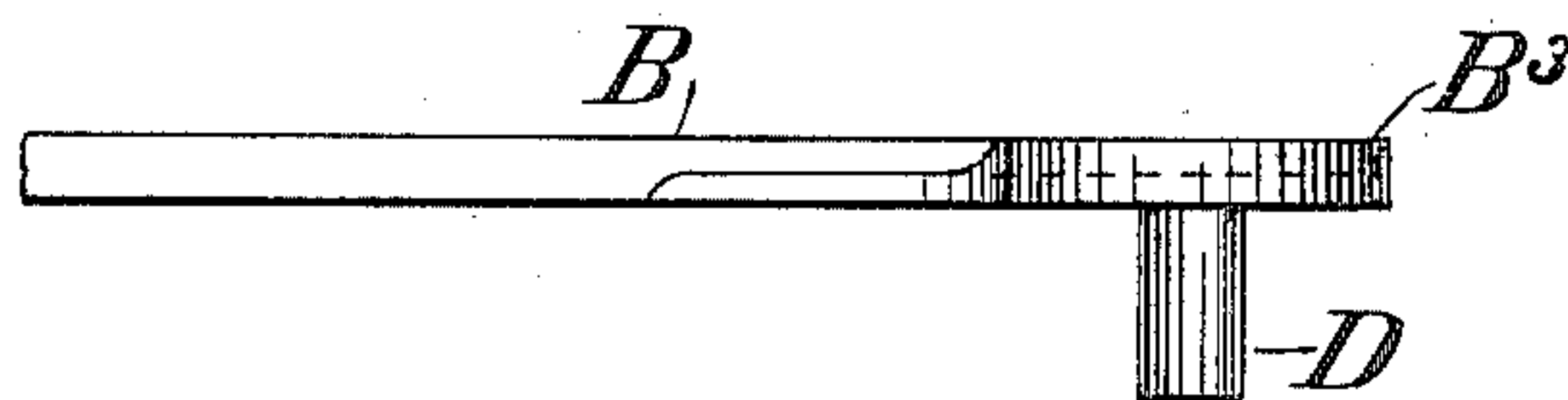


Fig. 5.

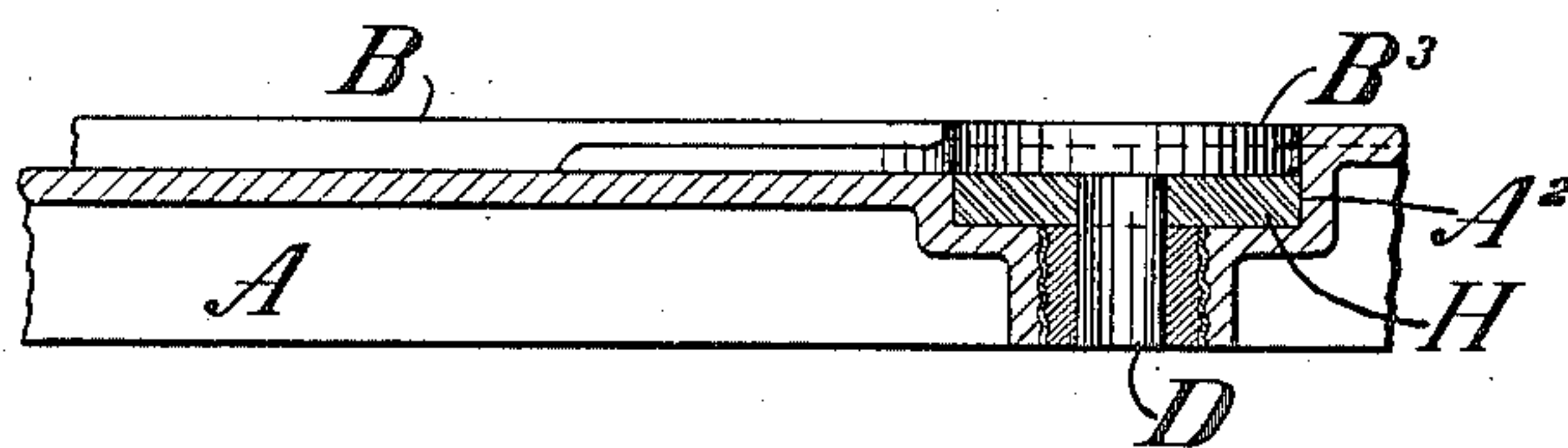


Fig. 6.

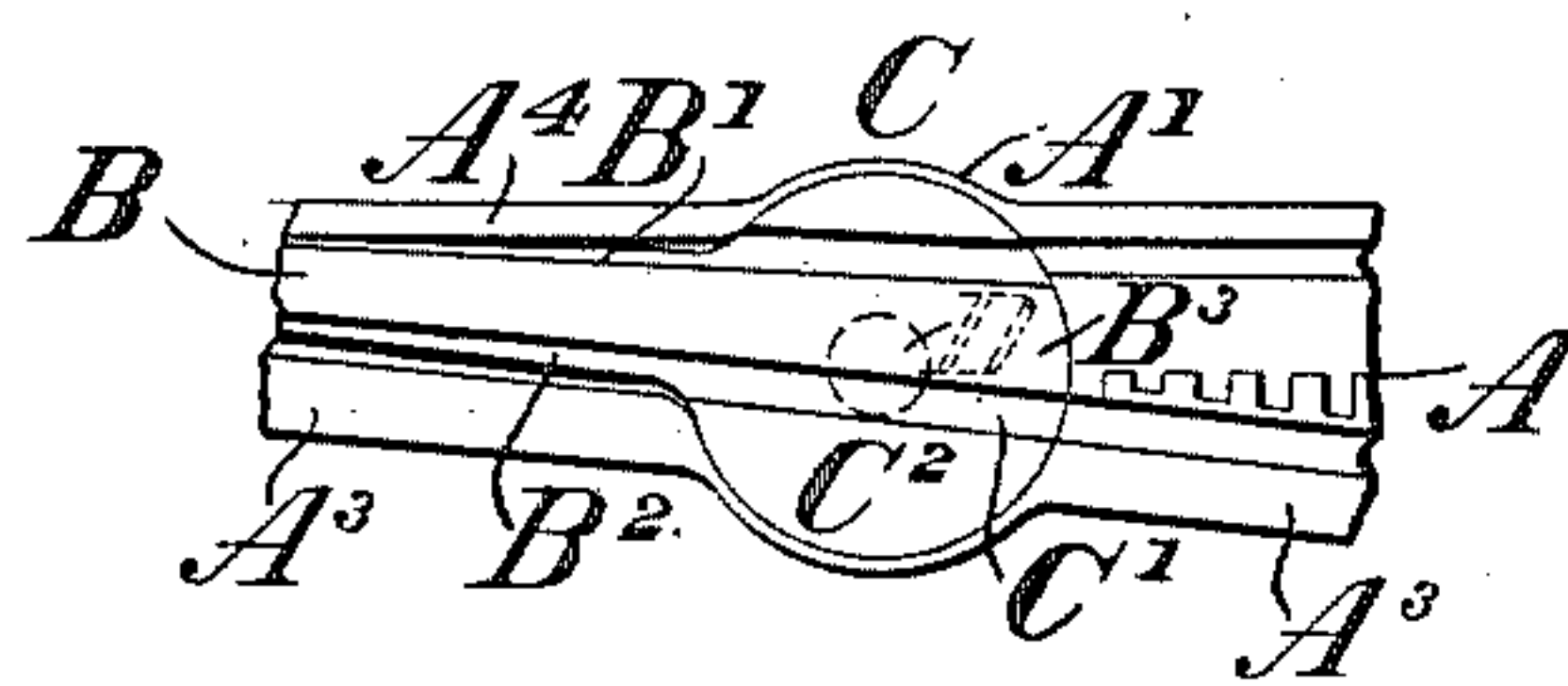


Fig. 7.

WITNESSES:

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RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 661,540, dated November 13, 1900.

Application filed March 19, 1900. Serial No. 9,224. (No model.)

To all whom it may concern:

Be it known that I, CARL F. KRESS, Jr., of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Railway-Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to railway-switches of that class in which there is a tapered tongue or point pivoted or swiveled to a supporting or foundation structure by means of a depending pin or pintle at its heel end. The action of the car-wheels upon these tongues or points tends to rock or tip them laterally, causing wear and looseness of the parts at the heel end. This looseness may cause the tongue to kick or throw under the action of a passing car after the front wheels have passed or in passing onto the right track, resulting in derailment of the car. This tendency is also increased by reason of the fact that in long-radius switches it is necessary to use a very long tongue in order to get sufficient width of the latter at its heel end to support the pin or pintle.

An object of my invention is to provide means which will prevent very largely the tendency of the tongue to twist or tip laterally under the action of the car-wheels, and thereby reduce greatly the wear and looseness above mentioned, and which relieves the pin or pintle from strains and thrusts; also, to provide a switch-tongue having tread portions at its heel end to carry the wheels across onto the respective branching or connecting tracks and to provide a durable and reliable switch.

My invention also enables the use of a much shorter tongue in a long-radius switch than has heretofore been possible.

I attain these objects by providing the tongue or point at its heel end with a circular enlargement which carries the depending pin or pintle and in the upper face of which are formed wheel-grooves or flangeways whose gage and guard lines are arranged to aline respectively with the lines of the connecting tracks. Said enlargement has suffi-

cient area to provide a tread-surface at the guard side of the heel, so that the latter takes the weight of a car while passing its guard side and is thus held squarely down to its seat. The foundation structure is provided with a circular pocket to seat this tongue enlargement, and the flat bottom of this pocket forms a widely-extended bearing for the heel. I prefer also to make a neat fit between the walls of the pocket and the circular edge of the enlargement to relieve the pin of all thrusts and strains. The enlargement forms a support for the pin, so that in long-radius switches it is unnecessary to extend the tongue to a great length in order to provide for the pin; but a tongue of any desired length may be used.

Referring to the accompanying drawings, which illustrate my invention, Figure 1 is a plan view of so much of my improved switch as is necessary to show my invention. Figs. 2, 3, and 4 are sections taken, respectively, on the lines 2 2, 3 3, and 4 4 of Fig. 1. Fig. 5 is a side elevation of the heel portion of the tongue. Fig. 6 is a sectional view showing a slight modification; and Fig. 7 is a plan view of a portion of the switch, showing another modification.

The letter A designates the foundation structure, which I prefer shall be a unitary steel casting, although it may be a built-up structure or of some other specific construction than that shown. This structure is similar in general form to those heretofore used, except that at that portion thereof which is to seat the heel of the tongue it is provided with a laterally-enlarged portion A', in which is formed a circular pocket A², which terminates the seat for the tongue.

A³ designates the tread-surface of the branching track, formed as a part of the structure A, and A⁴ is the guard portion of the structure against which the tongue is thrown to shift a car to the branching track.

B is the tongue, having the track side B', guard side B², and circular enlargement B³ at its heel end, which seats in the pocket A², as shown.

CC' are wheel-grooves or flangeways formed in the upper face of the enlargement B³, the

latter being of sufficient area to provide the tread-surface C^2 on the guard side.

D is the pin or pintle which swivels the tongue. In the modification shown in Fig. 7 the center of this pin is moved overtoward the groove or flangeway C' , which provides the full extent of tread-surface C^2 , but reduces the extent of the corresponding surface at the outside of the groove C' , which serves no useful purpose. This enables the enlargement to be made somewhat smaller than in the construction shown in Fig. 1.

The letter H, Fig. 6, shows a wear-plate of hard metal, which forms the bottom of the pocket A^2 , and thus further tends to decrease looseness due to wear.

It will be readily seen that the weight of the car-wheels in passing the center line of the pin or pintle D comes squarely upon the enlargement of the heel, holding it squarely down to its seat without any tendency to move it laterally, which, together with the prevention of looseness of the parts, insures accuracy of action.

I do not wish to be limited to the particular construction and arrangement of parts which I have herein shown and described, as variations in the details may be made without affecting the spirit and scope of my invention as pointed out in the appended claims.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A switch tongue or point provided with an enlargement at its heel end formed with flangeways and tread-surfaces at both the tread and guard sides thereof.

2. A switch tongue or point formed with a circular enlargement at its heel end for supporting the pivot pin or pintle and for carrying

ing the car-wheels by the said pin or pintle onto the abutting or adjacent tracks.

3. A switch tongue or point formed with a circular enlargement at its heel, said enlargement having flangeways and tread-surfaces for carrying the car-wheels onto both of the connecting tracks.

4. A switch tongue or point formed with a circular enlargement at its heel portion extending laterally beyond the gage-lines of both the connecting tracks.

5. The combination with a foundation structure having a circular pocket therein, of a switch tongue or point having its heel portion circularly enlarged and pivotally seated in said pocket, such enlarged portion having flangeways and tread-surfaces formed therein at both the tread and guard sides thereof.

6. The combination with a foundation structure having a circular pocket therein, of a switch tongue or point circularly enlarged at its heel end and pivotally seated in said pocket, and having its surface extended laterally of the gage-lines of the connecting tracks, the extension at the guard side of the tongue being flush with and forming a part of the tread-surface of the foundation structure.

7. The combination with a foundation structure having a circular pocket formed therein, and a hardened plate set into and forming the bottom of said pocket, of a switch tongue or point having a circularly-enlarged heel portion pivotally seated in said pocket.

In testimony whereof I have affixed my signature in presence of two witnesses.

CARL F. KRESS, JR.

Witnesses:

GEO. H. PARMELEE,
JOHN H. KENNEDY.