

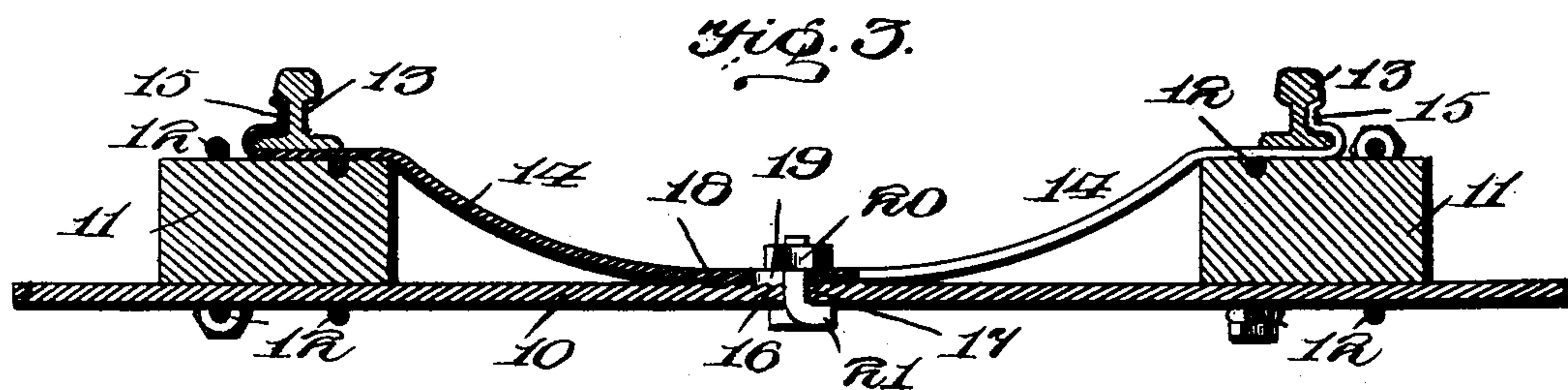
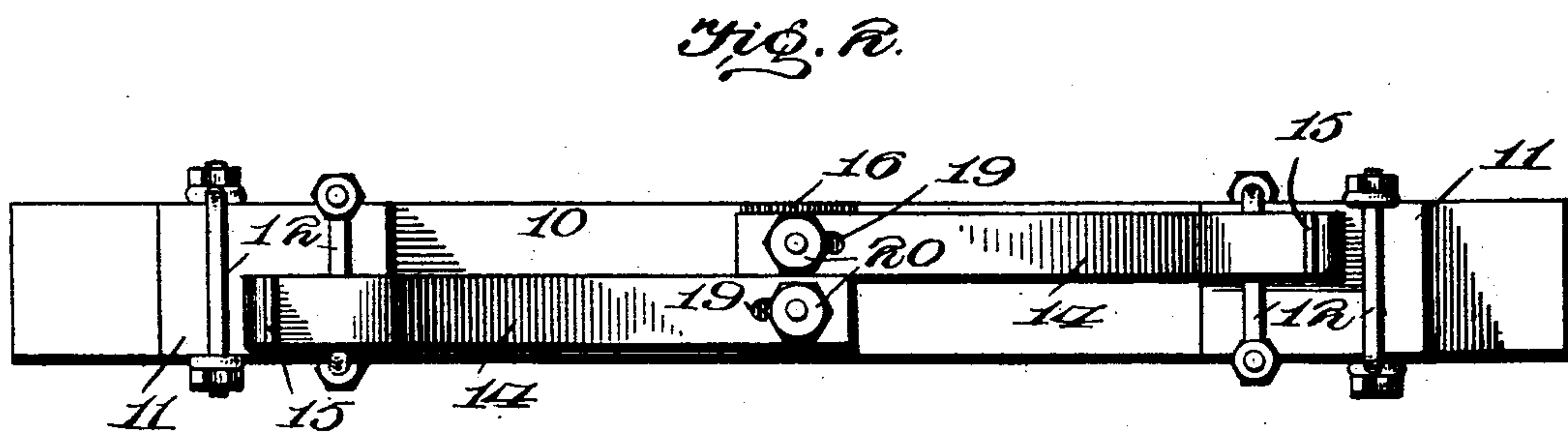
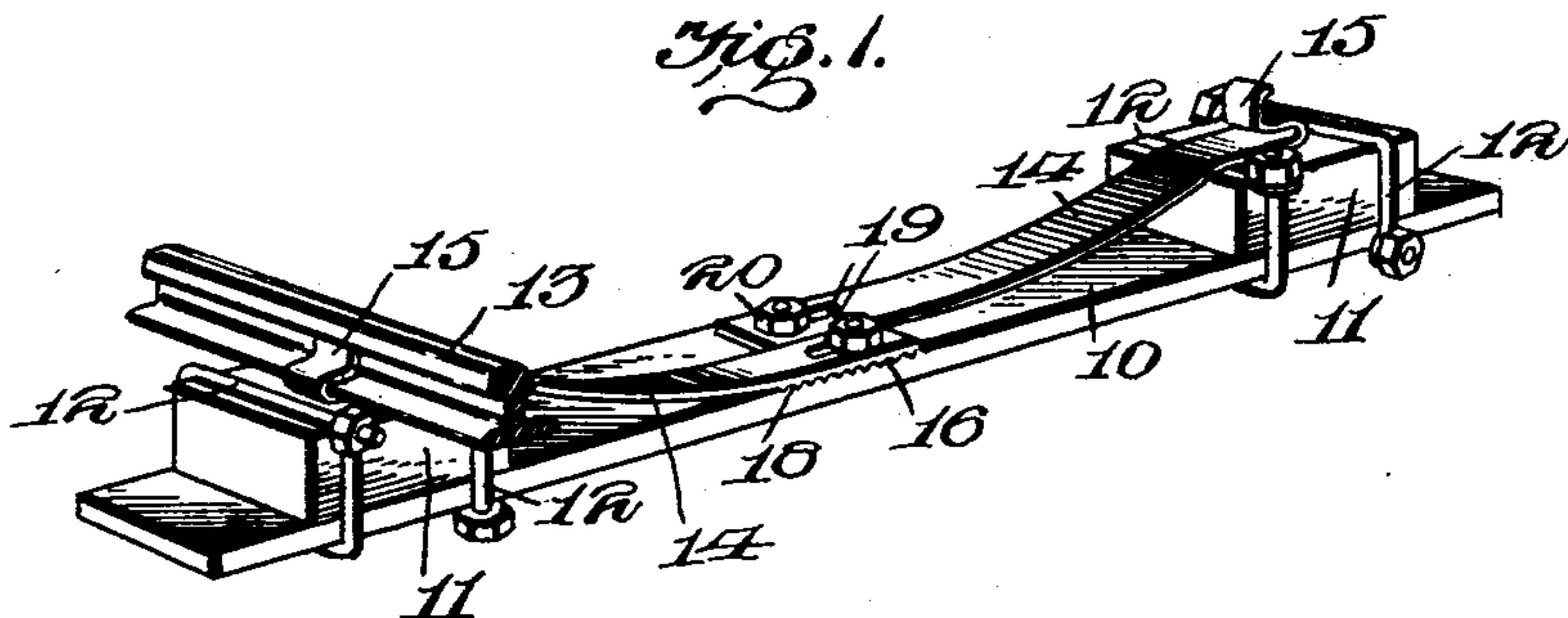
No. 684,335.

Patented Oct. 8, 1901.

W. M. WOODWORTH.
RAILWAY TIE.

(Application filed Jan. 5, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

WILLIAM M. WOODWORTH, OF SYCAMORE, INDIANA.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 684,335, dated October 8, 1901.

Application filed January 5, 1901. Serial No. 42,161. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. WOODWORTH, a citizen of the United States, residing at Sycamore, in the county of Howard and State of Indiana, have invented a new and useful Railway-Tie, of which the following is a specification.

The present invention relates to railway-ties, and more particularly to the means for preventing the spreading of the rails and the consequent accidents and loss of life.

The object of the invention is to provide simple means for independently fastening each rail against outward lateral movement and to have these means adjustable, so that they may be quickly applied and adjusted under varying conditions.

To the accomplishment of this object the construction described in the following specification and shown in the accompanying drawings is preferred, but may be changed and modified within the scope of the appended claims.

In the drawings, Figure 1 is a perspective view of a portion of a railway, showing the improved rail-holders applied thereto. Fig. 2 is a top plan view of the same. Fig. 3 is a longitudinal section.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

In the construction shown the tie comprises a body or sleeper 10, to the ends of which are secured bearing-blocks 11 by means of suitable clamps 12. The rails (designated 13) are seated upon these bearing-blocks 11 and are fastened thereto in any suitable manner.

To prevent the outward lateral movement of the rails, a pair of independent keepers are secured to the sleeper 10 and engage said rails. These keepers are in the form of retaining-arms 14, the outer end portions of which are bent to rest upon the faces of the bearing-blocks 11 and are provided with upstanding terminal hooks 15, that conform to and bear against the outer face of the rail and the base-flange thereof. These retaining-arms are independently and adjustably secured to the central portion of the sleeper 10, preferably in the following manner: The central portion of the sleeper is serrated to form transverse teeth 16 and is furthermore

provided with a pair of bolt-openings 17. The inner ends of the retaining-arms 14 are also serrated to form transverse teeth 18, which correspond to and interlock with the teeth 16 of the sleeper. Said inner ends of the arms 14 are furthermore provided with slots 19. Fastening-bolts 20 are passed through the respective slots 19 and openings 17 and hold the coacting teeth in engagement with each other. The heads of the fastening-bolts 20 are preferably in the form of hooks 21, which are arranged to be passed through the sleeper from the upper side and when in place have their terminal offstanding portions arranged against the under side of the sleeper, upon the opposite sides of the bolt-openings from the retaining-arms. A distinct advantage resides in this construction and arrangement, as the head of the bolt can thus be passed through from the upper side of the sleeper, and any pull upon the retaining-arm will only draw the head into closer engagement with the under side of the same.

The retaining-arms are preferably made of some strong spring metal, as steel, and are preferably bowed slightly to permit a slight expansion and contraction for the purposes hereinafter explained.

The application of the device is substantially as follows: The hooked ends of the retaining-arms are arranged against the outer face of the rails, and the arms passing under the same are adjusted to the proper position and secured by means of the bolts. These bolts can be passed through from the upper face of the sleeper, and thus may be removed or replaced without the necessity of taking up said sleeper. It will thus be seen that the inner ends are rigidly secured and cannot slip, because of the interlocking teeth. At the same time it is desirable upon curves to allow a slight lateral movement of the rails, and a limited movement is permitted by constructing the retaining-arms of spring metal and having them bowed slightly. The separate mounting of the retaining-arms permits of their movement independently of one another.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without

further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

16 1. In a railway-tie, the combination with a sleeper having a plurality of transverse teeth disposed between the rails; of a pair of keepers provided with teeth which coact with the teeth of the sleeper, said keepers extending
15 beneath and having upstanding portions engaging the outer faces of the rails.

2. In a railway-tie, the combination with a sleeper having a plurality of transverse teeth disposed between the rails, said sleeper being
20 also provided with bolt-openings arranged in the plane of the teeth, of a pair of keepers, each of which is arranged longitudinally of the sleeper and passes beneath the rail, said keepers each being provided at its inner end
25 with teeth that coact with the teeth of the sleeper, and at the other end with a terminal hook which conforms to and bears against the outer face of one of the rails, said keepers being also provided with slots alining with

the bolt-openings of the sleeper, and bolts 30 passing through said alined openings.

3. In a railway-tie, the combination with a sleeper, of bowed retaining-arms secured at one end to the sleeper between the rails, and having their opposite ends engaging the outer
35 faces of said rails.

4. In a railway-tie, the combination with a sleeper having bearing-blocks secured at or contiguous to its ends, said sleeper being provided with transverse teeth and bolt-openings
40 arranged between the bearing-blocks, of a pair of bowed retaining-arms provided at their inner ends with teeth and slots, said teeth interlocking with the teeth of the sleeper, the outer ends of said retaining-arms
45 resting upon the bearing-blocks and provided with hook terminal portions conforming and being adapted to rest against the outer faces of the rail, and bolts passing through the openings in the sleeper and the slots of the
50 retaining-arms.

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

WILLIAM M. WOODWORTH.

Witnesses:

H. C. APPLGATE,

J. H. HENLEY.