No. 652,334. Patented June 26, 1900.

T. A. SAVAGE.

CAR COUPLING.

(Application filed Sept. 29, 1899.)

(No Model.) 2 Sheets—Sheet 1.

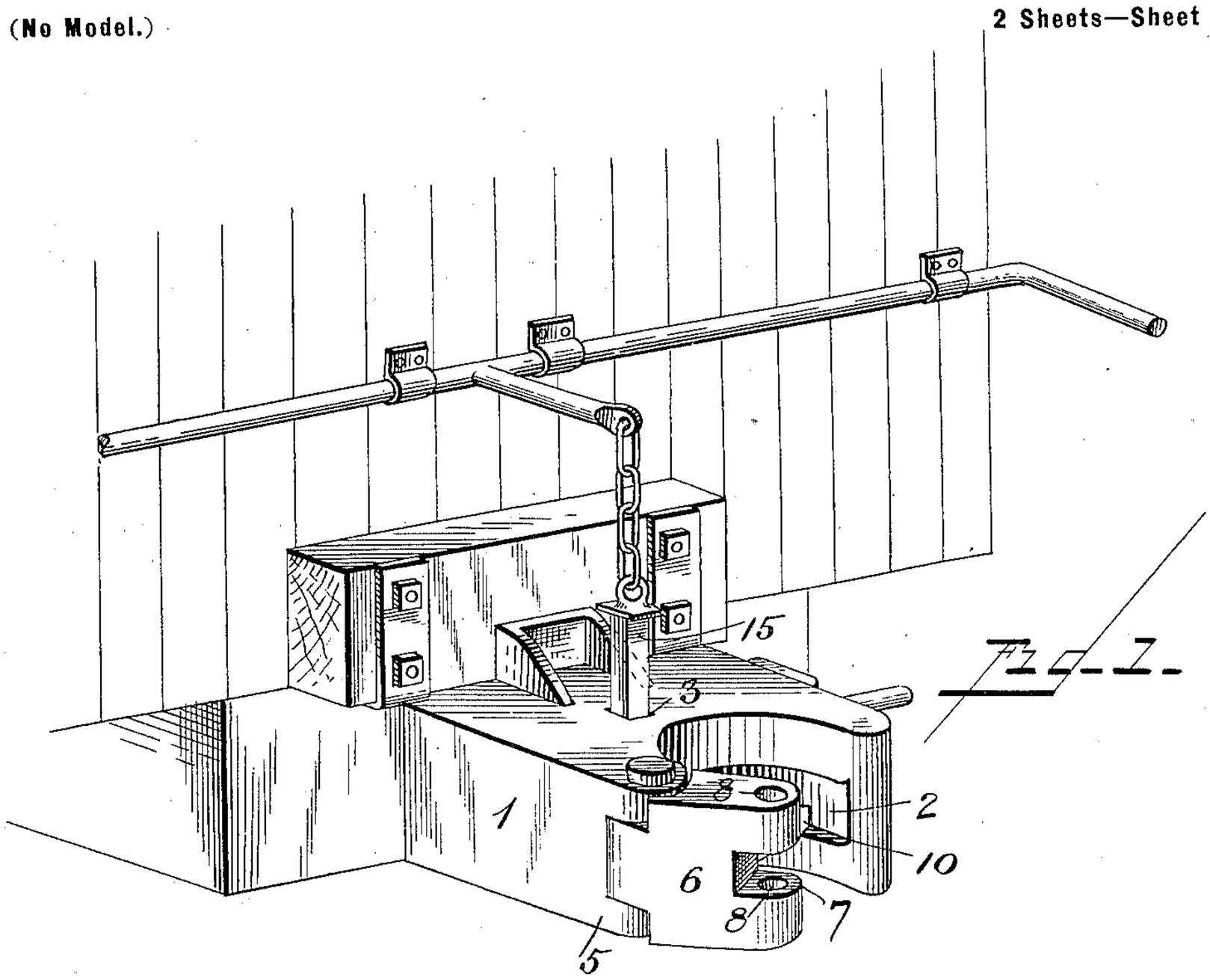

FIG. 1.

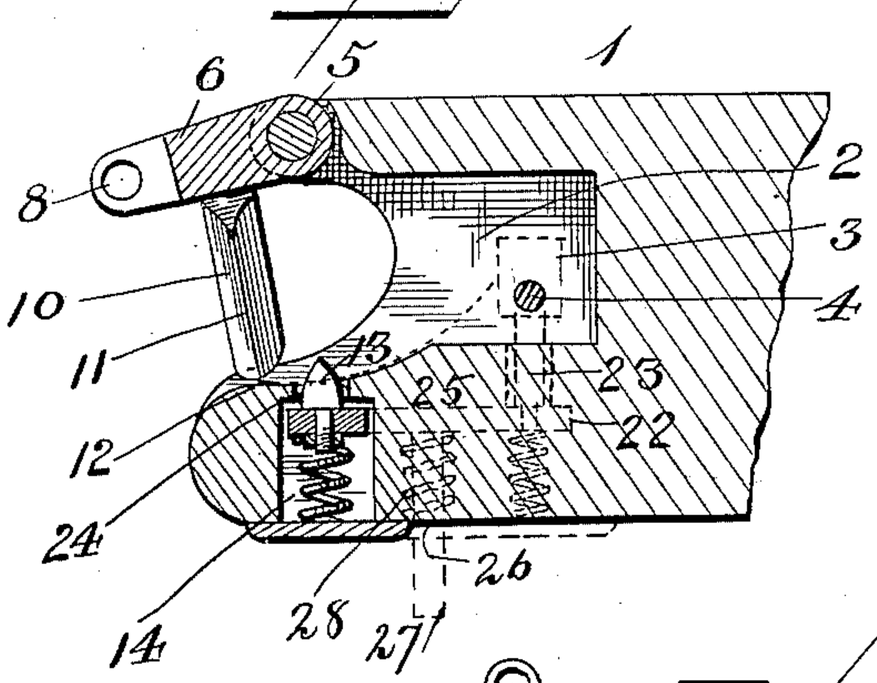

FIG. 2.

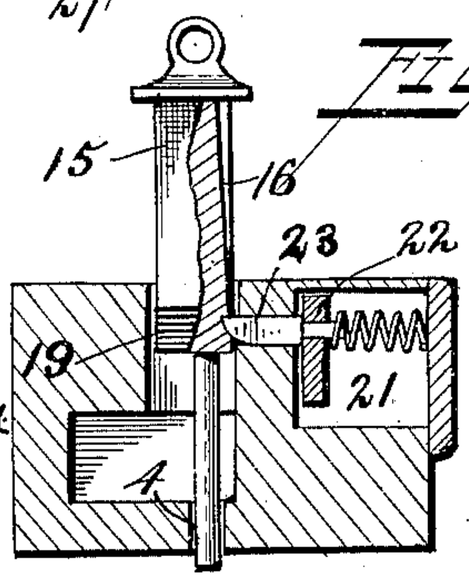

FIG. 3.

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(No Model.) 2 Sheets—Sheet 2.

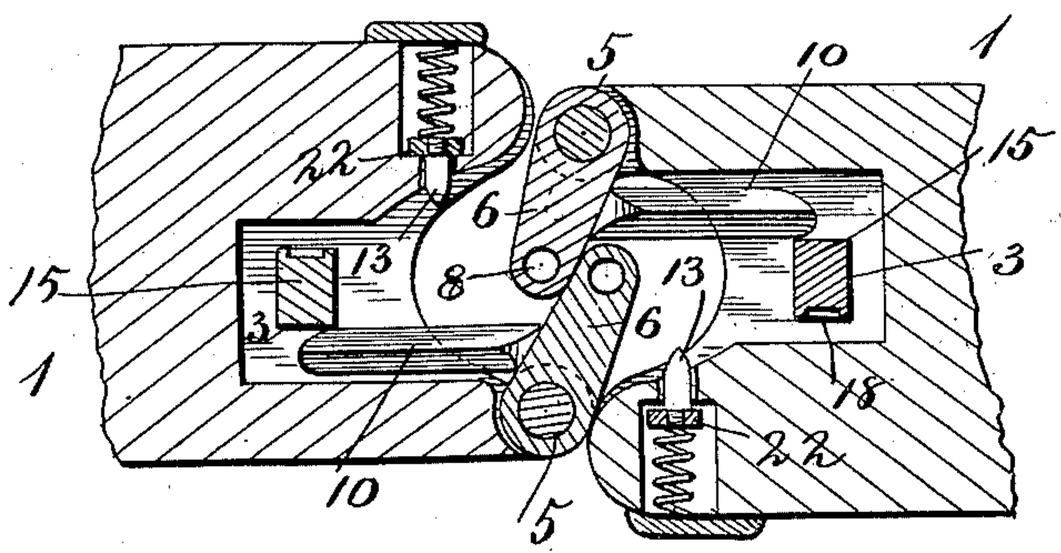


FIG. 4.

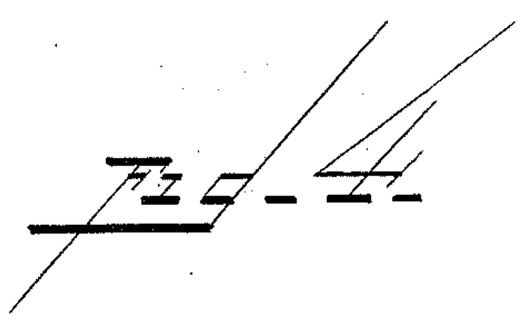
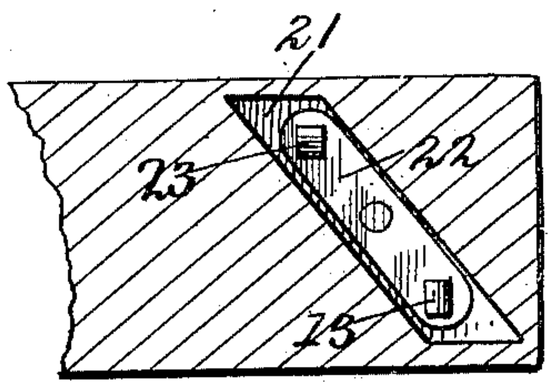


FIG. 5.



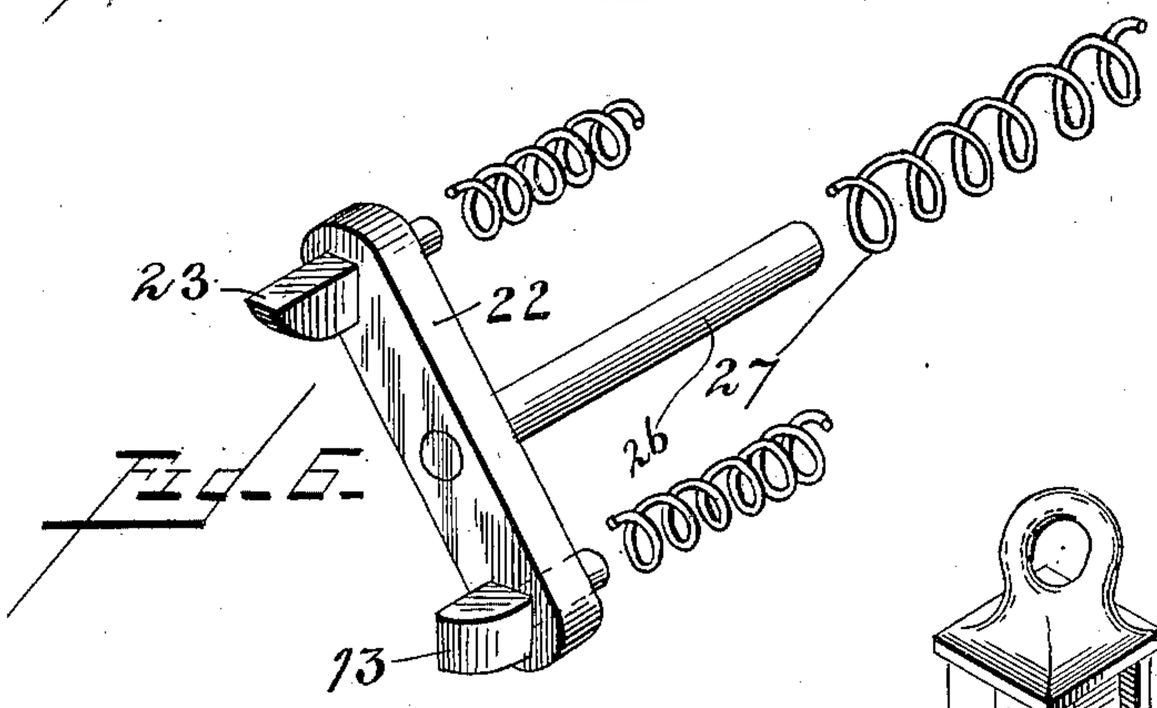


FIG. 6.

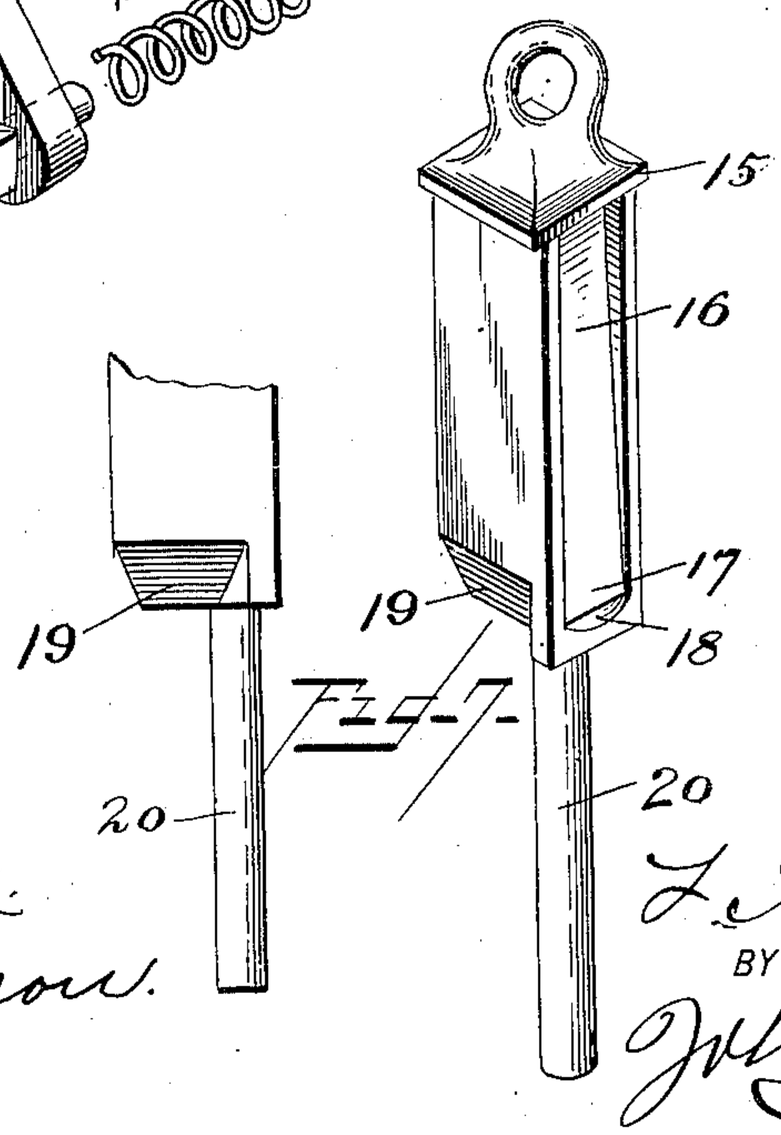


FIG. 7.

WITNESSES:
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UNITED STATES PATENT OFFICE.

THOMAS A. SAVAGE, OF SEWARD, NEBRASKA, ASSIGNOR OF THREE-FOURTHS TO JAMES F. MOORE, JAMES KINGHTON, AND GEORGE A. EMRICK, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 652,334, dated June 26, 1900.

Application filed September 29, 1899. Serial No. 732,068. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. SAVAGE, a citizen of the United States, residing at Seward, in the county of Seward and State of Nebraska, have invented certain new and useful Improvements in Car-Couplers, of which the following is a specification.

My invention is a car-coupler, and relates to that class of couplers known as the "Janney" type.

In the accompanying drawings, Figure 1 is a perspective view of one of the draw-heads, its coupling-pin, and means for operating it. Fig. 2 is a horizontal sectional view of one of the draw-heads. Fig. 3 is a vertical sectional view of one of the draw-heads, its dog, and coupling-pin. Fig. 4 is a horizontal sectional view of a pair of draw-heads locked in each other's embrace. Fig. 5 is a sectional view of one end of one of the draw-heads, showing the inner ends of the dog and trip-pin, the face of the beam to which they are attached, and the slot in which the three pieces work. Fig. 6 is a perspective view of the trip-pin, the beam to which it is attached, the guide-rod, and the springs. Fig. 7 gives two views of the coupling-pin.

My invention is described as follows:

1 is the draw-head, bifurcated at its front end and having in such bifurcated end and running back a considerable depth a slot 2. Running through the upper wall of said slot is a square hole 3, and through the under wall and immediately under one side of said opening 3 is a circular perforation 4. One wing 5 of the draw-head is horizontally bifurcated, and in this bifurcation is hinged a knuckle 6. In the free end of this knuckle 6 is another bifurcation 7, and in each end of said bifurcation is a pin-hole 8 for the accommodation of a neighbor coach that does not use the Janney coupler. Secured to one wall of this knuckle 6 and extending at right angles from its face is an arm 10. The lower face of this arm is horizontal; but its upper part is beveled, taking off each corner and bringing the center to an apex 11. The free end 12 of this arm is rounded or is a half-circle, so that when it passes inwardly or outwardly it strikes against the beveled faces of the trip 13 and forces it back into the slot 14, so that this arm may pass in or out.

Passing down through the square opening 3 and the circular opening 4 is a coupling-pin 15. The upper half of this coupling-pin 15 is a square, and in one face of the same is a groove 16, growing less and less deep until its lower end 17 is flush with the face of the pin, and just at its termination is a notch 18. Just in the rear of this notch the pin has a bevel part 19, and extending below this notch 18 and bevel part 19 is a cylindrical part 20, which passes through the opening 4.

In one side of the draw-head is a slot 21, that runs at an angle across the draw-head, as shown in Fig. 1, and in this slot rests a beam 22, and secured in this beam is a trip-pin 13 and a dog 23. The inner ends of the trip 13 and dog 23 pass through perforations 24 and 25 in the inner wall of the draw-head into the recess 2. The dog catches in the notch 18 of the coupling-pin 15.

Secured to the beam 22 is a guide-rod 27, which passes out through a perforation 26 in the draw-head. Around this guide-pin 27 is a spiral spring 28, its inner end resting against the outer face of the beam 22 and its outer end resting against the inner face of the slot 21. In order to secure more uniform action, if desired, I may also add a spring in the rear of dogs 23 and trip 13; but these two springs are not deemed essential.

This car-coupler is operated as follows: The coupling-pin 15 is raised until the dog 23 catches in the notch 18, and it remains in that position until tripped. The lower and round part of the pin, however, does not in this operation come out of the lower hole, but still remains therein. The cars being ready to couple, the knuckles 6, being open, approach each other, and the free ends of the knuckles strike the arms 10. This throws these arms 10 back by the trips 13 and immediately beyond the line of the pins 15. This operation at the same time throws the dogs 23 back out of the notches 18, and the pins therefore of their own weight fall down immediately in front of the arms 10 and the cars are coupled. If,

however, by any accident the pins should fall before the arms 10 pass in the rear of them, the beveled part of the arms strike against the beveled part 19 of the pins, throw the pins up, pass immediately behind them, and the coupler is locked. This last-described condition, however, very seldom if, ever, occurs. The great advantage in having the pins raised so that the arms 10 can pass behind them without having to raise them up is that there is no bumping or licks liable to break the pins or the arms, and the consequent jarring and friction in throwing the pins up is avoided and the danger of breakage largely minimized.

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

1. A car-coupler, comprising a pair of twin draw-heads 1, each having its front end bifurcated and in such bifurcation a recess 2; a square perforation 3, through its upper wall, and a corresponding perforation 4, through its lower wall, one arm 5, of said bifurcated part being horizontally bifurcated and in such bifurcation a hinged knuckle; to the inner face of the hinged knuckle, a beveled arm 10, at right angles to the face of said knuckle and adapted to swing back and forth in the recess 2, and behind the coupling-pin; a pin 15, provided with a notch 18, and a beveled part 19, adapted to work up and down in the perforations 3 and 4; in the side of said draw-head, opposite to arm 5, inner perforations 24 and 25, outer perforation 26, and a slot 14; beam 22, working in said slot; trip 13, secured to said beam and working through perforation 24; dog 23, also secured to beam 22, and working through perforation 25; guide-pin 26, secured to beam 22, and passing out through perforation 27; coil-spring 28, working around said guide-pin, substantially as shown and described and for the purposes set forth.

2. The combination of the draw-head 1, having its front end bifurcated, and in such bifurcation a recess 2; a square perforation through its upper, and a small circular perforation through its lower wall; a coupling-pin, having a large square part, and a small circular part, and having the lower end of its square part beveled, and near the lower end of said square part, a holding-notch, whereby said pin may be held up; a dog, secured to a beam, operated by a spring, and adapted to catch in said holding-notch; a trip, secured to said beam, and when pushed out throws said dog out of contact with said pin; a knuckle hinged in the front end of said draw-head, and a beveled arm secured to said knuckle, adapted to push said trip out, swing into recess 2, throw up and drop behind the coupling-pin, substantially as shown and described and for the purposes set forth.

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

THOMAS A. SAVAGE.

Witnesses:
J. J. THOMAS,
C. L. SLONECKER.