

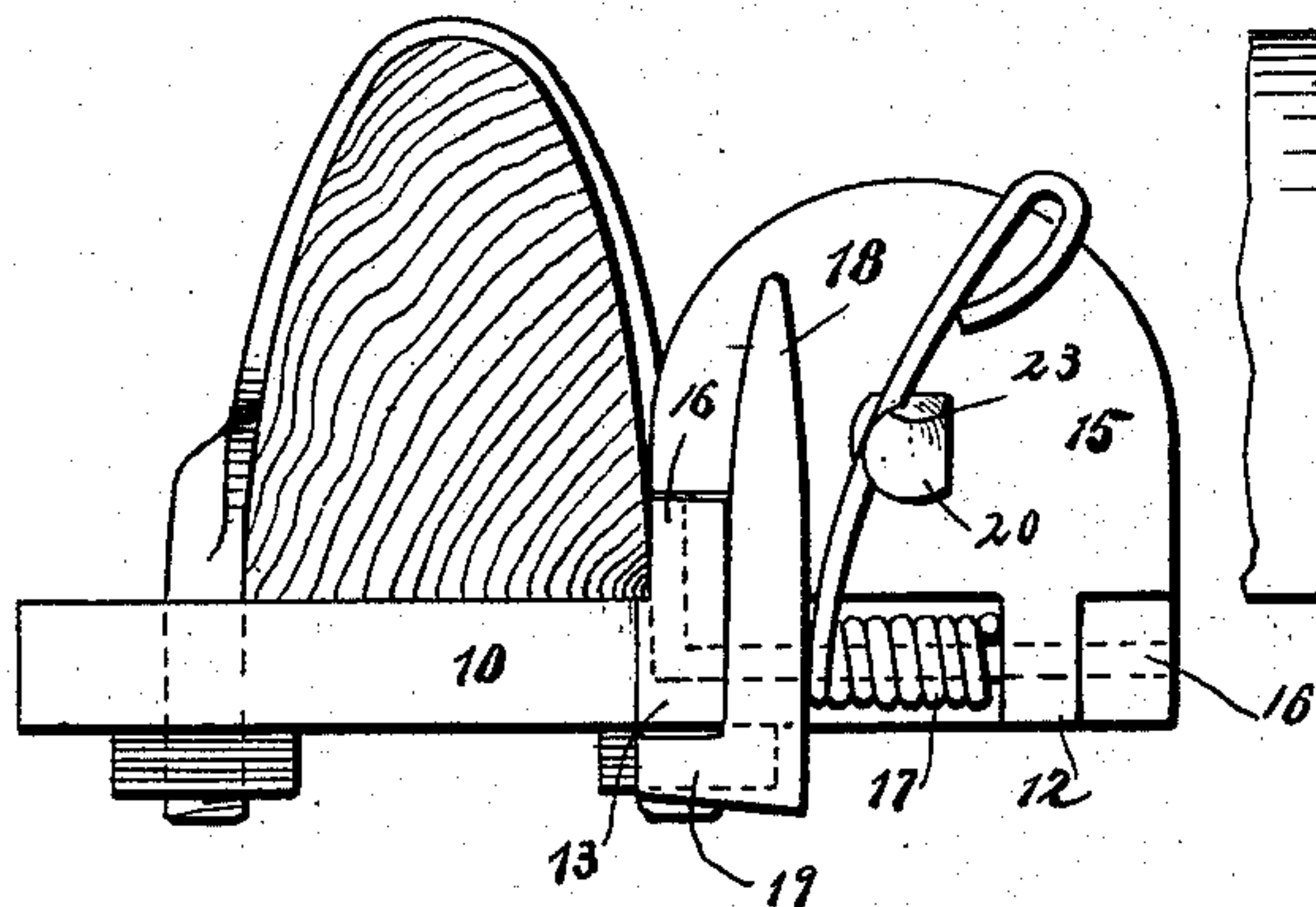
(No Model.)

T. L. BARR.  
THILL COUPLING.

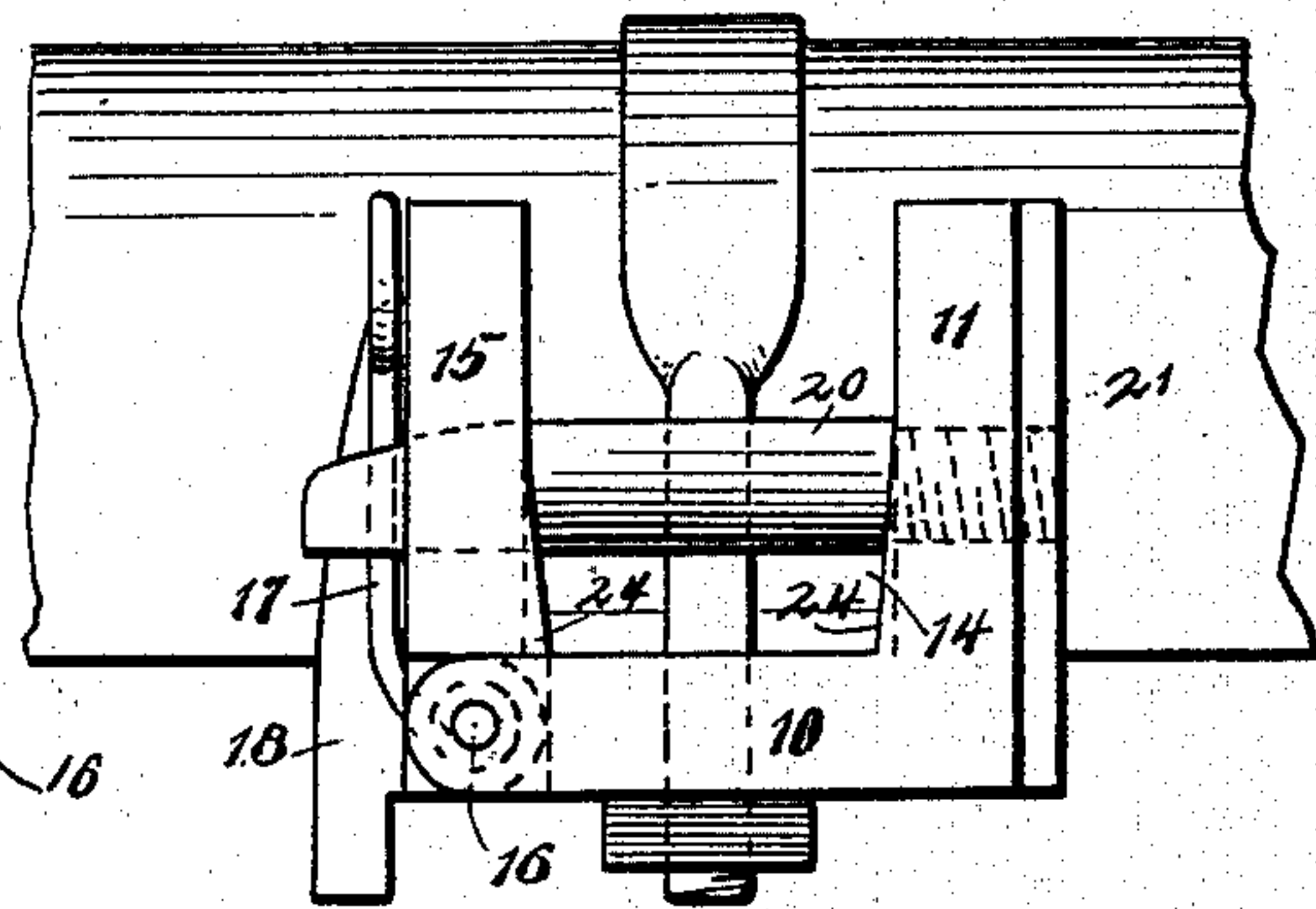
No. 413,381.

Patented Oct. 22, 1889.

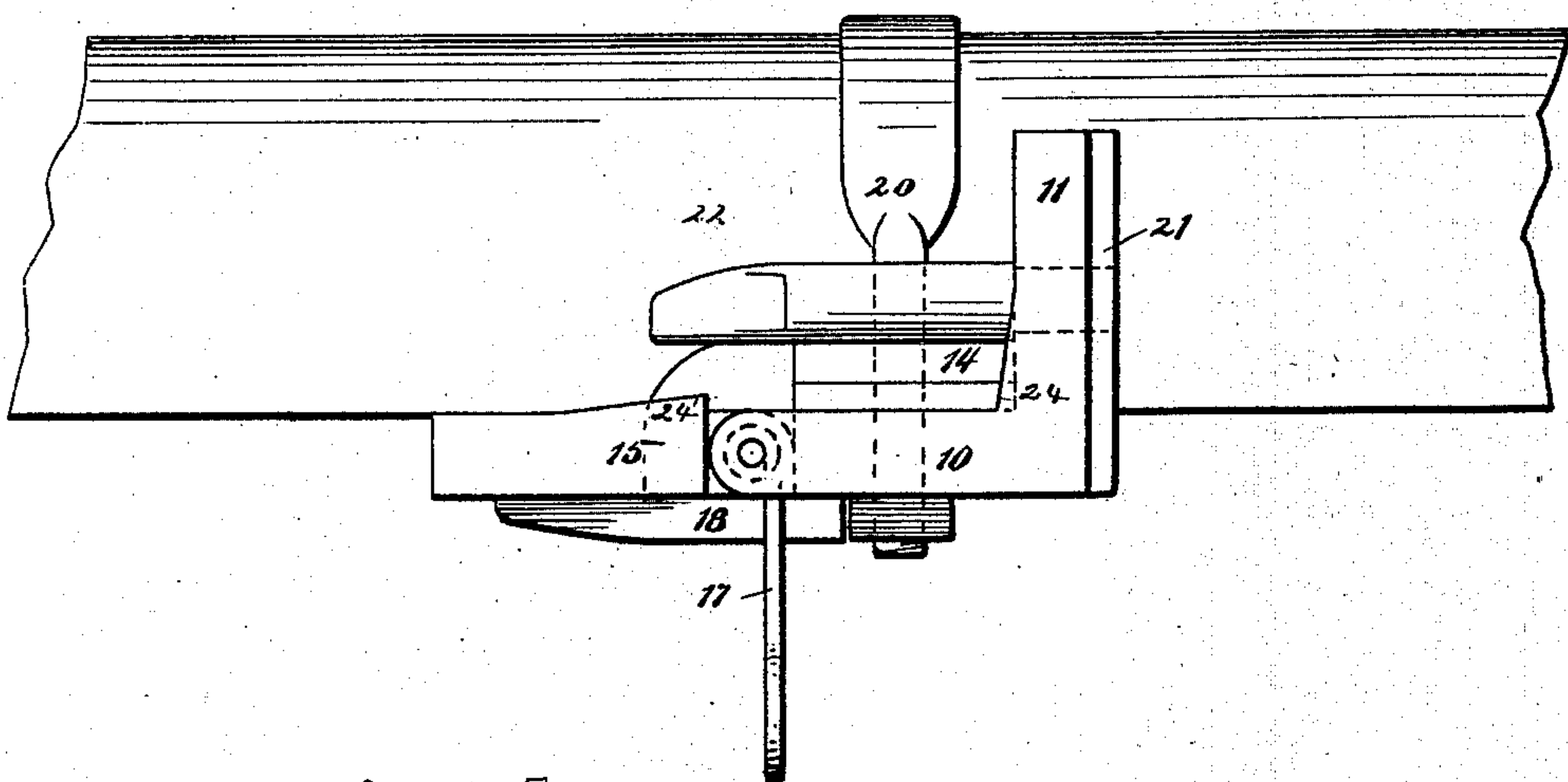
*Fig. 1.*



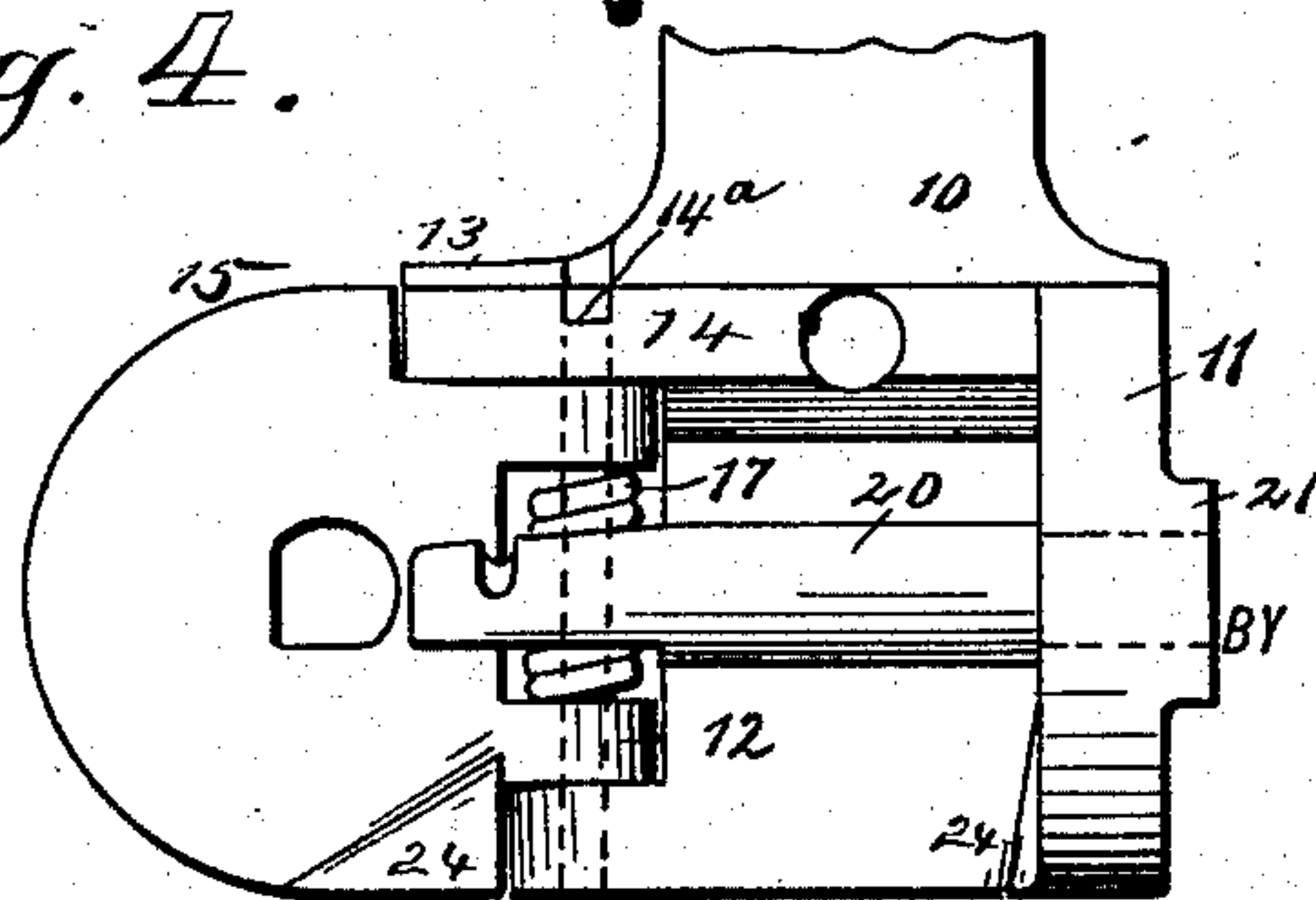
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

THOMAS L. BARR, OF PLYMOUTH, OHIO.

## THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 413,381, dated October 22, 1889.

Application filed July 9, 1889. Serial No. 316,972. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS L. BARR, of Plymouth, in the county of Richland and State of Ohio, have invented a new and useful Improvement in Thill-Couplings, of which the following is a full, clear, and exact description.

My invention relates to an improvement in thill-couplings, and has for its object to provide a coupling of simple and durable construction, and capable of manipulation to expeditiously and conveniently attach the thills to the axle. A further object of the invention is to provide a coupling which may be secured to any axle without difficulty, and employed in connection with any thills in general use.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a transverse section through an axle, illustrating the thill-coupling as applied thereto, the latter being in side elevation. Fig. 2 is a front view of the axle and also of the attached coupling. Fig. 3 is a similar view to Fig. 2, illustrating the coupling in position to receive the thill; and Fig. 4 is a plan view of the coupling when in position to receive the thill.

The body of the coupling comprises a base-plate 10, having integral with one longitudinal side at the outer end an upwardly-extending ear 11, and upon the other longitudinal edge of the base-plate, opposite the fixed or integral ear 11, two spaced lugs 12 and 13 are formed, and upon the upper surface of the said base-plate a transverse stop-bar 14 is cast or attached, which stop-bar extends from the rear inner face of the fixed ear 11 outward to the extremity of the side lug 13, which lug is of greater length than the lug 12.

Between the lugs 12 and 13 a laterally-movable ear 15 is hinged by passing a pintle 16 through the said lugs and through the lower edge of the ear, which is reduced in width to pass between the lugs, as illustrated in Fig. 1. The central lower portion of the

movable ear 15, through which the pintle 16 passes, is recessed to receive a spring 17, which spring is coiled around the pintle, and one end thereof is carried upward and forward, as is also best shown in Fig. 1. The pintle is L-shaped, and is held in position by passing the vertical member upward through a recess 14<sup>a</sup>, produced in the rear face of the stop-bar 14. Thus when the coupling is attached to the axle the pintle is securely held between the axle and the stop-bar.

Upon the outer face of the movable ear 15, near the rear edge, a stop 18 is formed, comprising a bar of metal attached or integral with the ear, which bar extends vertically downward, essentially in contact with the inner face of the projecting end of the transverse stop-bar 14 and the equivalent surface of the lug 13. The lower end of the said bar, constituting the stop 18, is carried downward below the under face of the body 10 of the coupling, and bent at a right angle rearward to form a horizontal arm 19, the upper face of which arm, when the ear is in its normal position, as shown in Fig. 1, essentially contacts with the under surface of the lug 13.

The rear edge of the movable ear 15 is recessed to permit the said ear to travel over the projecting end of the body stop-bar 14, which is cylindrical, when the ear is carried down to the horizontal or open position, as shown in Figs. 3 and 4.

In the fixed ear 11 of the body 10 one end of a pin 20 is screwed or otherwise attached, the said fixed ear 11 being preferably re-enforced, as shown at 21, to provide an ample bearing-surface for the pin. The free end of the pin 20 is essentially rectangular in cross-section, and the upper surface is beveled or curved, as shown at 22. In the inner face of this reduced or beveled end of the pin 20 a notch 23 is formed.

The movable ear 15 is provided with an opening at or near the center to receive the free end of the pin 20 when the former is carried to a vertical position, and when the ear is in this position, parallel with the fixed ear, the free end of the pin 20 extends beyond the outer face of the movable ear, and the said ear is retained in this position by causing the upper end of the spring 17 to enter the slot 23 of the pin, as shown in Figs. 1 and 2. The



body 10 is clipped to the axle in any suitable or desired manner.

In operation, to remove the thill from the coupling, the arm of the spring 17 is disengaged from the pin 20, and the ear 15 is carried downward to the horizontal position, the lower portion 19 of the stop 18 limiting its downward movement. The thill may now be readily slipped from the pin 20 and if desired another thill may be attached to the axle. In attaching another thill to the axle, the thill-iron is slipped over the pin 20, and the ear 15 is carried upward to its vertical position, and the arm of the spring 17 made to contact with the notch in the pin. The inner or opposed faces of each of the ears at the front lower end are thicker than at the top, and beveled slightly inward, as illustrated at 24 in Fig. 2, the better to fit the thill-iron and to prevent the thills from rattling when coupled to the axle.

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

1. As an improved article of manufacture, a thill-coupling comprising a horizontal body having a fixed vertical ear, provided with a coupling-pin, an ear hinged to swing in a vertical plane and apertured to receive the coupling-pin, and a locking device for the projecting end of the coupling-pin, substantially as described.

2. As an improved article of manufacture, a thill-coupling comprising a horizontal body having a vertical ear integral with one longitudinal side and an apertured ear hinged to the opposite side, a coupling-pin secured at one end to the fixed ear and adapted to pass through the aperture of the hinged ear,

and a locking-spring engaging the projecting end of the said pin, substantially as shown and described.

3. As an improved article of manufacture, a thill-coupling comprising a horizontal body, a vertical ear integral with one longitudinal side edge at the front, an opposed hinged ear, a pin secured to the fixed ear and passing through and beyond the hinged ear and provided with a notch in the projecting end, a spring provided with an arm capable of entering the notch in the pin, and a stop limiting the movements of the hinged ear, substantially as shown and described.

4. In a thill-coupling, the combination, with a horizontal body provided with a vertical ear integral with one longitudinal side, opposed spaced lugs integral with the opposite side, and a transverse stop-bar upon the upper face of the horizontal body, of an ear parallel with the fixed ear of the body hinged to the lugs of the said body, a pin secured to the fixed ear at one end and passed through the hinged ear at the opposite end, and provided with a notch in the projecting end, a spring coiled around the pintle of the hinged ear, having an upwardly forwardly-extending arm capable of entering the notch of the pin, and a stop extending downwardly below the outer face of the hinged ear and provided with a rearwardly-projecting horizontal arm, all combined for operation substantially as and for the purpose specified.

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Witnesses:

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