(No Model.)

2 Sheets—Sheet 1.

C. A. TERRY.

WRENCH.

No. 589,046. Patented Aug. 31, 1897.

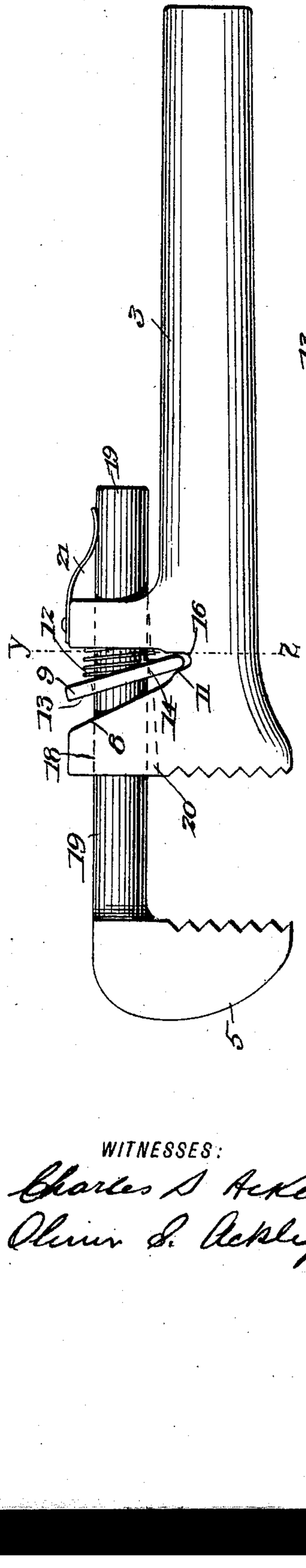

FIG. 1.

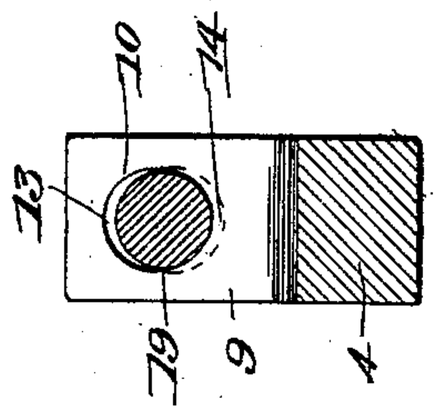

FIG. 3.

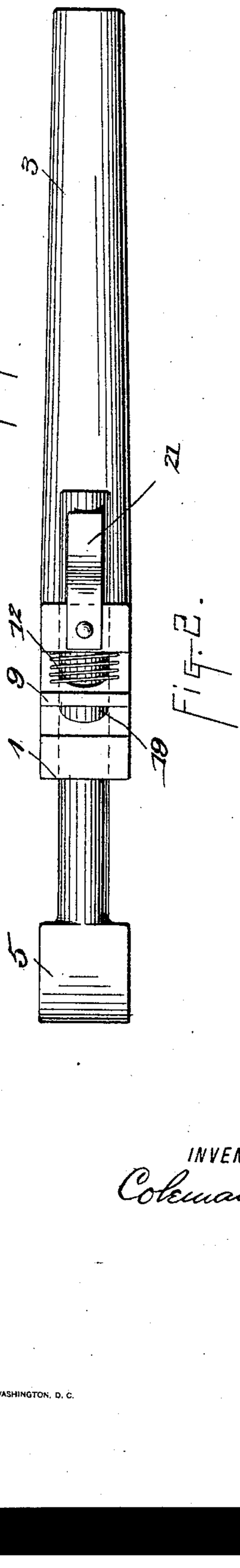

FIG. 2.

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(No Model.) 2 Sheets—Sheet 2.

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WRENCH.

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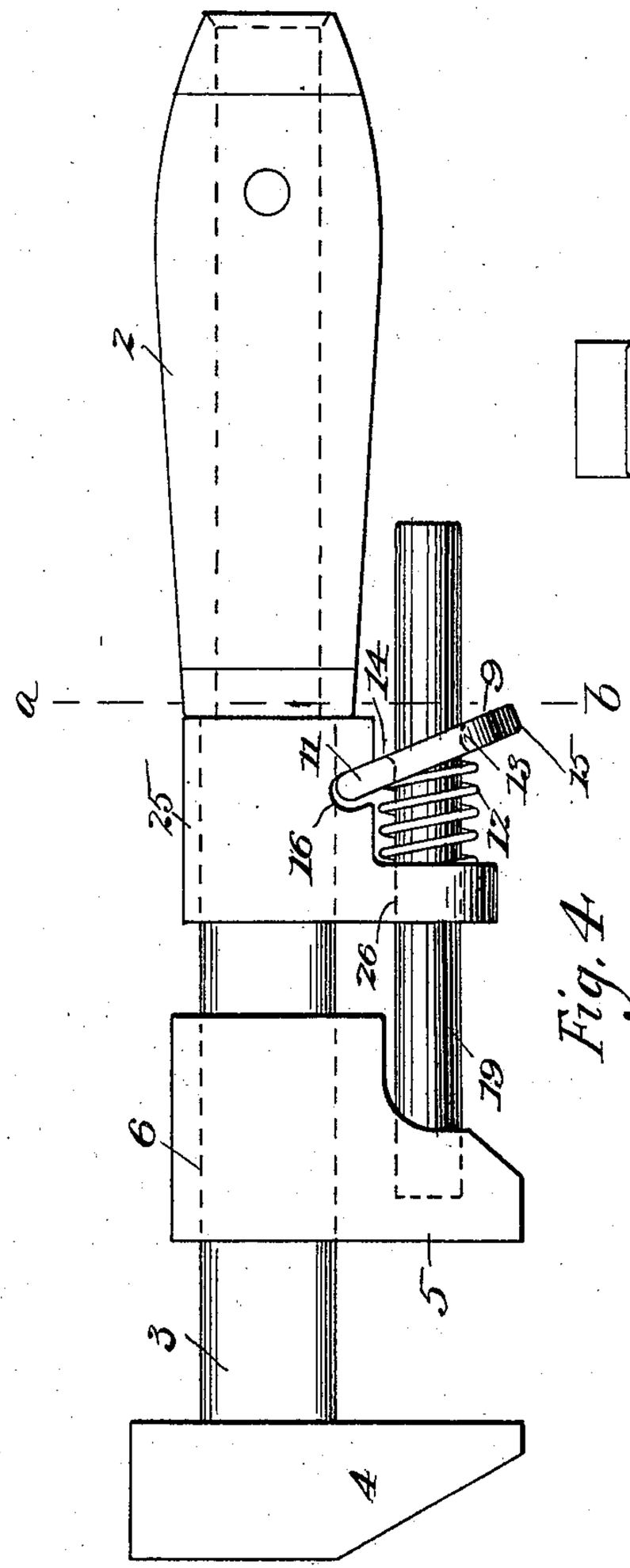

Fig. 4

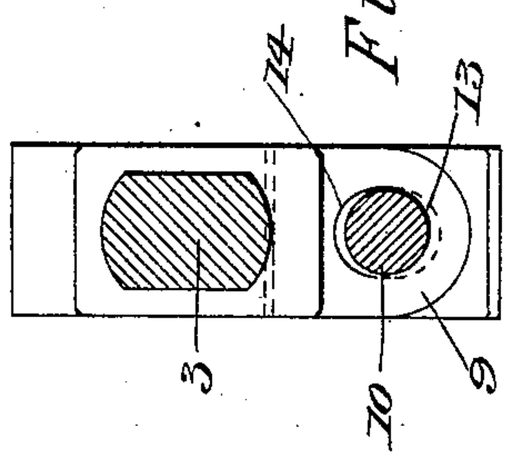

Fig. 6

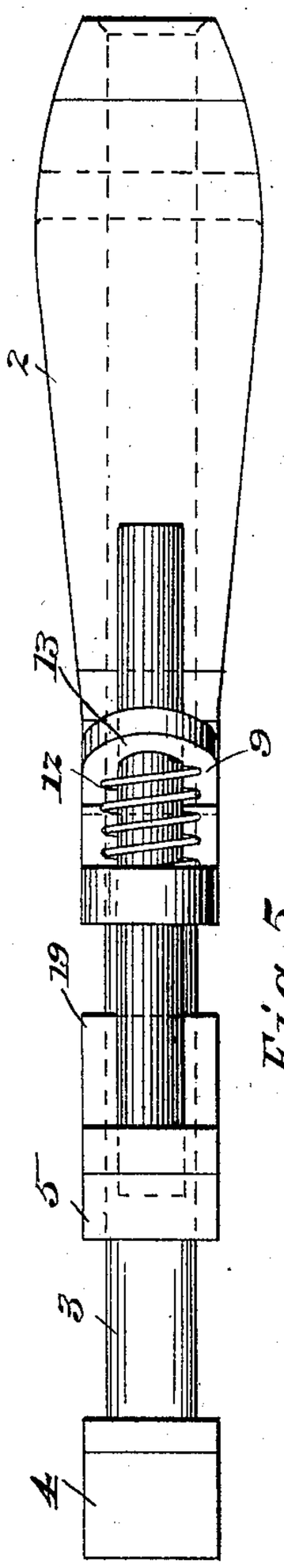

Fig. 5

WITNESSES:

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INVENTOR

Coleman A. Terry,

UNITED STATES PATENT OFFICE.

COLEMAN A. TERRY, OF KINGSTON, NEW YORK, ASSIGNOR OF ONE-HALF TO CHARLES S. ACKLEY, OF BROOKLYN, NEW YORK.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 589,046, dated August 31, 1897.

Application filed August 4, 1896. Serial No. 601,633. (No model.)

To all whom it may concern:

Be it known that I, COLEMAN A. TERRY, a citizen of the United States, residing at Kingston, Ulster county, and State of New York, have invented certain new and useful Improvements in Wrenches, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to wrenches in which there is employed a movable jaw that may be adjusted in different positions in order that the wrench may accommodate different sizes of nuts, bolt-heads, pipes, or the like.

The principal object of the invention is to provide a wrench of this class which may be readily adjusted to fit the object which it is to engage without the manipulation of a screw adjustment; and the invention consists in the various novel and peculiar arrangements and combinations of the several parts of the device, all as hereinafter fully described and then pointed out in the claims.

I have illustrated types of the invention in the accompanying drawings, wherein—

Figures 1 and 2 are side and back views, respectively, of one form of my improved wrench. Fig. 3 is a section, the plane of which section is indicated on line *y z*, Fig. 1, the spring which engages the clutch-piece being omitted. Figs. 4 and 5 are respectively side and front views of another form of my improved wrench with the movable jaw thereof adjusted in open position. Fig. 6 is a section of the form of wrench shown in Figs. 4 and 5, the plane of the section being indicated by lines *a b*, Fig. 4.

Referring to the form of the device shown in Figs. 1, 2, and 3, and in which like numbers of reference indicate like parts, 3 is a standard or bar serving both as a handle for the wrench and a support for the fixed jaw 4, mounted thereon. 18 is a perforation extending through the jaw 4, with its axis parallel with that of the bar 3. 5 is the adjustable jaw, and 19 is a rod projecting from the same at right angles thereto, and which is adapted to fit in the perforation 18, the lower end of which—that is, the right-hand end in Fig. 1—is just large enough to loosely receive the rod, while the upper end of the perforation is enlarged, as shown in dotted lines at 20. This permits a relative movement between the two jaws 4 and 5, so that when they are in engagement—for instance, with a pipe or cylindrical body—their engaging faces may be thrown out of parallelism whenever any force is applied to the wrench and the jaws thereby caused to take a firmer grip on the body. This relative movement of the jaws produces a wedge-like action between the same and the body engaged thereby, as will be readily understood from Fig. 1, wherein the jaws are shown in normal position with their engaging corrugated faces standing parallel with each other. Normally the jaws are kept parallel by means of a spring 21, which is mounted upon the back of the jaw 4 and bears with its free end upon the back of the lower end of the rod 19, and this spring keeps the upper end of the rod in engagement with the back wall of the perforation 18, but the force of the spring is at once overcome upon applying any force to the wrench when in use, and this causes the rod 19 to bear against the opposite wall of the perforation.

The rod 19 is held in adjusted position in its perforation 18 by means of a clutch consisting in a plate 9, formed with a perforation 10, slightly larger than the corresponding diameter of the rod, so that the clutch-plate may be rocked upon the rod in a direction parallel with its length. The rod passes through the perforation 10 of the plate, which is located in a recess 8, formed in the back of the jaw 4. A spring 12 encircles the rod and with one end engages the clutch-plate and with the other a fixed part of the jaw 4, so that normally it keeps the clutch-plate in inclined position upon the rod, the inner end of the plate engaging a fulcrum-point 11, which is fixed relatively to the standard 3 and the head 4. This clutch-piece 9 is permitted to have a slight play in its own plane in the direction of the fulcrum point or shoulder 11, by reason of a recess 16, into which it can move whenever the clutch-plate is moved on the rod 19 in a direction which tends to bring it at right angles thereto, and also to

provide for the movement of the rod 19 in the perforation 18, and the clutch-piece 9, being held in inclined position on the rod 19 by the spring, engages the back of said rod by its edge 13 of its perforation 10 and at the same time engages the front of the rod by its edge 14 of said perforation, so that any tendency to slide the fixed jaw on the rod 19 in a direction away from the jaw 5 is resisted by these two points clutching the rod and biting it. In the same way the movement of the jaw 5 in the direction away from the jaw 4 is also prevented by the clutch. At the same time either jaw may be moved toward the other, as the clutch is inactive whenever the rod is moved in a direction to close up the jaws or whenever the jaw 4 is moved on the rod so as to bring it toward the other jaw. The clutch is readily disengaged or unclutched by pressing down with the finger the outer or free end of the plate, so as to compress the spring 12.

In the form of wrench shown in Figs. 4, 5, and 6 the fixed jaw 4 is located upon the outer end of the standard or bar 3, as in an ordinary monkey-wrench, and 2 is an ordinary handle in which the standard 3 is secured. The movable jaw 5 is formed with a perforation 6, which receives the bar 3, and this jaw may be slid along the bar between the fixed jaw 4 and a bracket 25, which is secured upon the standard 3. The movable jaw 5 is provided with a rod 19, depending from the lower side thereof parallel with the standard 3, and this rod passes loosely through a perforation 26 in the bracket 25. A clutch-plate 9, having perforation 10, is mounted upon the rod 19 and its inner end engages the fulcrum-point 11, which is fixed relatively to the standard and the bracket, which is also formed with a recess or enlargement 16 for the clutch-piece to move into whenever it is straightened on the rod. A coil-spring 12 encircles the rod 19 and is interposed between the bracket and the clutch-piece and acts to maintain the latter in inclined position on the rod with the two points 13 and 14 of the plate in engagement therewith, whereby the same is clutched and prevented from moving in one direction, as hereinbefore described in reference to the constructions shown in the other figures. The clutch is released in the same way as the one in the other form—namely, by pressing upon the free end thereof, so as to compress the spring 12—and the clutch is likewise inactive when the movable jaw 5 is slid toward the fixed jaw, as the rod 19 is then free to slip through the clutch.

I desire to be understood as not limiting my invention to the particular constructions therein shown, as various changes may be made in the same without departing from the spirit of the invention.

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

1. In a wrench, the combination of a standard or bar provided with a fixed jaw, a movable jaw provided with a rod loosely mounted upon said standard so that it may be adjusted endwise thereon, and a rocking clutch-piece loosely engaging with and adapted to bear against said rod, and also engaging a point fixed relatively to said standard, and means for holding said piece in inclined position relative to the rod for locking the same against endwise movement in one direction.

2. In a wrench, the combination of a standard or bar provided with a fixed jaw, a movable jaw provided with a rod loosely mounted upon said standard so that it may be adjusted endwise thereon, a detached rocking clutch-piece consisting in a perforated plate through the perforation of which the said rod loosely passes, said clutch-piece engaging a point fixed relatively to said standard, and means for holding the clutch-piece in inclined position on the rod.

3. In a wrench, the combination of a standard or bar provided with a jaw, a movable jaw provided with a rod mounted loosely upon said standard and adjustable endwise thereon, the two said jaws having a relative rocking movement, and a clutch comprising a rocking clutch-piece engaging the said rod upon one or two sides and engaging a fixed point adjacent said rod, and means for holding said piece in inclined position upon the rod for locking said piece against endwise movement in one direction.

4. In a wrench, the combination of a standard or bar 3 provided with a fixed jaw 4, a movable jaw 5 having a rod 19 adjustable longitudinally relative to said standard, and a detached clutch 9 loosely engaging said rod and a point 11 fixed relatively to said standard, substantially as and for the purpose set forth.

5. In a wrench, the combination of a standard or bar 3 provided with a fixed upper jaw 4, a movable lower jaw 5 adapted to slide on said bar 3, a bracket secured upon the bar 3 below said movable jaw 5, a depending rod 19 secured to said movable jaw 5 and extending loosely through said fixed bracket, and a rocking clutch-piece loosely engaging with and adapted to bear against said rod and also engaging a point on said fixed bracket, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand, this 23d day of July, 1896, in the presence of the two subscribing witnesses.

COLEMAN A. TERRY.

Witnesses:
A. C. CONNELLY,
V. B. VAN WAGONEN.