

No. 713,480.

Patented Nov. 11, 1902.

A. C. MCFARLAND.
MONKEY WRENCH.

(Application filed Apr. 7, 1902.)

(No Model.)

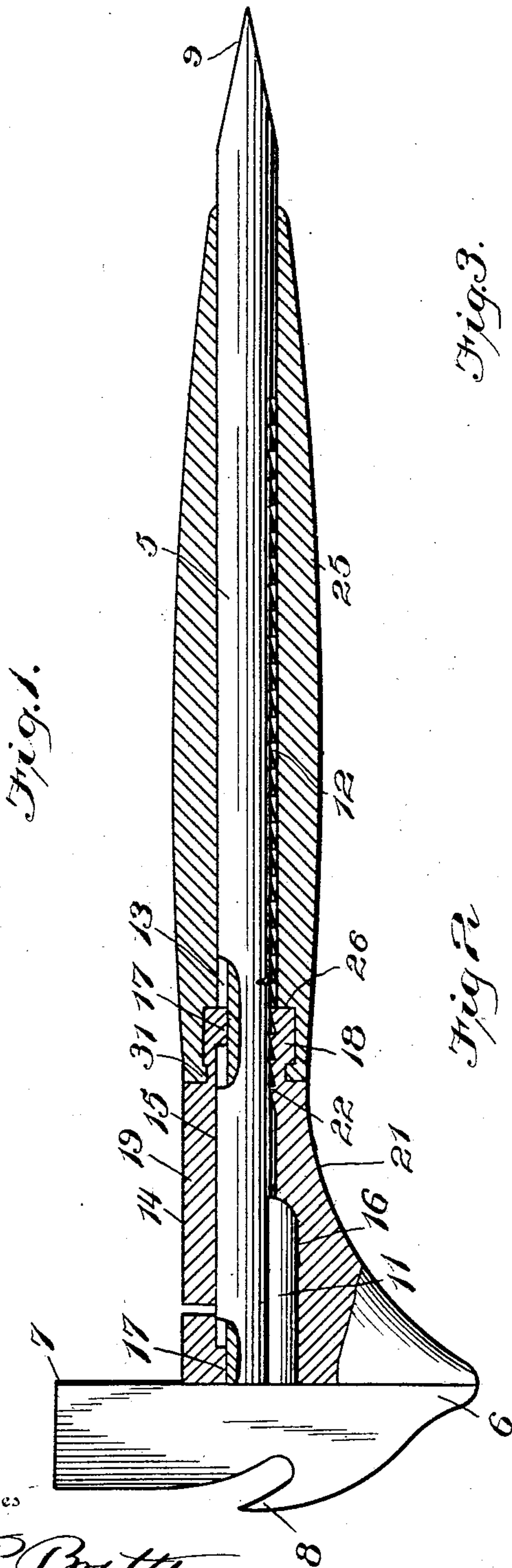


Fig. 3.

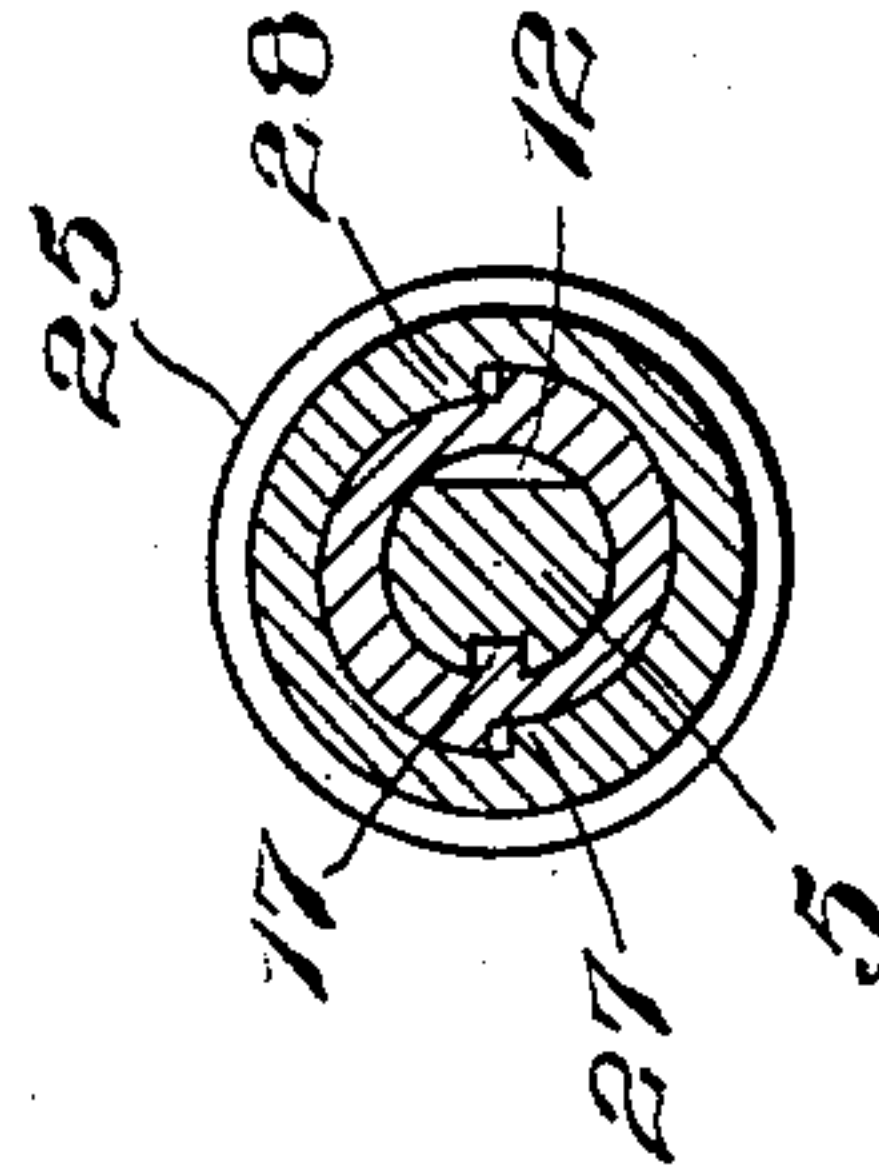
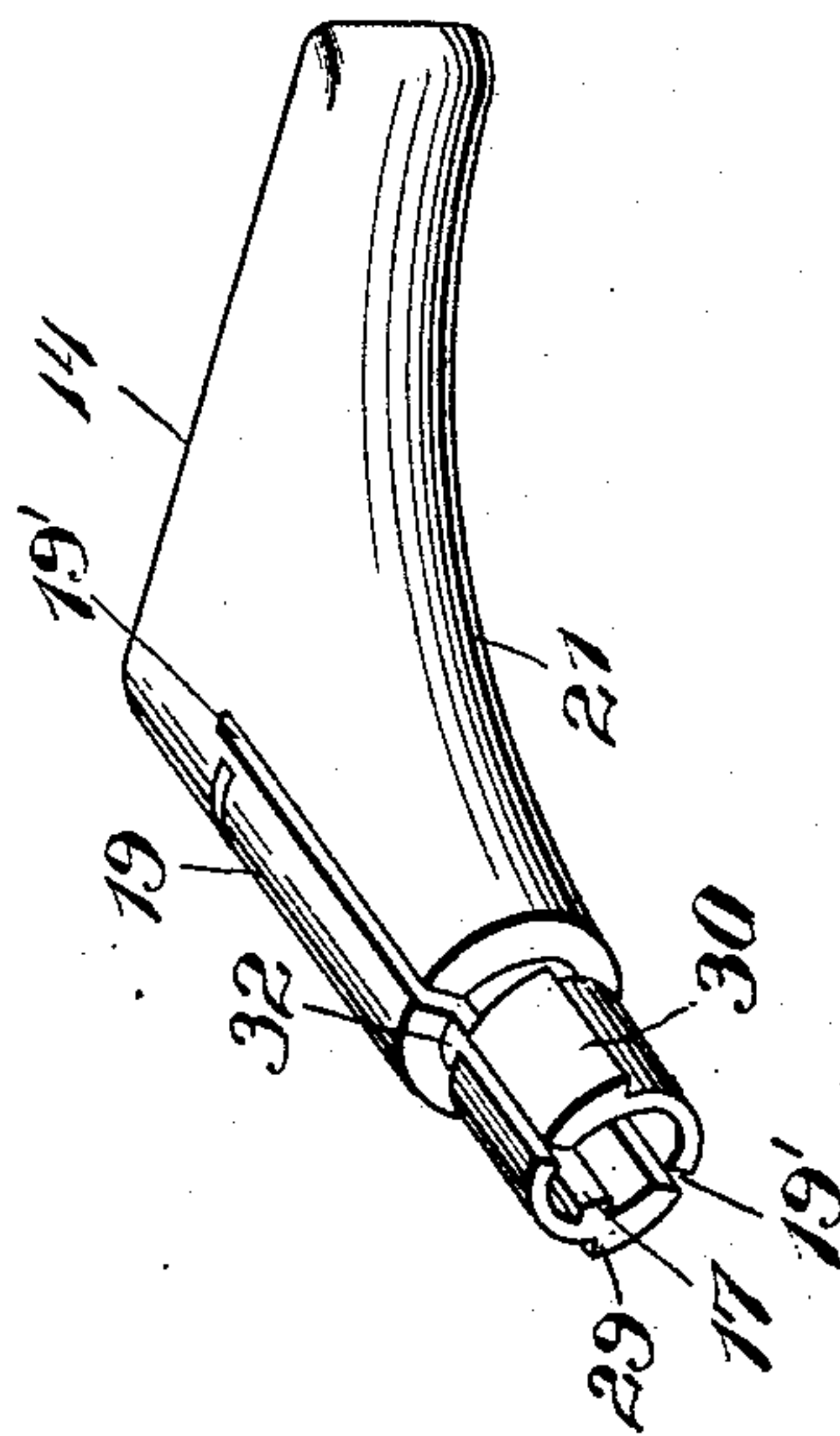


Fig. 2.



Witnesses

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MONKEY-WRENCH.

SPECIFICATION forming part of Letters Patent No. 713,480, dated November 11, 1902.

Application filed April 7, 1902. Serial No. 101,709. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD C. MCFARLAND, a citizen of the United States, residing at Denver, in the county of Arapahoe, State of Colorado, have invented certain new and useful Improvements in Monkey-Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to monkey-wrenches; and it has for its object to provide a construction in which the sliding jaw may be released from the stem to permit of a quick adjustment thereof upon the stem and in which the sliding jaw may be locked securely against movement longitudinally of the stem after it is properly adjusted.

A further object of the invention is to provide a wrench which will be an improvement from the standpoint of its manufacture and which may be made at a moderate cost and will comprise but two parts.

Other objects and advantages of the invention will be understood from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a view partly in side elevation and partly in longitudinal section and showing a wrench embodying the present invention. Fig. 2 is a detail perspective view of the sliding jaw of the wrench. Fig. 3 is a transverse section of the wrench through the cam-faces thereof.

Referring now to the drawings, the present wrench comprises a stem 5 substantially cylindrical in shape and at one end of which is the fixed jaw 6, at the rear end of which projects a hammer-head 7, while on the outer face of the fixed jaw is the claw 8 for pulling nails. At the opposite end of the stem is the screw-driver blade 9, formed by tapering the end of the stem. Upon the face of the stem directly adjacent to the fixed jaw is formed a rib 11, which extends longitudinally of the stem for a short distance from the fixed jaw, and between this rib and the screw-driver blade are formed transverse serrations 12. In the opposite face of the stem and extending through-

out the length thereof is formed a longitudinal groove 13.

The sliding jaw of the wrench is shown at 14, and through this sliding jaw is a cylindrical passage 15, which receives the stem, the passage being enlarged laterally at one end, as shown at 16, to receive the rib of the stem when the jaws are in mutual contact and when they are separated by only a slight distance. From the opposite wall of the longitudinal passage project lugs 17, which engage in the longitudinal slot of the stem. The lugs and ribs prevent rotation of the sliding jaw on the stem.

The neck 18 of the sliding jaw is slotted longitudinally, as shown at 19', in the plane of the axis of the passage through the jaw, the slot terminating a slight distance from the upper face or active face of the jaw, and in the resultant member 19 is formed a transverse slot 20 near to the inner end of the slot 19', so that the member 19 may be sprung in the direction of the member 21 at the opposite side of the slot, so that the free ends of the members may be gripped against the stem of the wrench and the roughened inner face 22 of the member 21 may be drawn into engagement with the serrations of the stem to hold the sliding member in fixed position.

Upon the stem of the wrench is rotatably mounted a handle 25, in the end of which adjacent to the jaws of the wrench is formed a countersink 26, the sides of which are eccentric to the axis of the handle and to each other, so that two oppositely-disposed cams 27 and 28 are provided. The countersink 26 receives the reduced ends of the members 19 and 21, which in turn are provided with cam-faces 29 and 30, respectively, so disposed and of such dimensions that when the handle is given a partial rotation the cams of the handle will engage the cams of the members of the jaw and will squeeze said members toward each other for the purpose above mentioned. When the handle is reversely rotated to the proper extent, the cams of the handle release the cams of the jaw members, so that the jaw may be slid freely along the stem toward and away from the fixed jaw. In order that the sliding jaw may be slid with the handle in both directions, a flange 31 is

formed at the outer end of the countersink of the handle and engages with the annular groove 32, encircling the members 19 and 21 of the sliding jaw.

- 5 In assembling the parts the members 19 and 21 are sprung toward each other and passed through the inclosure of the flange 31, so that the ends thereof provided with the cam-faces will lie beyond the flange, after which the
- 10 members are released and permitted to expand to engage the cam portions behind the flange, the handle being in position to prevent contact of the cams of the jaw with the cams of the handle. The stem of the wrench
- 15 is then passed through the sliding jaw and through the handle and fits the bore of the sliding jaw with sufficient snugness to prevent springing of the members 19 and 21 toward each other to a sufficient degree to permit withdrawal thereof from the handle. The
- 20 stem thereof acts to lock the handle and sliding jaw together, while permitting rotation of the handle upon the jaw. With this construction it will be seen that the parts may be easily and quickly adjusted, while the entire
- 25 wrench consists of only three pieces, it being understood that modifications of the specific construction shown may be made and that any suitable materials and portions may be
- 30 used without departing from the spirit of the invention.

What is claimed is—

1. A wrench comprising a stem having a jaw fixed thereon, a second jaw mounted slidably upon the stem and having a slotted portion 35 and resultant gripping members for movement into and out of engagement with the stem, said gripping members having cam-faces, and a handle rotatably mounted upon the stem and the gripping members of the jaw 40 and having cam-faces in operative relation to the cam-faces of the gripping members to actuate the latter.

2. A wrench comprising a handle having a passage therethrough one end of which passage is enlarged and beyond which enlargement there is a continuous flange, a jaw having a passage therethrough and having slots in the plane of the axis of the passage and resultant spaced members, said members having an annular groove circumscribing them 50 near to one end, the jaw being disposed with the free ends of the spaced members within the handle with the flange of the handle engaging the groove of the spaced members, and 55 a stem passed through the passages of the jaw and handle and having a jaw for cooperation with the first-named jaw.

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

ARCHIBALD C. MCFARLAND.

Witnesses:

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CHAS. E. PARADICE.