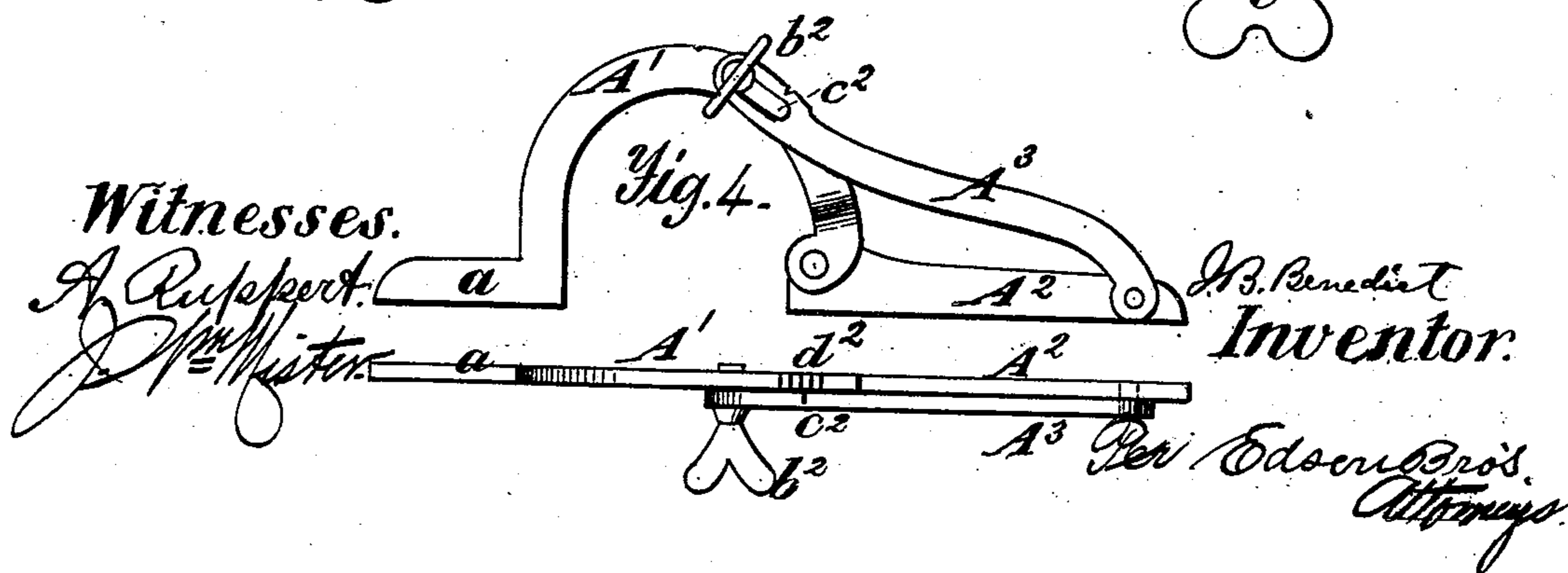
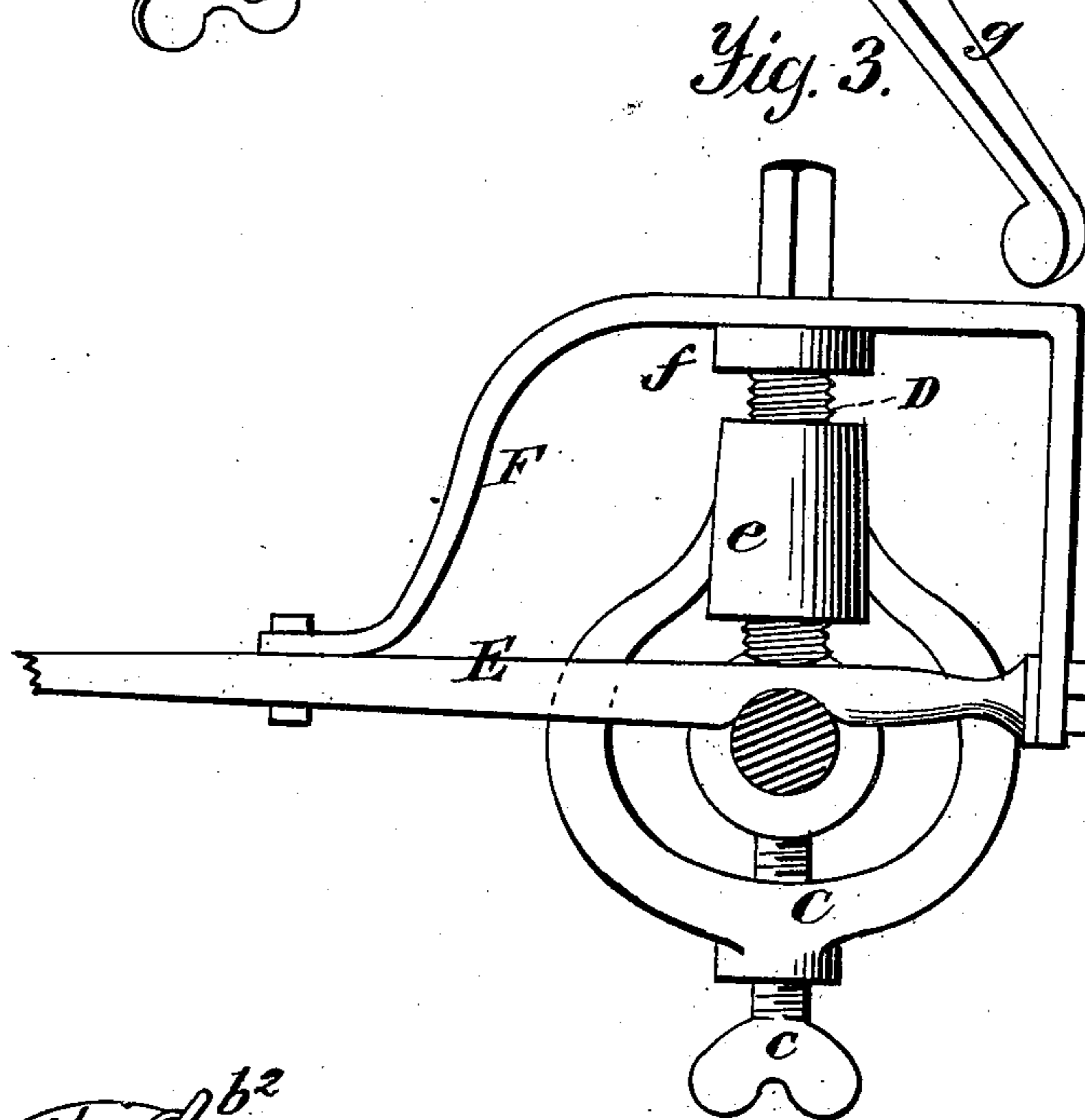
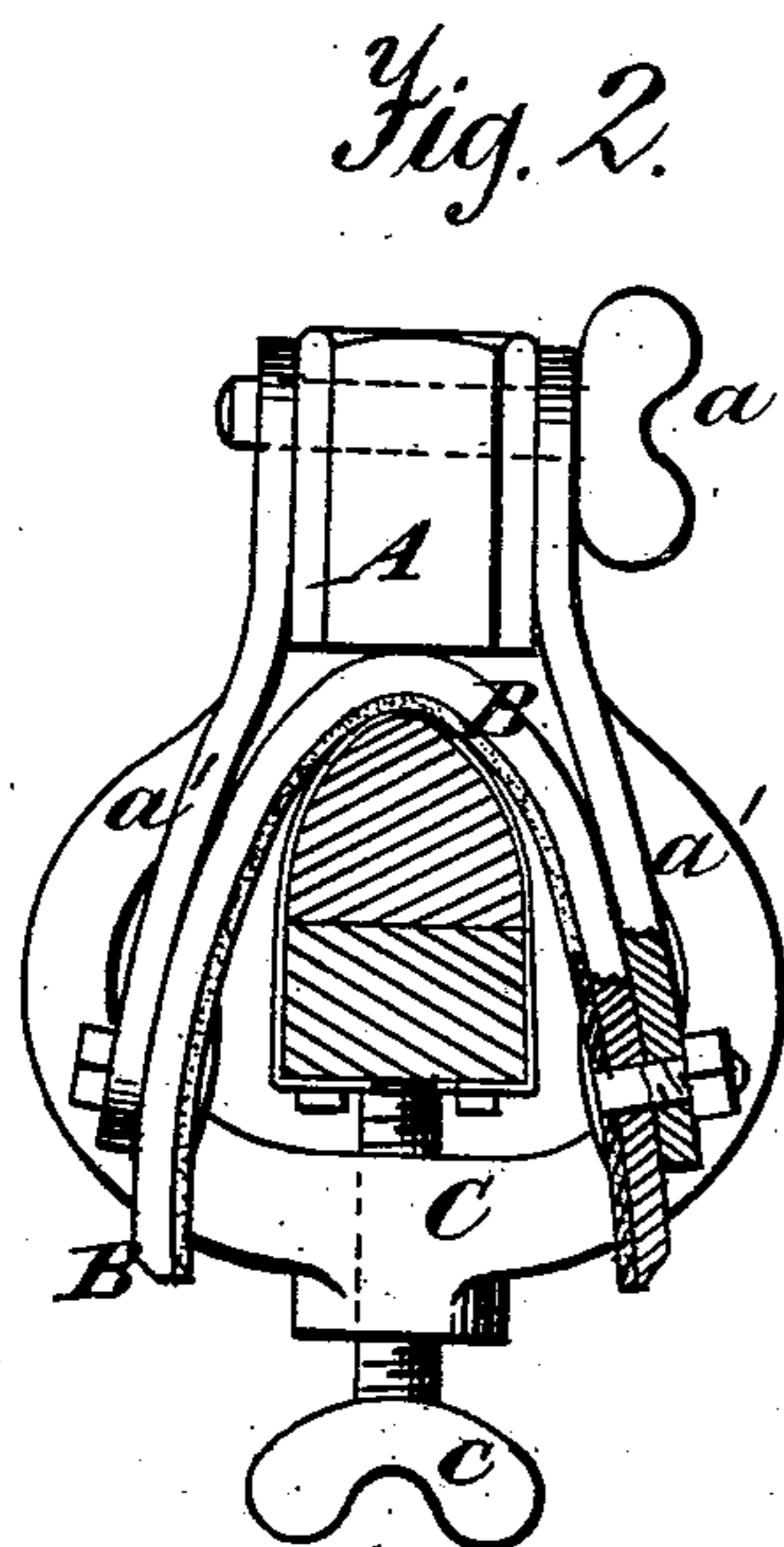
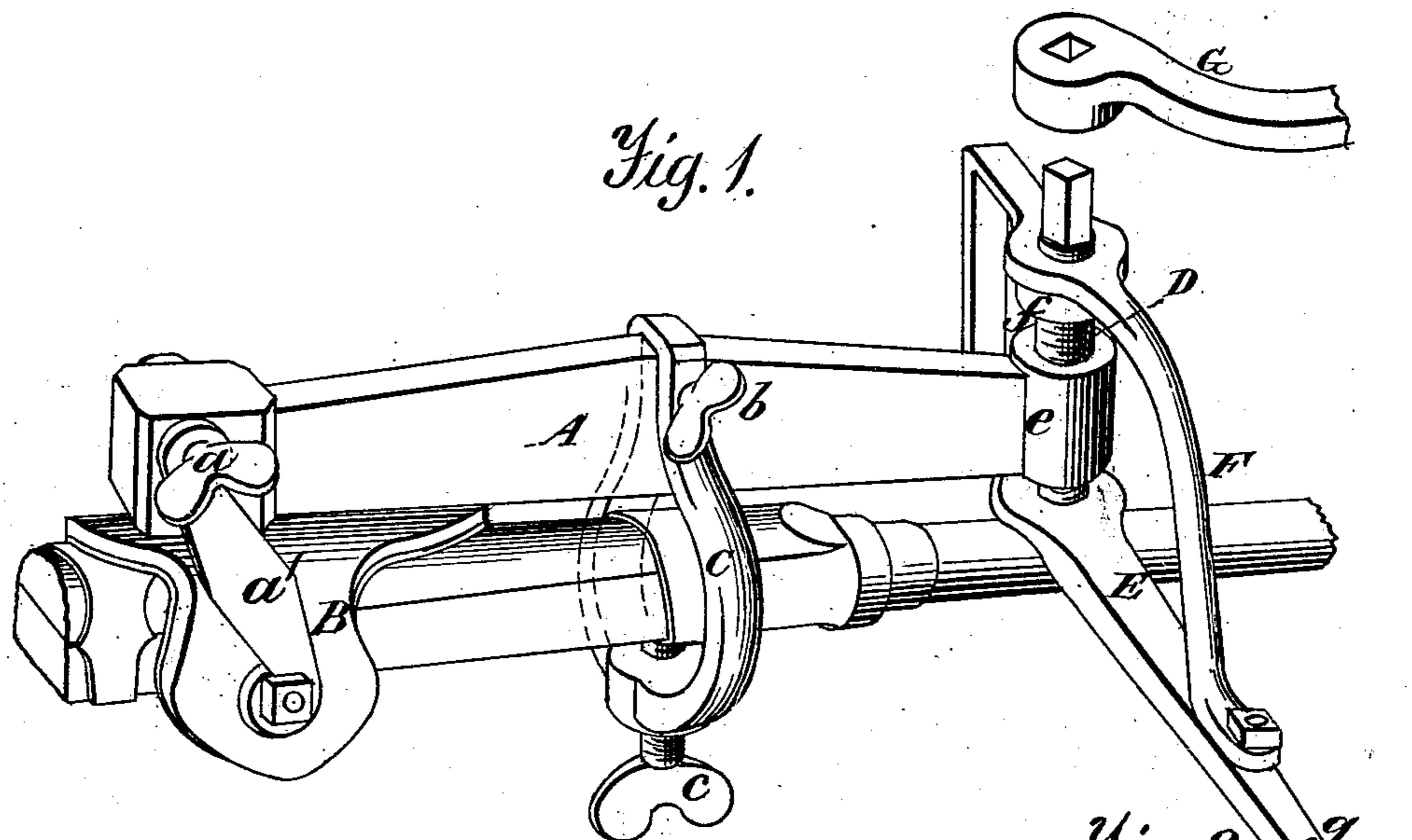


(No Model.)

J. B. BENEDICT.
AXLE STRAIGHTENER.

No. 247,004.

Patented Sept. 13, 1881.



UNITED STATES PATENT OFFICE.

JOHN B. BENEDICT, OF MICHIGAN CITY, INDIANA.

AXLE-STRAIGHTENER.

SPECIFICATION forming part of Letters Patent No. 247,004, dated September 13, 1881.

Application filed November 24, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. BENEDICT, a citizen of the United States, residing at Michigan City, in the county of La Porte and State of Indiana, have invented certain new and useful Improvements in Axle-Straighteners; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a perspective view of my axle-straightener, and Figs. 2 and 3 are sectional views thereof. Fig. 4 is a side and a plan view of the gage to accompany the straightener.

This invention contemplates improvements in axle-straighteners; and it consists in the combination of elements substantially as hereinafter more fully set forth.

In carrying out my invention I employ a lever with one end adapted to bear upon the axle and its other end adapted to act upon the axle-arm, by combining therewith a screw operated by a crank and bearing upon a cross-piece. The lever is connected at its pivotal point to the axle.

Referring to the accompanying drawings, A indicates the lever. This lever has one end detachably connected, by a thumb-screw, *a*, and pivoted arms *a'* *a'*, to a saddle, B, which may be cushioned on its under side, where it fits upon the axle, and thus prevent marring of the axle. It is hung or pivoted by a thumb-screw or pivot, *b*, in the narrow part of a clevis, C, which is adjusted to the axle by the thumb-screw *c*, to permit of the bringing of the lever nearer to or placing it farther from the axle, as may be desired. Its pivot *b*, which does not pass through it, but bears against it, permits the clevis to be so adjusted on the lever as to shorten or lengthen the outer arm of the lever to increase or diminish the leverage. The outer end of the lever has a screw-threaded eye, *e*, which receives a screw, D. The lower or beveled end of the screw bears in a coun-

tersink in the cross-bar E, which has a concavity in its under side to fit the axle-arm, upon which it is placed, as seen in Figs. 1 and 3, to straighten the axle-arm when bent upwardly. The upper end of the screw extends up through a yoke, F, and is provided above the said yoke with an angular head, as seen in Figs. 1 and 3, to permit of the application thereto of a wrench or crank, G, by which it may be operated, so as to raise and lower the outer end of the lever, the former action of said end of the lever having the effect to apply power to the screw, and thus straighten the arm of the axle when bent as aforesaid.

A collar, *f*, is fixed to the screw, directly under the yoke, to prevent it rising up through the yoke while acting upon the lever. The yoke F is secured to the bar E as shown or otherwise.

To the bar E is provided a handle, *g*, for steadying the device while operating with it. When the axle-arm is bent downwardly the device is applied to the under side thereof, and operated in the same manner as in straightening it when the bend is in the opposite direction.

In Fig. 4 is shown my device for indicating the direction in which the axle-arm is to be bent to straighten it. It consists, essentially, of an arc or angular portion, *A'*, with a foot, *a*, which, in using the instrument, is placed and rests upon the axle inside of the outer clip, and of an arm, *A*², hinged or articulated to the arc, and with its outer end connected by a slotted lever, *A*³, and an adjusting-screw, *b*², to the side of the arc, as seen in Fig. 4. This arm is designed to rest upon the axle-arm, and its declination will be indicated by the relative movement of a notch, *c*², on the lever *A*³, with the graduated notches *d*² on the arc, as the adjusting-screw *b*² is loosened and permits the arm *A*² to conform to the inclination of the axle-arm to be straightened. When the declination has been registered, as aforesaid, the screw *b*² is again tightened and the said registration noted to govern the operator in using the straightener upon the axle-arm.

I claim and desire to secure by Letters Patent—

1. In an axle-straightener, the lever A, with one end connected to a saddle and the other end provided with a headed screw, D, in combination with the bearing-bar E, yoke F, and
5 crank G, as and for the purpose specified.

2. In an axle-straightener, the lever A, with one end provided with a saddle, B, connected thereto by pivoted arms *a'*, and the other end provided with a screw, D, and bearing-bar E,
10 while between these it is provided with a fulcrum-clevis, C, having the screw *c* to bear

against the under side of the axle-arm and the screw *b* to change the pivotal point of the lever, substantially as and for the purpose set forth.

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

JOHN B. BENEDICT.

Witnesses:

Mrs. A. B. BENEDICT,
V. A. MENUEZ.