

No. 706,010.

Patented Aug. 5, 1902.

W. W. BENSON.
PIPE BENDING APPARATUS.

(Application filed Apr. 29, 1902.)

(No Model.)

3 Sheets—Sheet 1.

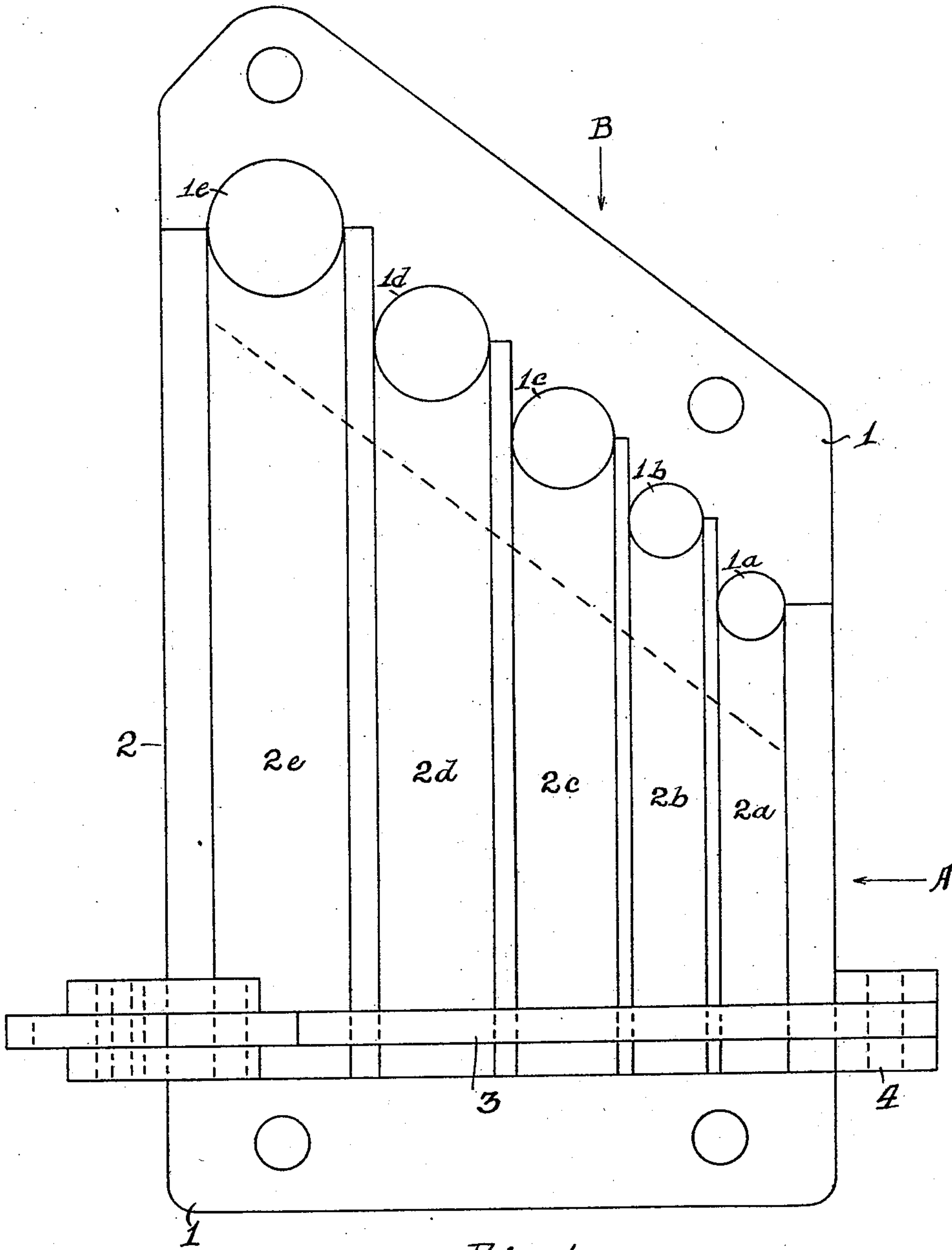


Fig. 1

WITNESSES:
Henry Kreeger
Wiley E. Crane

INVENTOR
Wm. W. Benson
BY
Chas. N. Butler
ATTORNEY.

No. 706,010.

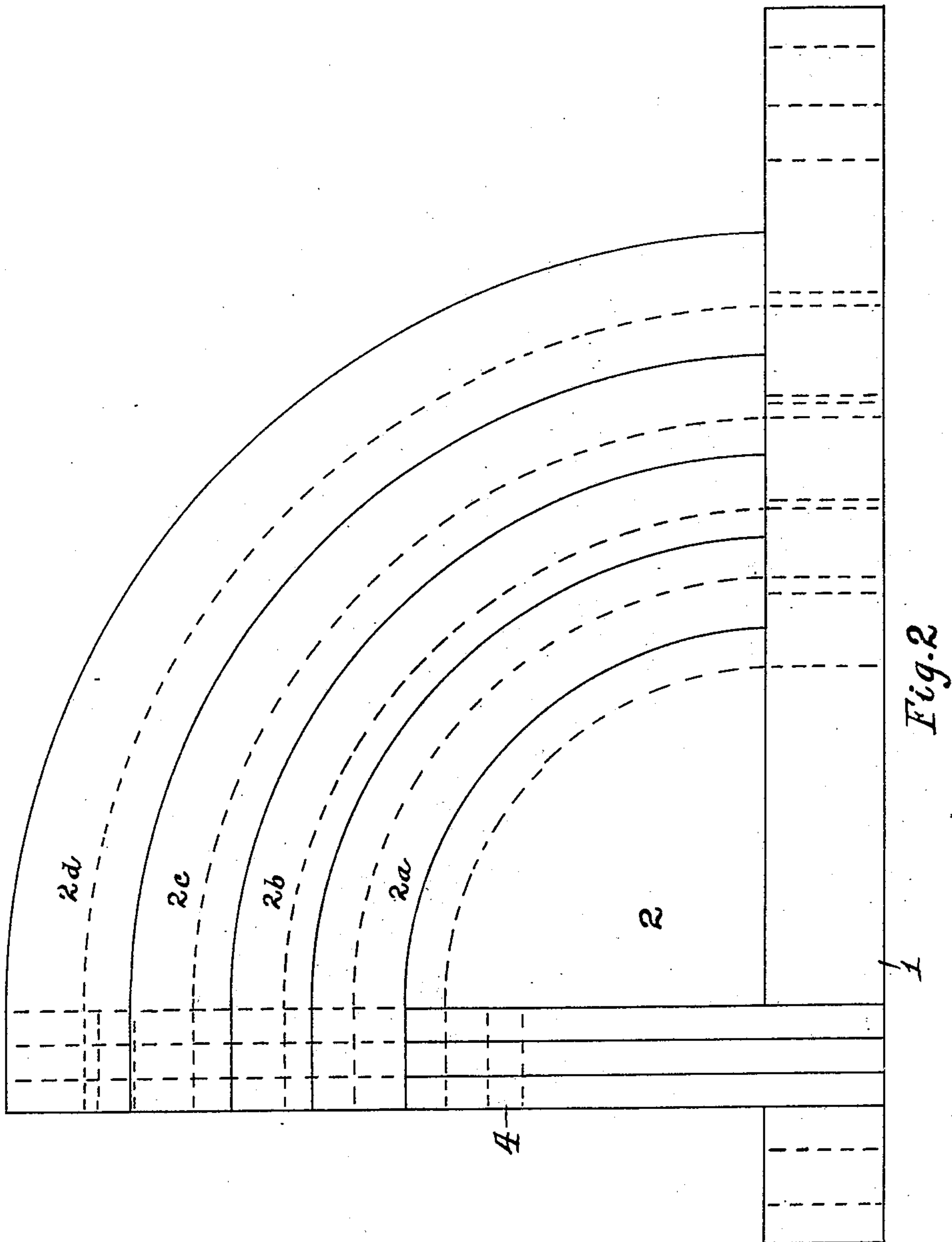
Patented Aug. 5, 1902.

W. W. BENSON.
PIPE BENDING APPARATUS.

(Application filed Apr. 29, 1902.)

(No Model.)

3 Sheets—Sheet 2.



WITNESSES:

Henry C. Riley
Utley E. Crane

INVENTOR

Wm. W. Benson

BY

Chas. H. Butler

ATTORNEY.

No. 706,010.

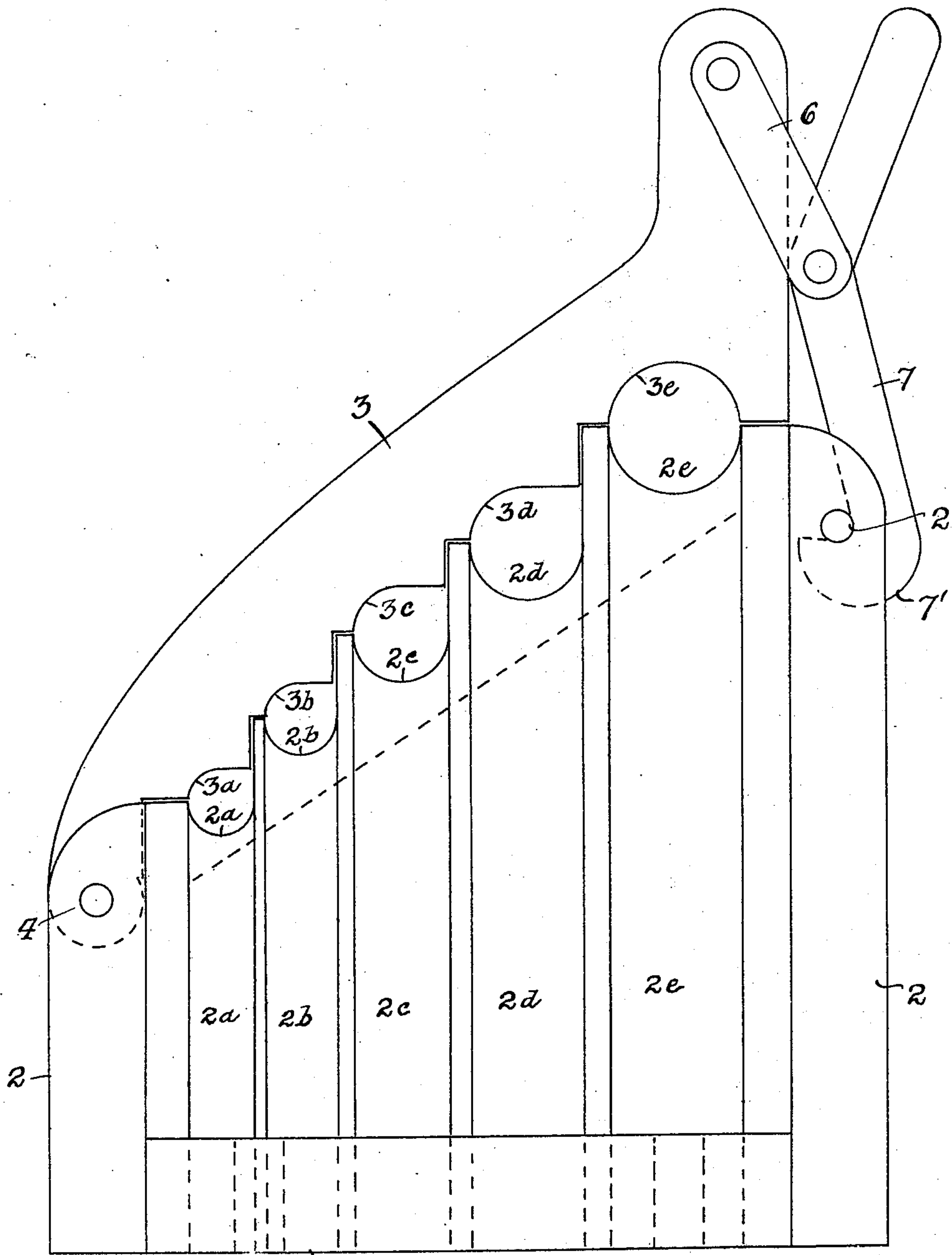
Patented Aug. 5, 1902.

W. W. BENSON.
PIPE BENDING APPARATUS.

(Application filed Apr. 29, 1902.)

(No Model.)

3 Sheets—Sheet 3.



WITNESSES:

Henry C. Green
Walter E. Crane

Fig. 3

INVENTOR

Wm. W. Benson

BY

Chas. N. Butler

ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM W. BENSON, OF PHILADELPHIA, PENNSYLVANIA.

PIPE-BENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 706,010, dated August 5, 1902.

Application filed April 29, 1902. Serial No. 106,250. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. BENSON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Pipe-Bending Apparatus, of which the following is a specification.

This invention relates to pipe-bending apparatus, and is more particularly designed for forming elbows for electric conduits.

The nature and characteristic features of the improvements will more fully appear from the following description, taken in connection with the accompanying drawings, of which—

Figure 1 is a plan view of my invention. Fig. 2 is a side elevation thereof as seen from the position of the arrow A of Fig. 1, and Fig. 3 is an end elevation thereof as seen from the position of the arrow B of Fig. 1.

As shown in the drawings, the apparatus comprises the base 1 and the block 2, having the general form of a quadrantal cone-frustum. The base is provided with the apertures 1^a, 1^b, 1^c, 1^d, and 1^e of gradually-increasing diameters, and the block 2 is provided with the quadrantal grooves 2^a, 2^b, 2^c, 2^d, and 2^e of circular cross-section, the radii of the quadrants and the diameters of the grooves gradually increasing. A lever 3, having the notches 3^a, 3^b, 3^c, 3^d, and 3^e, adapted to register with the grooves 2^a, 2^b, 2^c, 2^d, and 2^e, is connected by the hinge 4 to the block 2 and is adapted to be secured in the position shown by the latch comprising the link 6, pivoted to the lever 3, and the lever 7, pivoted to the link, the lever having a jaw 7', which engages a catch 2' of the block 2.

In the operation of forming an elbow or bending a pipe to quadrantal form of diameter corresponding to the diameter of the pipe's bore the end of the pipe is inserted in the hole of the base corresponding to the groove

adapted for forming the pipe as desired, and the pipe is then bent over the form, in which position it is secured by latching the lever 3. The pipe is thus clamped and held while it is subjected to any further forming operations that may be required for obtaining the desired result.

Having described my invention, I claim—

1. In a bending apparatus, a form having a series of parallel circular grooves of varying radii, in combination with a base for supporting the same and holding the articles to be formed by the respective grooves, said mechanism being provided with apertures adjacent to the respective grooves for engaging the article to be formed, substantially as specified.

2. In a bending apparatus, the combination of a base having a series of holes therein adapted for engaging pipe ends, with a curved block or form having a series of peripheral grooves of varying radii extending from the respective holes, and a lever adapted to cross said grooves transversely and retain the shapes formed upon said apparatus, substantially as specified.

3. In a bending apparatus, the combination of a base having a series of holes therein adapted for engaging pipe ends, with a block or form having peripheral grooves of varying radii extending from the respective holes, said device having the form substantially of a cone-frustum section axially intersected by said base, and a hinged lever having a latch adapted for holding the shapes formed upon said apparatus.

In testimony whereof I have hereunto set my name in the presence of the subscribing witnesses.

WM. W. BENSON.

Witnesses:

UTLEY E. CRANE,
C. N. BUTLER.