

(No Model.)

F. WESTERBECK.
CRIMPING TOOL.

No. 554,554.

Patented Feb. 11, 1896.

Fig. I.



Fig. II.

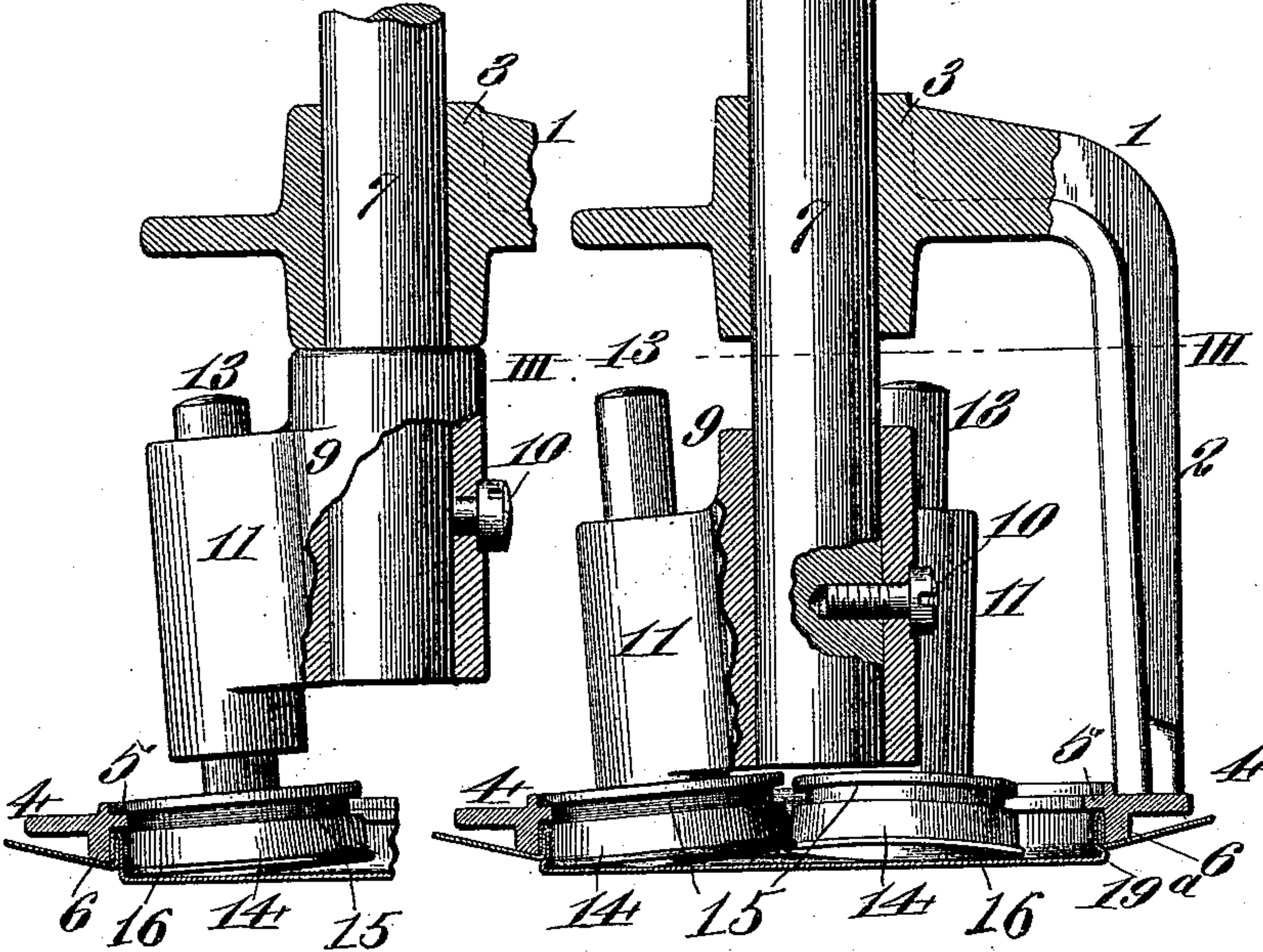


Fig. IV.

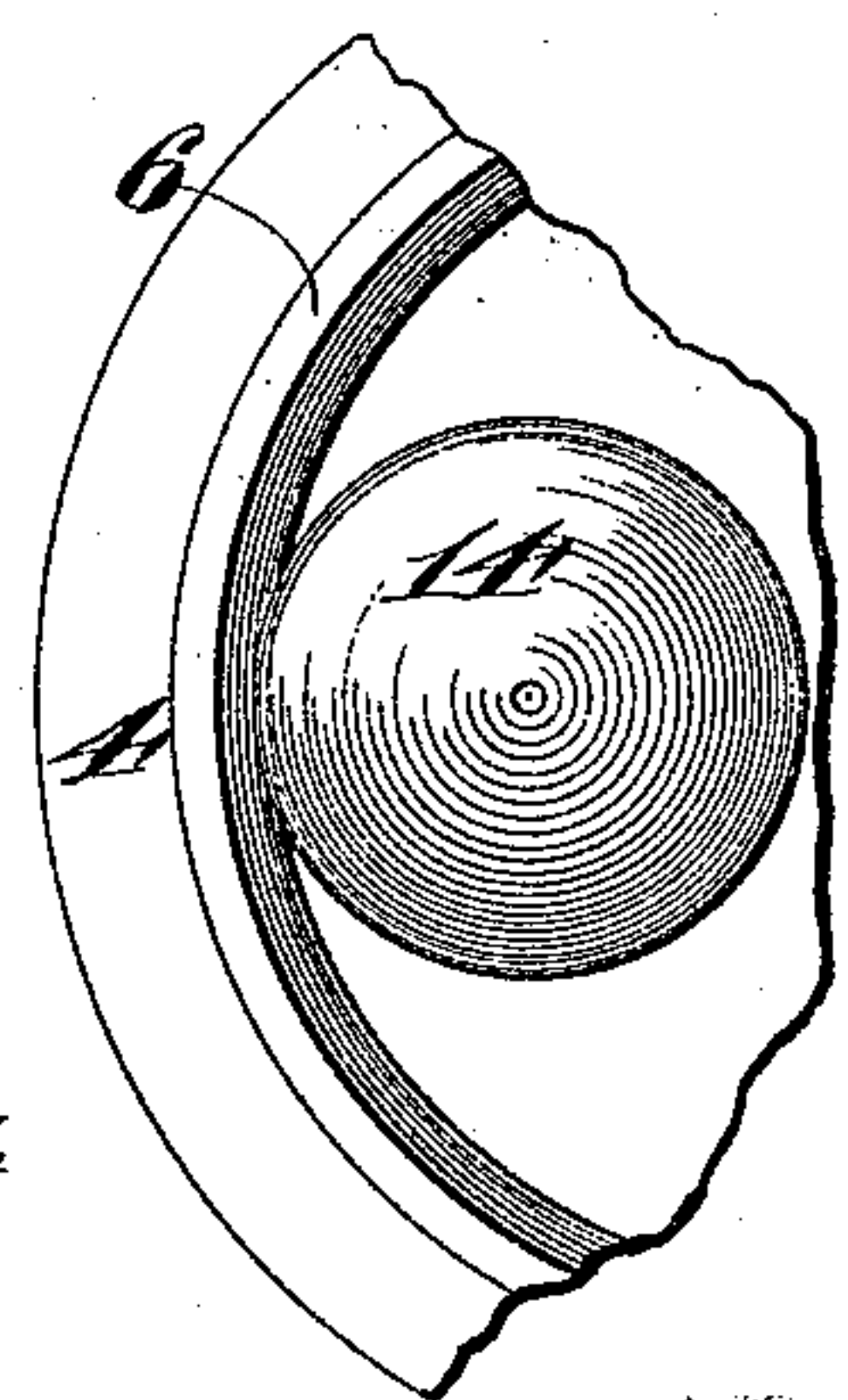


Fig. III.

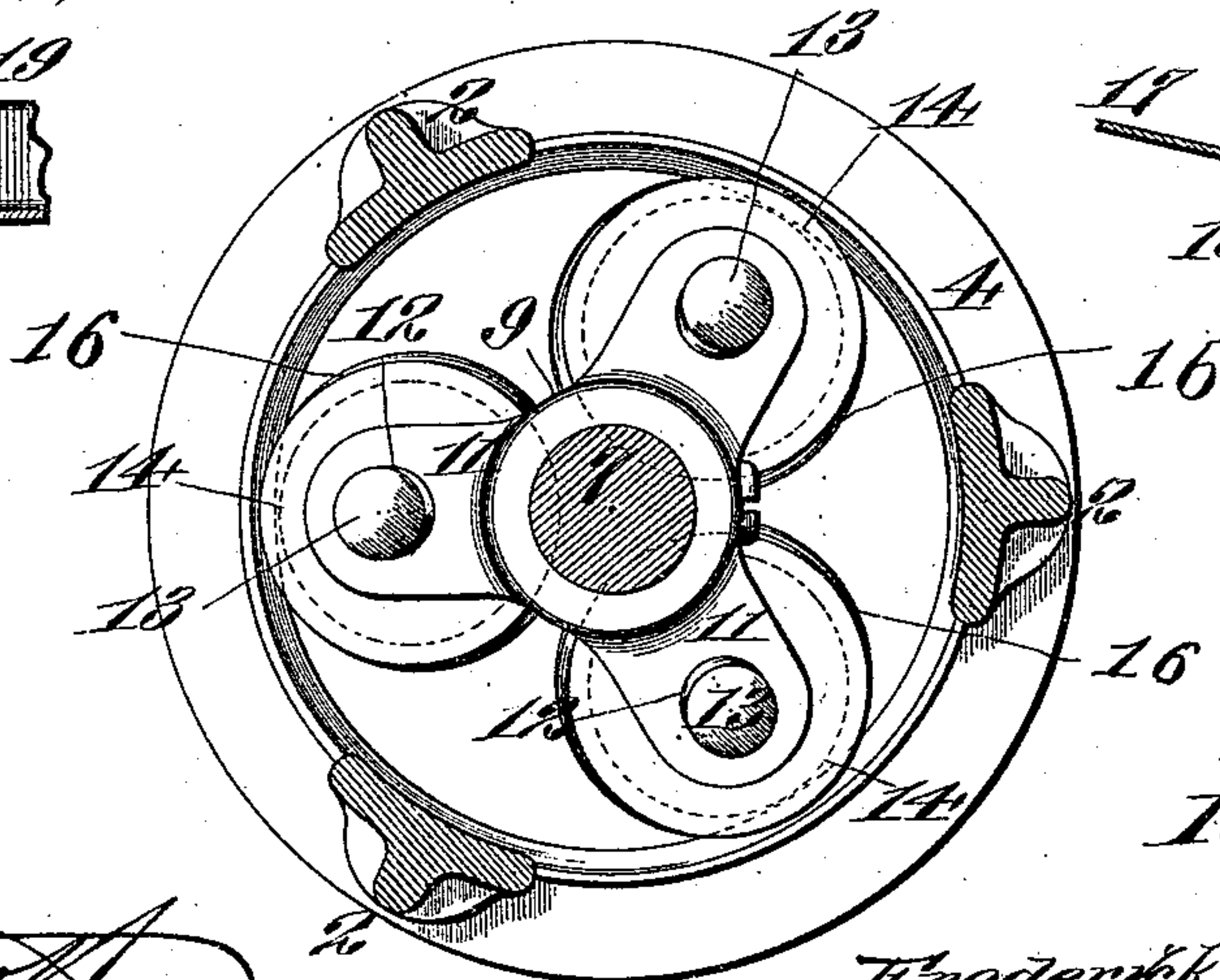


Fig. V.

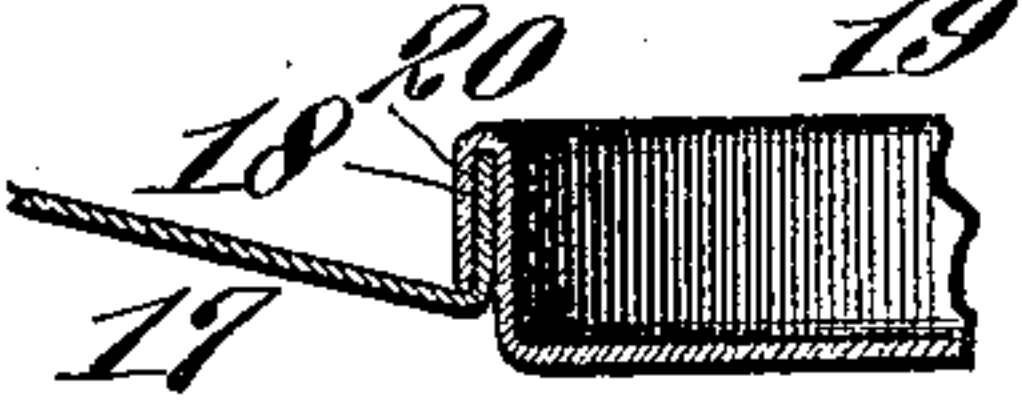
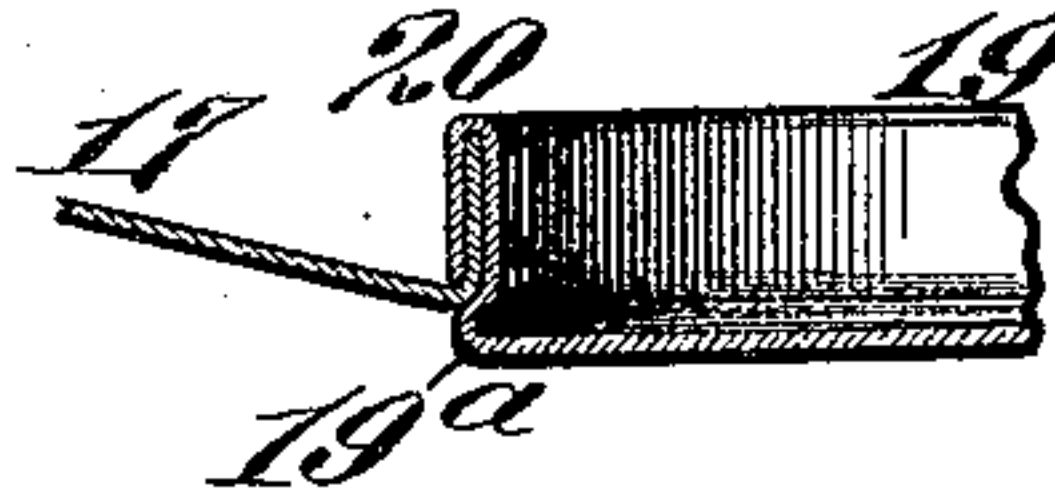


Fig. VI.



Attest:

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FREDERICK WESTERBECK, OF ST. LOUIS, MISSOURI.

CRIMPING-TOOL.

SPECIFICATION forming part of Letters Patent No. 554,554, dated February 11, 1896.

Application filed July 2, 1895. Serial No. 554,744. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK WESTERBECK, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Crimping-Tools, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to a compound crimping-tool that effects a purely mechanical crimp hermetic seal-joint with sheet-metal can-lids, also with caps upon the flanged mouths of can-spouts and other like circular sheet-metal joints, without the use of solder, sealing-wax or like seals, which latter are sometimes difficult to apply and unseemly as well as unsatisfactory in some of the results; and the invention consists in features of novelty hereinafter fully described and pointed out in the claims.

Figure I is a view partly in elevation and partly in vertical section, in which the parts are shown in depressed position, illustrating the act of crimping. Fig. II is a view showing the position of the parts before depression. Fig. III shows a horizontal section taken through the yoke and stem and a top view of the crimping ring and disks. Fig. IV is a detail view of the lower side of one of the disks and a portion of the ring. Fig. V illustrates a section of a can and lid previous to being crimped. Fig. VI illustrates the section shown in Fig. V after crimping.

Referring to the drawings, 1 designates a yoke formed with three arms 2, and having at the conjunction of said arms a hub 3. At the lower ends of the arms 2 is a ring 4, provided with an annular inwardly-projecting rib 5 and an annular downwardly-extending flange 6.

7 designates a stem fitting and working in the hub 3, and provided at its upper end with the handle 8. This stem carries at its lower end a block 9, held by a set-screw 10, and having three diverging wings 11, and each of these diverging wings has a central bearing-bore 12, which bore is inclined inwardly in a downward direction, so that all of the bores extend toward a common center. Each bore receives the journal-stem 13 of a disk 14, and

as a natural consequence of the inclined bores 12 each of the stems 13 stands at an angle with the lower portions closer together than the upper portions, and, therefore, the disks 14 are naturally centralized toward each other.

The disks 14 are each formed with a peripheral groove 15 corresponding in width to the width of the rib 5, so that the groove will fit the rib, and in the operation of the tool the disks are free to rotate, while at the same time they are retained in position, owing to their being held from vertical movement by the rib 5 engaging the groove 15.

At the lower edge of each disk is a flange-rim 16. 17 designates the marginal rim of a can-top, and 18 is an upwardly-projecting flange over which the downwardly-projecting flange 20 of can-lid 19 is arranged to project. In Fig. V, I have shown a portion of a can-top margin 17 and the lid before being crimped by my improved tool, and in Fig. VI, I have shown the same parts after the crimping has been done.

The operation of my tool is as follows: The tool is placed in position as indicated in either Fig. I or Fig. II, but the stem 7, block 9, and wings 11, which are all rigidly connected, are at this time elevated, as shown in Fig. II, and in this position the disks 14 are all thrown toward a center, owing to the incline of the bores 12 in which the disk-stems are journaled, and for this reason the disks do not exert any force against the sheet-metal can-lid and margin. The stem 7 is next pressed downward through means of its handle 8, and this movement depresses the wings 11, and the disks 14 are thrown outward against the interior of the upper surface of the can-lid, compressing the lid and can-top margin against the depending flange 6 and causing the flange-rim 16 to press the metal of the lid inward beneath the margin of the can-top, and thus form a locking-bend 19^a, that firmly secures the lid to the can-top, and in this manner a substantial and secure joint is made between the can-top and the lid.

I claim as my invention—

1. In a crimping-tool, the combination of a yoke, a ring carried by said yoke, disks arranged to travel against the inner face of said ring, journal-stems on said disks, and an op-

erating-stem carrying diverging wings provided with inclined bores in which said journal-stems are arranged to slide and rotate, substantially as and for the purpose set forth.

5 2. In a crimping-tool, the combination of a yoke, a ring carried by said yoke, a rib on the inner face of said ring, grooved disks arranged to travel on said rib, journal-stems on
10 said disks, an operating-stem, diverging wings carried by said operating-stem, and the provision in said wings of inclined bores in which said disks journal-stems are arranged to operate, substantially as and for the purpose set forth.

15 3. In a crimping-tool, the combination of a yoke, a ring carried by said yoke, an operating-stem, wings diverging from said operating-stem, disks, journal-stems on which said disks are mounted, said journal-stems having
20 their bearings in inclined bores in said wings, substantially as described.

4. In a crimping-tool, the combination of a yoke, a ring carried by said yoke, an annular
25 rib on the interior of said ring, an operating-stem, wings diverging from said stem, journal-stems arranged to operate in said wings,

and grooved disks carried by said journal-stems, substantially as described.

5. In a crimping-tool, the combination of a yoke, a ring carried by said yoke, an annular
30 rib on the interior of said ring, an operating-stem, diverging wings carried by said operating-stem, journal-stems arranged to operate in said wings, grooved disks carried by said journal-stems, and flange-rims formed
35 on the lower edges of said disks, substantially as and for the purpose set forth.

6. In a crimping-tool, the combination of a yoke, a ring carried by said yoke, an annular
40 rib on the interior of said ring, a downwardly-extending flange on said ring, an operating-stem, diverging wings carried by said operating-stem, journal-stems arranged to operate in said wings, grooved disks carried by said
45 journal-stems, and flange-rims formed on the lower peripheral edges of said disks, substantially as described.

FREDERICK WESTERBECK.

In presence of—

E. S. KNIGHT,
N. FINLEY.