

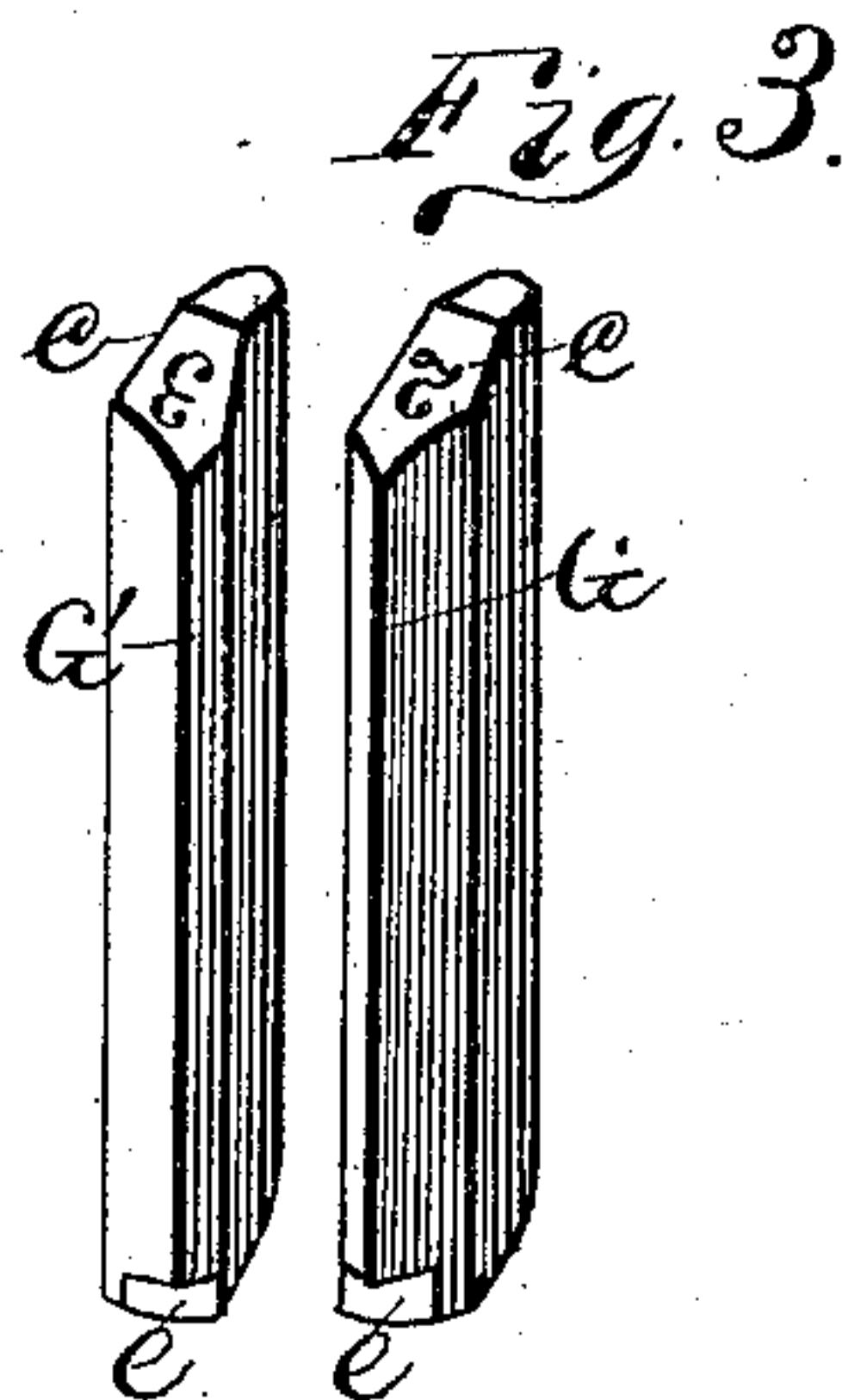
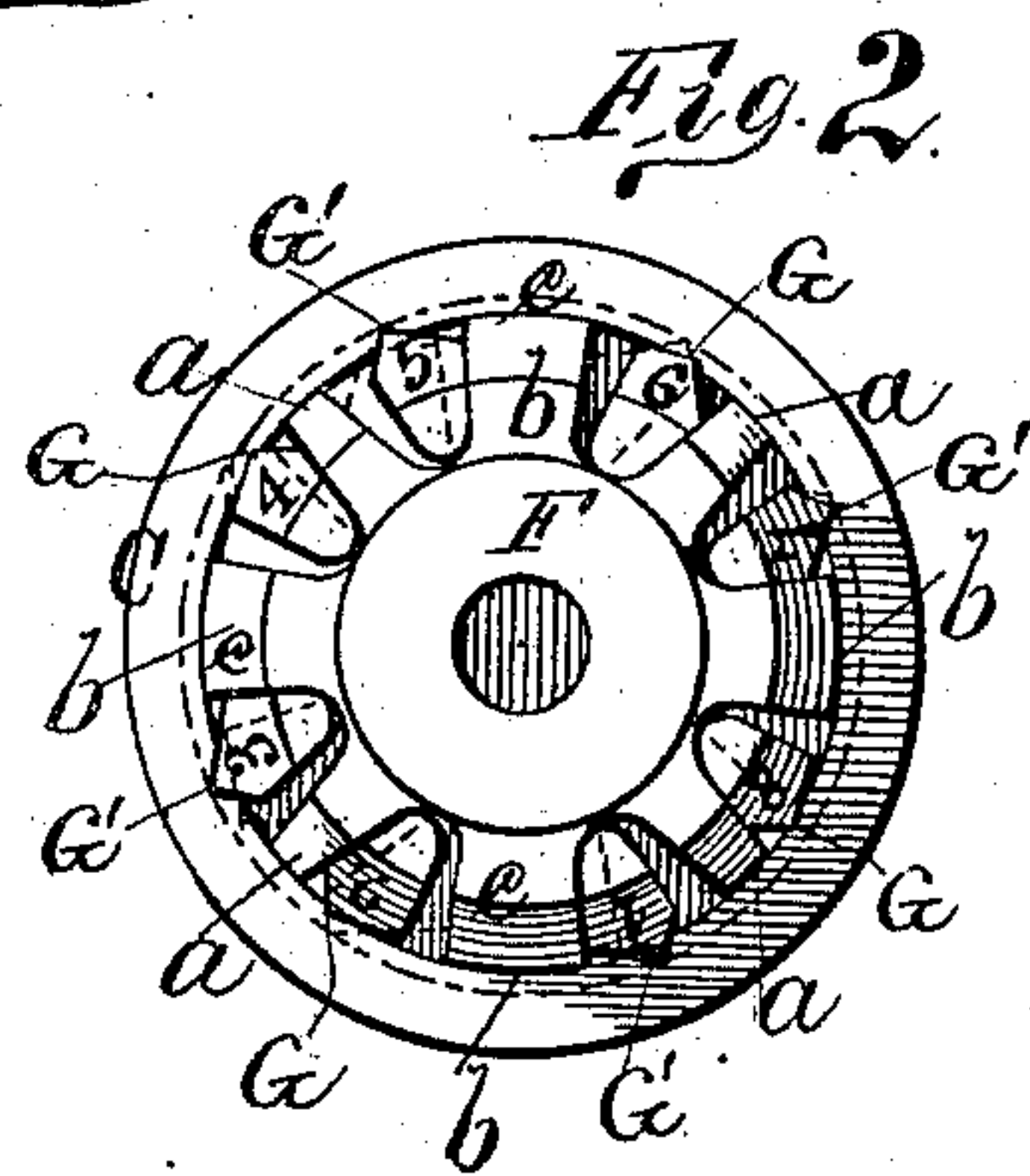
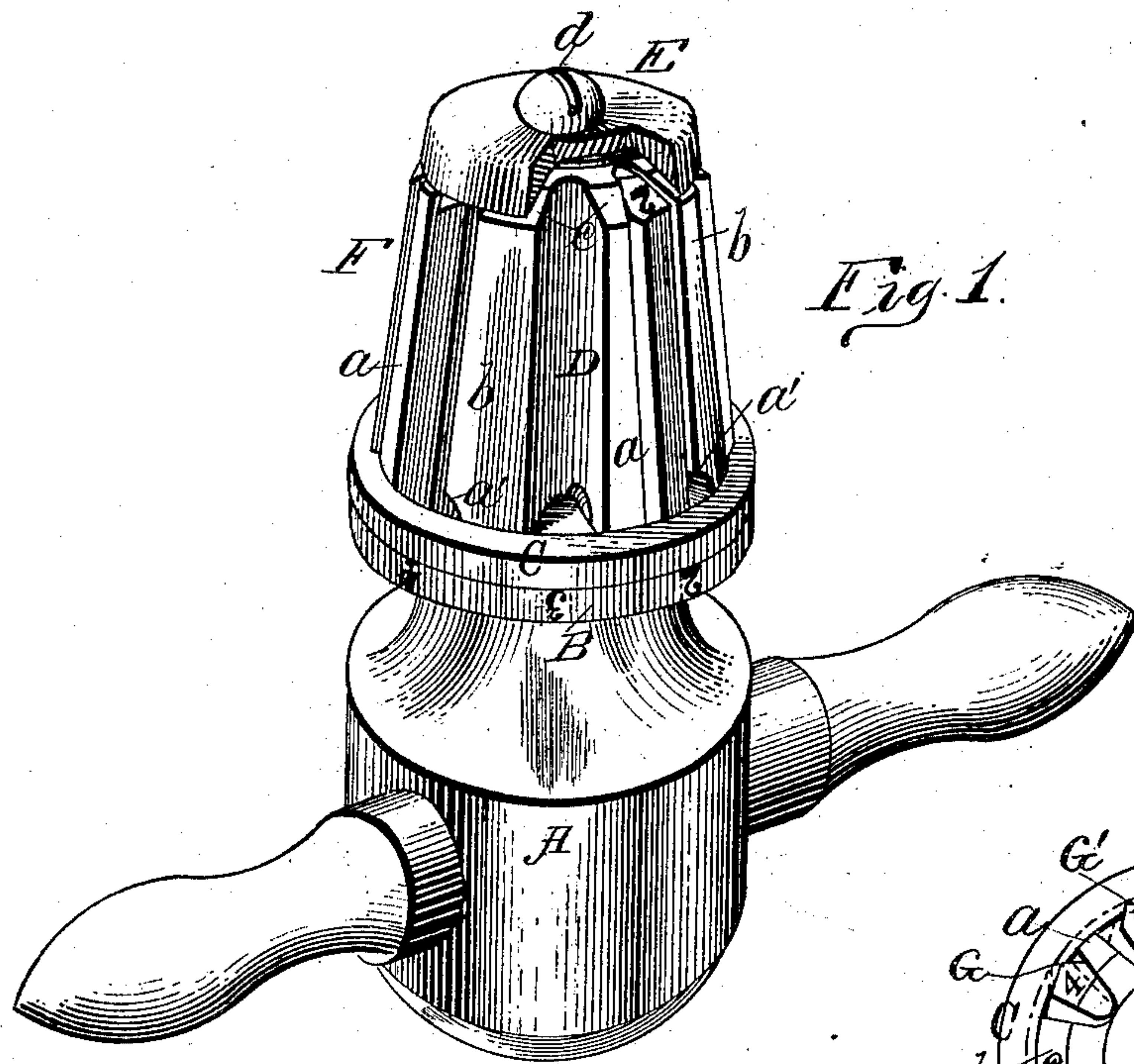
(No Model.)

C. TRAPP.

WRENCH FOR BUNG BUSHES.

No. 257,414.

Patented May 2, 1882.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES TRAPP, OF PORT WASHINGTON, WISCONSIN, ASSIGNOR TO HENRY W. LYMAN AND JAMES W. VAIL, OF SAME PLACE.

WRENCH FOR BUNG-BUSHES.

SPECIFICATION forming part of Letters Patent No. 257,414, dated May 2, 1882.

Application filed September 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES TRAPP, of Port Washington, in the county of Ozaukee, and in the State of Wisconsin, have invented certain
5 new and useful Improvements in Wrenches for Bung-Bushes; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to wrenches for forcing
10 metallic bushes into the bung-holes of casks, &c.; and it consists in a central tapering core having longitudinal recesses to receive loose eccentrics, the exposed surfaces of which are provided with one or more biting-jaws to en-
15 gage with the inner periphery of the bush and cause it to turn with the wrench.

In the drawings, Figure 1 is a perspective view of my device with one of the eccentrics removed. Fig. 2 is a top view of my device
20 with the cap removed. Fig. 3 is a perspective view of two of the eccentrics.

A is the shank of the wrench, which is of metal, has ordinarily a hole through it for an operating-lever, and a rim, C, which forms the base
25 of a flanged core, F, the flanges *a* of which are inclined from the center or core out, as well as from the base of the core to its termination. The flanges *b* alternate with flanges *a*, and, while they are inclined from the base of the core
30 to its termination, are dovetailed in cross-section. In the recesses D, between these flanges *a* and *b*, I insert eccentrics 1 2 3 4 5 6 7 8, &c., each of which is formed with a knife-edge, G or G', that is designed to take into the inner
35 periphery of the bush; and I generally arrange these eccentrics so that the knife-edge of each will be nearer to one of the flanges *a* than to its companion flange *b*.

One corner of the lower end of the eccentrics
40 is rounded off, as at *e*, to permit it to turn freely against the rim C, and the upper ends of the eccentrics, as well as the flanges, are beveled off, as at *e*, to receive a cap, E, by which they are held from toppling out, but which permits them
45 to play from side to side.

It will be seen that when the eccentrics having the knife-edges G are lying against the flanges *a* their knife-edges will be almost flush with them; but when the eccentrics are turned
50 so as to lie up against flanges *b*, then their knife-

edges project above or beyond the flanges. The same is true of the eccentrics having the knife-edges G'. Now, therefore, when the wrench is inserted squarely into a bush the eccentrics will be crowded against the flanges *a*; but if,
55 after its insertion in the bush, the wrench be turned to the right, the knife-edges G' will take into the surface of the bush, and the eccentrics will be crowded over toward the flanges *b*, and the hold of the knife-edges upon the bush will
60 increase with the amount of resistance to be overcome. Now, to remove the wrench after it has driven the bush home, it is only necessary to give it a very slight turn to the left, using only sufficient force to throw the eccen-
65 trics back against the flanges *a*, when the wrench may be easily withdrawn.

As above described, the eccentrics, when inserted between the flanges, lie in such a position that the knife-edge of each is always farthest
70 from flange *b*; and to bring this about I make, say, half of them (1, 3, 5, and 7) with knife-edges G' pointing to the right, and the other half (2, 4, 6, and 8) with knife-edges G pointing to the left. Now, when the bush is to be forced into
75 the bung, it will be necessary to turn the wrench from left to right, and this will cause the knife-edges on the right side of their eccentrics to take into the inner periphery of the bush and carry the bush about with it, so when the
80 wrench is turned in an opposite direction the knives that project to the left will bite into the bush and dislodge it from its position. Any number of eccentrics may be used, having either right or left handed knife-edges arranged in
85 any desired relation to each other, without departing from the spirit of the invention.

My device may be also used to hold the bush-blanks while they are being threaded; and when they are specially designed for that purpose I
90 propose to slightly modify their construction by making the flanges all one width and shape and forming the cutting-edges of the eccentrics on the same side of all of them, so that they will act only in one direction. If desired, the
95 eccentrics may have more than one knife-edge.

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

1. A wrench for driving the bushes in and 100

out of bung-holes, consisting of a flanged core, and eccentrics having knife-edges loosely arranged therein, and means, substantially as described, for holding the specified parts together.

- 5 2. A wrench for bung-bushes, having flanges *a*, wedge-shaped in cross-section, and flanges *b*, dovetailed in cross-section, the flanges *a* and *b* alternating with each other, in combination with eccentrics 1 2 3, &c., arranged in the recesses between these flanges, with their knife-edges lying nearer to flanges *a* than to flanges *b*, and with means, substantially as described, for holding the specified parts together.

3. The combination of the flanged core, eccentrics, cap E, and rim C, as set forth. 15

4. A bush-wrench having flanged core F, rim C, base B, and shank A, in combination with eccentrics 1 2 3, &c., and cap E, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of 20 September, 1881.

CHARLES TRAPP.

Witnesses:

WM. H. LANDOLT,
EDWARD R. BLAKE.