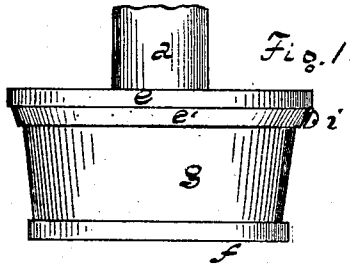
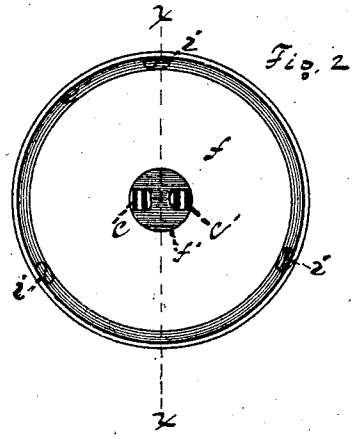
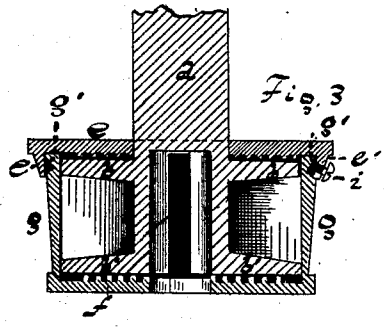
G. ODHOLM.

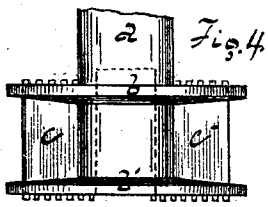
Drill-Chucks.

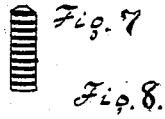
No. 151,714. Patented June 9, 1874.

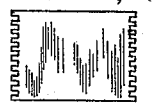


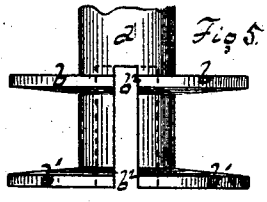


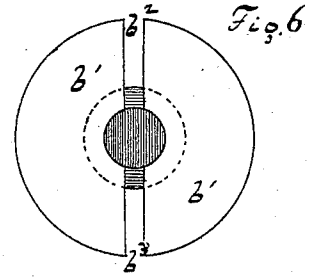












Witnesses

John Pollitt

Henry Small

Inventor:

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By W. E. Simonds Atty

UNITED STATES PATENT OFFICE.

GUSTAVUS ODHOLM, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN DRILL-CHUCKS.

Specification forming part of Letters Patent No. **151,714**, dated June 9, 1874; application filed April 22, 1874.

To all whom it may concern:

Be it known that I, GUSTAVUS ODHOLM, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Drill-Chucks, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is a side view of a chuck embodying my said improvements. Fig. 2 is a front-end view of the same. Fig. 3 is a view of the same in central section on the plane indicated by the dotted line *x x*, omitting the jaws. Fig. 4 is a side view of the jaw-carrier with the jaws in position. Fig. 5 is a side view of the jaw-carrier revolved a quarter-turn from the position shown in Fig. 4, without the jaws. Fig. 6 is a front-end view of the jaw-carrier, without the jaws. Fig. 7 is an end view of one of the jaws. Fig. 8, a side view.

Only two jaws are shown in the drawings, but the chuck may have two or more.

The invention is a device for holding drills and the like. The parts are usually made of iron or steel, and the feature of the invention is the combination of radially-moving jaws with scrolls at both ends of the jaws.

The letter *a* denotes a shaft bearing the two disks *b* b^1, both having corresponding radial slots b^2 b^2 b^3 b^3, carrying the jaws *c c'*, the ends of which are ratchet-toothed, fitting at one end into a scroll-groove, *d*, on the inner face of the back plate *e*, and at the other end into a corresponding scroll-groove on the inner face of the front plate *f*. This front plate *f* and the annular band *g* are in one piece, and form a shell within which is the jaw-carrier, composed of the two disks *b* b^1. This shell and the back plate *e* are secured together as follows: On the inner face of the back plate is a short rim or collar, *e'*, overlapping the annular band *g*, which has near its rear edge the annular V-shaped groove *g'*, and set-screws *i i i* run through the collar *e'*, and bearing against the rear side of the V-shaped groove *g'*, so that running the screws inward tends to pull the back plate against the edge of the band *g*.

It is obvious that if the outer case, composed of the front plate *f*, band *g*, and back plate *e*, is revolved, while the shaft *a* and disks *b b'* remain stationary, the jaws will be operated upon by the scroll-grooves, and moved radially outward or inward, as the case may be.

It will be seen from this description that the jaws have an equal bearing at both ends, and are advanced or withdrawn equally at both ends, and that the opposing edges of the jaws are always parallel.

If it is desired to make the jaws embrace a conical shape, the obliquely-opposite corners of the jaws can be chamfered, and the jaws so set in the two-scroll grooves that one end will be farther advanced radially than the other. There is a central opening, *f'*, in the front plate *f*, and a similar opening in the shaft *a*, to permit the introduction of the drill-stock.

I claim as my invention—

The combination of the jaw-carrier, the jaws *c c'*, toothed at both ends, and the front and back plates *f e*, scroll-grooved on their inner faces, all substantially as shown and described.

GUSTAVUS ODHOLM.

Witnesses:
W. E. SIMONDS,
HENRY SMALL.