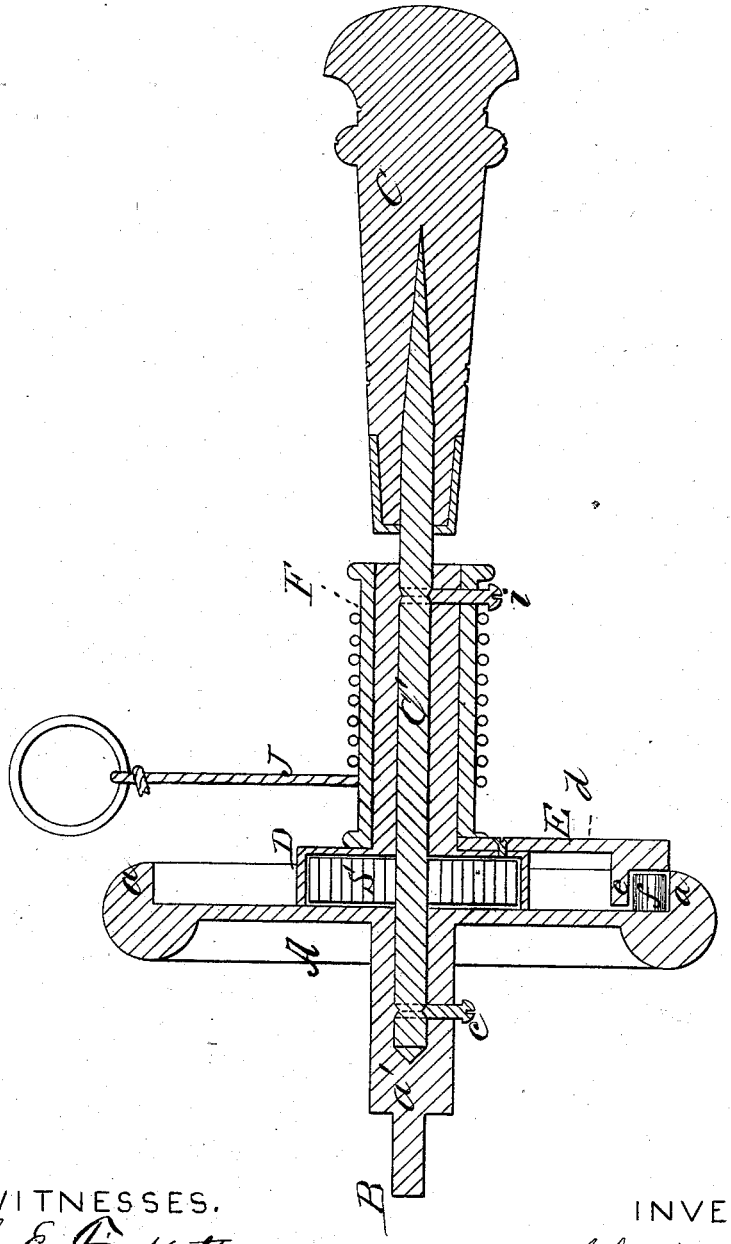
C. L. BELLAMY.
Hand-Drill.

No. 203,402. Patented May 7, 1878.



WITNESSES.
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UNITED STATES PATENT OFFICE.

CHARLES L. BELLAMY, OF ARLINGTON, NEW JERSEY.

IMPROVEMENT IN HAND-DRILLS.

Specification forming part of Letters Patent No. **203,402**, dated May 7, 1878; application filed March 23, 1878.

To all whom it may concern:

Be it known that I, CHARLES L. BELLAMY, of Arlington, in the county of Hudson and State of New Jersey, have invented a new and valuable Improvement in Hand-Drills; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

The drawing is a representation of a longitudinal central section of my hand-drill.

This invention has relation to improvements in hand-drills.

The object of the invention is to impart a continuous rotation in one direction to the drill-head, so that better effects may be produced.

The nature of the invention consists in combining, with a fly-wheel carrying the drill and rotating upon a suitable handle, a clutch mechanism and a drum rotating on said handle, and a spring secured at one end to the said clutch and at the other to the said handle, whereby the return motion of the clutch is had without arresting the drill, and a continuous motion thereof obtained, as will be hereinafter more fully set forth.

In the annexed drawing, the letter A designates a metallic wheel, having upon one side an edge flange, *a*, and on the other a central projecting socket, *a'*, into which the drill-tool B is fitted in the usual manner. C represents a handle, from which projects a metallic shaft, C', adapted to be received in the hub of the fly-wheel, and secured thereto by means of a bolt, *c*, extending through the socket *a'* and engaging an annular groove on the shaft C', or by other equivalent means.

The wheel A rotates freely upon the shaft C', but is held against lateral displacement by the bolt *c* aforesaid. Upon the shaft C are arranged, in the following order, so as to revolve freely thereon, the metallic barrel D, the clutch device E, and a drum, F, all rigidly connected or formed together as I may prefer.

The clutch consists of a T-arm, *d*, extending from the drum radially to the edge flange *a* of the fly-wheel, having a curved perimeter and a recess with an inclined bottom, *e*, upon its inner face. In this recess, between the edge flange *a* and the inclined bottom *e*, is placed a roller, *f*, that is jammed between the head and flange when the drum is turned to the right, thereby rotating the fly-wheel, but immediately lets go, allowing the wheel to continue its motion when the motion of the drum is reversed by the reaction of a coil or other spring, S. This latter is placed in the barrel D, and is rigidly secured thereto at one end, and at the other to the shaft C'.

Rotary motion is imparted to the clutch by means of a cord, J, secured thereto and wound around it a sufficient number of times, which is vigorously unwound by drawing upon it with the right hand. During the rotation of the drum, spring-barrel, and clutch the spring S is wound up, and its reaction reverses the clutch at the moment the cord is slackened, at the same time rewinding the said cord without arresting the fly-wheel and drill.

The barrel is held up to the fly-wheel by means of a bolt, *i*, extending through the drum and engaging an annular groove in the shaft C' aforesaid.

What I claim as new, and desire to secure by Letters Patent, is—

In combination with the shaft C', the fly-wheel A, provided with a socket for the tool, and having a flange, *a*, at its perimeter, and the rotating drum F and its arm *d*, provided with a roller, *f*, adapted to jam against the flange *a*, whereby the fly-wheel is rotated by the motion imparted to the drum, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES L. BELLAMY.

Witnesses:

E. A. HENDRICKSON,

H. E. FICKETT.