

J. E. WINDLE & J. C. GOODRICH.

Bit-Gages.

No. 157,562.

Patented Dec. 8, 1874.

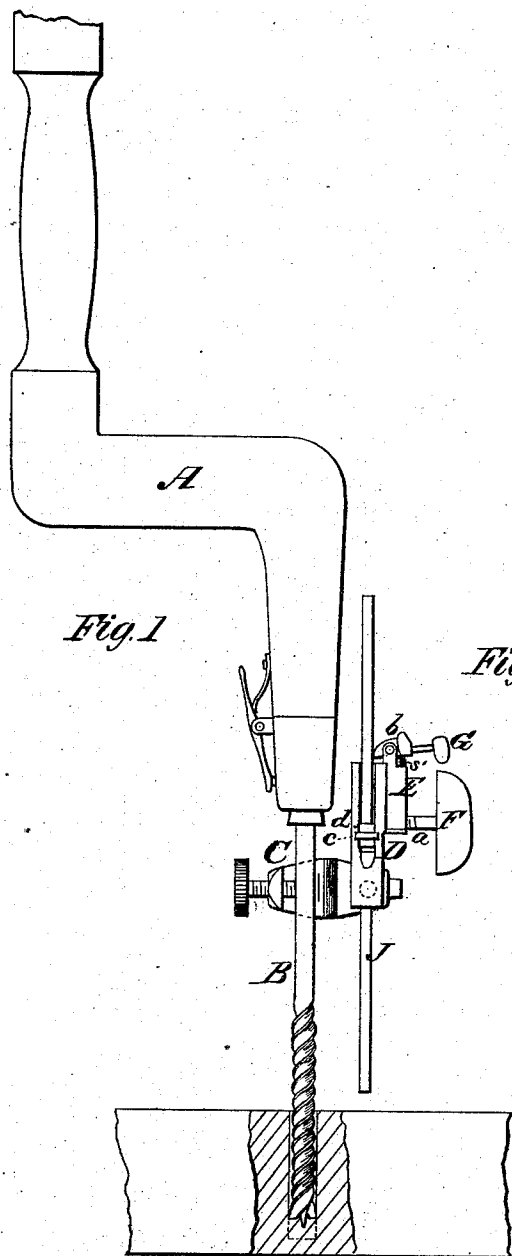


Fig. 1

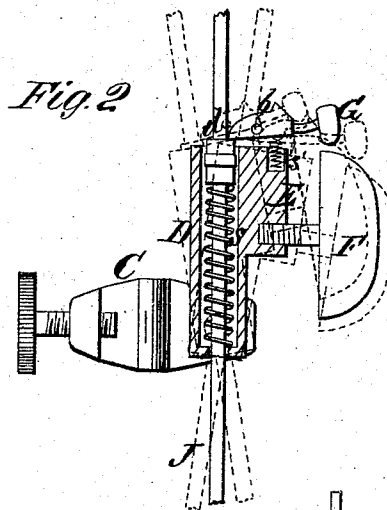


Fig. 2

Fig. 3

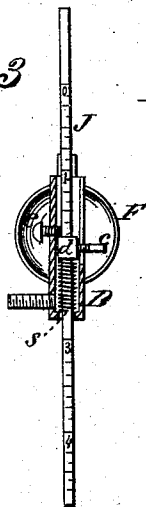
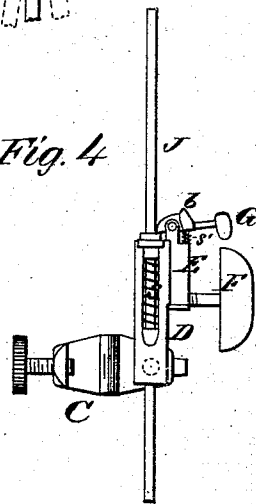


Fig. 4



WITNESSES

Robert Emmett,
E. H. Bates

INVENTORS

John E. Windle,
James C. Goodrich,
Chipman Fossum & Co.

Attorneys

UNITED STATES PATENT OFFICE.

JOHN E. WINDLE AND JAMES C. GOODRICH, OF SPRINGFIELD, MASS.

IMPROVEMENT IN BIT-GAGES.

Specification forming part of Letters Patent No. **157,562**, dated December 8, 1874; application filed August 19, 1874.

To all whom it may concern:

Be it known that we, JOHN E. WINDLE and JAMES C. GOODRICH, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and valuable Improvement in Bit-Gages; and we 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 drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side view of our bit-gage. Fig. 2 is a sectional view. Figs. 3 and 4 are detail views of the same.

This invention has for its object the attachment to a drill or a boring-bit of an adjustable gage and an alarm-bell, which will indicate when the proper depth of hole has been bored, as will be hereinafter explained.

In the annexed drawings, A designates part of a hand-brace, and B is a boring-bit, secured to the brace in the usual well-known manner. C designates a clamp, which is secured to the shank of the bit B by means of a set-screw, and which has secured to it, by means of a nut and a screw, a barrel, D. By loosening the nut last referred to the barrel can be adjusted and set at different angles, indicated by dotted lines, Fig. 2. On one side of the barrel D a hollow box, E, is formed, which contains a spiral spring, *s'*, that acts upwardly against the pivoted arm *b* of a hammer, G, and lifts this hammer free from a bell, F. J designates a gage-rod, which is properly marked

off on one or more of its sides in inches and fractions of inches, and inserted through a hole made longitudinally through the barrel D. On this gage-rod a collar, *d*, is adjustably applied by means of a set-screw, *e*, which plays in a slot through the barrel D. Between the collar *d* and the bottom of the barrel D is a spring, *s*, the object of which is to throw up the rod J when its collar is released from a set-screw, *e*, and cause said collar to strike the hammer-arm and sound an alarm.

Having determined the depth of hole to be bored the rod J is adjusted accordingly, and it is drawn down its barrel until the collar *d* catches under the screw *e*. The boring is then proceeded with, and when the proper depth of hole is made the lower end of the gage-rod strikes the surface of the object being bored, and thus releases the collar *d* from the screw *e*, allowing spring *s* to throw up the rod J and sound an alarm. The bit is then removed, and the gage-rod set for boring another hole.

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

The combination, with a boring-bit, of an adjustable gage-rod and an alarm device, substantially as specified, and for the purpose set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JOHN E. WINDLE.
JAMES C. GOODRICH.

Witnesses:

E. H. LATHROP,
H. A. BARTHOLOMEW.