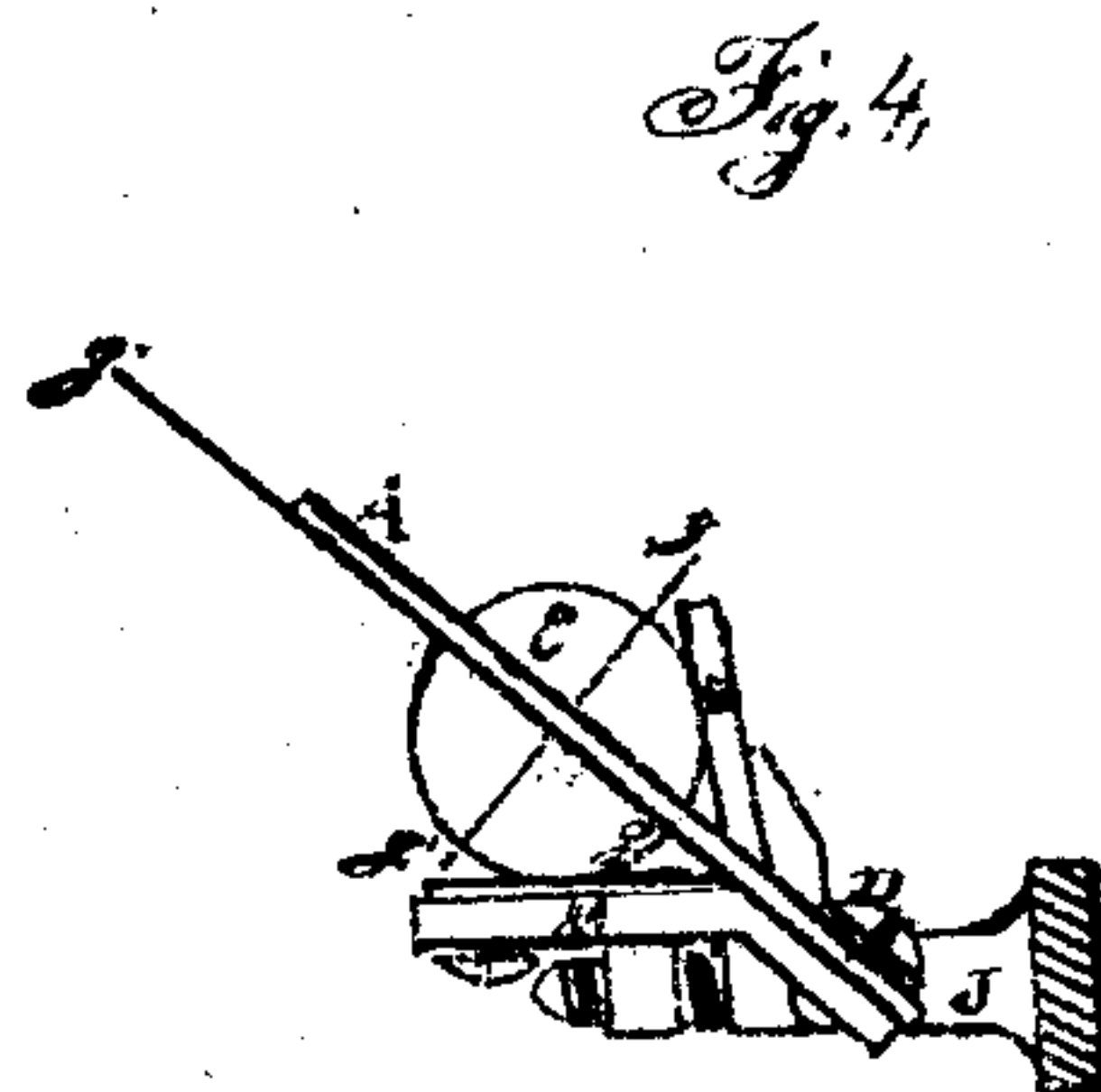
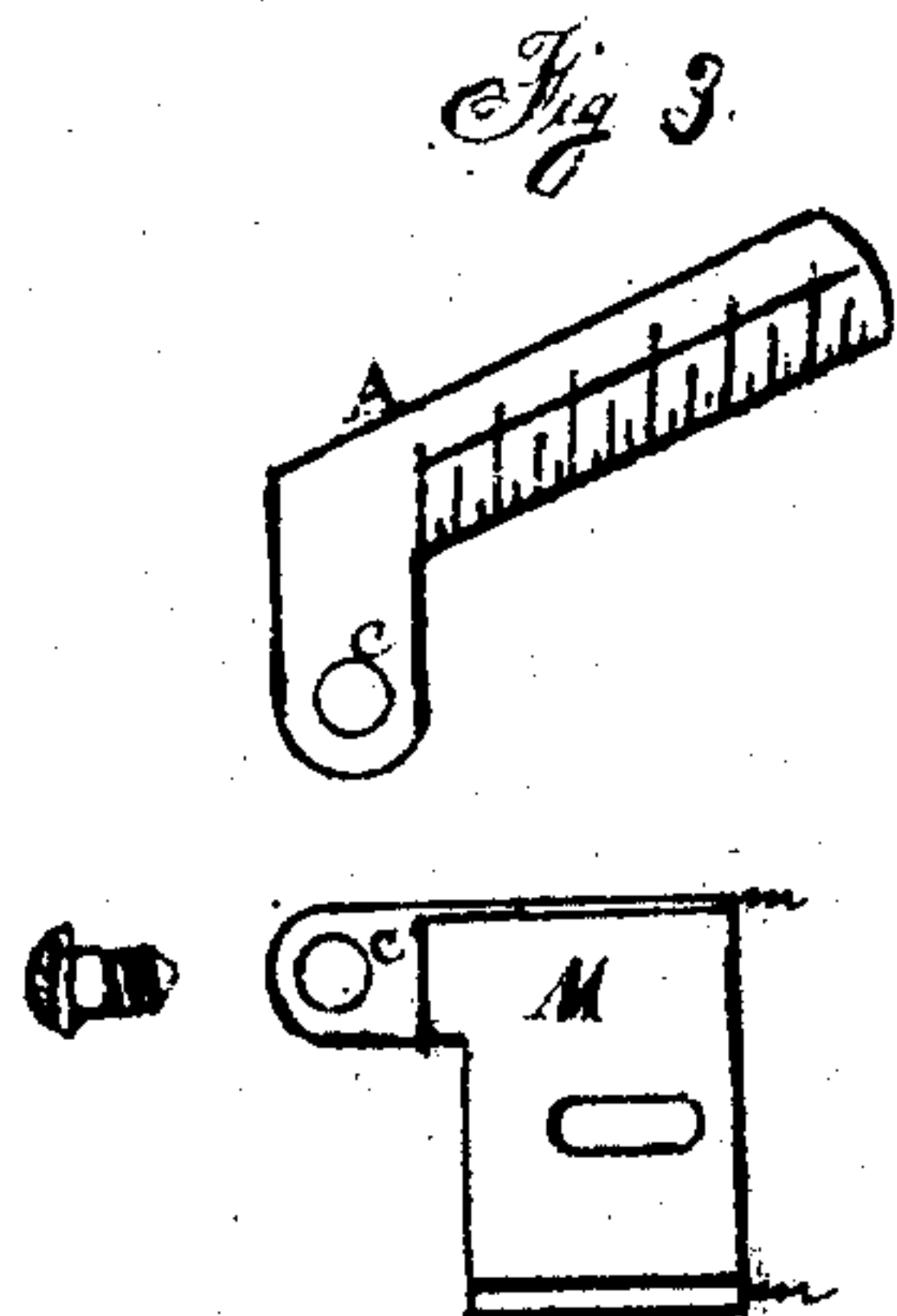
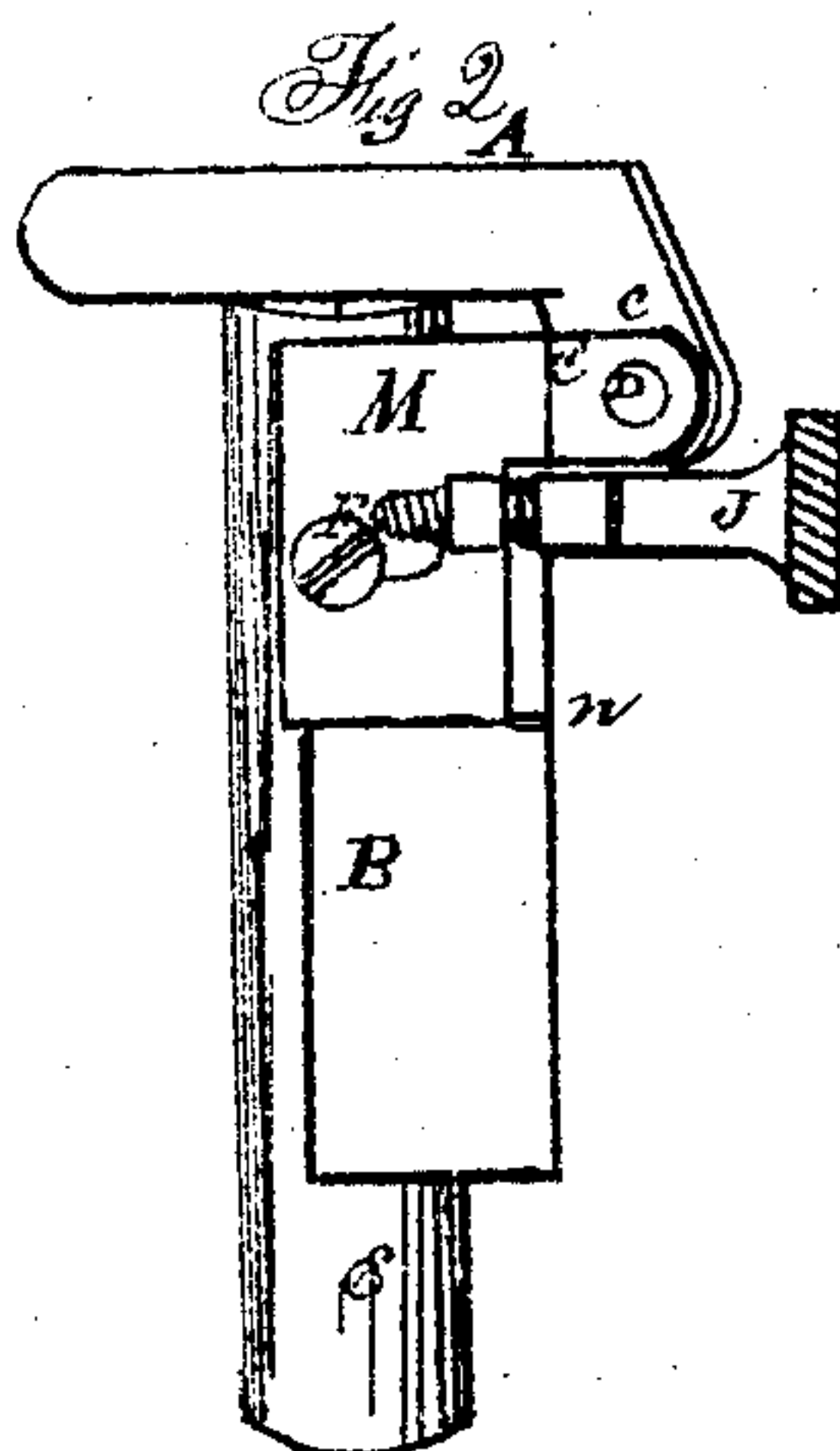
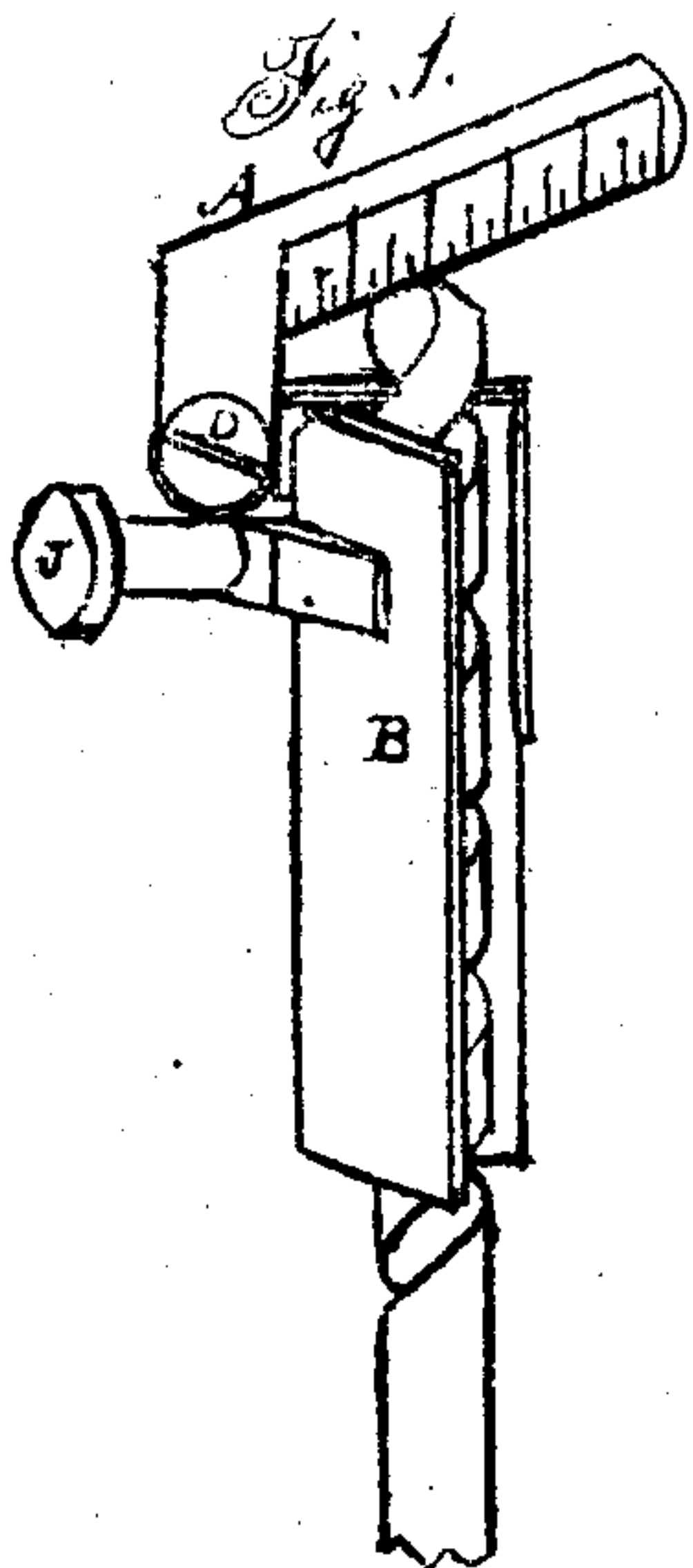


W. C. Wells.
Drill-Gauge.

N^o 76123

Patented Mar. 31, 1868.



Witnesses

John A. Hurley
James W. Hurley

Inventor
William C. Wells

United States Patent Office.

WILLIAM C. WELLS, OF NEWARK, NEW JERSEY.

Letters Patent No. 76,123, dated March 31, 1868.

IMPROVED DRILL-GAUGE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM C. WELLS, of Newark, in the county of Essex, in the State of New Jersey, have invented certain new and useful Improvements on the Drill-Gauge which is described in the drawings and specifications accompanying the Letters Patent of W. C. WELLS, issued November 28, 1865, and numbered 51,248, and which is also further described in the drawings and specifications accompanying the application for Letters Patent of the said W. C. WELLS, which application was filed in the Patent Office on the 28th day of December, 1865, and which was officially examined and allowed on the 25th day of April, 1866; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the said gauge, as improved, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side view of the gauge, with a drill held in proper position for gauging, showing the rotating blade A, and stud-screw D upon which the said blade revolves.

Figure 2 is a back view of the instrument, showing how, with the blade A depressed, it can be used as a centring-gauge.

Figure 3 shows the blade A, supporter M, stud-screw D separately, with the projections c c' , on the blade A and supporter M, which, in combination with the screw D, form a pivot or hinge-joint.

Figure 4 is a top view of the instrument when used as a centring-gauge, showing the end of the cylindrical piece e , with the lines $g'g$ drawn, whose intersection describes the centre of the piece.

The nature of my invention consists in forming a pivot-joint or turning-joint on the blade A and supporter M, which, in combination with the stud-screw D, enables me to alter the position of the blade A, so as to conform to any desired angle, thereby enlarging the sphere of usefulness of the instrument herein described.

To enable others to make and use my invention, I will describe its construction and operation.

To a V-shaped or concentric guide or holder, B, fig. 2, I attach a supporter, M, upon which I fasten the rotating blade A by means of the pivot or stud-screw D, which passes through the blade at c , and screws firmly into the supporter M at c' . The part of the supporter M upon which the blade A is fastened, extends backward from the guide B a sufficient distance to allow the said blade to rotate freely. This part of the supporter M is bent in such a manner that, when attached to the guide B, with the blade A fastened upon it, the said blade will be held in a line directly central with the V-part of the guide B, as shown at g g , fig. 4. The supporter M is fastened to the guide B by means of the screw F, which passes through a slot in the supporter M, and screws firmly into the guide B. The supporter M is provided with a small flange at its upper and lower extremity, as shown at m m , fig. 3. The upper flange overlaps the top edge of the guide B, and the lower flange fits in a slot in the said guide, as shown at n , fig. 2, thus forming a sliding joint for the supporter M, yet preventing it from altering its position in any other respect. The supporter M is moved along the side of the guide B, and carries the blade A with it, in a lateral direction to or from the centre of the V-guide, by means of the thumb-screw J, fig. 2, which passes through a bearing in the guide B, and screws into a stud on the supporter M. When the blade A is attached to the guide B, the plane of the said blade should be in a line parallel with the vertical plane of the said guide B. Upon the face or side of the blade A, I place marks or indentations, the use of which enables me to ascertain when the point of a drill is or is not central.

To use this instrument as a drill-gauge, set the blade A to the desired angle, grind or file the lip of the drill until it conforms to the angle of the blade, notice the mark or indentation at which the point of the drill touches, revolve the drill half a turn; if the point of the drill still touches the same mark or indentation, the point is central. To use the instrument as a centring-gauge, set the edge of the blade directly over the centre of the V-guide, depress the blade until it lies across the end of the cylindrical piece, as at fig. 2, then, with a sharp scratch-awl, describe the line $g'g$, fig. 4, revolve the piece one-quarter of a turn and describe the line g g , the intersection of the two lines $g'g$ will be the centre of the piece.

I do not claim the construction of a centring-gauge by attaching a blade to a V-shaped guide; that, I know, has been done before. Neither do I claim constructing a drill-gauge by placing a blade above a V-shaped guide; that has already been done, and claimed in the Letters Patent herein referred to; but

What I claim as my improvements, and for which I desire to obtain Letters Patent, is—

1. In a drill-gauge, the employment of a movable or rotating blade, A, in combination with a v-shaped or concentric guide, B, said blade being movable to or from the end of the said guide, above which it is placed in a line parallel with the vertical plane of the said guide B for the purpose of enlarging or diminishing the area of the angle which it is intended to describe, substantially as herein specified.

2. I claim the projection *c* on the blade A, and projection *c'* on the supporter M, in connection with the stud-screw D, fig. 3, which conjointly forms a pivot-joint, when the said parts are attached to a concentric guide, as and for the purpose shown and described.

Witnesses:

JOHN A. HURLEY,
JAMES W. HURLEY.

WILLIAM C. WELLS.