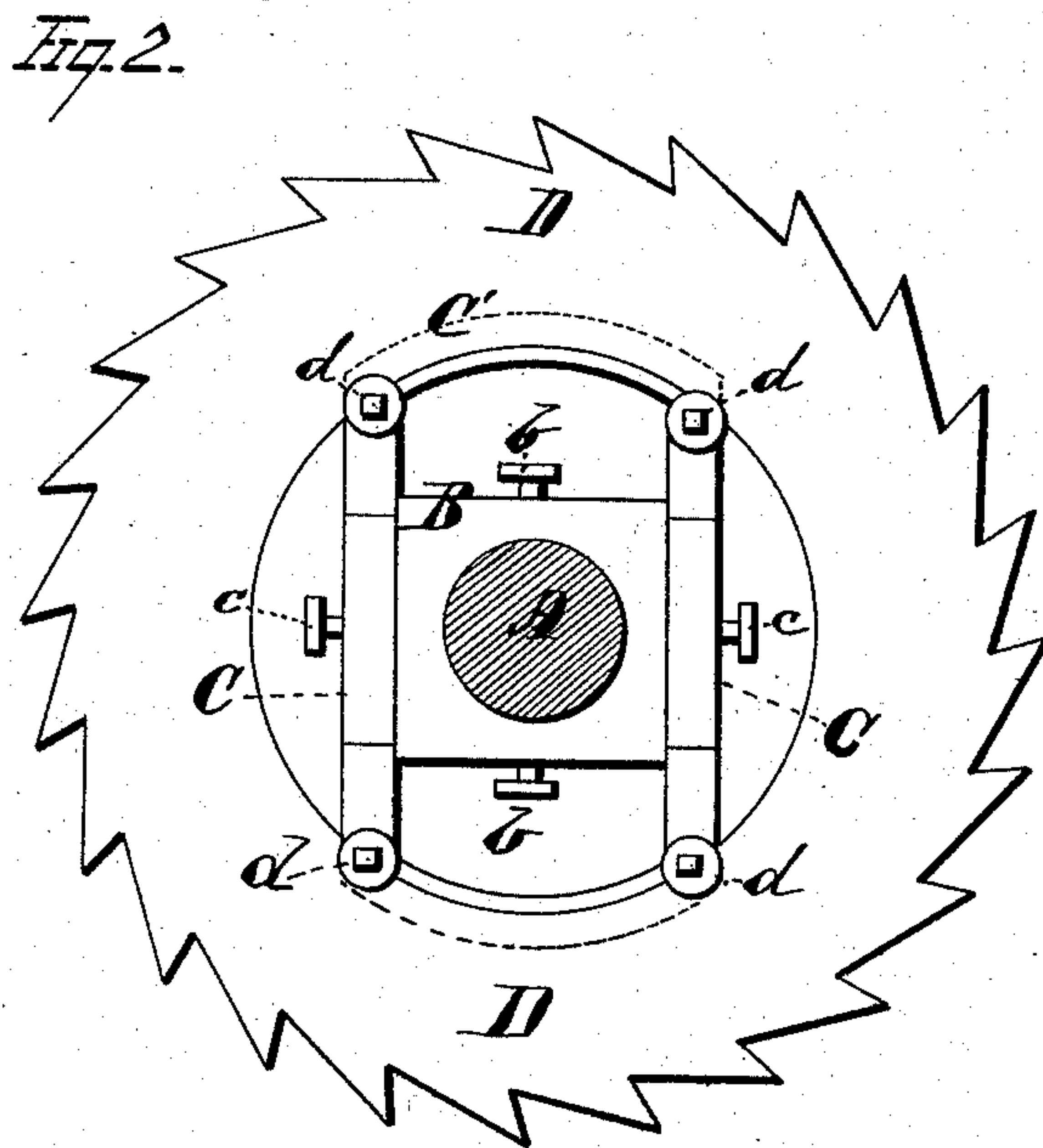
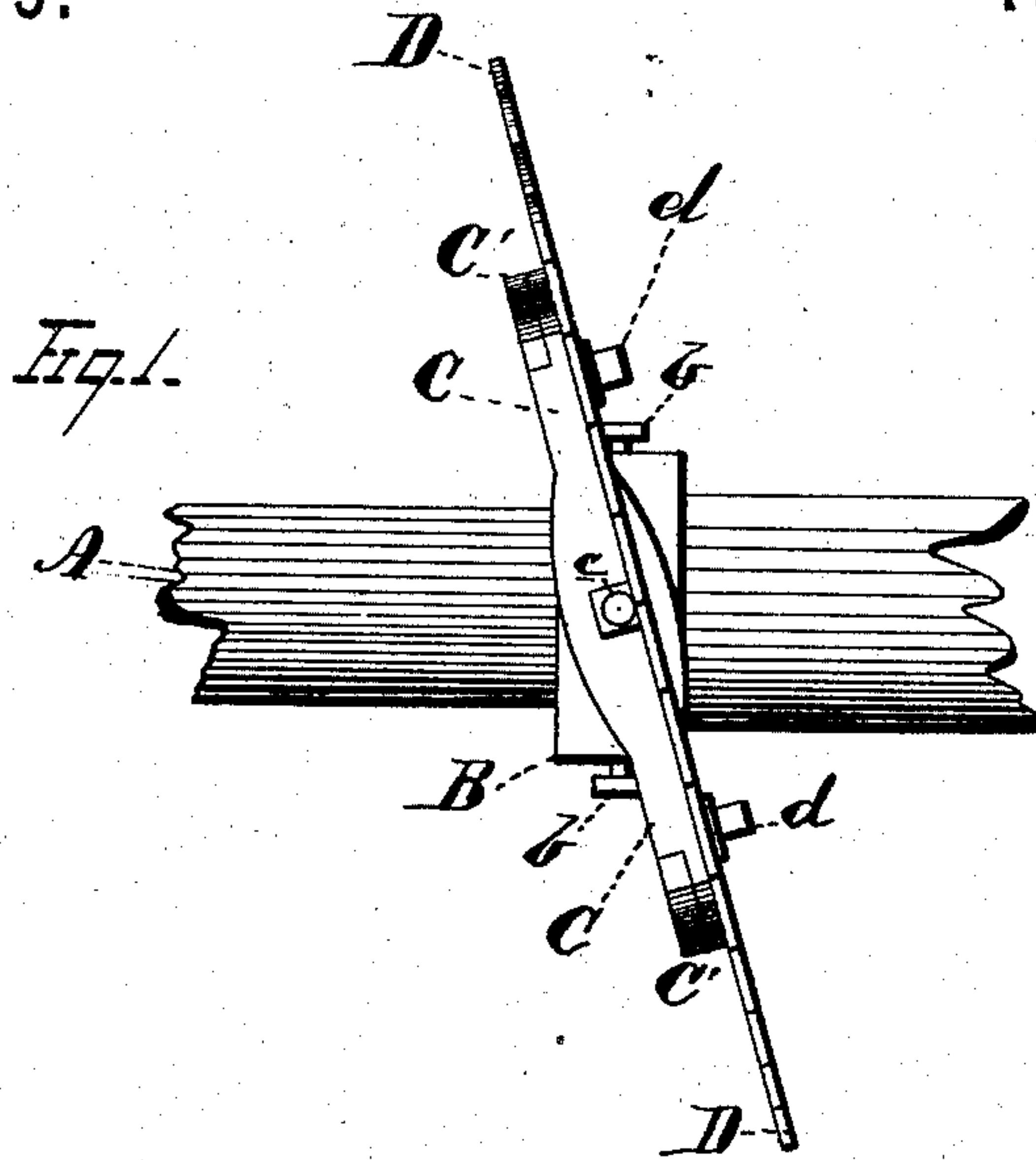


**D. F. SMITH.**  
**Wabble-Saws.**

No. 156,823.

Patented Nov. 10, 1874.



WITNESSES

*W. J. Newman.*

*Robt. M. Barr.*

By

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# UNITED STATES PATENT OFFICE.

DANIEL F. SMITH, OF HAVERHILL, MASSACHUSETTS.

## IMPROVEMENT IN WABBLE-SAWS.

Specification forming part of Letters Patent No. **156,823**, dated November 10, 1874; application filed June 2, 1874.

*To all whom it may concern:*

Be it known that I, DANIEL F. SMITH, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Wabble-Saws; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to certain new and useful improvements in hanging or setting circular wabble-saws upon their journals or shafts, by means of which said saws may be readily secured to the same, and accurately adjusted to the proper plane of motion with great facility.

My invention consists in certain combinations and arrangements of devices and appliances, as hereinafter more fully described and claimed.

In the drawings, Figure 1 is a front elevation of my invention. Fig. 2 is a side elevation of the same.

A represents the journal or shaft which carries the saw, and B the hub, of suitable material, bored to fit said journal, and secured thereon by means of set-screws *b b*. C represents a swinging frame or yoke, embracing the sides of the hub B, and secured thereto on each side by set-screws *c c*. The said frame is capable of a swinging or oscillating movement upon the set-screws, when necessary, in a direction at right angles to the shaft or journal A, and it is evident that by this means it can be readily adjusted to the plane of motion, so as to run with any desired wabble. The ends of the yoke of frame are made in the form of the arc of a circle, and have rabbets

at their edges of the same shape to receive the saw, as shown. D represents the saw, consisting of an annular blade, the inner edge of which sets into the rabbets *c' c'* on the arc-shaped ends of the yoke or frame C. The saw is firmly secured by set-screws and washers *d d* at each corner of the frame or yoke, as shown.

The method of attaching and detaching the saw-blade, and of adjusting the frame or yoke to the proper plane of motion, will be evident from the foregoing description of the apparatus without further explanation.

What I claim is—

1. The hub B, secured to the journal or driving-shaft A by set-screws *b b*, and carrying an adjustable pivoted yoke or frame, C C', to which the saw is attached, and by which it may be adjusted to any desired plane of motion, substantially as and for the purposes described.

2. In combination with the hub B, the pivoted adjustable yoke or frame C C', secured to the hub by set-screws *c c*, substantially as and for the purposes described.

3. The set-screws *c c* and rabbets *c' c'*, in combination with the annular saw-blades D and frame or yoke C, substantially as herein described.

4. The combination of the hub B, adjustable yoke or frame C, circular saw D, and the set-screws for attaching the same to each other and adjusting the yoke or frame C, substantially as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of May, 1874.

DANIEL F. SMITH.

Witnesses:

WILLIAM TAGGART,  
JOHN HARRIMAN.