

G. F. Woolston,
Circular Saw Mill.
N^o 16,894. Patented Mar. 24, 1857.

Fig. 1.

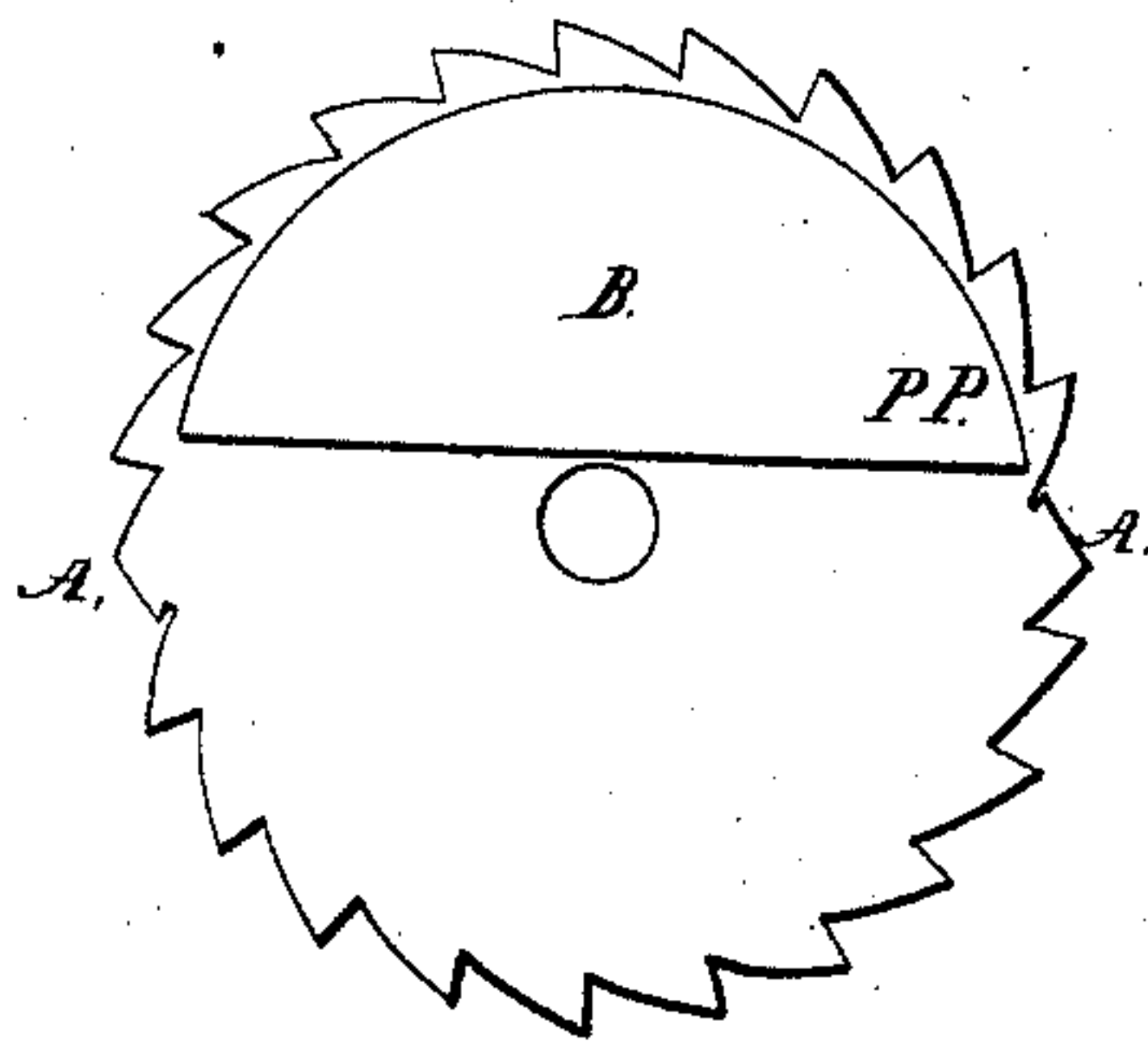


Fig. 2

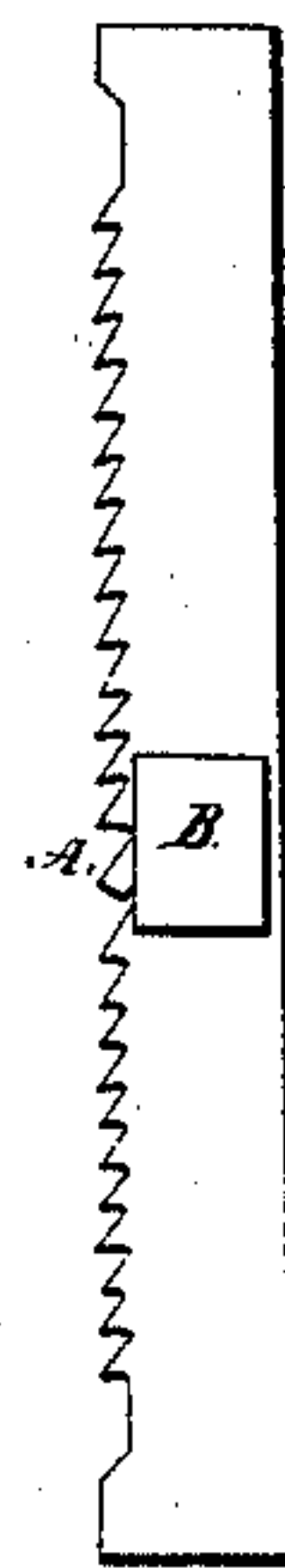


Fig. 3

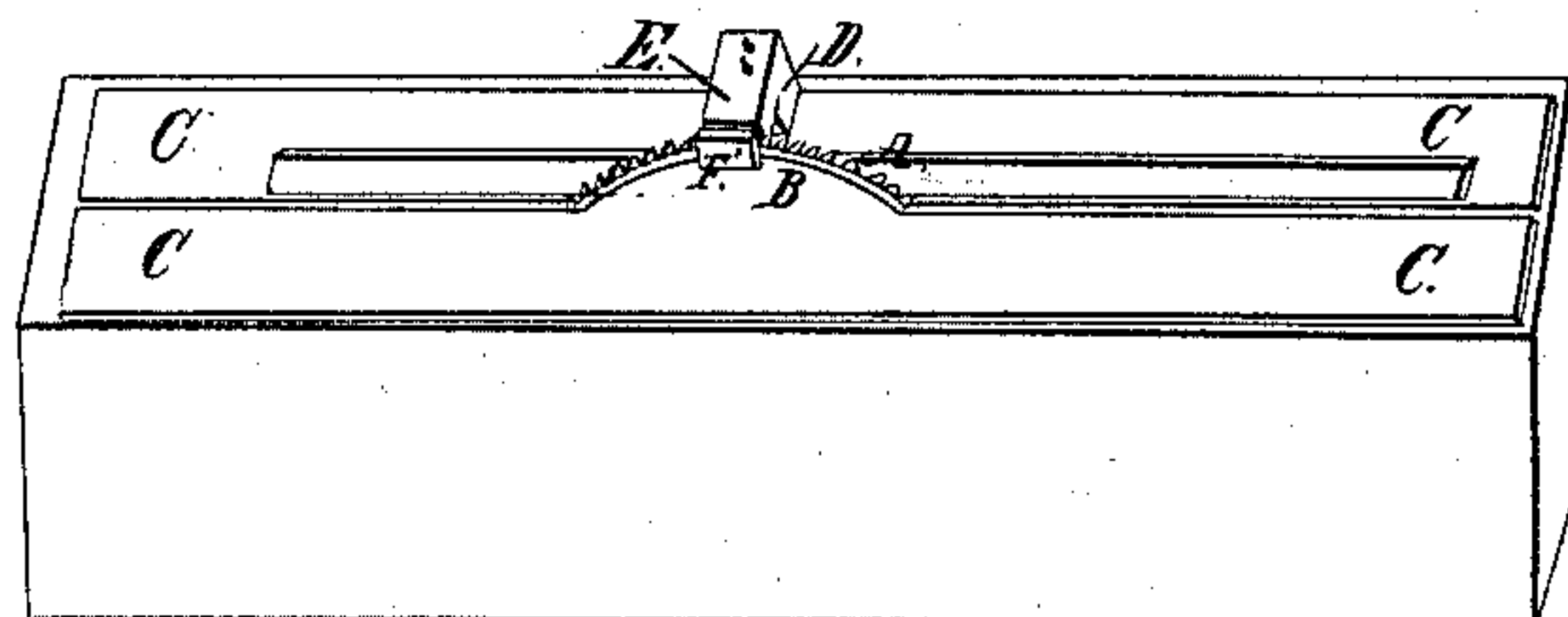
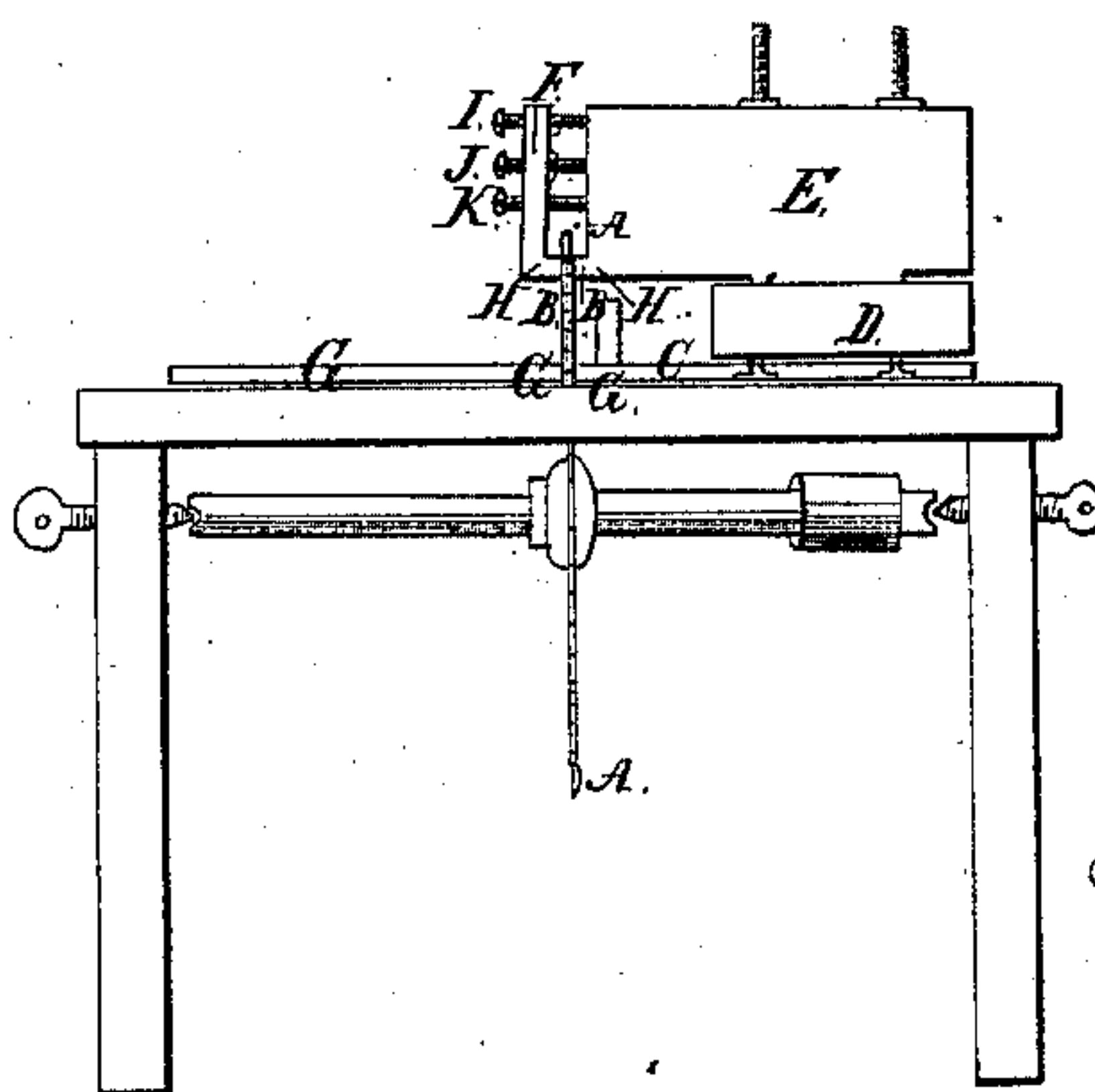


Fig. 4.



Witnesses:

Isaac N. Coffin

Geo. W. Nairn

Inventor:

George F. Woolston

UNITED STATES PATENT OFFICE.

GEO. F. WOOLSTON, OF WASHINGTON, DISTRICT OF COLUMBIA.

CIRCULAR SAWING MACHINE.

Specification of Letters Patent No. 16,894, dated March 24, 1857.

To all whom it may concern:

Be it known that I, GEORGE F. WOOLSTON, of the city of Washington and District of Columbia, have invented new Improvements in Cutting and Planing Wood; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, and to the letters of reference marked thereon.

In all the drawings the same letters refer to the same parts.

Figure 1 represents a circular saw, Fig. 2 a straight saw.

Letters A represent knives or cutters, formed in the saw, and bent outward in opposite directions, sufficiently to cut off a thin shaving at each revolution, or stroke, of the saw; thereby planing in the operation of sawing.

Knives or cutters formed in saws, and operating in the manner above described, are liable to form ridges; which is usually the effect of vibration, either of the saw or of the material being sawed. For the purpose of preventing the formation of ridges and producing a smoother surface I place near to the saw, or in contact therewith, thin metallic guard plates, as represented by letters B of such thickness that the outer surface of said plates are in exact line or plumb with the cutting edges of the planing cutters; the plates being between the saw and the material being sawed. These plates have an outward set at P P to allow the cutters at the back of the saw to clear the

wood. The manner of applying the said guard plates, and holding them firmly in their places, will be understood by reference to Figs. 3 and 4; in which Fig. 3 represents a perspective view, Fig. 4 an upright end view.

Letters C, D, E, and F represent a frame, to which the plates are attached at G G and H H, and through which the saw operates. This frame is so constructed that the part represented by letter E may be raised or depressed to suit saws of different sizes, by placing between C and E a block, as shown by letter D, of the required height or thickness; the part represented by letter F may also be adjusted by the screws I, J, and K in such a manner that the saw will pass easily between the plates at H H without sufficient space to admit of vibration.

What I claim as my invention, and desire to secure by Letters Patent, is,

1. The application and use of guard plates, substantially in the manner and for the purposes herein described, in combination with knives or cutters formed in saws, or inserted therein; and operating substantially in the manner herein specified.

2. I claim, substantially as herein described, the manner of applying the said plates, holding them firmly, and so adjusting them as to prevent vibration of the saw.

GEORGE F. WOOLSTON.

Witnesses:

ISAAC N. COFFIN,
JOS. W. NAIRN.