(No Model.)

C. D. MARSH & C. F. OVERHISER.

CHIP BREAKER FOR WOODWORKING MACHINES.

No. 533,996. Patented Feb. 12, 1895.

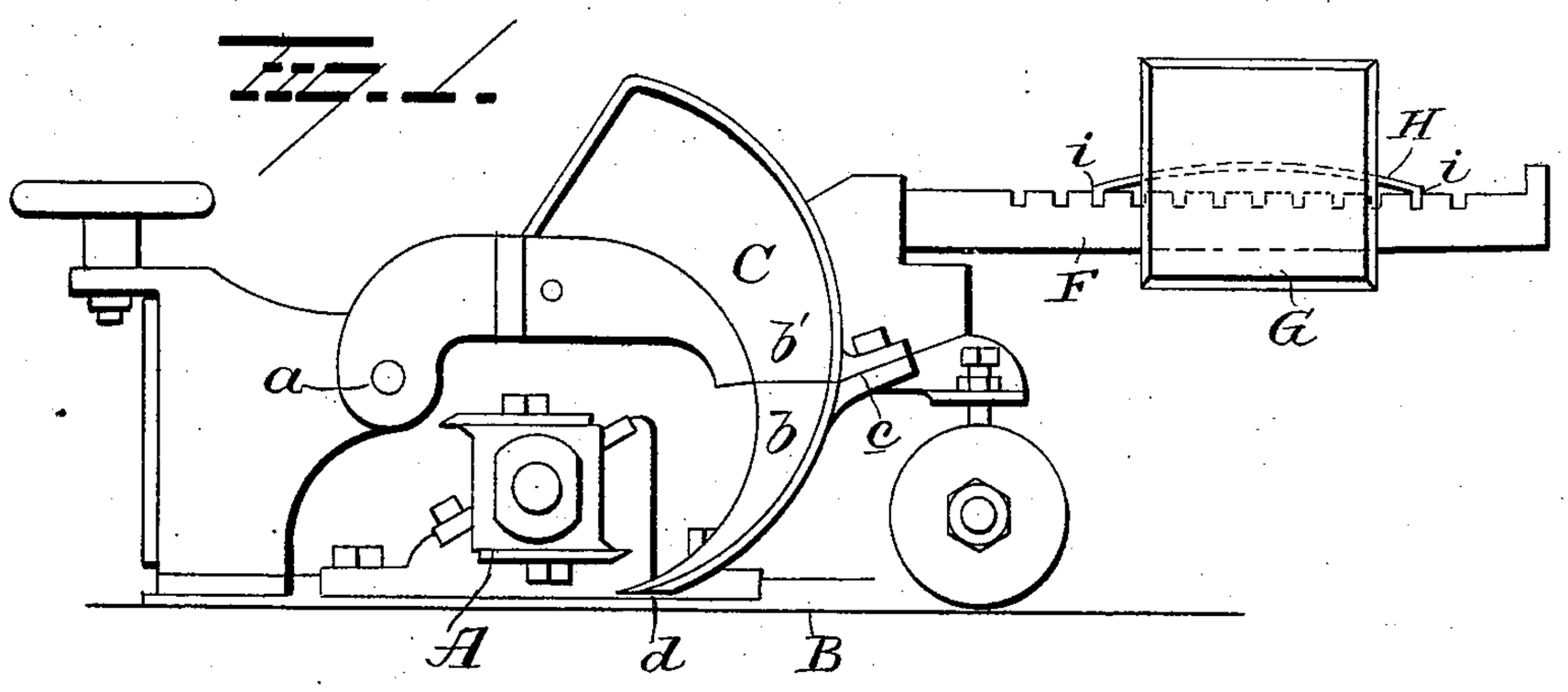

FIG. 1.

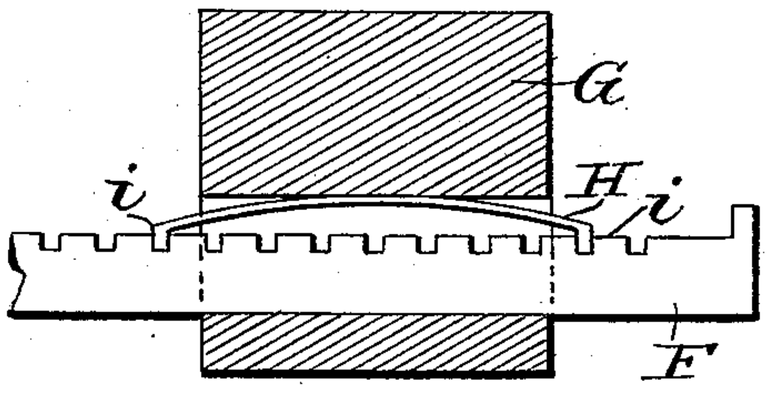

FIG. 2.

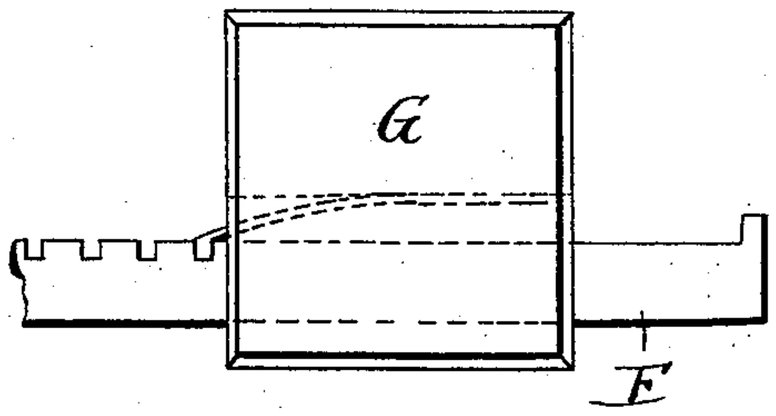

FIG. 3.

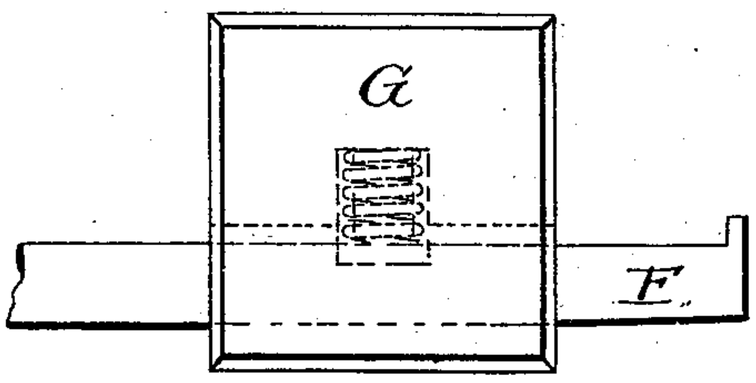

FIG. 4.

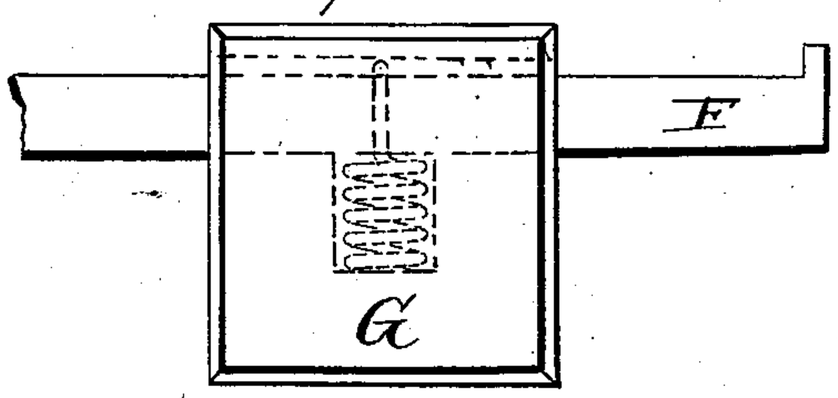

FIG. 5.

Witnesses
C. J. Nottingham
L. W. Foster.

Inventors
Calvin D. Marsh
and
Charles F. Overhiser
By H. A. Seymour. Attorney

UNITED STATES PATENT OFFICE.

CALVIN D. MARSH AND CHARLES F. OVERHISER, OF WILLIAMSPORT, PENNSYLVANIA, ASSIGNORS TO ROWLEY & HERMANCE CO., OF SAME PLACE.

CHIP-BREAKER FOR WOODWORKING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 533,996, dated February 12, 1895.

Application filed June 20, 1894. Serial No. 515,177. (No model.)

To all whom it may concern:

Be it known that we, CALVIN D. MARSH and CHARLES F. OVERHISER, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Chip-Breakers for Woodworking-Machines; and we 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 appertains to make and use the same.

Our invention relates to an improvement in chip breakers for wood working machines the object being to provide means whereby the chip breaker can give or yield to any unevenness of surface of the board being operated upon, without leaving the board and it consists in the parts and combinations of parts as will be more fully explained and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of a section of a planing machine embodying our invention. Fig. 2 is a detached view partly in section showing the yielding support for the weight and Figs. 3, 4 and 5 are similar views of modified constructions.

A represents the upper cutter and B the table over which the boards to be dressed or molded, as the case may be, are passed.

C represents the chip breaker of the ordinary shape, hinged at *a* to the frame of the machine and shaped to catch the flying chips cut off by the cutter. This breaker is located in advance of the cutter, and is preferably constructed of two parts *b* and *b'* both of which have rearwardly projecting flanges *c* by which they are secured together. The lower section *b* is beveled or cut away on its under side as shown at *d* to form an enlarged bearing face which latter when the machine is in operation rests on the board being dressed.

The weight of the chip breaker tends to hold it in position but this weight is supplemented by the rod F and the weight G. This rod is rigidly attached to the breaker and has no movement independent thereof. This rod is preferably provided with teeth on its upper face for engaging the downwardly turned ends *i* of the spring H. This spring is preferably semi-elliptic as shown and being passed through the weight G supports the latter on its convex surface, the two ends of the spring resting on the upper surface of the rod F. The spring if desired can be secured to the weight so that the latter will be prevented from shifting its position. Instead of having the spring bear at its two ends on the top of the rod, it can be secured at one end to the rod and rest at its other end on the rod as shown in Fig. 3.

In Fig. 4 we have shown the weight recessed to receive a spiral spring the lower end of which rests on the rod, while in Fig. 5, the weight is shown suspended by a spring from the rod. In all of these forms or embodiments of our invention the weight has a limited movement independent of the chip breaker and rod and the latter can also have a slight movement independent of the weight. Hence it follows that the chip breaker can rise to follow inequalities or elevations in the surface of the board by simply compressing or expanding (as the case may be) the spring without elevating the weight. This elevation of the chip breaker compresses or expands the spring and the latter together with the weight causes the breaker to follow the surface of the wood and ride over the elevations without actually leaving the board.

It is evident that changes in the construction and relative arrangement of the several parts might be made without avoiding our invention and hence we would have it understood that we do not restrict ourselves to the particular construction and arrangement of parts shown and described, but,

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a wood working machine, the combination with a hinged chip breaker having an arm extending outwardly therefrom, of a weight slotted to receive the arm and permit of vertical movement, and a spring interposed between the weight and the arm, substantially as set forth.

2. In a wood working machine, the combination with a hinged chip breaker having an arm extending outwardly therefrom, of a

weight mounted on said arm and having an opening therein of greater depth than the vertical thickness of the arm whereby to admit of vertical play therein, and a spring in the weight and interposed between the latter and the arm in such manner as to receive and absorb the first upward vibration of the arm, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

CALVIN D. MARSH.
CHARLES F. OVERHISER.

Witnesses:
D. R. FORKMAN,
C. W. THOMPSON.