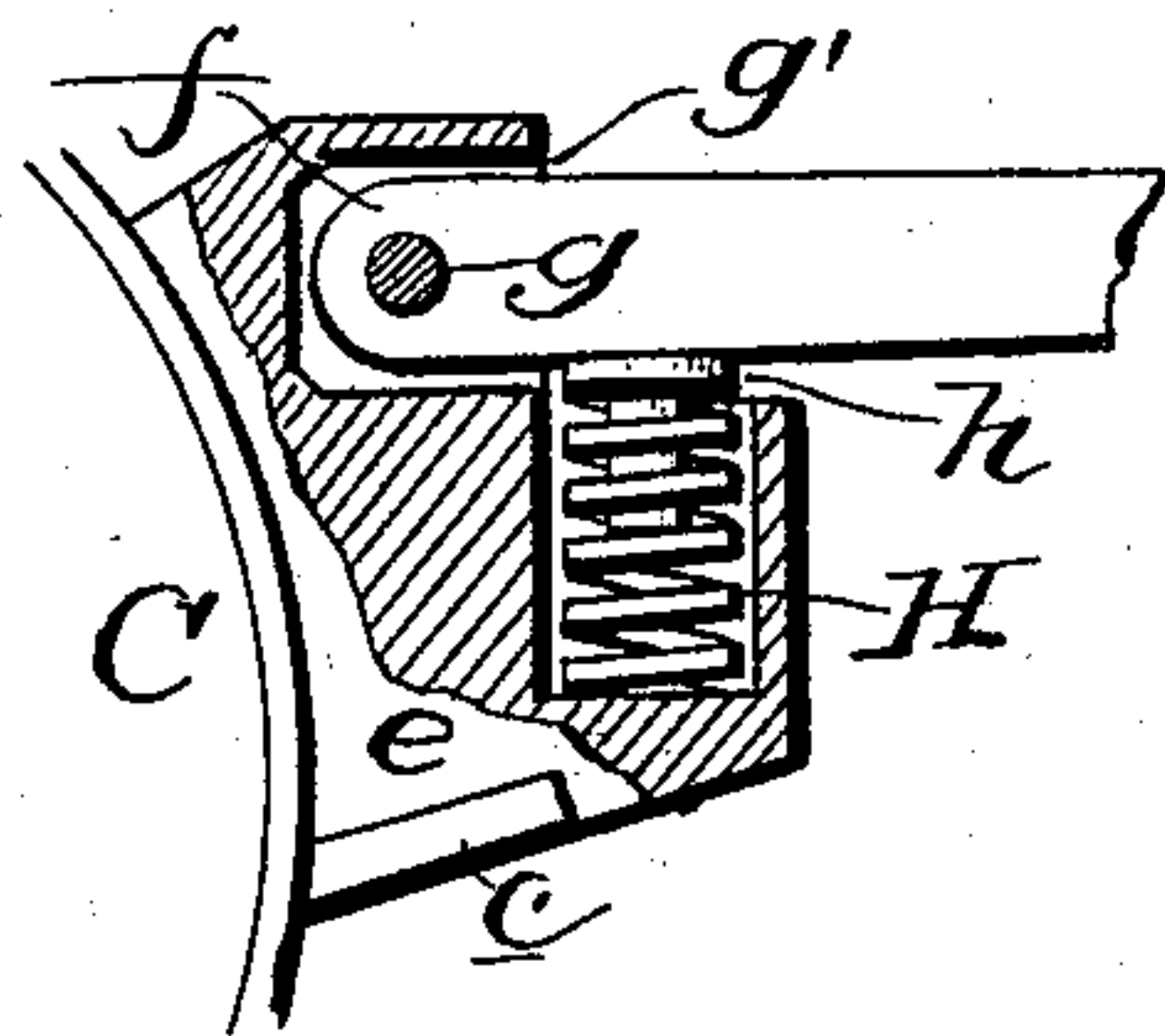
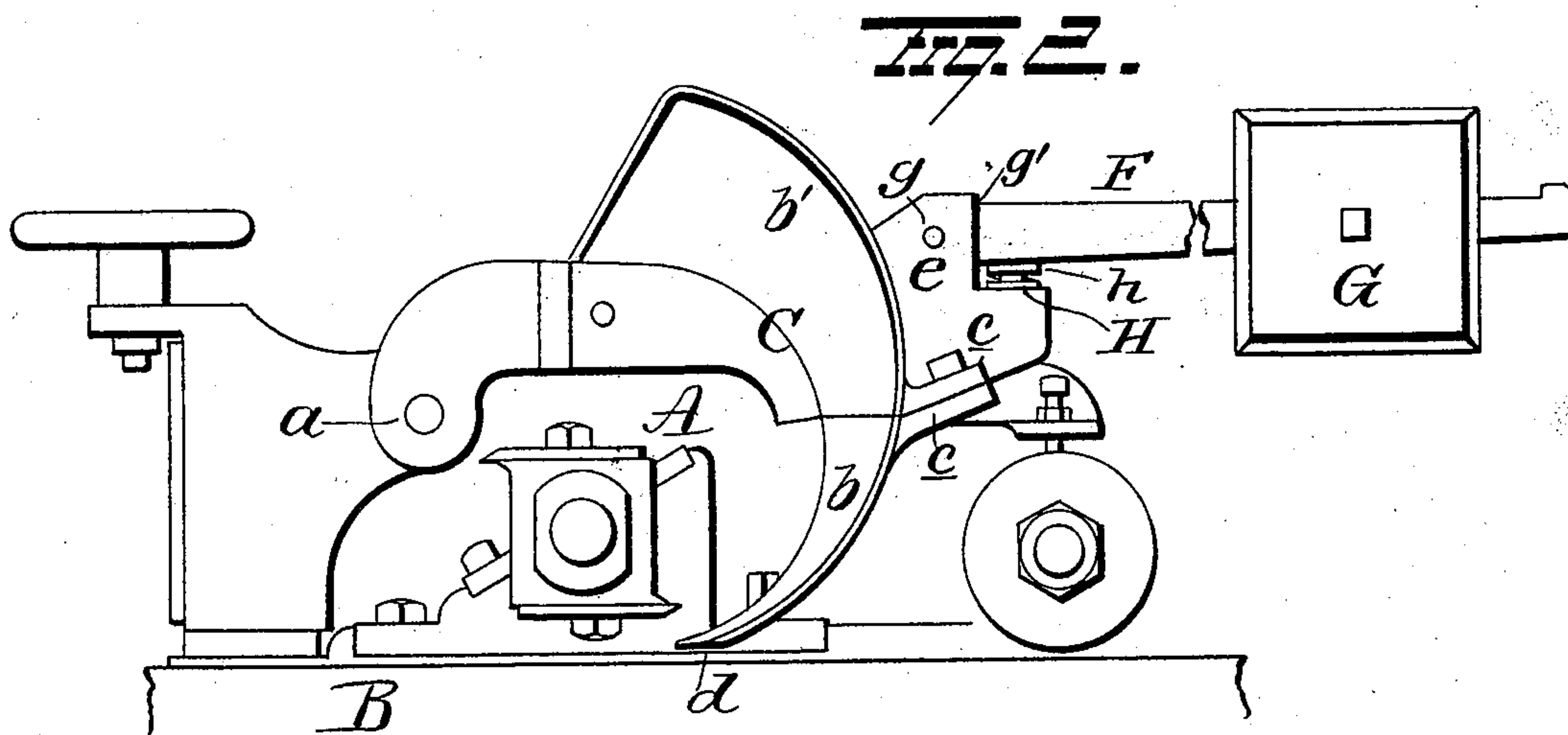
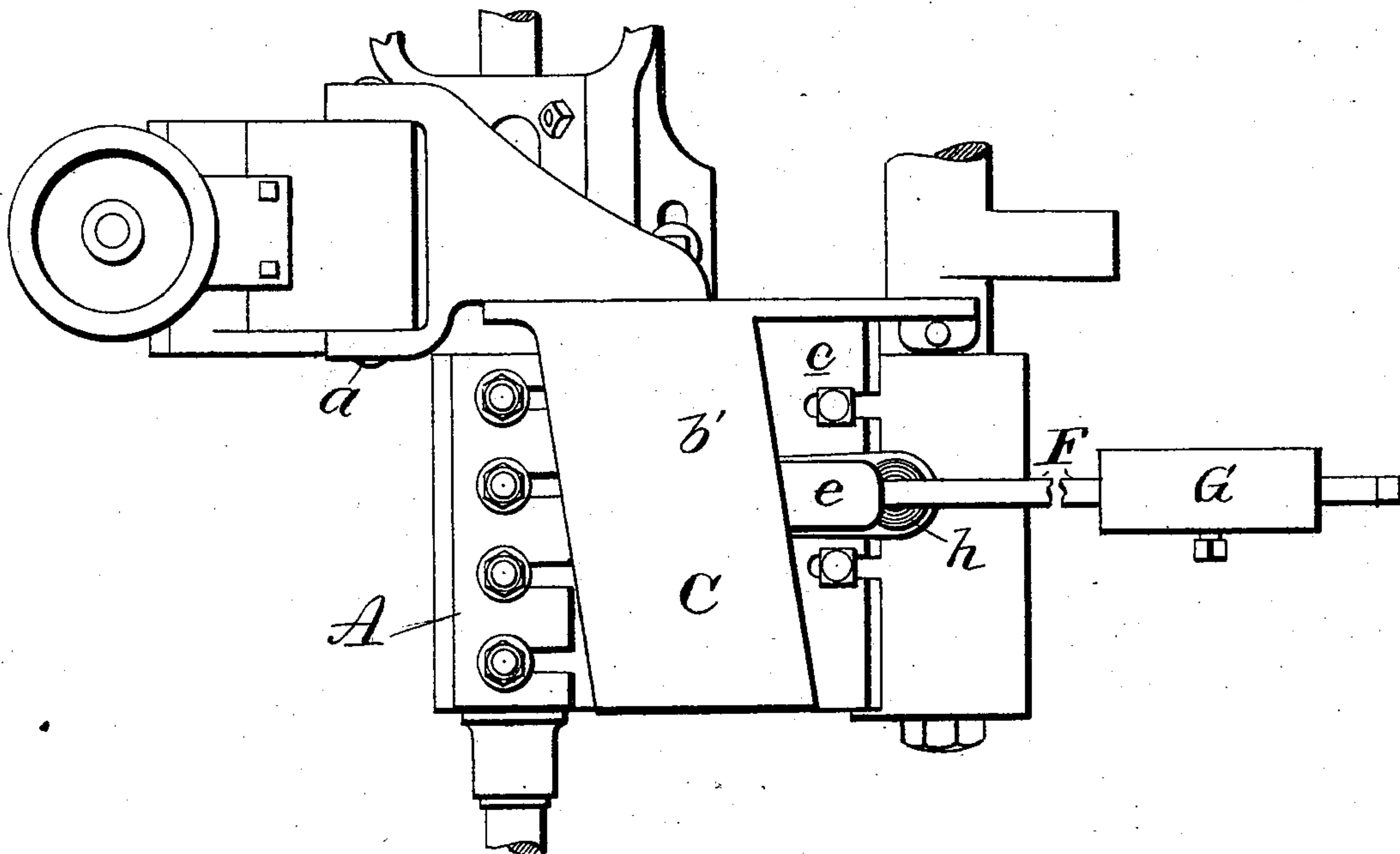


(No Model.)

C. F. OVERHISER & C. D. MARSH.  
CHIP BREAKER FOR WOODWORKING MACHINES.

No. 506,249.



**FD-3**

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Witnesses

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# UNITED STATES PATENT OFFICE.

CHARLES F. OVERHISER AND CALVIN D. MARSH, OF WILLIAMSPORT, PENNSYLVANIA, ASSIGNORS TO THE ROWLEY & HERMAN COMPANY, OF SAME PLACE.

## CHIP-BREAKER FOR WOODWORKING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 506,249, dated October 10, 1893.

Application filed April 21, 1893. Serial No. 471,304. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES F. OVERHISER and CALVIN D. MARSH, 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. In the machines now commonly employed the chip breakers are held down to their work by a weighted arm, the weight being adjustably mounted on the arm. These chip breakers are located just in advance of the cutters and while they afford a protection against flying chips they also operate as pressers designed for holding the board down on the table and prevent it from vibrating or any undue movement. When the machine is in operation however, the rough uneven surfaces of the board being operated upon, passing under the toe of the breaker causes the breaker with its attached rigid weight to also fly up leaving the board practically unsupported from above, just in advance of the cutter, and hence the latter tends to lift the board and as a result produces a slight unevenness of surface.

The object of our invention is to provide an improved chip breaker which can give or yield to any unevenness of surface without actually leaving the board, and it consists in the parts and combination of parts as will be more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in plan of a section of a planing machine embodying our invention. Fig. 2 is a side view of same, and Fig. 3 is a detached view partly in section showing the manner of connecting the weighted arm to the chip breaker.

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 ordi-

nary 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 lever *F* and the weight *G*. Ordinarily this lever is rigidly attached to the breaker and has no movement independent thereof. With our device we provide the breaker with a forwardly projecting block *e* which latter is provided near its upper end with a socket *f* within which the rear end of the lever is pivoted at *g*. The socket *f* is larger than the end of the lever so that they can move a limited distance independently of each other, and by lifting up on the lever the shoulder *g'* of the bracket is engaged and the chip breaker elevated. The forwardly projecting block *e* is also provided with a cylindrical socket located in advance of the pivot *g*, for the reception of the spring *H*, which latter supports the block *h* on which the lever rests.

From the foregoing it will be seen that the lever has a limited movement independent of the chip breaker, and the latter can also have a slight movement independent of the lever. The whole weight of the lever and weight tend however to hold the toe of the chip breaker down on the board. As the yielding bearing of the lever is near the pivotal point of the latter and the weight near the free end thereof, it will be seen that the chip breaker can rise to follow inequalities or elevations in the surface of the board by simply compressing the spring and without elevating the lever. This elevation of the chip breaker compresses the spring and the latter together with the lever and the weight causes the breaker to follow the surface of the wood and ride over the



elevations therein without actually leaving the board and thus is always exerting its weight on the board.

5 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  
10 parts shown and described, but,

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

15 1. In a wood working machine the combination with a cutter and a chip breaker, of a weighted lever pivoted to the chip breaker, and a yielding bearing for said lever, the said yielding bearing being carried by the chip breaker.

20 2. In a wood working machine the combination with a cutter and a hinged chip breaker, of a pivoted lever, a weight thereon, and a yielding cushion carried by the chip

breaker and forming a bearing for the lever, substantially as set forth. 25

3. In a wood working machine the combination with a cutter and hinged chip breaker, of a weight supported by the chip breaker, and a yielding cushion interposed between the weight and the chip breaker. 30

4. In a wood working machine, the combination with a cutter and a chip breaker the latter having a forwardly projecting block, the said block having a socket and a seat, and a spring cushion mounted in said seat, of a 35 weighted lever pivoted at one end in said socket, and resting on the spring cushion.

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

CHARLES F. OVERHISER.  
CALVIN D. MARSH.

Witnesses:

JNO. R. BIXLER,  
H. H. MESSINGER.