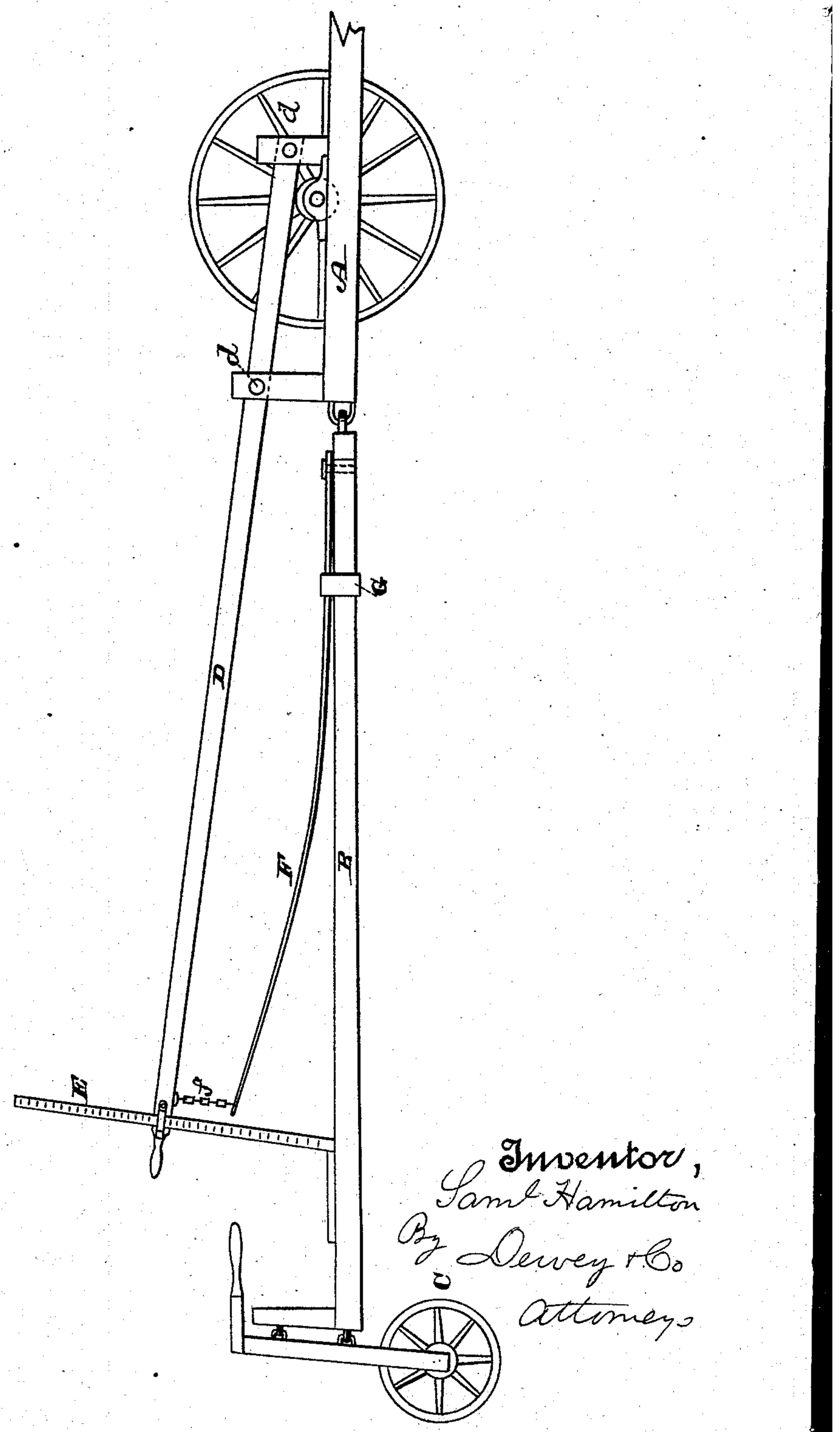
(No Model.)

S. HAMILTON.

HEADER SPRING.

No. 284,296. Patented Sept. 4, 1883.



Witnesses,
J. A. Krouse.
Wm F. Booth.

Inventor,
Saml Hamilton
By Dewey & Co
Attorneys.

UNITED STATES PATENT OFFICE.

SAMUEL HAMILTON, OF SALINAS, CALIFORNIA.

HEADER-SPRING.

SPECIFICATION forming part of Letters Patent No. 284,296, dated September 4, 1883.

Application filed March 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL HAMILTON, of Salinas, county of Monterey, State of California, have invented an Improved Header-Spring; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful improvement in the class of headers, reapers, or mowers in which the beam is hinged to the main frame, and a long lever attached to the frame is operated to raise or lower the header to or from the ground; and it consists in certain details of construction, hereinafter described and claimed. The general operation, however, is as follows: The main frame is raised and lowered and the height of the cutter adjusted by means of a long lever extending back over the beam. By elevating this lever the front of the header is thrown down and by depressing it it is thrown up.

The figure in the accompanying drawing is a side elevation, showing my spring and the manner of its attachment.

I have here deemed it necessary to show but a portion of the main frame of the header, which is designated by A.

B is the tongue or beam, to which the horses are attached in the usual manner. This beam is hinged to the frame, and has the usual steering-wheel, C.

D is the operating-lever, attached to the frame A at *d d*. It extends back over the beam and engages with a rack, E, in the usual manner. It is obvious and well known in what manner the movement of this lever affects the header. In the ordinary operation, when the lever is disengaged from the rack, the weight of the header has a tendency to throw the lever up, and therefore it requires some exercise of power to adjust the lever to the position desired, and to cause it to re-engage with the rack. When the header is in operation, the force of the draft or push of the horses increases materially the tendency of the front of the header to incline to the ground. So great is this tendency that it has become a common practice to weight the end of the lever both by forming therewith a ballast-box and by adding additional weight, even to the extent of six hundred pounds. With this weight as a counter-balance the operation of the lever is rendered easier; but the ballast is too cumbersome and its force is constant, which is not essential, as I shall show. Another expedient to overcome the difficulty is by the employment of a spiral spring. This device is imperfect, because of the nature of the spring, its cost, and its small power when attached.

F is my spring. This consists of spring-steel, formed of as many leaves as may be desirable. It is attached to the top of the beam at its forward end. Thence it extends back, curving upward slightly to a point under the rear end of the lever, and is attached to said lever by a chain, *f*.

G is a sliding band embracing the beam and the spring, by the movement of which the tension of said spring may be regulated.

Now, it will be observed that the stronger the tendency of the header to go into the ground, and thereby to throw the end of the lever up, the greater will be the resistance offered by the spring, because it will be harder to bend as the lever rises. Therefore the power of the spring is nicely graduated to meet the wants of the case. By being attached to the end of the lever it has the best point on which to exercise its counter-resistance, thereby rendering the movement of the lever an easy matter. By the exercise of small power this lever may be operated, and by being so nicely counterbalanced the rack is never worn by the constant movement of the lever, as is the case where ballast is used.

This spring is neat and cheap. It is out of the way, and is well adapted for the purpose intended.

I do not claim, broadly, the employment of a spring for effecting my purpose; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. In a header, the beam B, hinged to the rear of the header, and the lever D, for raising and lowering the header, in combination with the flat leaf-spring F, lying between the beam and lever, and having its forward end

secured to the beam, and its rear end flexibly secured to the lever, substantially as set forth.

2. In a header, the beam B, hinged to the header, the lever D, and the rack E, in combination with the flat leaf-spring F, attached to the forward end of the beam, and connected with the rear end of the lever, and the sliding band G, substantially as and for the purpose herein described.

In witness whereof I hereunto set my hand.

SAMUEL HAMILTON.

Witnesses:
G. W. EMERSON,
L. H. NOURSE.