

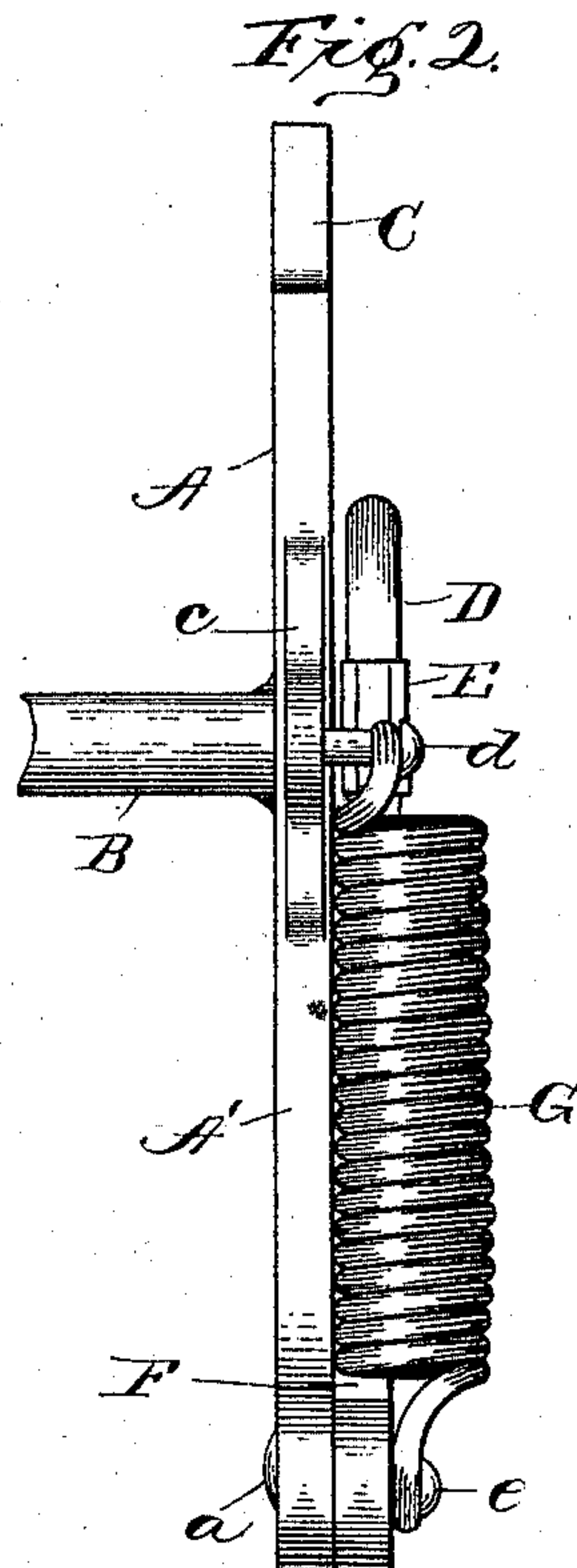
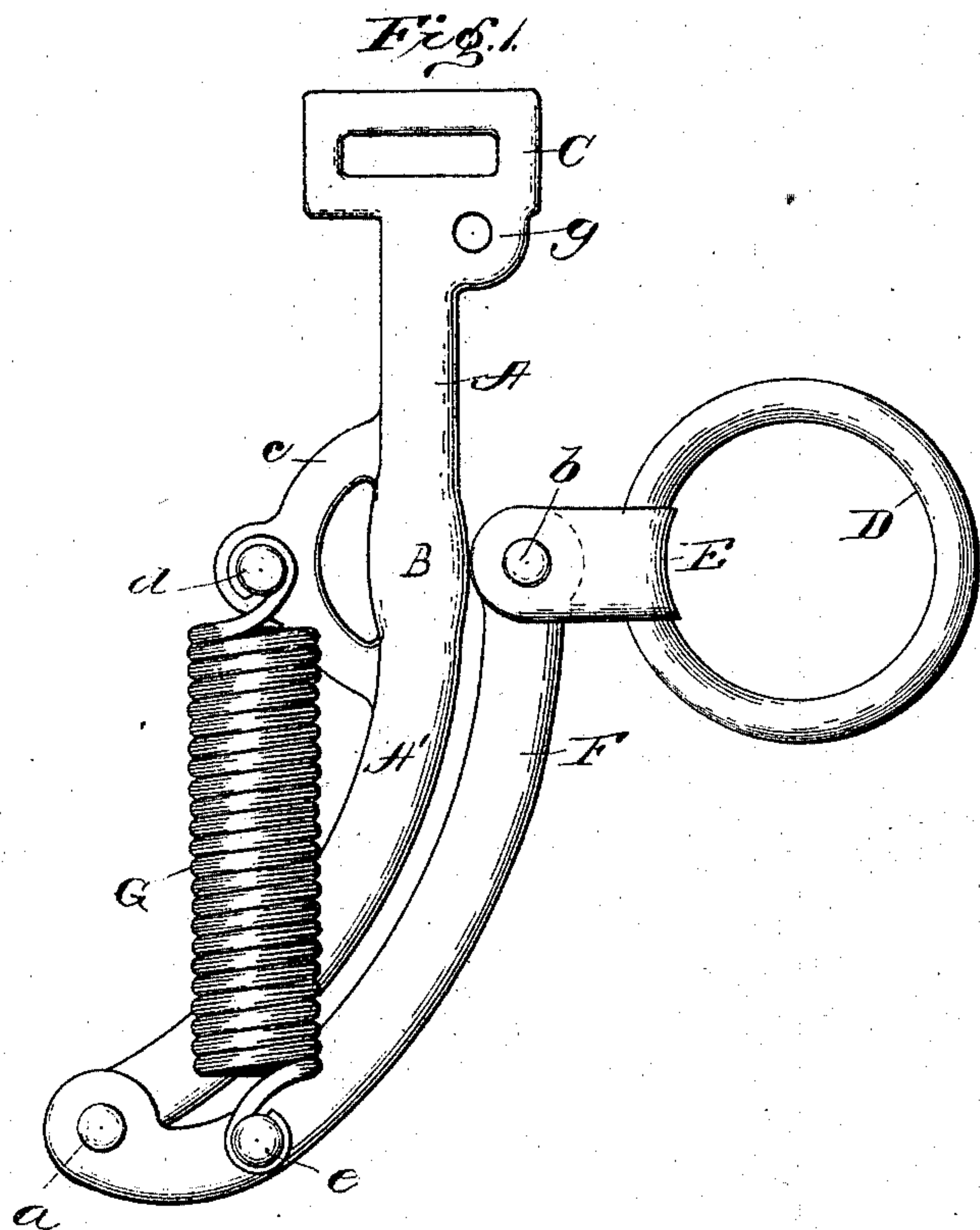
(No Model.)

2 Sheets—Sheet 1.

H. H. BATES.
BRIDLE BIT.

No. 574,058.

Patented Dec. 29, 1896.



Witnesses:

J. M. Fowler Jr.

Wm. P. Churchill

Inventor:

Henry H. Bates

(No Model.)

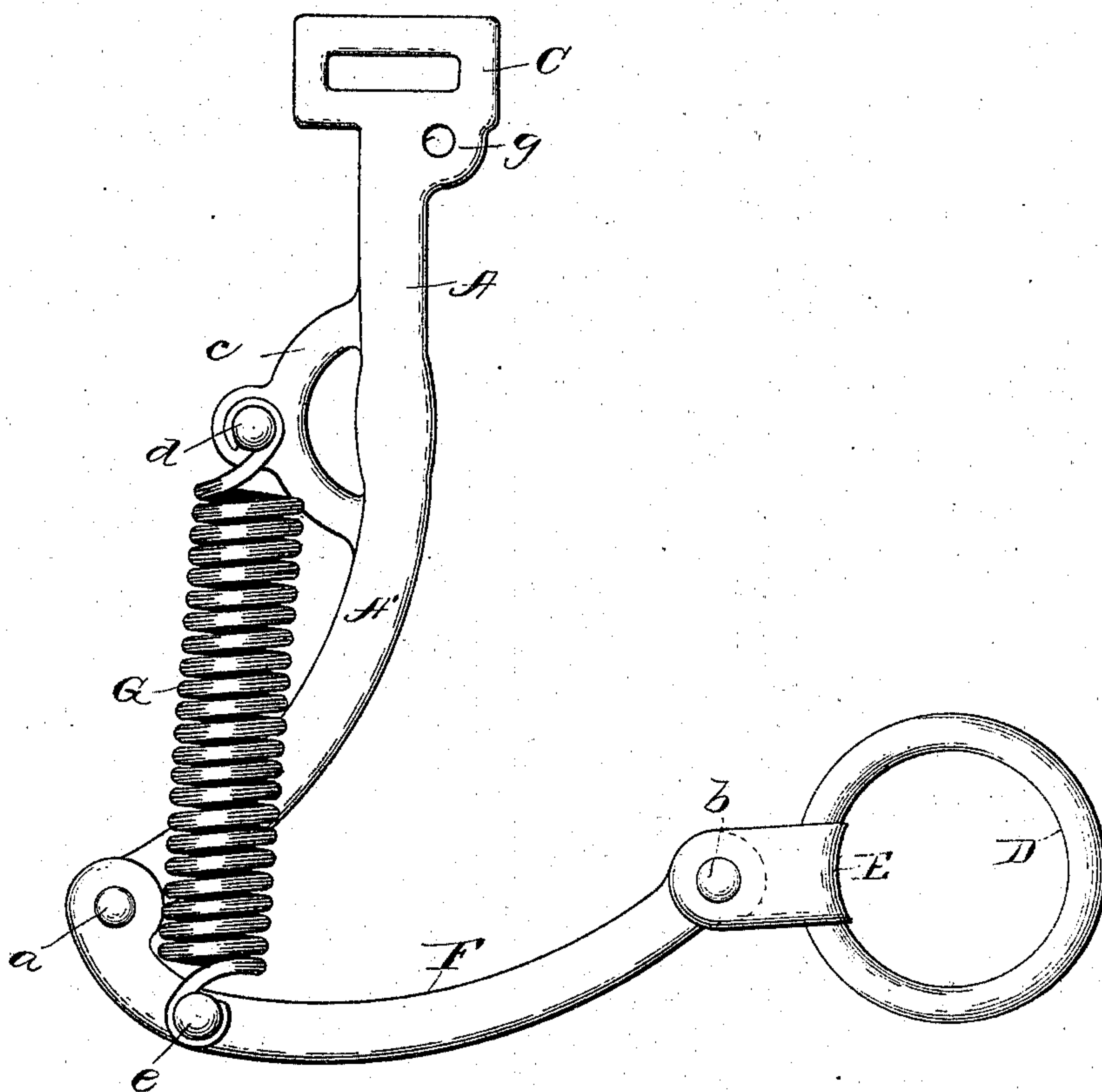
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Fig. 3.



Witnesses:
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Wm. P. Churchill

Inventor
Henry H. Bates

UNITED STATES PATENT OFFICE.

HENRY H. BATES, OF WASHINGTON, DISTRICT OF COLUMBIA.

BRIDLE-BIT.

SPECIFICATION forming part of Letters Patent No. 574,058, dated December 29, 1896.

Application filed June 10, 1895. Serial No. 552,243. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. BATES, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Bridle-Bits; 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 appertains to make and use the same.

My invention relates to bits for horses' bridles; and it consists in an improved leverage bit which does away with the necessity for the extra rein usually employed in connection with the ordinary curb-bit when used on a tender-mouthed horse.

The ordinary leverage bit, as is well known, is too powerful for constant use on tender-mouthed horses, and yet such horses often require a curb-bit as a protection to the rider. For these the extra rein is provided, and yet unthinking riders are careless about using the latter and often injure the animal by bearing on the curb-rein when there is no necessity. My improved bit prevents all possible injury of this character by its self-adjusting capacity, which gives it precisely the power and action of the ordinary bit under ordinary circumstances, with only a single rein to be taken account of, and yet when occasion requires more power and restraint to be applied, as when the horse suddenly takes fright, the bit expands automatically under the increased strain and becomes instantly converted into a powerful lever or curb bit without the necessity of changing reins—a move sometimes impossible of execution under the suddenness of the emergency.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a side view of the bit, exposing the cheek-piece and showing my improvement in its ordinary or closed position. Fig. 2 is an edge view of the same; and Fig. 3 is a view from the same point as Fig. 1, showing the device in its open position.

Like letters refer to like parts in the several figures, in which—

A represents the upper portion of the main bar; B, the bit portion, which may be welded on A or connected in any suitable manner;

C, the loop for the attachment of the head-stall-strap of the bridle; g, the loop for the attachment of the curb-chain when one is used; D, the ring for the attachment of the 55
bridle-rein; A', the lower continuation of the main bar, and F the hinged or expanding portion of the bar, pivoted to the lower main bar A' at a. 60

G is a powerful coiled spring in contracted position firmly attached at its extremities to the lugs d e, one situated on an extension c of the main bar and the other on the expanding portion or link F, and so inserted in as- 65
sembling the parts together as to powerfully draw the link F upward to lie closely along the lower main bar A'. This spring may be made in duplicate, if desired, in which case 70
lighter stock is used, and one spring may be located on each side of the main bar. The ring D is attached to the link F by a jointed connection E, pivoted at b. The spring is made of such tension and power as to retain 75
the link F in the closed position shown under all ordinary strains to which the bridle-rein is subjected in riding a gentle horse; but under an unusual and powerful pull, such as 80
occurs in the effort to master an unruly animal, the spring yields and permits the link F to unclasp, when the direction of the strain is diverted to the point a, and a powerful leverage is created, as in curb-bits, the long arm equal to a C and the short arm to C B. 85
On the subsidence of the emergency the link naturally closes of itself under the tension of the spring and returns to its former position without any care on the part of the rider.

One advantage possessed by this bit over any ordinary curb-bit is that the yielding 90
nature of the transition from the ordinary strain to the leverage strain is such as to obviate that injury to the horse's mouth which sometimes occurs, even to hard-bitted animals, in suddenly putting on the curb. A 95
violent blow cannot be suddenly inflicted on the animal's jaw with this bit by a rider who has lost his temper, but there is always a transition period. The leverage, however, is steadily maintained as long as the tension on 100
the bridle-rein is maintained.

I have shown only one side of the bit, but it will be readily understood that there is another equal and opposite cheek-piece and ac-

companying mechanism at the other end of the bit or mouthpiece B. The headstall, bridle-rein, and other parts of the bridle being the same as in ordinary use are not shown.

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

1. The improved curb-bit for horses' bridles herein described, comprising the mouth-
10 piece, the fixed cheek-pieces, extended downward to form a leverage, link-pieces pivoted to the said cheek-pieces at the lower extremities thereof, a bridle-rein ring secured to each link-piece at its upper extremity, and
15 a constricting-spring attached to each cheek-piece and to its corresponding link respectively, whereby the latter is normally held in close proximity to the former but allowed to expand under a sufficient strain, substantially as and for the purpose specified.

20 2. In an expanding bridle-bit, the combination of the mouthpiece, cheek-pieces, downwardly extended in a forward curve, curved link-pieces pivoted to the said cheek-pieces at their lower extremities, bridle-rein rings

secured to the link-pieces at their upper ex- 25
tremities; and constricting-springs G, attached at one end to each cheek-piece near the mouthpiece, and at the other end to the corresponding curved link near the pivot thereof, and normally holding the two in 30
juxtaposition, until expanded by an unusual strain on the bridle-rein, substantially as and for the purpose specified.

3. In an automatically-expanding curb-bit, the combination of mouthpiece B, cheek-piece 35
A A', link F pivoted to the cheek-piece at its lower extremity, spring G, attached by its ends to the cheek-piece and the pivoted link respectively, whereby they are drawn together, and rein-ring D, secured to link F at 40
its upper extremity, all substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY H. BATES.

Witnesses:

RHESA G. DU BOIS,
WM. P. CHURCHILL.