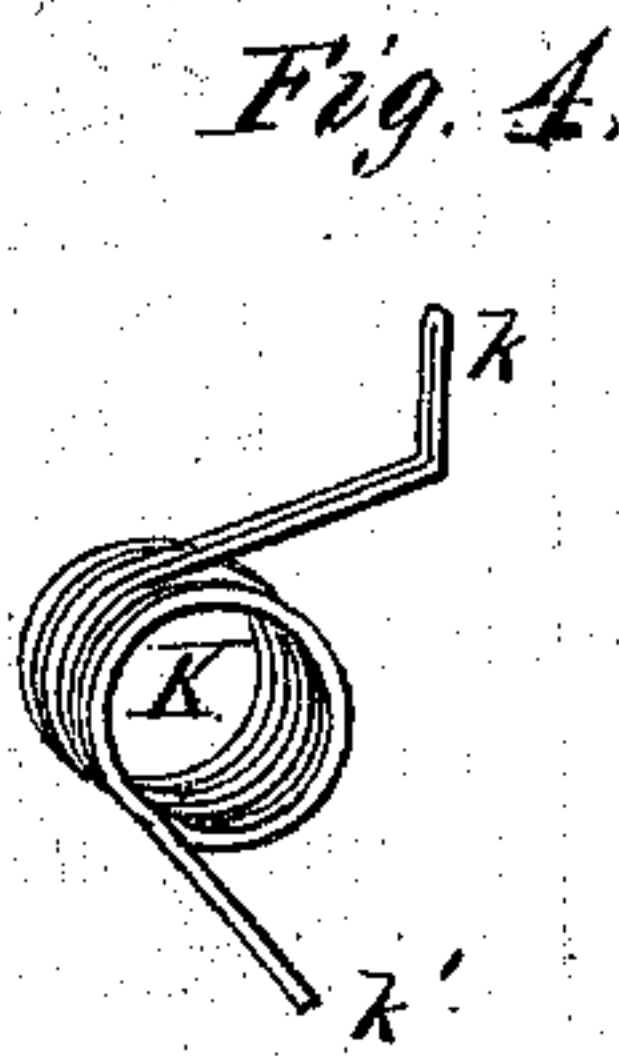
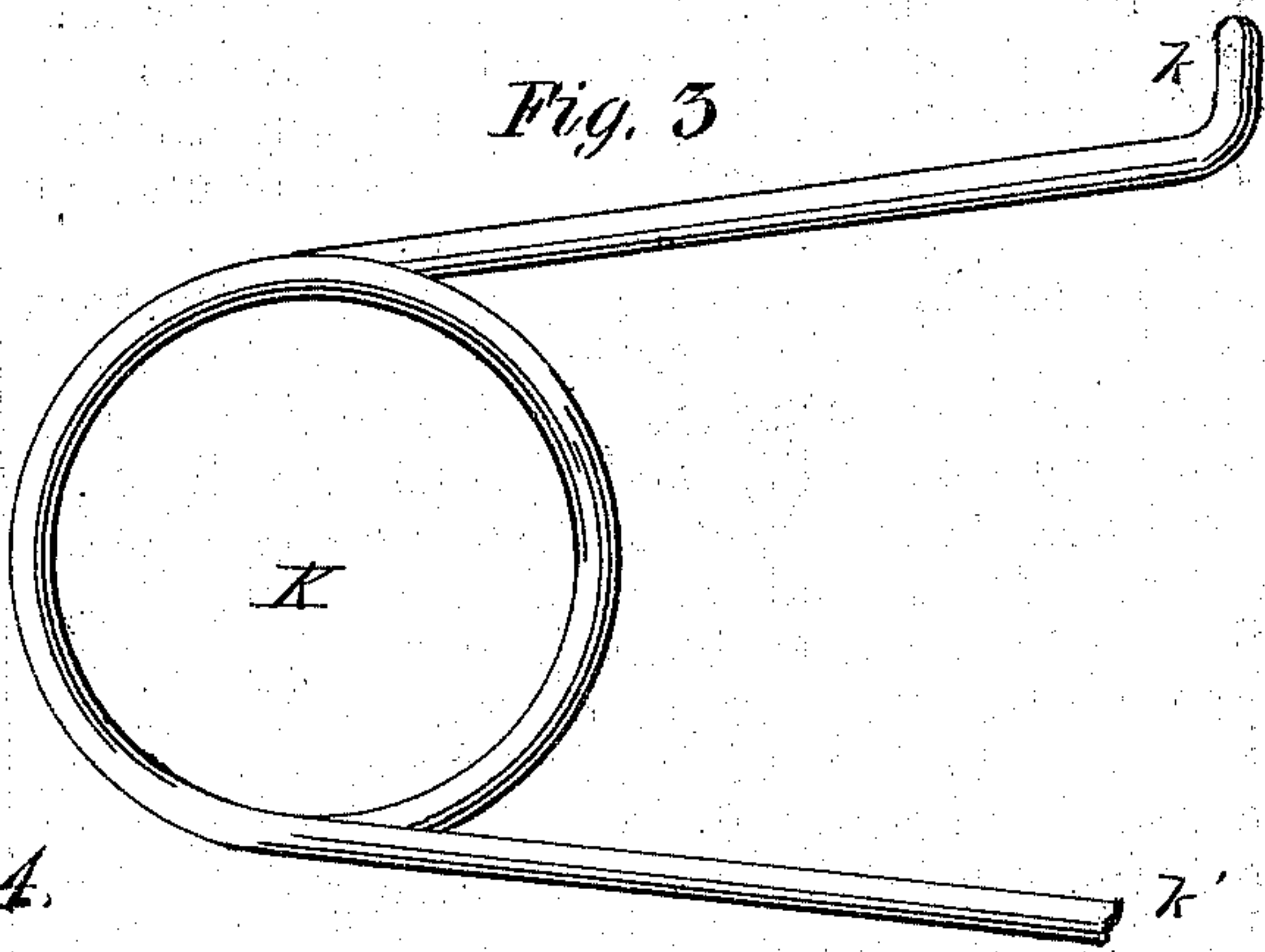
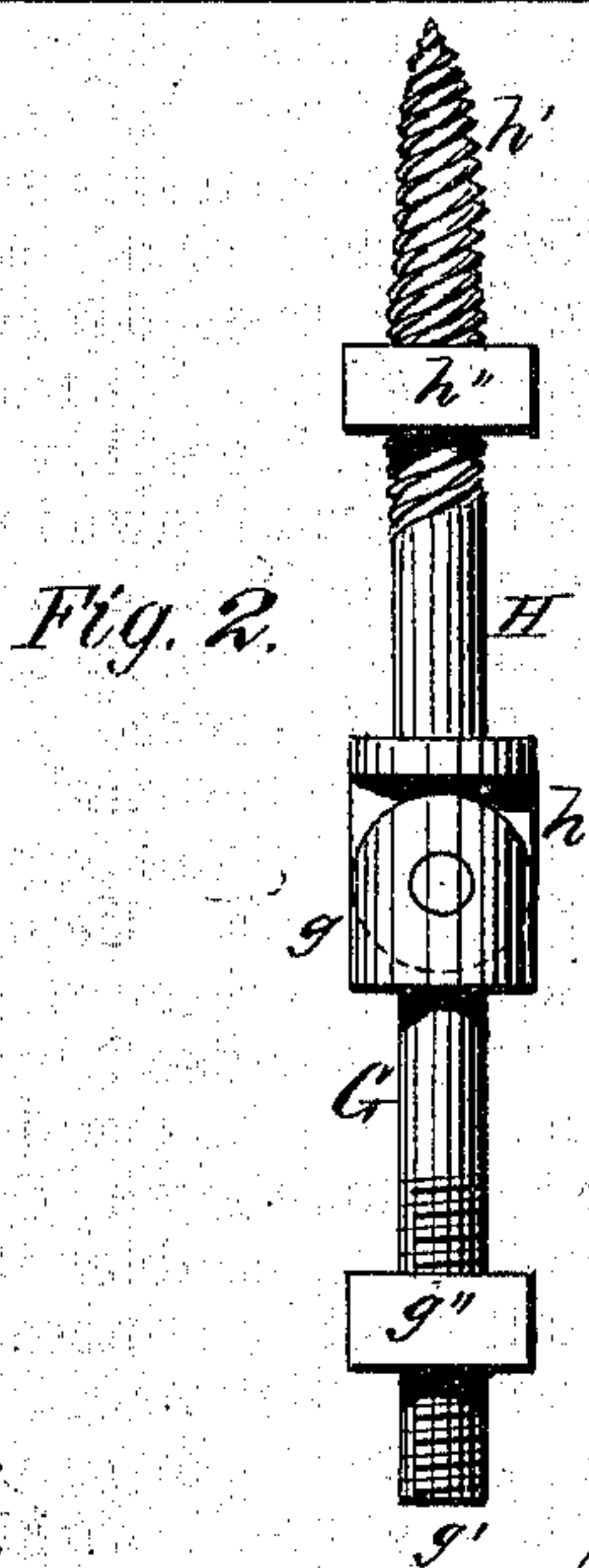
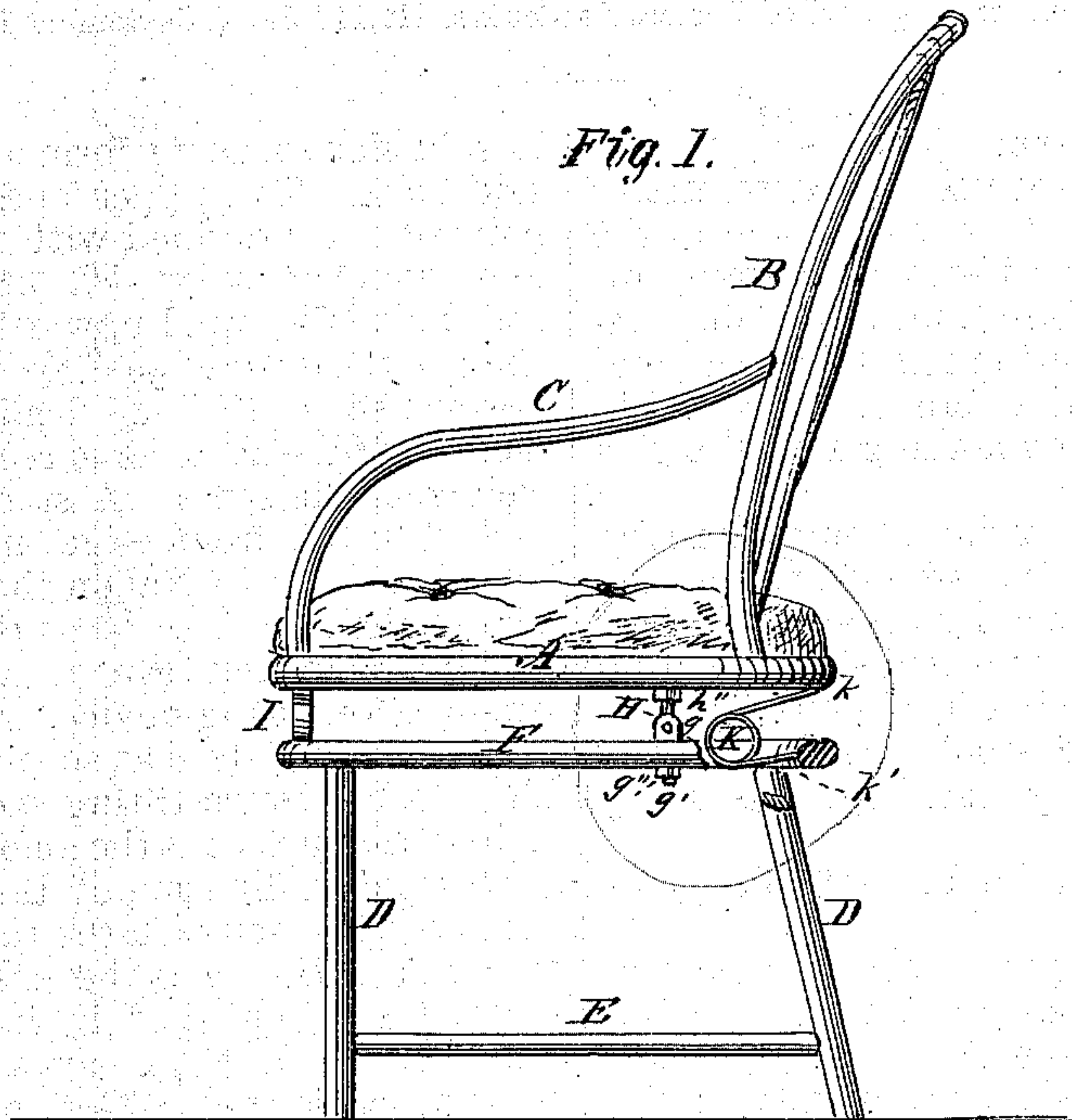


SAMUEL S. HAYWARD.

Improvement in Tilting Chairs.

No. 119,143.

Patented Sep. 19, 1871.



Witnesses

*Alfred M. ...
John B. Young*

Inventor

*Samuel S. Hayward, by
Orinelle and Oyer, his
Attys.*

UNITED STATES PATENT OFFICE.

SAMUEL S. HAYWARD, OF NORWICH, NEW YORK.

IMPROVEMENT IN TILTING-CHAIRS.

Specification forming part of Letters Patent No. 119,143, dated September 19, 1871.

To all whom it may concern:

Be it known that I, SAMUEL S. HAYWARD, of Norwich, in the county of Chenango and in the State of New York, have invented certain new and useful Improvements in Chairs; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation of my improved chair with a portion of the stool-frame broken away so as to show the arrangement of the tilting-spring. Fig. 2 is an enlarged side elevation of the adjustable hinge-bar for connecting together the chair-seat and stool. Fig. 3 is a like view of the tilting-spring, and Fig. 4 is a top view of the same.

Letters of like name and kind refer to like parts in each of the figures.

My invention is an improvement in a class of chairs having its seats so pivoted to or upon its stools as to be capable of a backward tilting motion; and it consists principally in the construction and relative arrangement, upon the seat and stool, of the hinge-bars and tilting-spring, substantially as and for the purpose hereinafter specified. It further consists in the peculiar construction of the hinge-bar employed for connecting together the chair-seat and stool and its combination with said parts, substantially as and for the purpose hereinafter shown.

In the annexed drawing, A represents the seat of a chair, from which extend upward the back B and arms C, all of usual construction. The supporting-stool is formed of four legs, D, connected near their lower ends by means of ordinary rounds E, and at their upper ends by a rail, F, which corresponds in general size and shape, horizontally, to the exterior of the chair-seat A. Passing vertically upward through the rail F, upon opposite sides and in rear of the fore-and-aft center of the stool, is a metal bolt, G, having upon its upper end a head, *g*, and upon its lower end a screw-thread, *g'*, and nut *g''*, said head resting upon the upper face of said rail, while said nut, bearing against its lower face, holds said bar firmly in place. The head *g* is provided with a vertical slot, which receives and contains a corresponding tongue, *h*, attached to the lower end and forming a part of a second bolt, H, said tongue being pivoted with-

in said slot so as to form a hinge-joint between said bolts. The upper end *h'* of the bolt H is pointed and provided with a wood screw-thread, upon which is a nut, *h''*. As thus constructed, said bolt is screwed upward into the seat of the chair to the desired position and the nut *h''* turned upward so as to bear firmly against the lower face of said seat, so as to receive and sustain the weight of the same. A suitable lug, I, being attached to the front edge and lower side of the seat A and bearing upon the corresponding portion of the rail F, sustains the front side of said seat in the desired vertical position and completes this portion of the device, which now consists of a chair having its seat so pivoted as to be capable of a backward-tilting movement, at the will of its occupant. As the amount of rearward and downward inclination of the seat necessary for comfort will vary with the taste of the occupant, said inclination may be easily and quickly increased or diminished by loosening the nuts *g''* and *h''* upon the hinge-bars and turning said bars so as to cause their upper ends to pass further into or be in a like proportion withdrawn from the seat, after which the parts are again secured in their relative positions by screwing said nuts against their respective bearings. In order that the seat may be pressed forward and downward, so as to prevent the same from being accidentally tilted rearward, I employ a spring, K, having preferably the form shown in Figs. 3 and 4, which spring has its doubled end *k* secured within the rear edge and transverse center of the seat and its single ends *k'* secured in a corresponding position to or within the rail F, so as to bring the coils in a vertical plane and nearly in a line fore and aft of the chair. Being adjusted so as to exert an upward pressure upon the chair-seat, the latter will be caused by the spring to maintain its usual position unless purposely tilted backward, in which event the peculiar construction of said spring enables it to yield to the motion without such an increase of tension as to cause a perceptible variation in the power required for moving to, or maintaining said seat in position at, any point within the limits of its movements. If desired, the double coil may be omitted and a spring having a single coil only substituted in its place.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The construction and relative arrangement of the hinge-bars G and H, spring K, the chair-seat A, and the supporting-stool, substantially as and for the purpose specified.

2. The adjustable hinge-bars G and H, constructed substantially as described, and provided with the nuts *g''* and *h''*, respectively, and combined with the chair-seat and supporting-stool, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of September, 1871.

SAMUEL S. HAYWARD.

Witnesses:

GEO. S. PRINDLE,

JOHN B. YOUNG.

(35.)