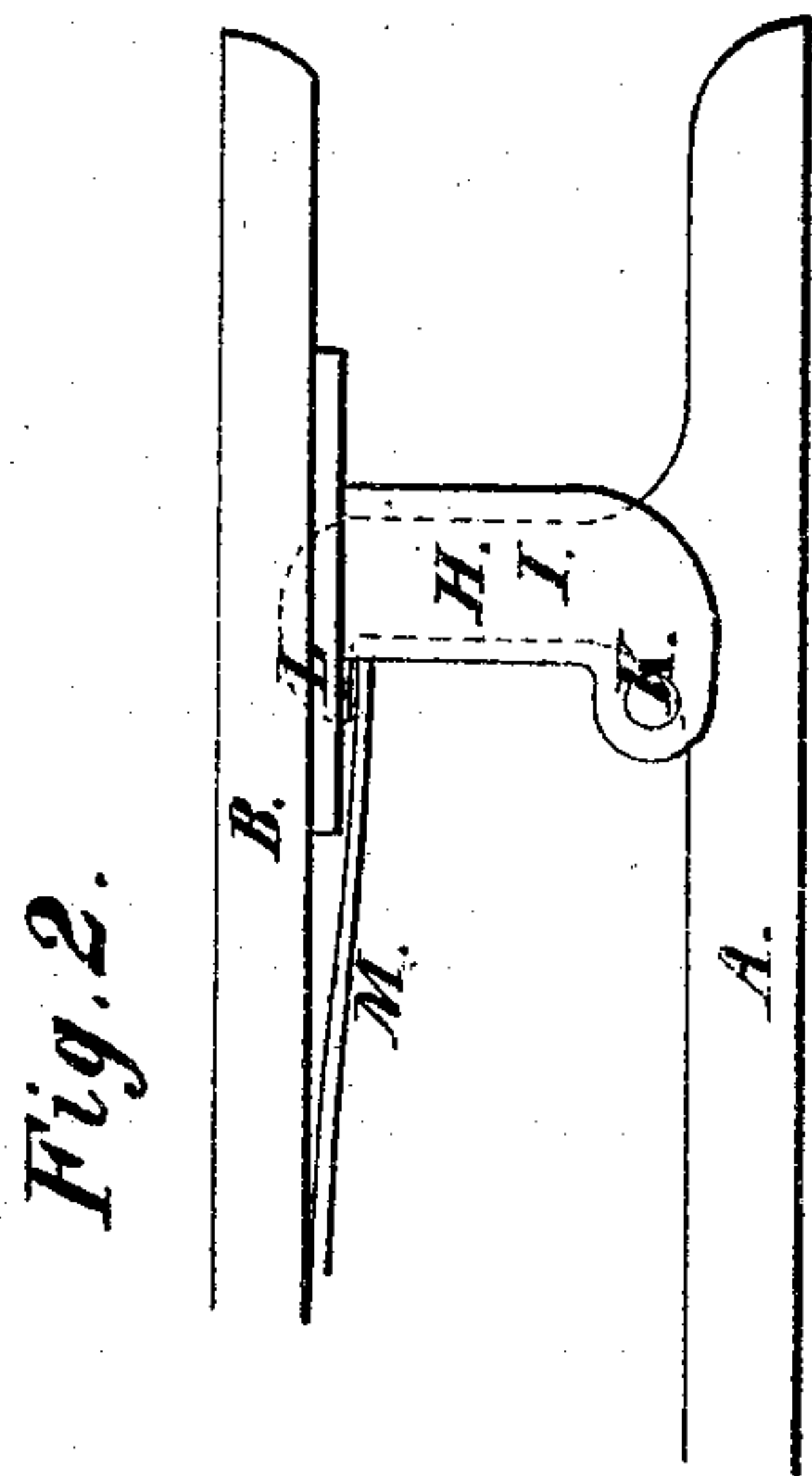
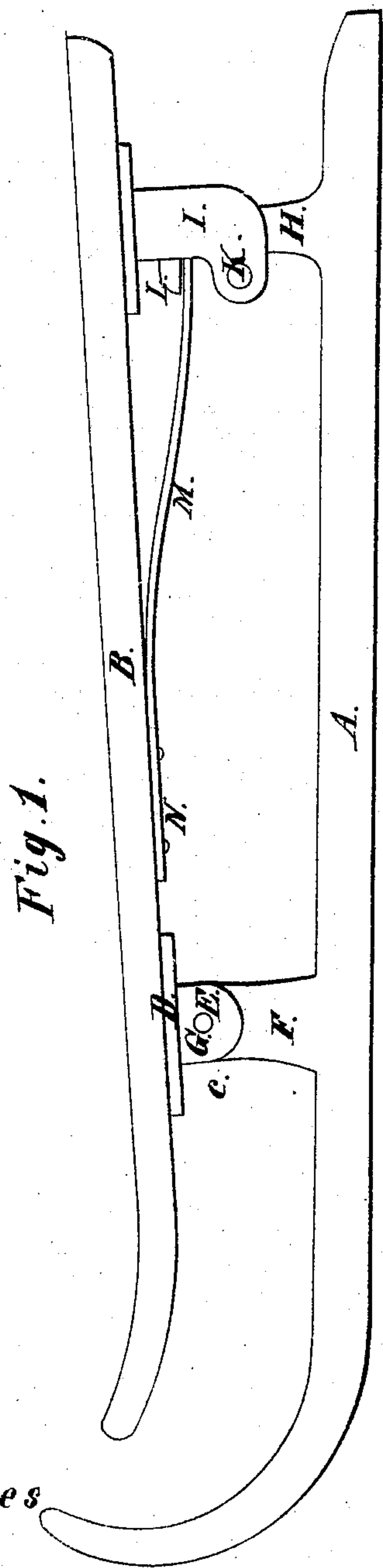


A. W. Elmer,
Skate,
No 59,796, Patented Nov. 20, 1866.



Witnesses

Edmund A. Hyde
John Jones

Inventor

J. H. Gardner
Attorney for
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United States Patent Office.

IMPROVEMENT IN SKATES.

A. W. ELMER, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND C. ENSMINGER, OF SAME PLACE.

Letters Patent No. 59,796, dated November 20, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, A. W. ELMER, of Springfield, Hampden county, Commonwealth of Massachusetts, have invented an Improved Skate; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon:

In the drawings Figure 1 represents a side view of my invention, and

Figure 2 a partial side view of the same.

This invention consists of a skate so arranged that instead of presenting a stiff resting-place for the foot, as is usually the case, a play is given to the ankle and foot without interfering with the perfect running of the skate.

To accomplish this I attach the runner, A, of my skate (see fig. 1) to the forward part of the foot-plate B at C. This attachment is made in this manner: A small plate, D, having two ears, E, to it, is fastened suitably beneath the foot-plate B, or else the ears are formed directly upon the foot-plate, as may be convenient. The forward pillar, F, of the runner is pivoted at the top between these ears E by means of the rivet G. By this means a hinge is made, giving a play to the foot-plate B when it is pressed down by a preponderance of weight on the toe part. At the rear pillar, H, is a pair of ears, I, similarly attached to the foot-plate as are the ones in front. These ears are much longer, however, and reach nearly to the centre of the runner. These ears form a guide for the rear pillar H to play in when the toe part of the foot-plate is pressed down or relieved from pressure. The play of the skate is limited by the pin, K, which is put through the lower and front part of the ears I, this pin resting across the runner A when down, and when up catching against the upper and front part of the pillar H, which is brought over at L, forming an elbow or hook. In order to regulate the play of the skate and give it elasticity, I place a spring, M, formed of a strip of suitable metal, underneath the foot-plate fastened to it at N, and having the other end pressing up against the head L upon the rear pillar H, and being kept in place by the ears I, which guide it with the pillar H.

In operation, when the weight of the body in skating is thrown forward, bringing a preponderance to bear upon the toe of the foot and foot-plate, the latter yields to it, the front part bearing down and the heel raising, the spring giving elasticity to the motion and causing the plate to give only in proportion to the weight on either part. This motion does not interfere at all with the smooth running of the skate as the runner is always parallel to the surface of the ice.

The advantages of this invention are chiefly the great relief it gives to the strain upon the ankle and the play it gives to the foot, which otherwise is cramped by the stiffness of the skate, causing a great weariness of those parts; my invention doing away with most part of the fatigue generally attending the exercise of skating, and assisting greatly in the execution of those easy and graceful movements which make skating so attractive.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

An elastic skate, having the foot-plate B and runner A combined with the spring M, constructed and operating substantially as described.

A. W. ELMER.

A. D. BRIGGS,
E. H. HYDE.