

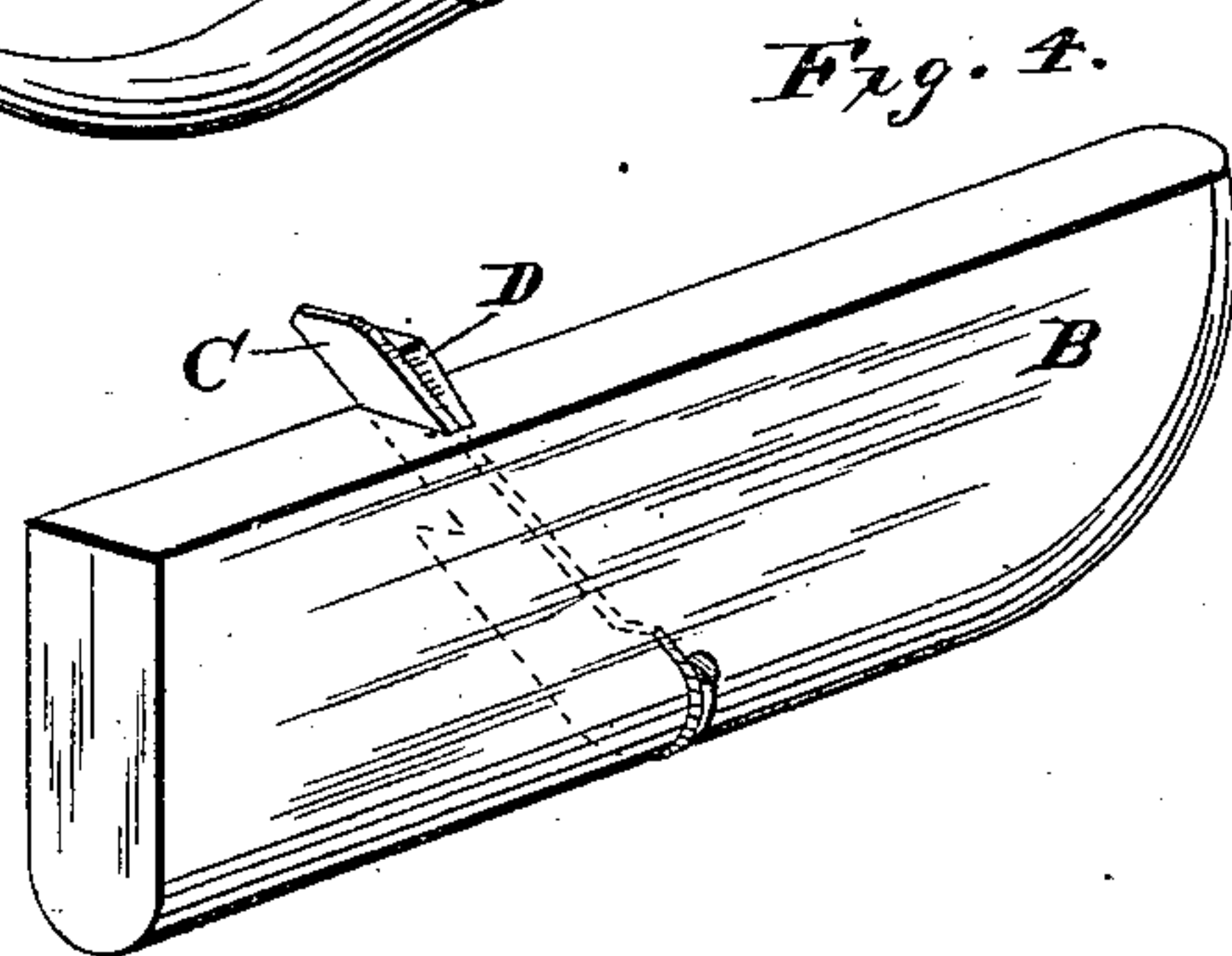
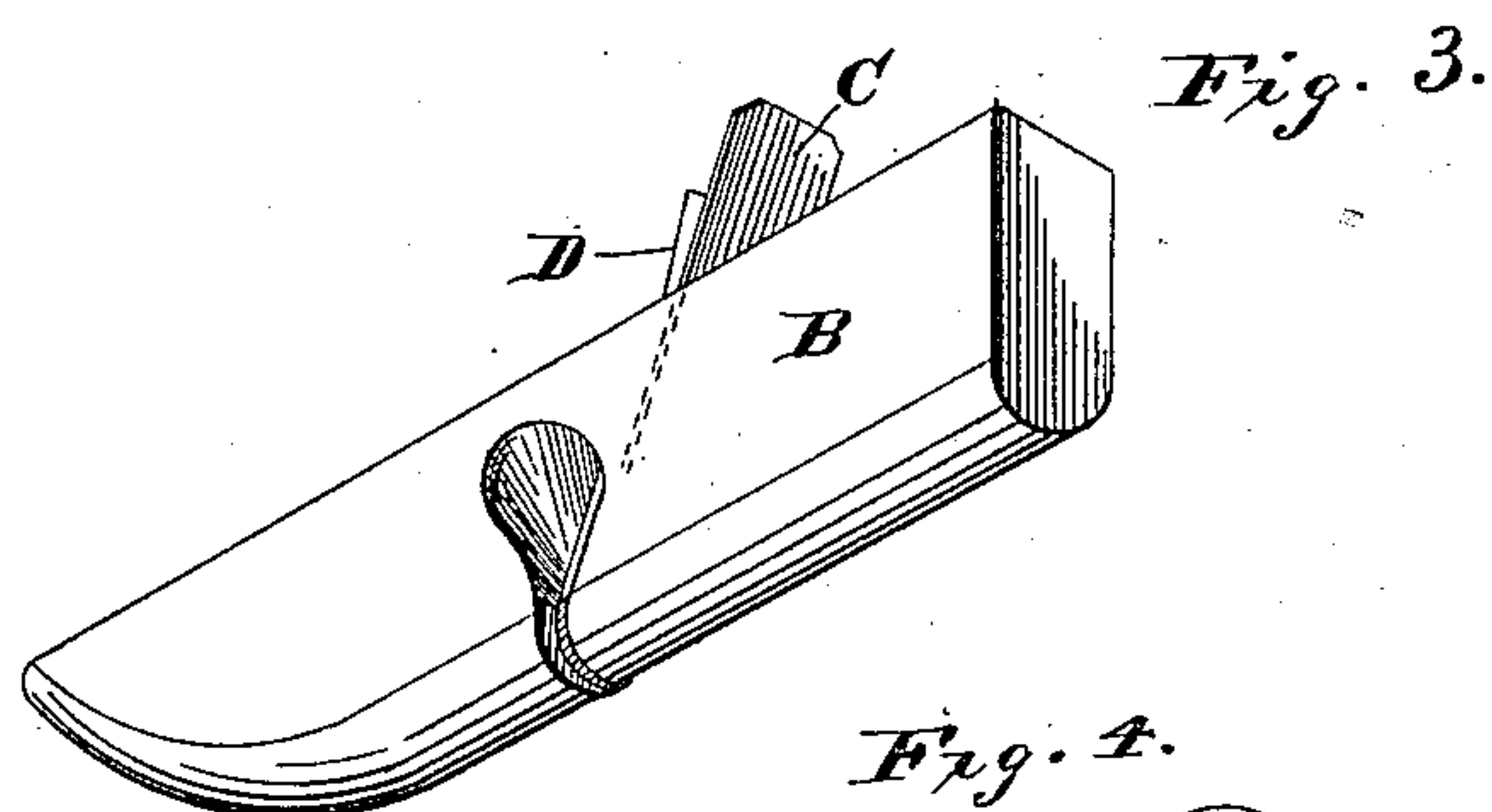
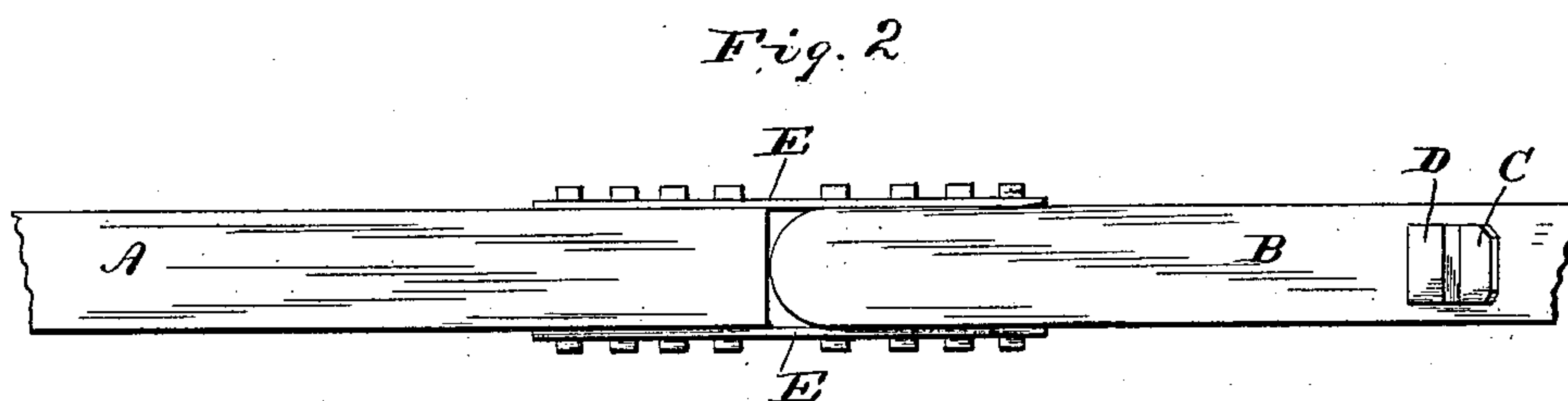
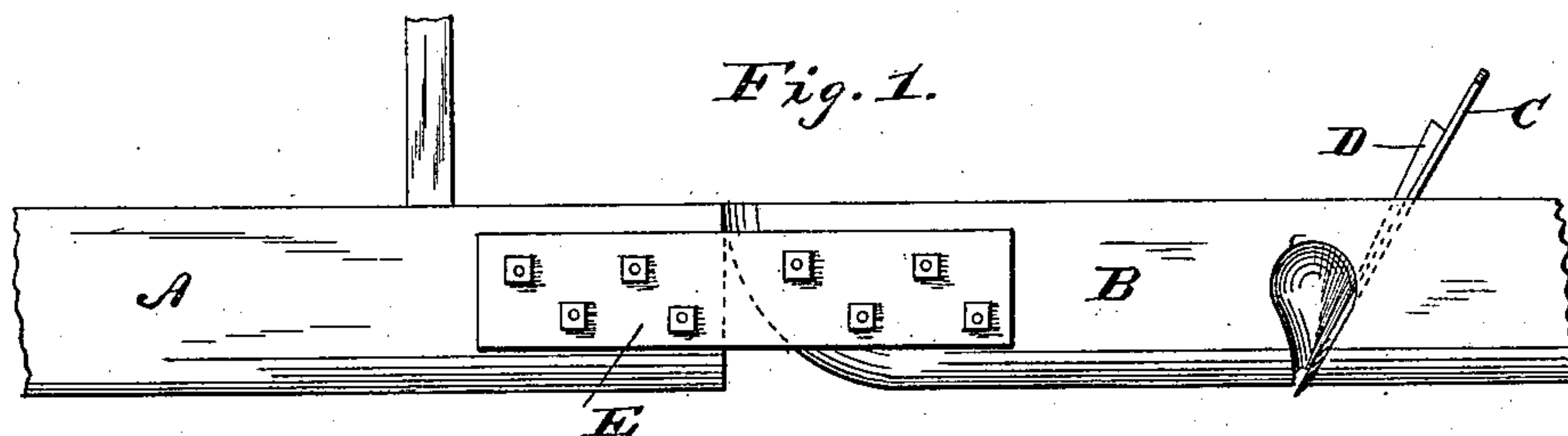
(No Model.)

A. GALLINGER.

MEANS FOR FORMING TRACKS OR RUTS IN ICE COVERED LOGGING ROADS.

No. 326,209.

Patented Sept. 15, 1885.



Witnesses

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UNITED STATES PATENT OFFICE.

ALEXANDER GALLINGER, OF OSHKOSH, WISCONSIN.

MEANS FOR FORMING TRACKS OR RUTS IN ICE-COVERED LOGGING-ROADS.

SPECIFICATION forming part of Letters Patent No. 326,209, dated September 15, 1885.

Application filed February 27, 1885. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER GALLINGER, of Oshkosh, in the county of Winnebago and State of Wisconsin, have invented certain
5 new and Improved Means for Forming Tracks or Ruts in Ice-Covered Logging-Roads; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and
10 to the figures and letters of reference marked thereon.

In the lumber regions the logs procured have ordinarily to be transported a distance
15 of from five to fifteen miles by means of bobsleds, and until the roads become traveled enough to cause ruts or tracks to be formed in them by the runners of the sleds the loads carried have to be comparatively light in order that the sleds may be able to bear the
20 racking and straining caused by their sliding from side to side of the road. Even after the ruts have become formed the road soon becomes dirty, worn, and heavy to such an extent as to render it necessary to decrease again
25 the amount of the load, sometimes as high as fifty per cent., and this occurs though efforts are made to in a measure renew the roads by sprinkling them with water by means of
30 sprinklers devised for the purpose, and allowing the water to freeze and form a new surface. The difficulties experienced in keeping these roads in proper condition have led to the production of my present invention; and,
35 stated in a general way, the latter consists in combining with the runner or runners of a sled, by suitable connecting means, a timber provided with a cutting-tool, whose function is to cut out ruts or tracks in a new road, or
40 to clear out and keep clear of an accumulation of dirt, snow, or ice the ruts of an old road, whereby, by reason of the uniformly-good condition of the roads thus produced, the maximum loads are enabled to be carried by the
45 sleds at all times, or whereby, at least, a near approximation to this result is attained.

I will first describe the means which I prefer to employ in carrying out my invention, and will then point out what I deem to be
50 new in the claim at the end of this specification.

Referring to the accompanying drawings,

Figure 1 is a side elevation of a portion of a sled-runner, showing the application of my invention thereto. Fig. 2 is a top view of the
55 same. Figs. 3 and 4 are perspective views of the cutting device detached.

Similar letters of reference in the several figures indicate like parts.

The letter A indicates the sled-runner; B, 60 the body of the cutting device, consisting of a piece of timber about three or four inches thick, from four to six inches deep, and about four feet long, these proportions not being, however, arbitrary, but merely given as de- 65 scribing the size of a part that would correspond to the size of the sled-runners in general use. The bottom of this timber B may be of any desired contour, but is preferably made oval or convex to correspond to the form 70 of the sled-runner shoe, while its forward end is preferably rounded or curved after the manner of a sled-runner.

A cutting-bit, C, extends diagonally through the timber B from top to bottom and projects 75 below its bottom a short distance, its cutting end thus exposed being of an outline corresponding to that of the bottom of the timber.

The bit is held in place by means of a wedge, D, or other suitable means, while a slot is 80 formed in the part B in front of the bit for the accommodation of the material removed by the action of the bit, the said slot being given a backward and outward curve or inclination, so as to cause the removed material 85 to be discharged either to the right or to the left of the track of the implement, according as may be desired.

E E represent metal straps by means of which the device is firmly secured to the sled- 90 runner in rear of the same. I do not of course desire to confine myself to this mode of attachment, as any other common fastening contrivance would serve the same purpose.

Two cutting implements may be used at the 95 same time—one attached to one runner of the sled and the other to the other runner—and the slot or openings for the discharge of the material may taper one to the right and the other to the left; but ordinarily only one will be 100 required, both ruts or tracks being served by it in a round trip, and its use being continued until the road is in a satisfactory condition.

Should there be formed an accumulation of

material on one side of a rut or track, due to the repeated use of one of the cutting implements in connection with one sled-runner, the implement may be transferred to the other runner of the sled, so as to cause it to throw the material in the opposite direction.

The bottom of the implement may be shod with iron, if desired.

After the freezing of a sprinkled road one of my cutting implements may be attached to a sled and the ice furrowed out, so as to form ruts or tracks in the road, which keep the loaded sled on the road much as a car-track does a car; and when a good body of ice has been formed by repeated sprinklings, and yet by use and the accumulation of dirt and manure in the ruts the road has become unserviceable or greatly impaired, the implement may be attached to a loaded sled, and

the dirt removed from the ruts, and a good track formed without the expense of further resprinkling, and in weather too warm for resprinkling and freezing the roads may be renewed in like manner, thus enabling the maximum loads to be drawn on the sleds.

I claim as my invention—

The combination, with the sled-runner, of the timber having the cutting-bit, and the slot for receiving the material removed by the bit from the track and discharging said material to one side of the track, and means, substantially as described, for rigidly connecting said timber to the sled-runner, as set forth.

ALEXANDER GALLINGER.

Witnesses:

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J. C. HOWARD.