

L. SIRD.
Sled-Brake.

No. 224,615.

Patented Feb. 17, 1880.

Fig. 1.

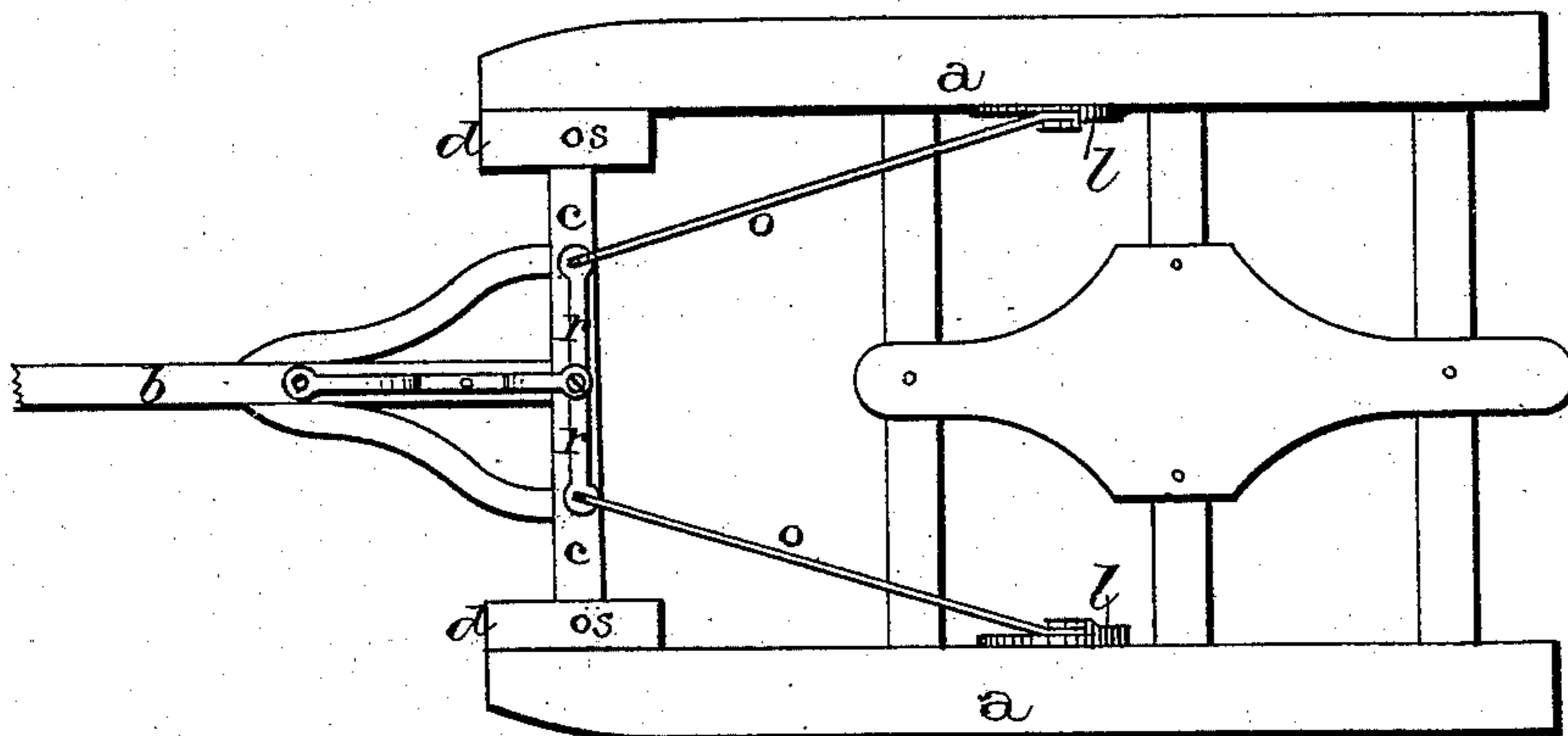


Fig. 2.

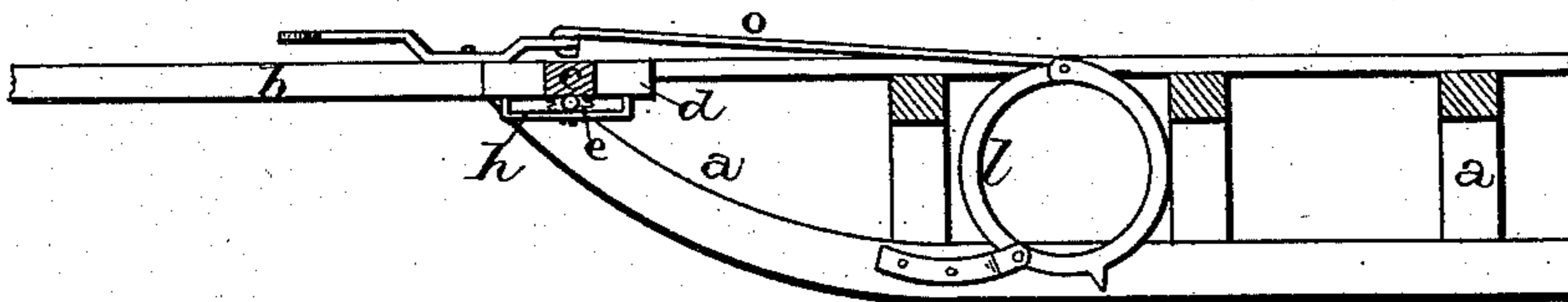
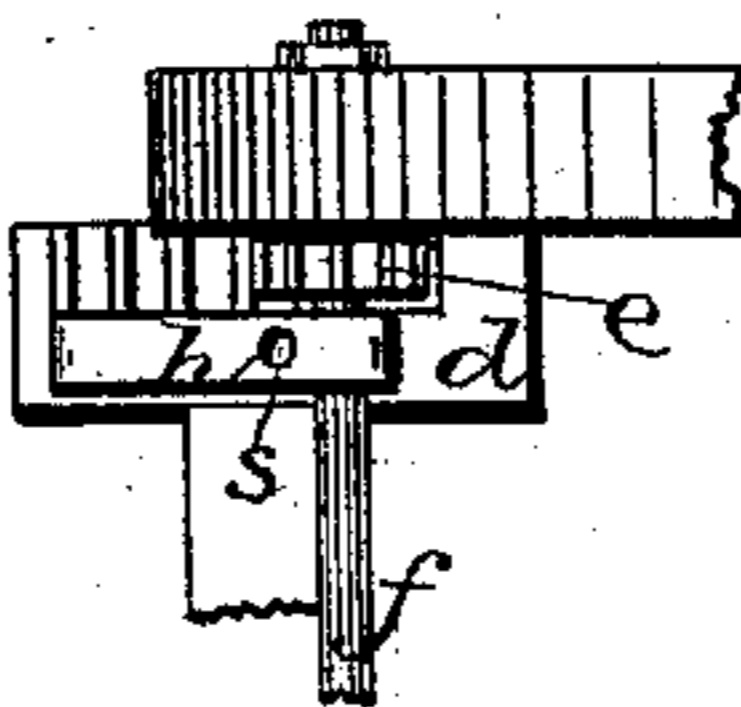


Fig. 3.



Witnesses:

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per
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UNITED STATES PATENT OFFICE.

LOUIS SIRD, OF LEICESTER, VERMONT.

SLED-BRAKE.

SPECIFICATION forming part of Letters Patent No. 224,615, dated February 17, 1880.

Application filed January 8, 1880.

To all whom it may concern:

Be it known that I, LOUIS SIRD, of Leicester, in the county of Addison and State of Vermont, have invented certain new and useful Improvements in Sled-Brakes; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in sled-brakes; and it consists in placing a loosely-revolving shaft provided with a pinion at each end in the upper front ends of the two runners and attaching the tongue loosely thereto by means of loops, and providing the tongue-blocks with teeth to mesh with the pinions on the shaft, whereby the tongue, in moving backward, operates the brakes.

It also consists in making holes through the tongue-blocks, so that pins can be passed down through them in front of the shaft provided with pinions, whereby the sled can be backed without operating the brakes, all of which will be more fully described hereinafter.

Figure 1 is a plan view of my invention. Fig. 2 is a vertical section of the same. Fig. 3 is an inverted view of the front end of one side of the sled, showing the pinions meshing in the rack on the under side of the tongue-block.

A represents a sled of any desired construction, and B the tongue. The rear end of this tongue is secured to the cross-bar C, which has the tongue-block D secured to each end, each of said blocks having a rack on its under side to engage with the pinion E on the shaft F. This shaft extends through the front upper ends of the two runners, and has the pinions secured to it just inside of each runner. To the under side of each block is secured a loop or guide, H, of sufficient length to allow the tongue to move back and forth a sufficient distance to operate the brakes L. These loops or guides connect the tongue directly to the shaft—the only part of the sled to which the tongue is fastened. By having the racks in the under side of the tongue-blocks, so as to mesh with the pinions, the tongue moves back and

forth more easily than to slide over a fixed surface.

Pivoted upon the top of the cross-bar is the lever r, which has fastened to each of its ends a connecting-rod, O, which rods have their rear ends pivoted to the upper parts of the brakes L. These brakes are made circular, as shown, and provided with the studs, projections, or sharp points, which catch in the ground, snow, or ice, and impede the forward motion of the sled whenever the tongue is forced backward. Each one of these brakes shall be provided with two or more pivotal holes, so that the brake can be adjusted according to the length of the stud or projection. By connecting these two brakes to a pivoted lever on top of the tongue either one or both brakes can be operated at the same time; and should anything prevent one of the studs from operating, as catching on the top of a hard, smooth stone, the other one will either operate or prevent the backward movement of the tongue. In this manner the brakes will operate upon the side of a hill, or upon the roughest and most uneven ground.

Through each block is made a hole, S, so that when the tongue is drawn forward a pin can be passed down through each of the blocks and catch just in front of the shaft, and thus prevent the tongue from being forced backward and operating the brakes when it is desired to back the sled.

By placing the shaft in the front end of the two runners and securing the two pinions rigidly to it, in turning the sled around the whole strain will come upon the shaft, and not upon the nose or front of the sled.

Another advantage gained by placing the shaft in the front end of the runners and connecting the tongue directly to it is, that the whole weight of the load is thrown directly upon the brakes, and the brakes can be operated by fewer and simpler parts.

Having thus described my invention, I claim—

1. In a sled, the shaft F, provided with a pinion, E, at each end, and journaled in the front end of the two runners, in combination with the tongue, which is connected to the shaft by means of loops or guides, whereby the tongue

can be moved back and forth for the purpose of operating the brakes, substantially as shown.

2. The tongue-blocks provided with the loops or guides for attaching the tongue to the shaft, and having holes through them, so that pins can be passed down in front of the shaft, and thus prevent the tongue from being moved backward, substantially as described.

3. The combination of a tongue thus movable back and forth, and which has secured to it a lever which is pivoted at its center, each

end of the lever being connected to one of the brakes by means of a connecting-rod, whereby either one or both of the brakes will always be made to operate, substantially as specified. 15

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of December, 1879.

LOUIS SIRD.

Witnesses:

LAFAYETTE O. HATHAWAY,
CHARLES N. HORTON.