

(No Model.)

J. C. PERKINS.  
ROLLER ATTACHMENT FOR SLEIGHS.

No. 592,207.

Patented Oct. 19, 1897.

FIG. 1.

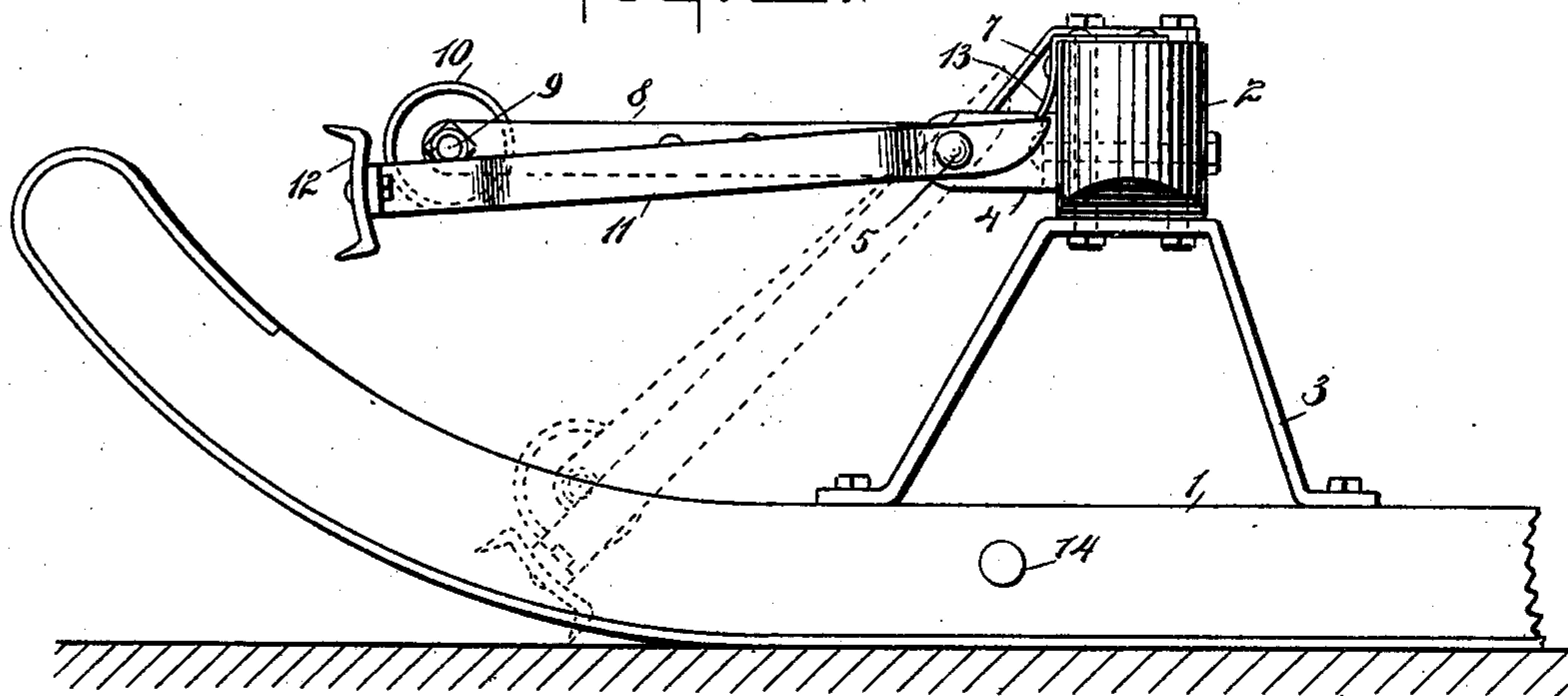


FIG. 2.

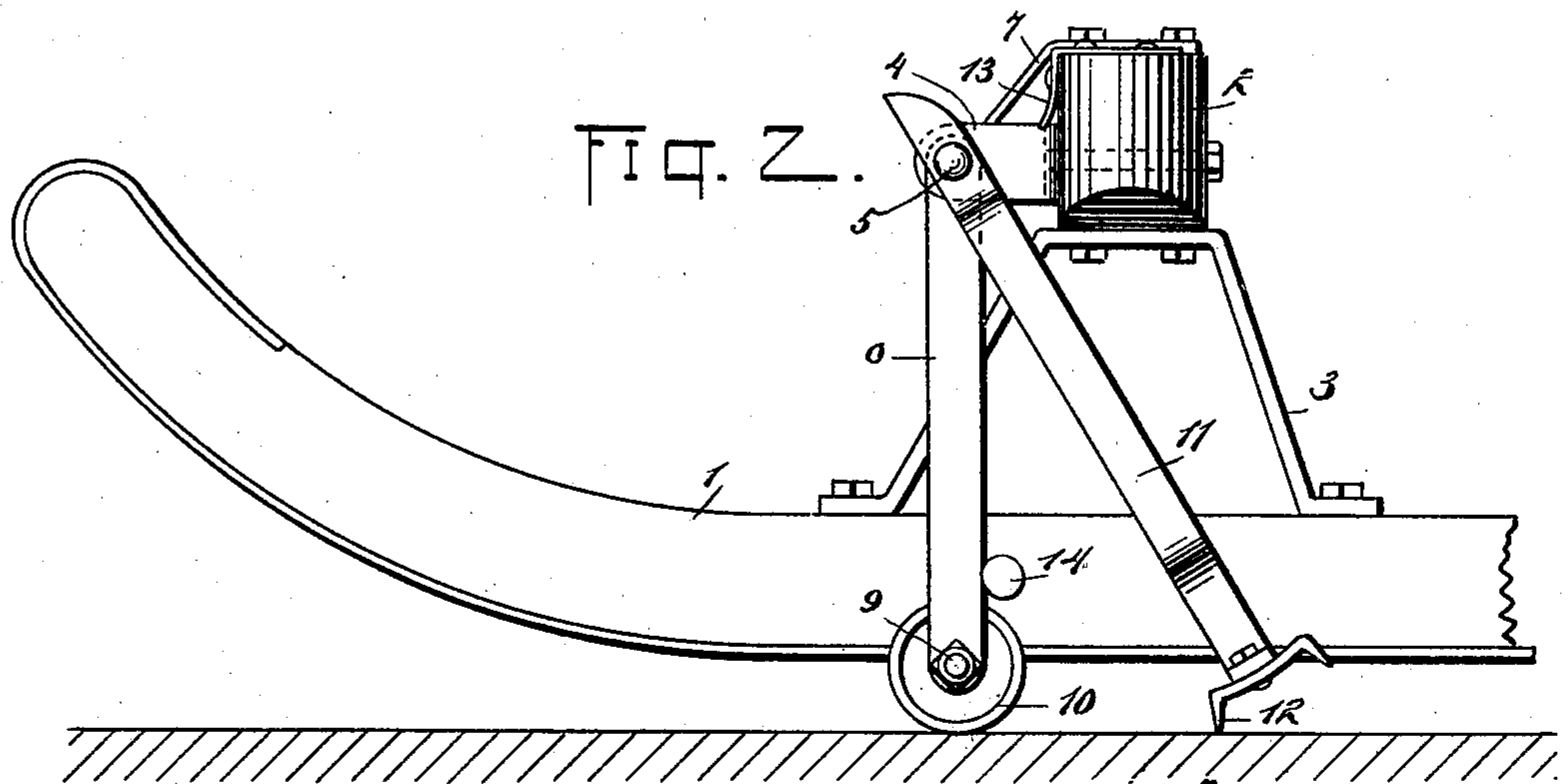
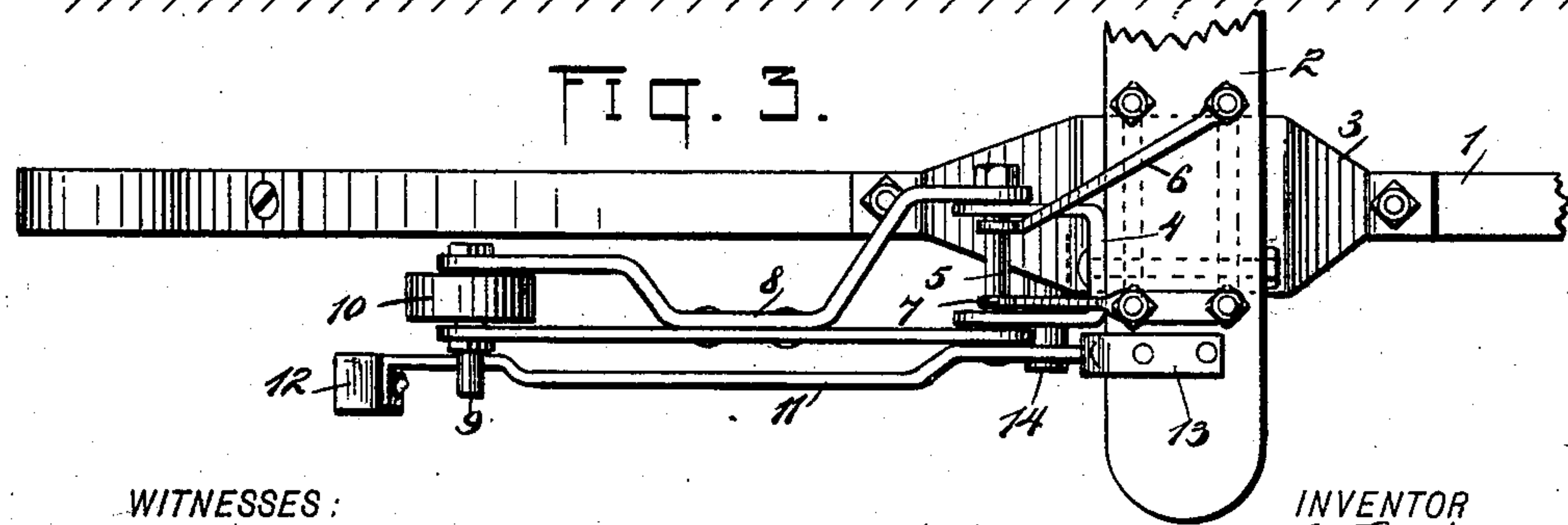


FIG. 3.



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## ROLLER ATTACHMENT FOR SLEIGHS.

SPECIFICATION forming part of Letters Patent No. 592,207, dated October 19, 1897.

Application filed June 30, 1897. Serial No. 642,996. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES C. PERKINS, of Inwood, in the county of Lyon and State of Iowa, have invented a new and Improved Roller Attachment for Sleighs, of which the following is a full, clear, and exact description.

This invention relates to roller attachments for sleighs, sleds, cutters, or the like, and the object is to provide a simple and comparatively inexpensive roller attachment and actuating mechanism whereby the runners may be lifted and held above the surface of bare ground, bridges, or the like, so that the sleigh may be drawn forward in the manner of a wheeled vehicle, thus obviating the frictional resistance that would otherwise occur.

I will describe a roller attachment for sleighs embodying my improvement, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a portion of a sleigh having my invention applied thereto and showing the same in its inoperative position. Fig. 2 is a similar view, but showing the parts in operative position; and Fig. 3 is a top plan view.

In the drawings I have only shown the device as attached to one end of one bolster, but it is to be understood that the devices will be employed at each side of a sleigh, sled, or the like, and that any desired number may be employed, not less, however, than four.

Referring to the drawings, 1 designates a sleigh-runner, and 2 is the bolster supported on the knee 3. Extended forward from the bolster and attached thereto is a yoke 4, and mounted in this yoke 4 is a bolt 5. If desired, brace-rods 6 and 7 may be engaged at one end with the bolt 5 or with the yoke 4, and at the opposite end with the bolster, as shown, and thus give additional strength or resistance to the yoke. Mounted on the bolt 5 is a roller-carrying arm 8. This roller-carrying arm 8 is bifurcated at its upper end, and the members engage, respectively, with the bolt 5 at the outer sides of the yoke 4. The lower end of the arm 8 is also bifurcated, and a bolt 9

is supported in this lower end, and on this bolt 9 is mounted a roller 10; also, pivoted on the bolt 5 is a lifting-arm 11, the lower end of which is provided with a shoe 12, and the upper end of which is designed to be engaged with a keeper, here shown as a spring 13, secured to the bolster and designed to hold the parts in their elevated or inoperative position, as indicated in Fig. 1. The roller-supporting arm 8 is somewhat longer than the distance between its pivotal point and the lower edge of the runner 1, so that when said arm is in a substantially vertical position the runner will be held free from the ground. The shoe-carrying arm 11 is somewhat longer than the arm 8, and, in fact, extends somewhat beyond the outer periphery of the roller 10.

When drawing the sleigh over snow, the parts above described will be held in the position indicated in Fig. 1 by means of the keeper 13 engaging with the shorter end of the arm 11, and this arm 11 will hold the arm 8 in a substantially horizontal position by engaging with the extended end of the bolt 9. When, however, bare ground, a bridge, or the like is encountered, the several devices on the sleigh may be released, when they will assume the position indicated in dotted lines in Fig. 1. Then, by a forward movement of the sleigh, the lifting-arms will lift the runners free of the ground, and the lifting-arms will be carried rearward to the position indicated in Fig. 2. The arms 8, carrying the rollers, will be supported in a substantially vertical position, as here shown, by means of pins 41, extended from the runner, and then the sleigh may be drawn forward in the manner of a wheeled vehicle. The arms 11 will have offset portions, as shown in Fig. 3, so as to clear the pins 14.

When it is desired to return the parts to their inoperative position, it is obvious that by backing the sleigh the said parts will be carried to the position indicated by dotted lines in Fig. 1, and then may be lifted to their normal supported position.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

1. An attachment for a sleigh or the like, comprising a pivoted arm, a roller carried on the free end of said arm, the said arm being of



sufficient length to support the runner above the ground, and a pivoted lifting-arm having a length between its free end and pivotal point somewhat greater than the length between the pivotal point of the roller-arm and the outer periphery of the roller, substantially as specified.

2. An attachment for a sleigh or the like, comprising a roller-bearing arm having pivotal connection with an extension from a bolster, a roller carried by the free end of said arm, a stop for limiting the downward and rearward motion of said arm, a lifting-arm mounted on the pivot of the roller-bearing arm and having a length somewhat greater than said roller-bearing arm, and means for holding said arms in their inoperative position, substantially as specified.

3. An attachment for a sleigh or the like, comprising an arm mounted to slide relatively to the bolster of the sleigh, a roller carried on the free end of said arm, a lifting-arm mounted to swing relatively to the bolster and having a length somewhat greater than the length of the roller-carrying arm, a shoe on the free end of said lifting-arm, a stop for limiting the rearward movement of the roller-carrying

arm, and a spring on the bolster, for engaging with the lifting-arm and holding the two arms in their inoperative position, substantially as specified.

4. In a sleigh, the combination with the runners and bolsters thereof, of yokes extended forward from the bolster, roller-carrying arms mounted to swing on said yokes, rollers mounted in the free ends of said arms, the distance between the pivotal point of said arms and the outer periphery of the rollers being greater than the distance between said pivotal points and the bottom of the runners, lifting-arms mounted on said pivots and having a length greater than the roller-carrying arms, stops for limiting the rearward movement of the roller-carrying arms, spring-yielding devices for connecting with the lifting-arms to hold them in a substantially horizontal position, and projections from the roller-carrying arms which engage the upper surface of the lifting-arms, substantially as specified.

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Witnesses:

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