

No. 613,110.

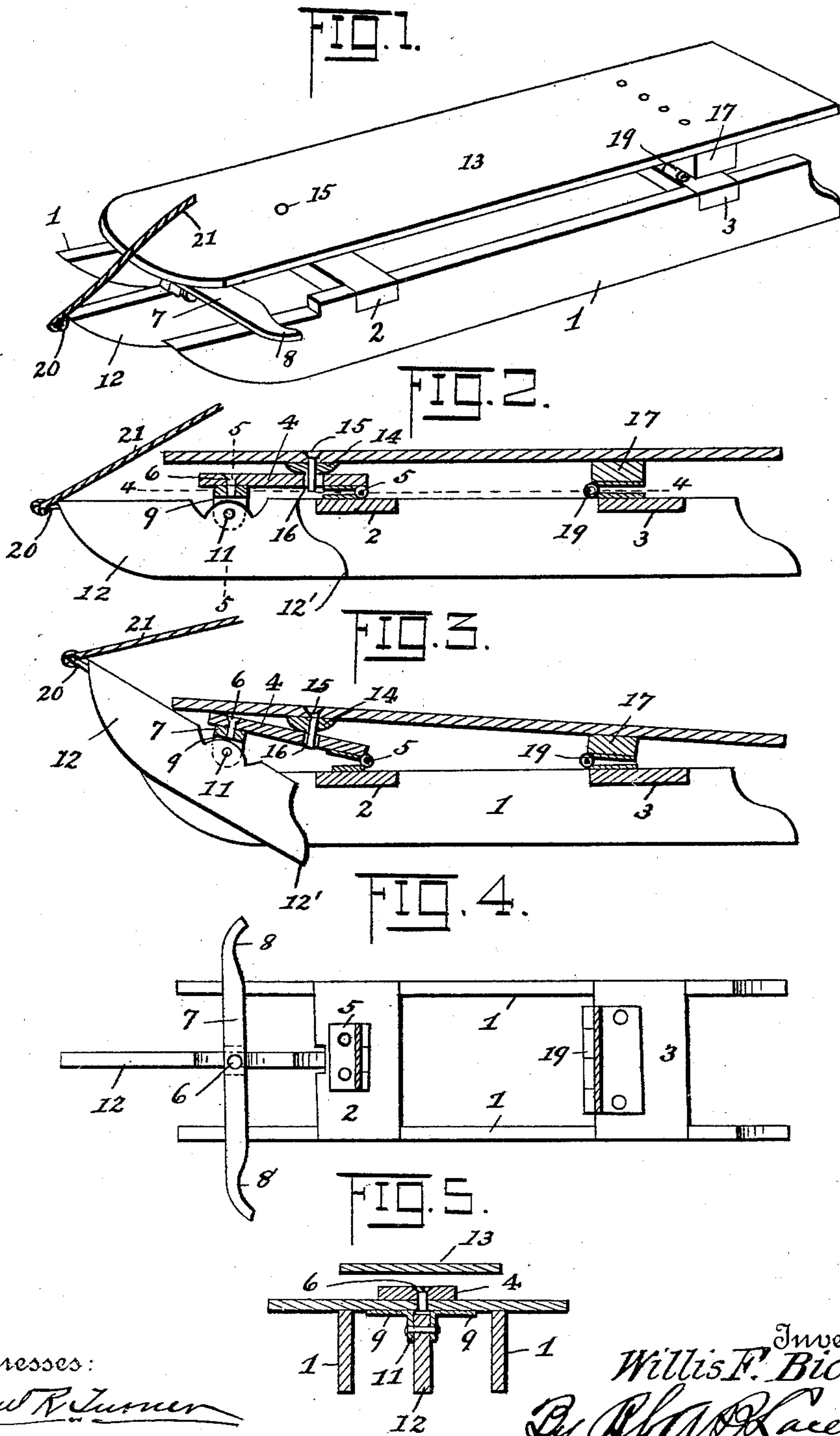
Patented Oct. 25, 1898.

W. F. BICKEL.
COASTING SLED.

(Application filed Jan. 4, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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2 Sheets—Sheet 2.

FIG. 6.

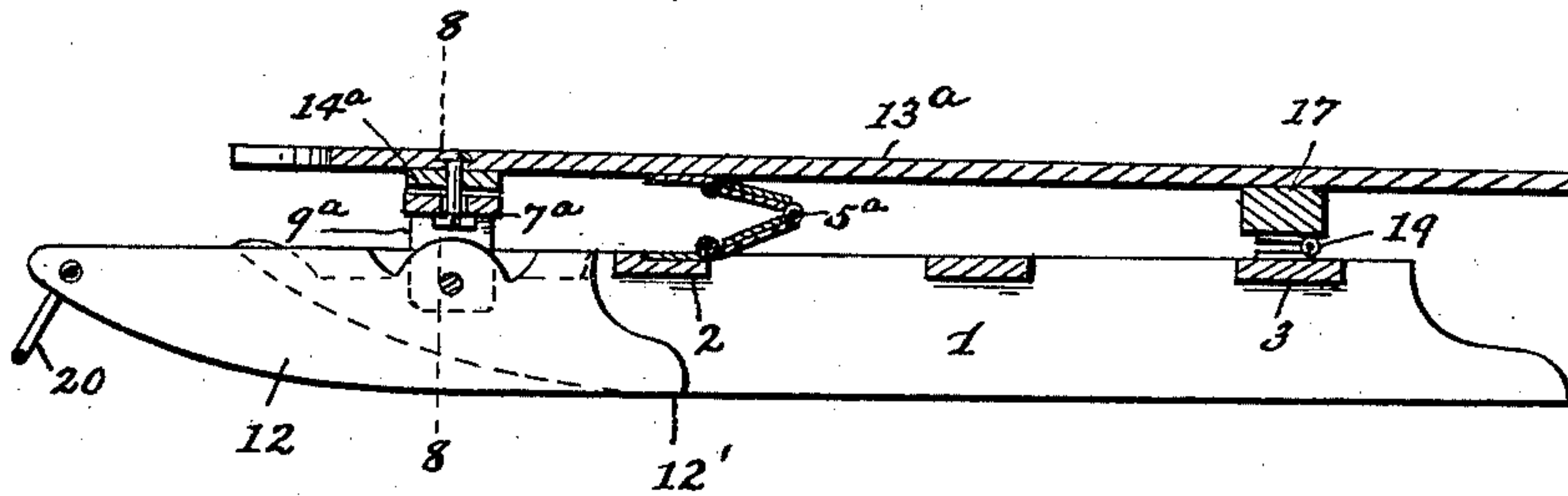


FIG. 7.

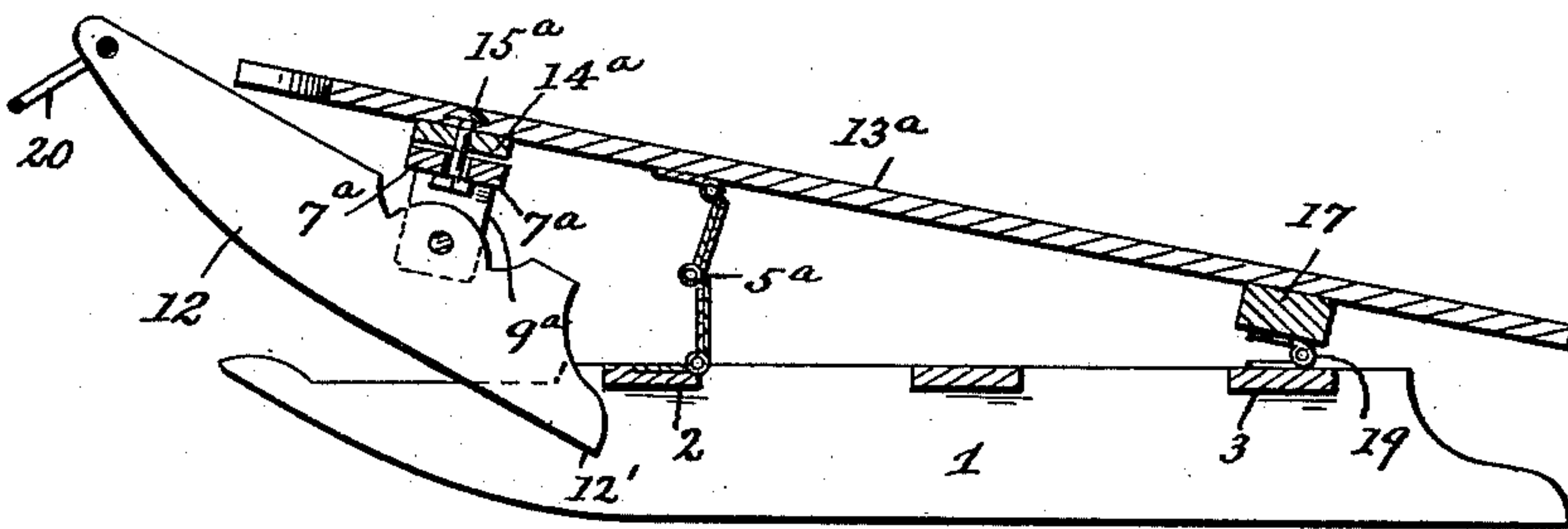
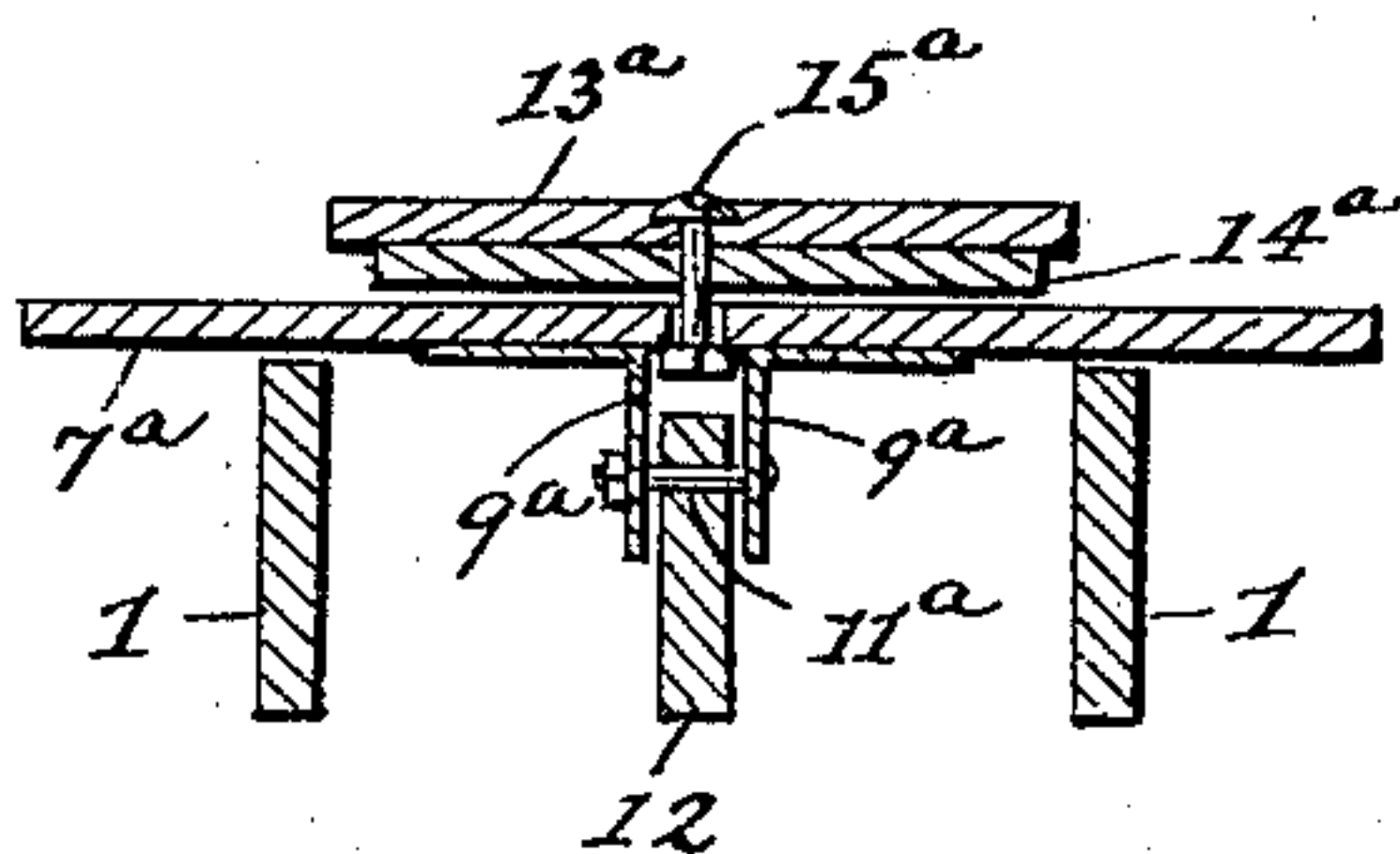


FIG. 8.



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UNITED STATES PATENT OFFICE.

WILLIS F. BICKEL, OF MCGREGOR, IOWA.

COASTING-SLED.

SPECIFICATION forming part of Letters Patent No. 613,110, dated October 25, 1898.

Application filed January 4, 1898. Serial No. 665,518. (No model.)

To all whom it may concern:

Be it known that I, WILLIS F. BICKEL, a citizen of the United States, residing at McGregor, in the county of Clayton and State of Iowa, have invented certain new and useful Improvements in Coasting-Sleds; 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 appertains to make and use the same.

My invention relates to improvements in coasting-sleds; and it consists in certain novel features of construction, combination, and arrangement of parts, which will be herein- after more fully described and claimed.

The invention has for its object to improve generally the construction of sleds of this character and provide a novel construction and arrangement of seat-board and combined guide and brake runner by means of which vibration is reduced and the sled much more readily and conveniently controlled than the form of sled in common use.

In the drawings hereto annexed and forming a part of this specification, Figure 1 is a perspective view of my improved sled. Fig. 2 is a longitudinal section of same. Fig. 3 is a similar view showing the guide-runner in use as a sled-brake. Fig. 4 is a horizontal section on the line 4 4 of Fig. 2, and Fig. 5 is a transverse section on the line 5 5 of Fig. 2. Figs. 6 and 7 are longitudinal sectional views illustrating a modification, and Fig. 8 is a cross-section on line 8 8 of Fig. 6.

Similar numerals of reference designate corresponding parts throughout the several views of the drawings.

1 1 represent the usual rigid parallel main runners, connected at their upper edges by the transverse braces 2 3.

4 represents a longitudinal horizontal bracket vertically pivoted at its rear end to the transverse brace 2 by a hinge 5, and the forward free end of said bracket receives a cylindrical pivot-stud 6, centrally fixed in a transverse foot-lever 7, the outer ends of which project beyond the parallel sides of the sled and are formed with curved recesses 8 8, which conveniently receive the feet of the pilot.

9 9 represent angle-brackets fixed to the under side of the lever 7, and their lower par-

allel webs receive a transverse bolt 11, on which is pivoted the guide-runner 12, arranged longitudinally between and parallel with the main fixed runners 1 1.

13 represents the longitudinal horizontal seat-board, its forward end being provided with a transverse cleat 14, having a depending stud 15, which engages a corresponding orifice 16 in the bracket 4 forward of its joint with the brace 2, and 17 represents a corresponding cleat secured to the seat-board near its rear end and which is pivoted to the transverse cleat 3 by a suitable hinge 19. The seat-board is adapted to tilt in a vertical plane on the hinges to compensate for vibration.

20 represents an eyebolt fixed in the forward upper end of the guide-runner 12, and 21 represents a hand-line connected therewith.

From the above description, taken in connection with the accompanying drawings, the construction and operation of my improved sled will be understood. It will be seen that by means of the foot-lever 7 the guide-runner 12 may be moved in a horizontal plane on the pivot-stud 6 to guide the sled to the right or left and that by means of the hand-line 21 said guide-runner may be tilted up in a vertical plane on the pivot-bolt 11 to bring the heel end 12' thereof into position to act as a brake. The bracket 4 and seat-board 13 are adapted to tilt up on their hinges 5 19 to accommodate for this movement.

In the embodiment of my invention disclosed in Figs. 6, 7, and 8 the bracket 4 is dispensed with and the seat-board 13^a is united directly to the transverse brace 2 by a four-leaf hinge 5^a, the end leaves of said hinge being secured to the seat-board and brace and the intermediate leaves thereof serving as pivots to permit the seat-board to tilt up, as shown in Fig. 7. The guide-runner 12 is pivoted to tilt in a vertical plane, as in the other figures, by the bolt 11^a, which passes through the vertical webs of the angle-brackets 9^a, secured to the foot-lever 7^a, and said lever is pivoted directly to the footboard by the bolt 15^a, projecting through an orifice therein and through the said seat-board and the cleat 14^a. This construction is deemed preferable for small sleds and the construction shown in Figs. 1 to 5 for large sleds.

Although I have specifically described the

construction and relative arrangement of the several elements of my invention, I do not desire to be strictly confined to the same, as it is obvious that such changes or modifications
5 may be made as fairly fall within the scope of my invention without departing from the spirit thereof.

Having thus fully described my invention, what I claim as new and useful, and desire to
10 secure by Letters Patent, is—

1. A coasting-sled comprising, in combination, a pair of main runners connected adjacent to their front and rear ends by fixed transverse braces, a seat-board having hinge
15 connections with said braces, a transverse foot-lever at the front end of the sled pivoted to swing in a horizontal plane, a pair of spaced angle-brackets secured to the under side of said lever, a transverse pin or bolt extending
20 between the pendent vertical webs of the brackets, and a guide-runner pivotally connected with said pin or bolt to swing in a vertical plane, substantially as described.

2. A coasting-sled comprising, in combination, a pair of main runners connected adjacent to their front and rear ends by fixed
25 transverse braces, a seat-board hinged to said rear brace and provided adjacent to its front end with a depending pivot-stud, a bracket hinged at its rear end to the front brace and
30 provided with an opening to receive said stud, a transverse foot-lever pivoted to the front end of the bracket to swing in a horizontal plane, a pair of spaced angle-brackets secured to the under side of said lever, a transverse
35 pin or bolt extending between the pendent vertical webs of the brackets, and a guide-runner pivotally connected with said pin or bolt to swing in a vertical plane, substantially
40 as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIS F. BICKEL.

Witnesses:

FRED S. RICHARDS,
HANS LEE.