

F. SHILLIN.  
SLEIGH KNEE.

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958,552.

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Fig. 1.

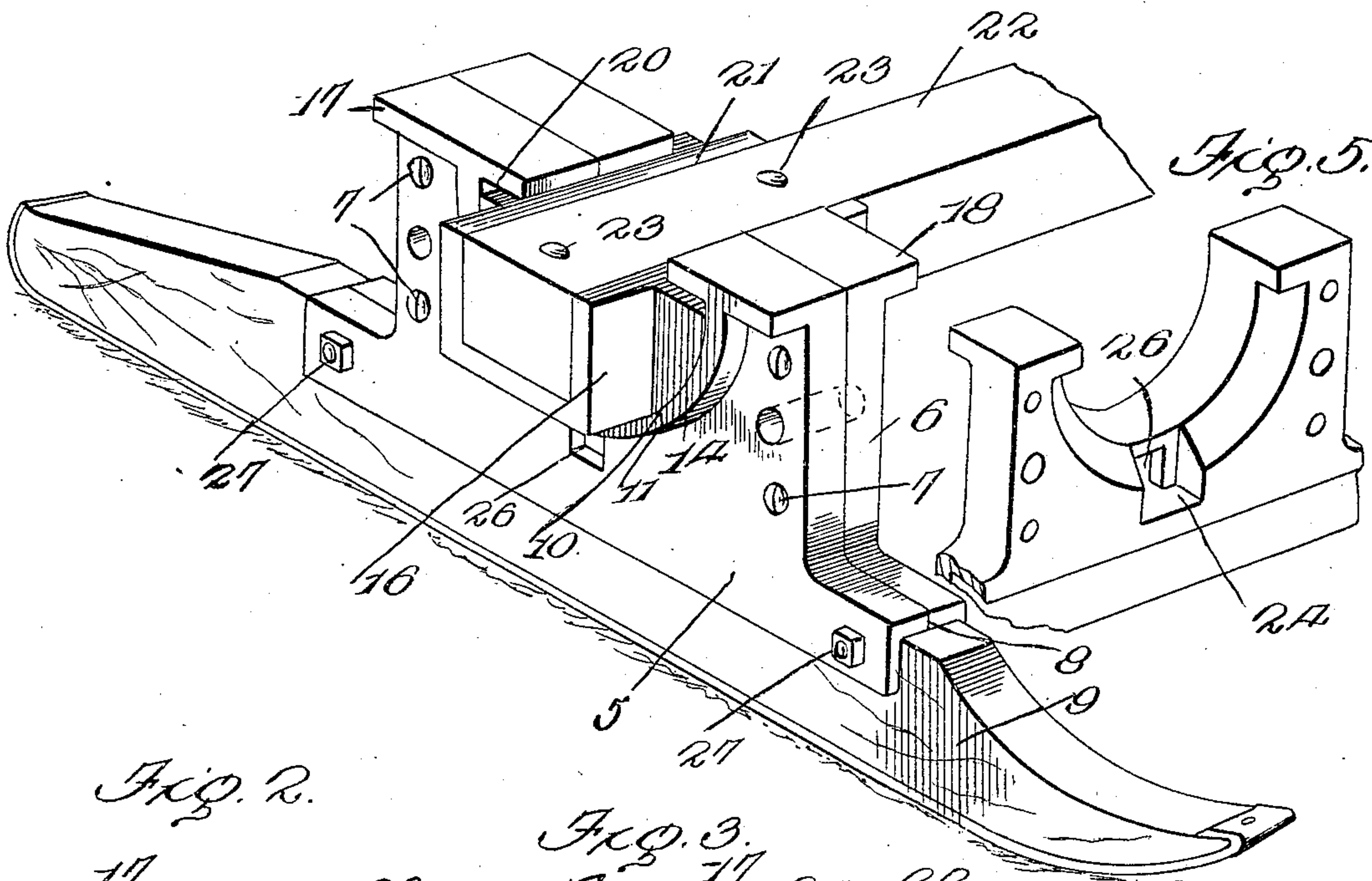


Fig. 5.

Fig. 2.

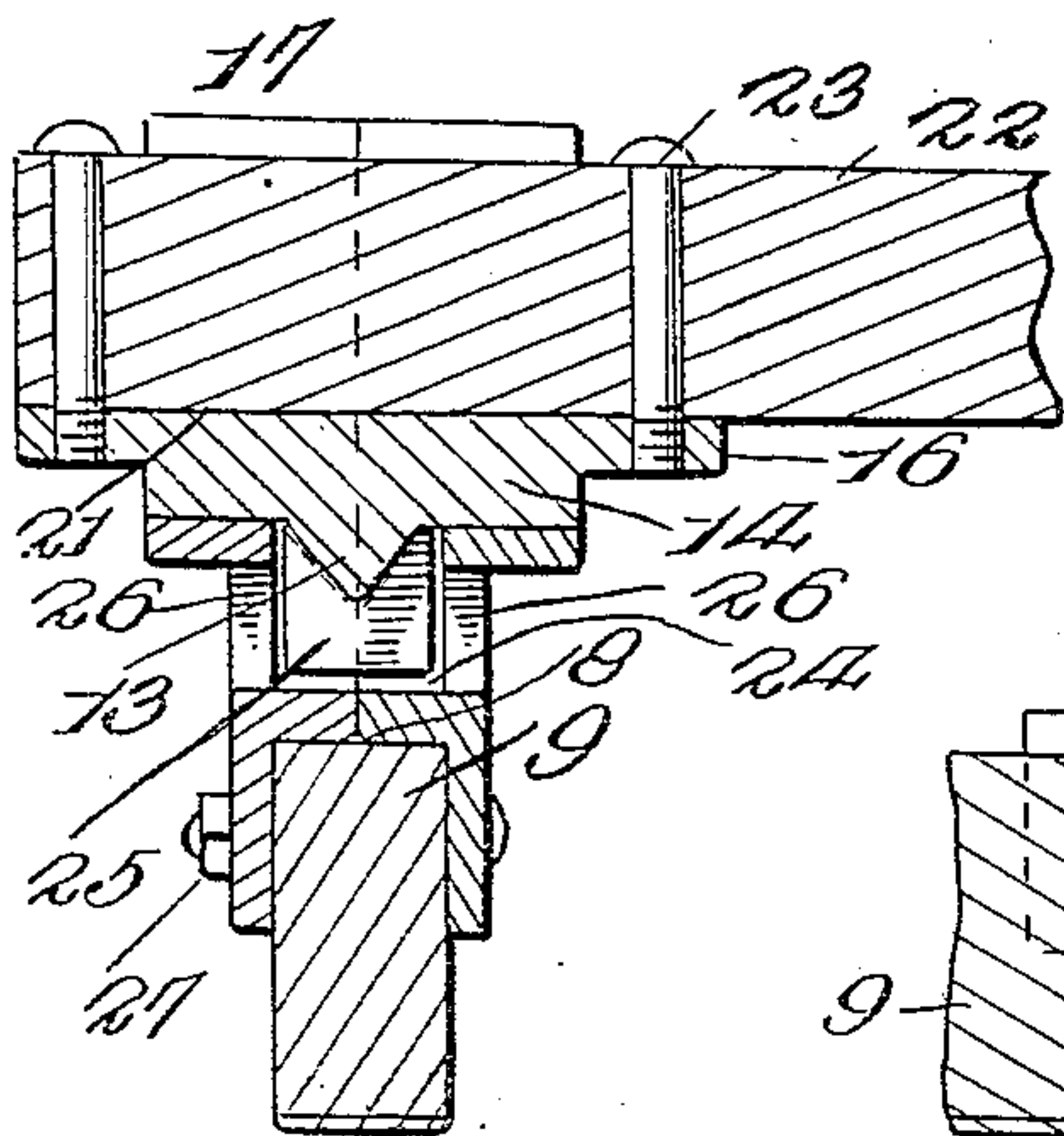


Fig. 3.

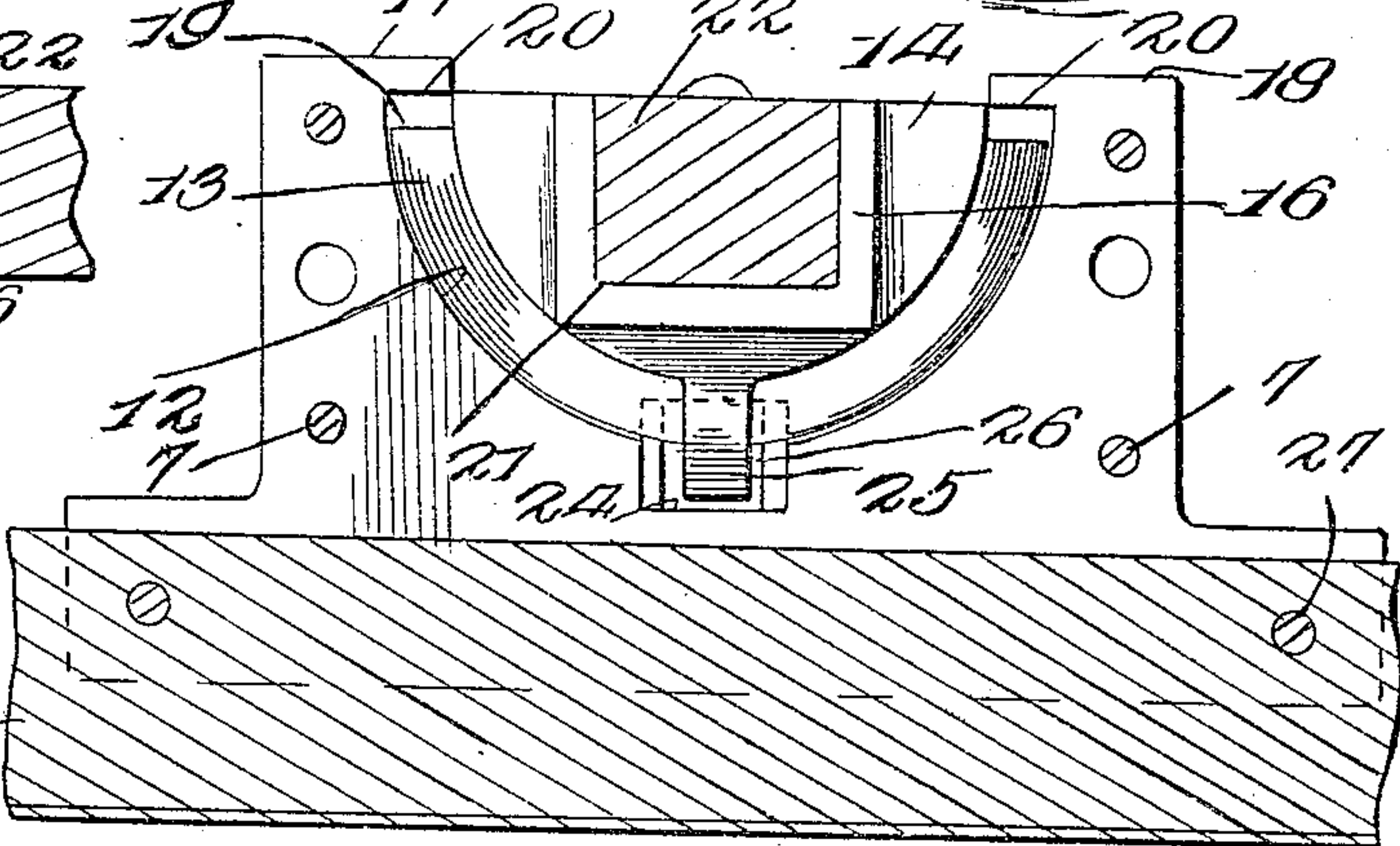
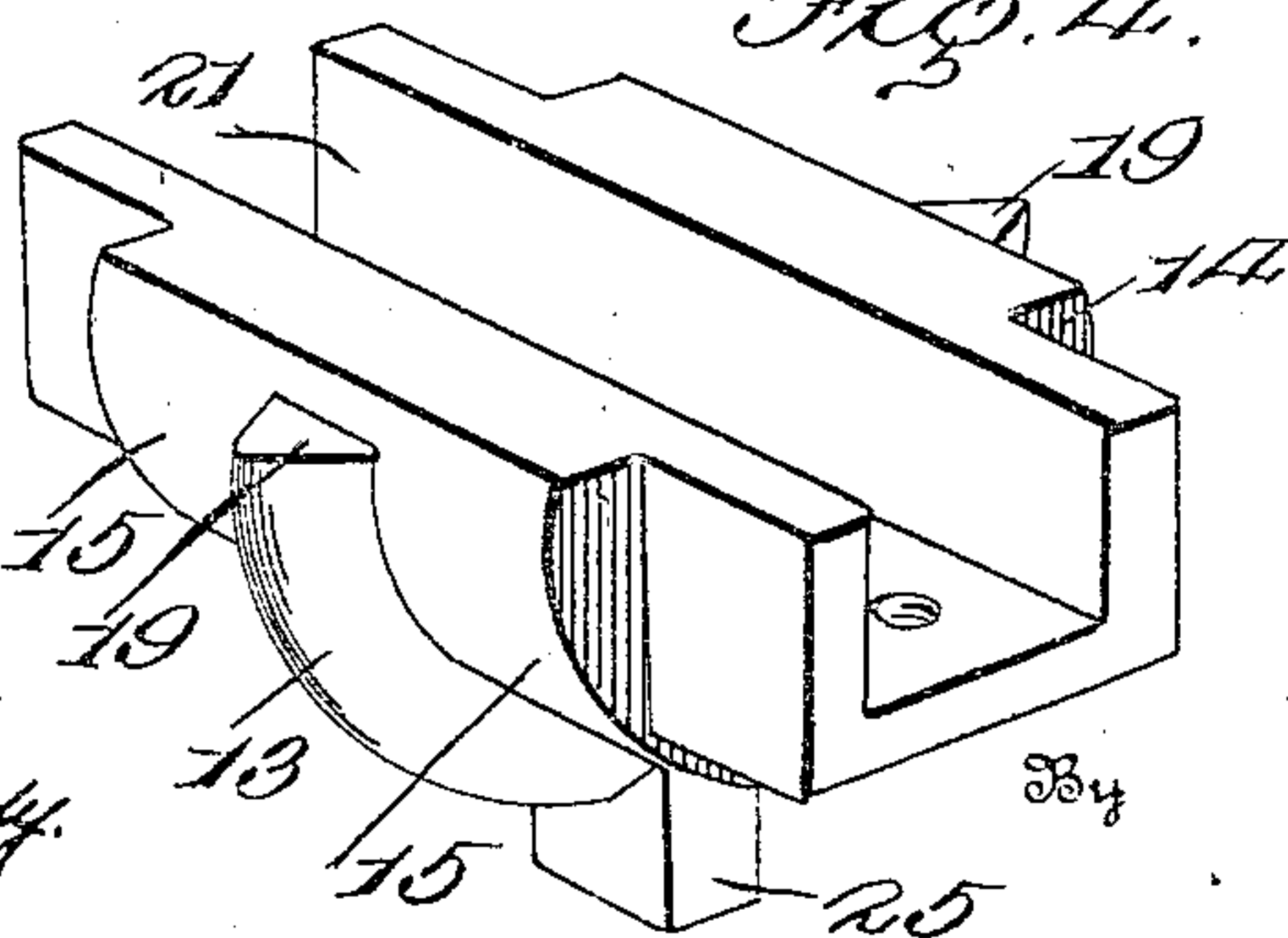


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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SLEIGH-KNEE.

958,552.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, FRANK SHILLIN, a citizen of the United States, residing at Sundby, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Sleigh-Knees, of which the following is a specification.

This invention relates to sleighs and more particularly to a sleigh knee especially designed for use in connection with bob sleighs.

The object of the invention is to provide a comparatively simple and thoroughly efficient device of the character described which will permit the necessary play of the runners when passing over rough and uneven surfaces without liability of straining the parts.

A further object is to provide a sleigh knee, the construction of which is such as to permit free side oscillation of the saddle piece or block, while at the same time effectually preventing end movement thereof.

A further object is to so construct the sleigh knee as to dispense with the usual rave, means being provided for preventing the accumulation of bark, ice and other foreign matter in the bearing, and thus interfering with the proper operation of the device.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be restored to within the scope of the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a sleigh runner provided with a knee constructed in accordance with my invention; Fig. 2 is a transverse vertical sectional view of the same; Fig. 3 is a longitudinal vertical sectional view thereof; Fig. 4 is a detail perspective view of the knee piece or block detached; Fig. 5 is a perspective view of one of the bracket sections detached.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved sleigh knee forming the subject matter of the present invention, comprises a supporting bracket, preferably formed in two sections 5 and 6, said casing sections being detachably united by bolts or similar fastening devices 7 and having their lower ends cut-away to produce a socket 8 for the reception of the runner, indicated at 9.

Each bracket section is formed with a segmental recess constituting a bearing 10, the metal at the recess 10 being extended laterally to form a segmental reinforcing rib 11.

The inner face of each bracket section is inclined or beveled at 12 to produce a substantially V-shaped groove adapted to receive a correspondingly shaped segmental rib 13 formed on a saddle piece or bearing block 14. The saddle piece or block 14 is provided with smooth portions 15 on opposite sides of the rib 13 for engagement with the bearing 10, the opposite ends of the saddle piece being extended laterally beyond the exterior faces of the adjacent bracket sections 5 and 6, as indicated at 16.

The upper ends of the brackets 5 and 6 are extended laterally to form flanges 17, the upper surfaces of which are disposed in horizontal alinement so as to produce a flat bearing surface 18 and thus dispense with the usual rave plate.

The opposite ends of the V-shaped rib 13 preferably terminate short of the upper surface of the saddle piece 14 to form shoulders 19 which bear against corresponding shoulders 20 formed on the adjacent bracket sections when the saddle piece or block is oscillated, and thus serve to limit the oscillation of said saddle piece.

The upper surface of the saddle piece or block 14 is formed with an angularly disposed seating recess 21 adapted to receive a bolster 22, the latter being rigidly secured to the saddle piece by bolts 23.

Formed in the inner face of each bracket section and intersecting the inclined or beveled walls 12 thereof, is a socket or depression 24 adapted to receive and accommodate a lug or projection 25 depending from the V-shaped rib 13 of the saddle piece or block. The depending lug 25 by engagement with



the adjacent walls of the recess or socket 24, serves to assist in limiting the oscillation of the saddle piece, there being openings 26 formed in the bracket sections and communicating with the sockets 24 to allow the escape of bark, ice or other foreign matter which would have a tendency to impede or otherwise interfere with the proper operation of the saddle piece. Thus it will be seen that the saddle piece carrying the bolster 22 is free to oscillate so as to allow the runner 9 to accommodate itself to any uneven surfaces, while by reason of the V-shaped rib 13 and correspondingly shaped groove in the bracket, side movement of the saddle piece and bolster is effectually prevented.

In assembling the device, the saddle piece 14 is placed in position on one of the bracket sections, after which the mating bracket section is secured thereto by the bolt 7, the bracket carrying the saddle piece being subsequently positioned on the runner and rigidly secured thereto by bolts or similar fastening devices 27.

The device is extremely simple in construction and may be readily taken apart in order to remove the saddle piece, when necessary.

Having thus described the invention, what is claimed as new is:

1. The combination with a sleigh, of a bracket secured to the runner thereof and provided with a bearing opening through the top of the bracket and having a segmental groove, there being an opening formed in the bracket and intersecting the groove at said bearing, a saddle piece having a rib engaging the walls of said groove, and a stop lug depending from the rib and

adapted to engage the walls of the opening in the bracket for limiting the oscillation of the saddle piece, there being apertures formed in the bracket and communicating with the opening.

2. The combination with a sleigh, of a bracket mounted thereon and including detachably connected sections having their lower ends cut-away to form a seat for the reception of the runner and their upper portions provided with segmental recesses opening through the top of the bracket and constituting a bearing, the inner face of each bracket section being beveled and provided with an opening communicating with said beveled portion, a saddle piece having a segmental rib adapted to bear against the beveled portions of the bracket sections and provided with a seat adapted to receive a bolster, and a lug depending from the rib at the bottom of the saddle piece for engagement with the adjacent walls of the openings for limiting the oscillation of the saddle piece, the opposite ends of the rib terminating short of the top of the saddle piece to form shoulders adapted to bear against the adjacent bracket sections at the beveled portions thereof to assist in limiting the oscillation of the saddle piece, there being apertures formed in the bracket sections and communicating with the openings in said bracket sections, and a seating recess formed in the top of the saddle piece for the reception of a bolster.

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

FRANK SHILLIN. [L. s.]

Witnesses:

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