

J. E. JOHNSON.
SLED RUNNER.
APPLICATION FILED MAR. 20, 1908.

905,704.

Patented Dec. 1, 1908.

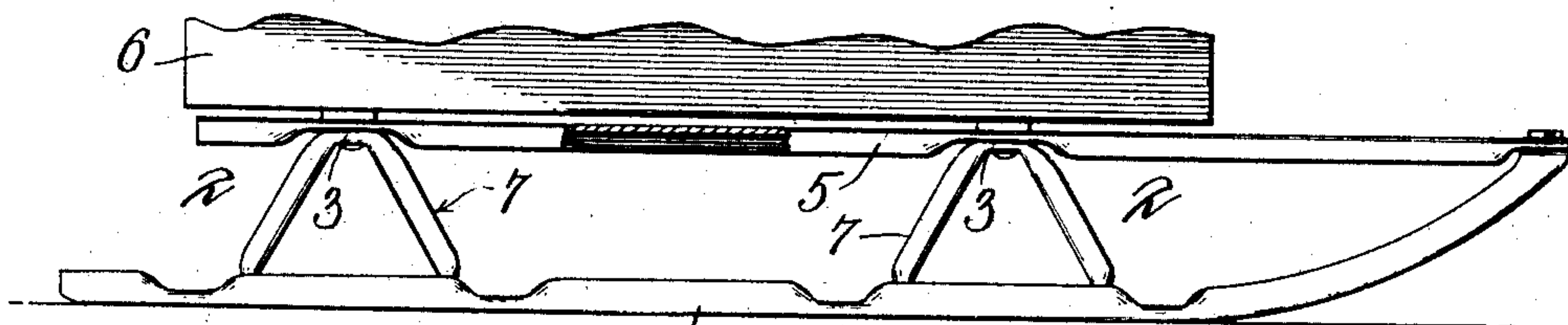


Fig. 1.

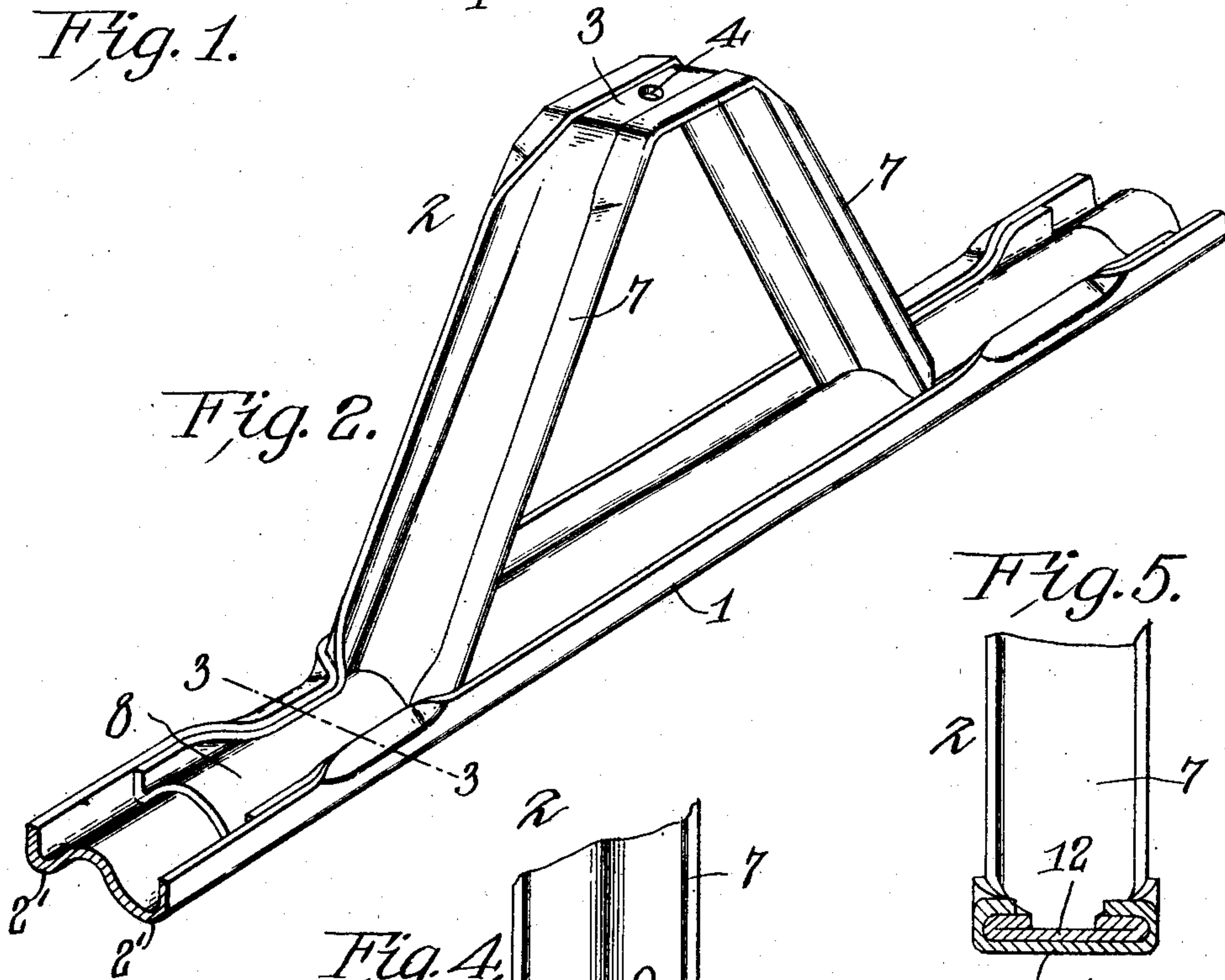


Fig. 2.

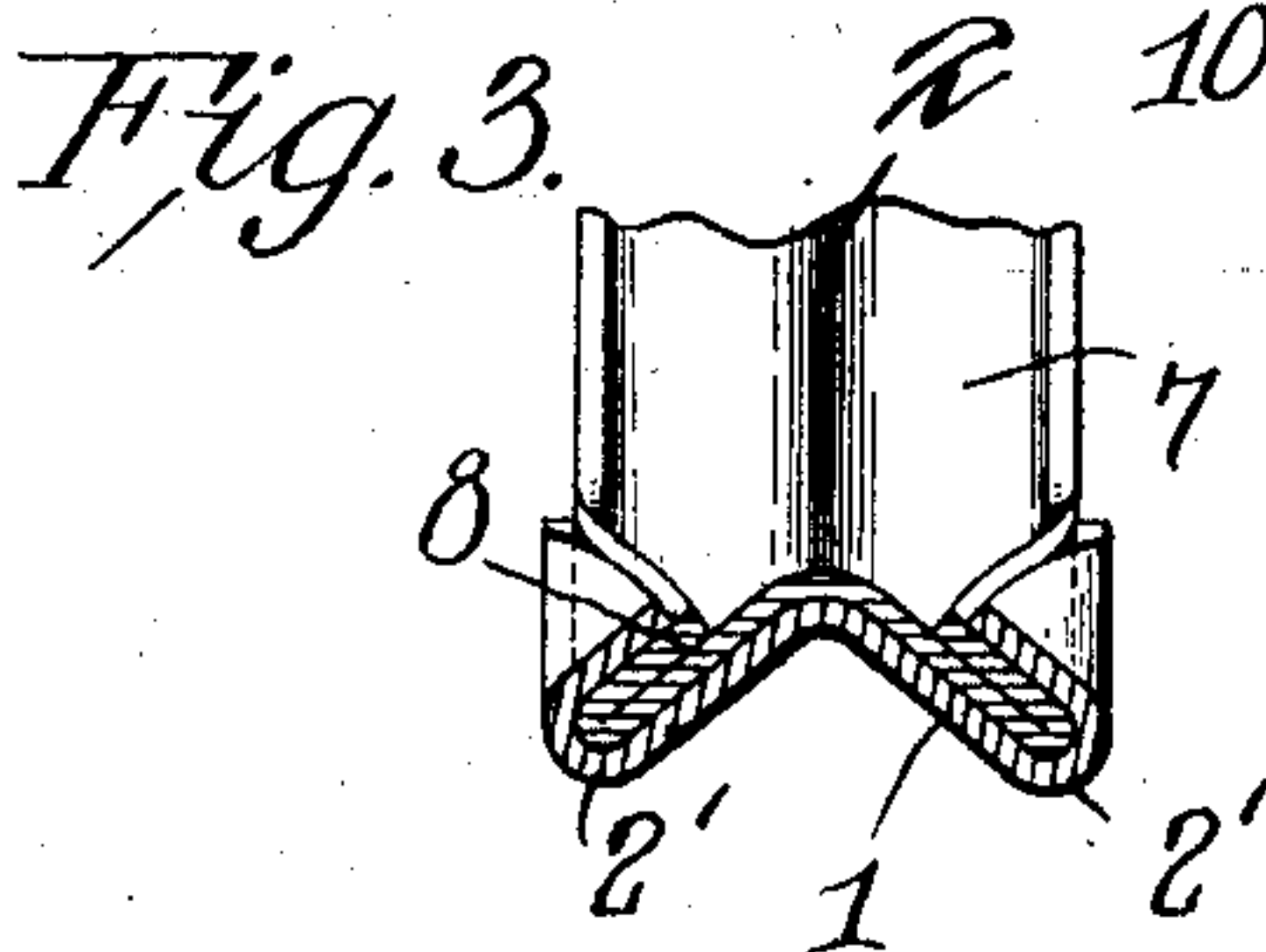


Fig. 3.

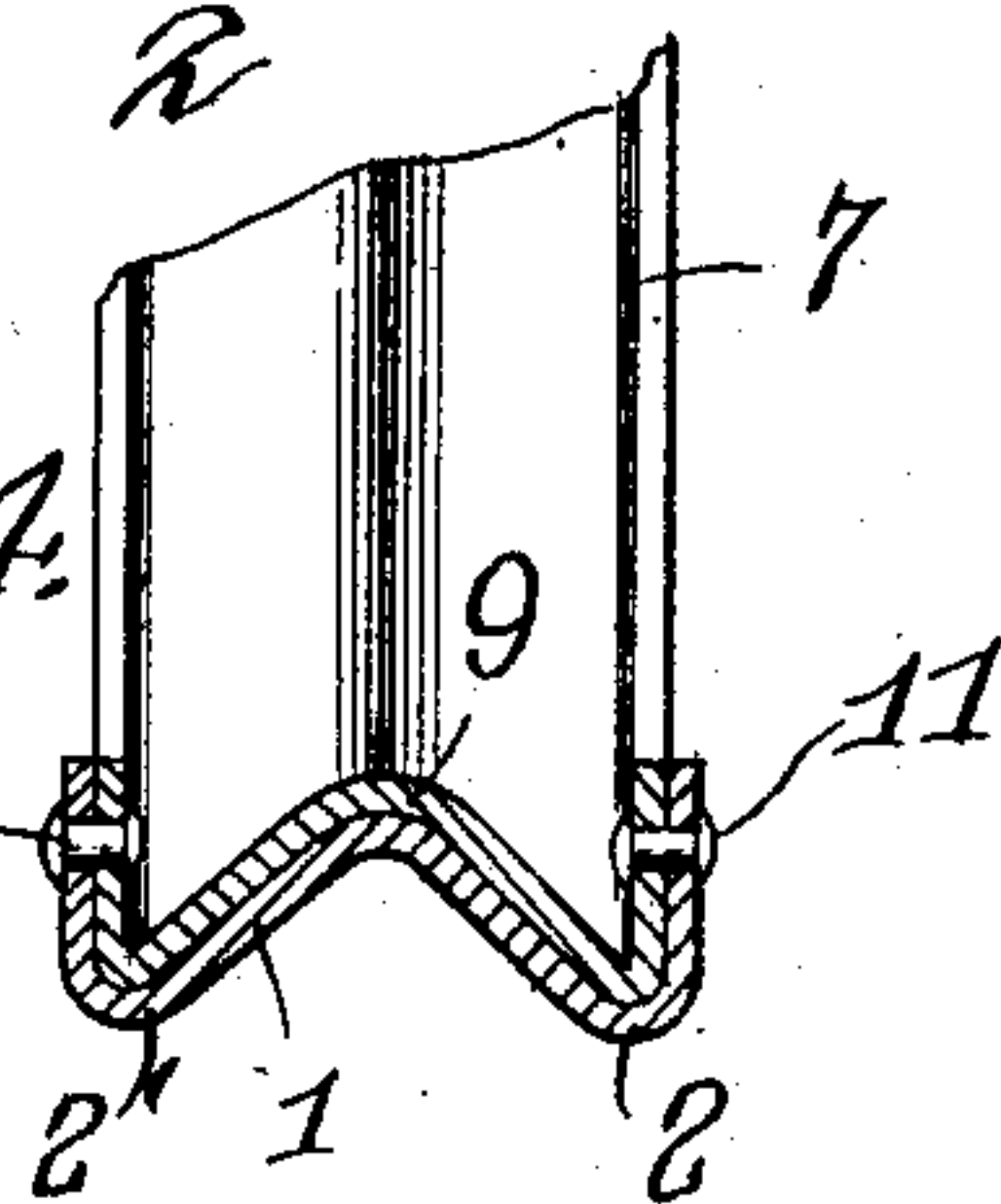


Fig. 4.

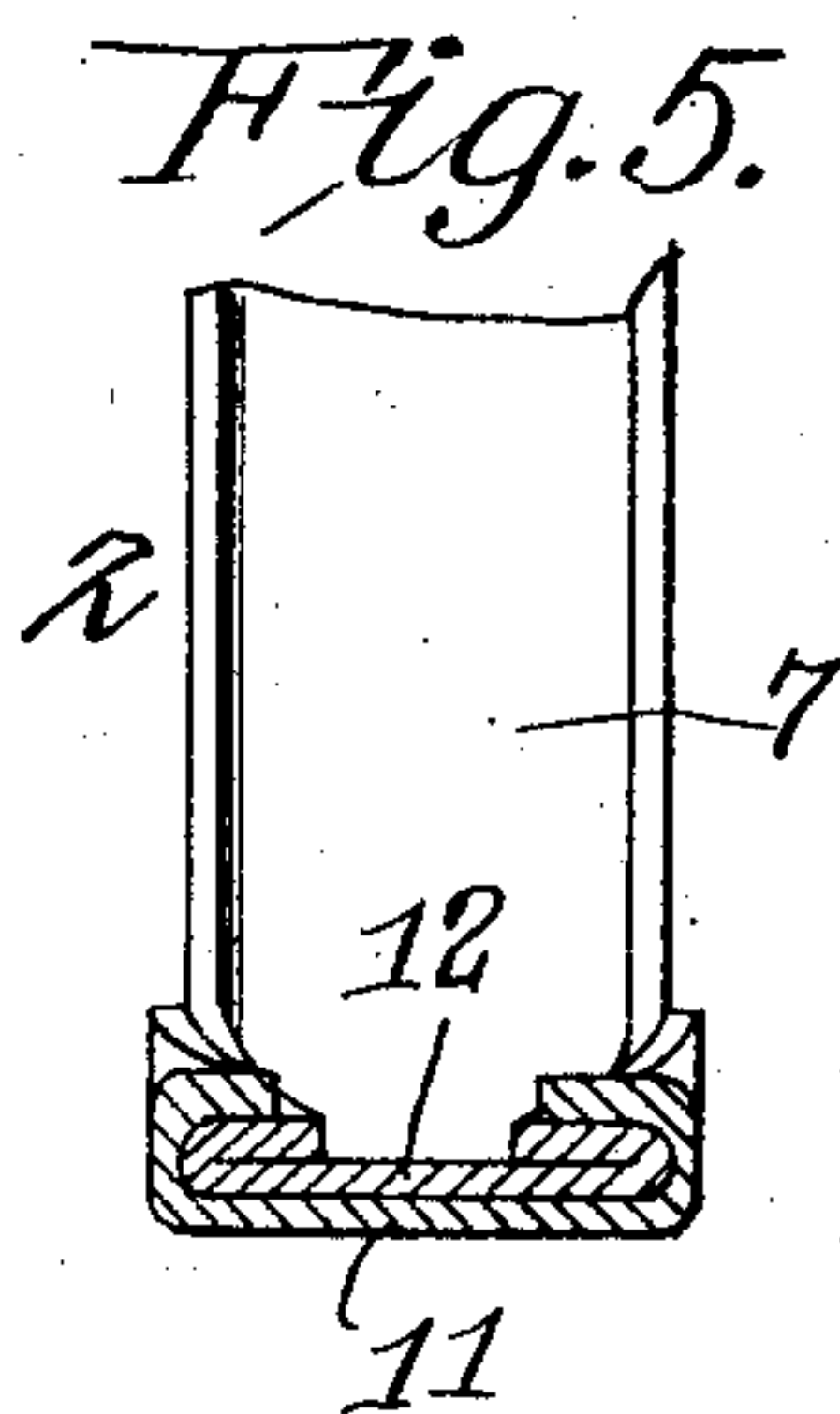


Fig. 5.

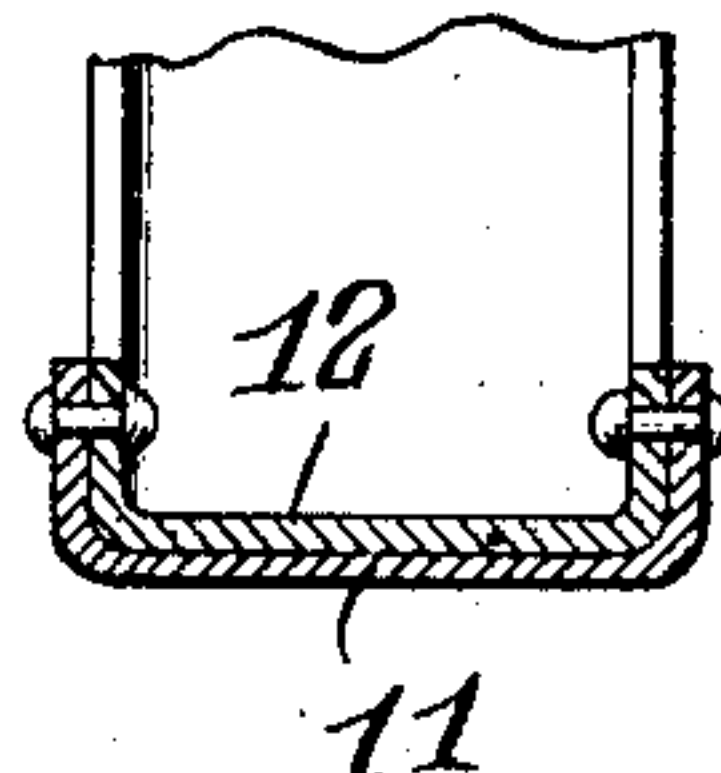


Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN E. JOHNSON, OF NORTH ANDERSON, INDIANA.

SLED-RUNNER.

No. 905,704.

Specification of Letters Patent.

Patented Dec. 1, 1908.

Application filed March 20, 1908. Serial No. 422,299.

To all whom it may concern:

Be it known that I, JOHN E. JOHNSON, a citizen of the United States, residing at North Anderson, in the county of Madison and State of Indiana, have invented new and useful Improvements in Sled-Runners, of which the following is a specification.

This invention relates to sled runners, and the object of the invention is to provide a device of this character, constructed preferably of steel or iron, which shall be extremely simple, light, cheap and durable, the runners of which are constructed of channel members having their bearing faces either corrugated or plain and having the knees channeled and connected to the runners by bending the flanges of the knees and runners upon themselves, thus securely and effectively retaining the knees and runners connected with each other.

Another object of the invention is to provide a sleigh runner shoe constructed of a channel member with a longitudinal depression whereby the runner will present a pair of bearing faces, and whereby the sleigh will be prevented from sliding laterally upon sloping roads and in which friction is greatly reduced.

To these ends the invention resides in the novel construction and combination of parts, hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a sleigh runner constructed in accordance with my invention, and illustrating the same in applied position upon the body of a sleigh. Fig. 2 is an enlarged detail perspective view of a portion of the runner shoe and knee illustrating the method of connecting these elements. Fig. 3 is a transverse sectional view upon the line 3—3 of Fig. 2. Fig. 4 is a transverse sectional view of a modified form of attaching the feet of the knee to the runner shoe. Fig. 5 is a still further modified view, illustrating in transverse section the method of attaching a knee to a runner shoe having a plain bearing face. Fig. 6 is a still further modification, illustrating in transverse section a further method of attaching the knee to a runner having a plain bearing face.

In the accompanying drawings, and referring particularly to Figs. 1, 2 and 3 thereof, the numeral 1 designates the runner shoe of my improvement. This shoe 1 is constructed of channel iron or steel and is provided

with a central longitudinal depression providing bearing faces 2' directly beneath the vertical offset sides of the member.

The numeral 2 designates the knee employed with my device. This knee 2 is also constructed of channel iron or steel, and has also a central longitudinal depression similar to that of the runner shoe 1. The knee 2 is provided with a flattened bearing face 3, constructed by flattening the edges of the offsets of the channel member and bending them inwardly towards the body as clearly illustrated in Fig. 1 of the drawings. The central depression is also flattened and provided with an orifice 4, adapted for the reception of retaining elements by which the knee is connected with the connecting bar 5 and positioned upon the body 6 of the sleigh. The knee 2 is provided with depending legs 7 extending downwardly at an angle from both ends of the bearing face 3. The legs 7 are provided with offsets or feet 8, adapted to be positioned between the vertical walls of the runner shoe 1, the central depression of the feet occupying the rounded surface provided by the depression upon the bearing face of the runner shoe. When the feet 8 are positioned within the channel of the runner shoe 1, the vertical edges of the runner shoe 1 and feet 8 are bent upon each other towards the center of the feet and runner shoe as illustrated in Figs. 1, 2 and 3 of the drawings. By this construction it will be noted that the knee is effectively secured upon the runner shoe and that no bolts or other securing devices are required.

In Fig. 4 I have illustrated a slight modification in which the feet 9 of a knee are secured to a runner shoe by providing the vertical offsets of the feet and runner shoes with alining openings adapted for the reception of retaining elements 10.

In Fig. 5 I have illustrated a still further modification in which the channel member or runner 11 is provided with a flat bearing face. In connecting the foot 12 of a knee, also provided with a flat under face, the vertical walls or offsets of the knee and runner are bent upon themselves as illustrated, and the members effectively secured together.

In Fig. 6 I have illustrated a still further modified form of connecting the knee and runner illustrated in Fig. 5. In this figure I have provided the vertical walls or offsets of the channeled knee and runner with alining

openings adapted for the reception of bolts or other retaining means by which the members are effectively secured together.

Having thus fully described the invention
5 what is claimed as new is:

1. In a device of the character described, a runner shoe comprising a longitudinal channel member, a knee also comprising a channel member having a flattened bearing surface and provided with diverging legs having
10 feet engaging between the vertical walls of the channel member and secured to the runner member by having the engaging walls of the members bent upon themselves.

15 2. In a device of the character described, a runner shoe comprising a channel member

having a longitudinal depression, and a knee member constructed with projecting edges and having a central longitudinal depression, a flat bearing face upon the knee member, 20 outwardly inclined legs depending from the bearing face, feet provided upon the extremities of the legs engaging between the walls of the runner shoe and secured thereto by bending the walls of the shoe and the projecting edges of the feet upon themselves. 25

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

JOHN E. JOHNSON.

Witnesses:

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