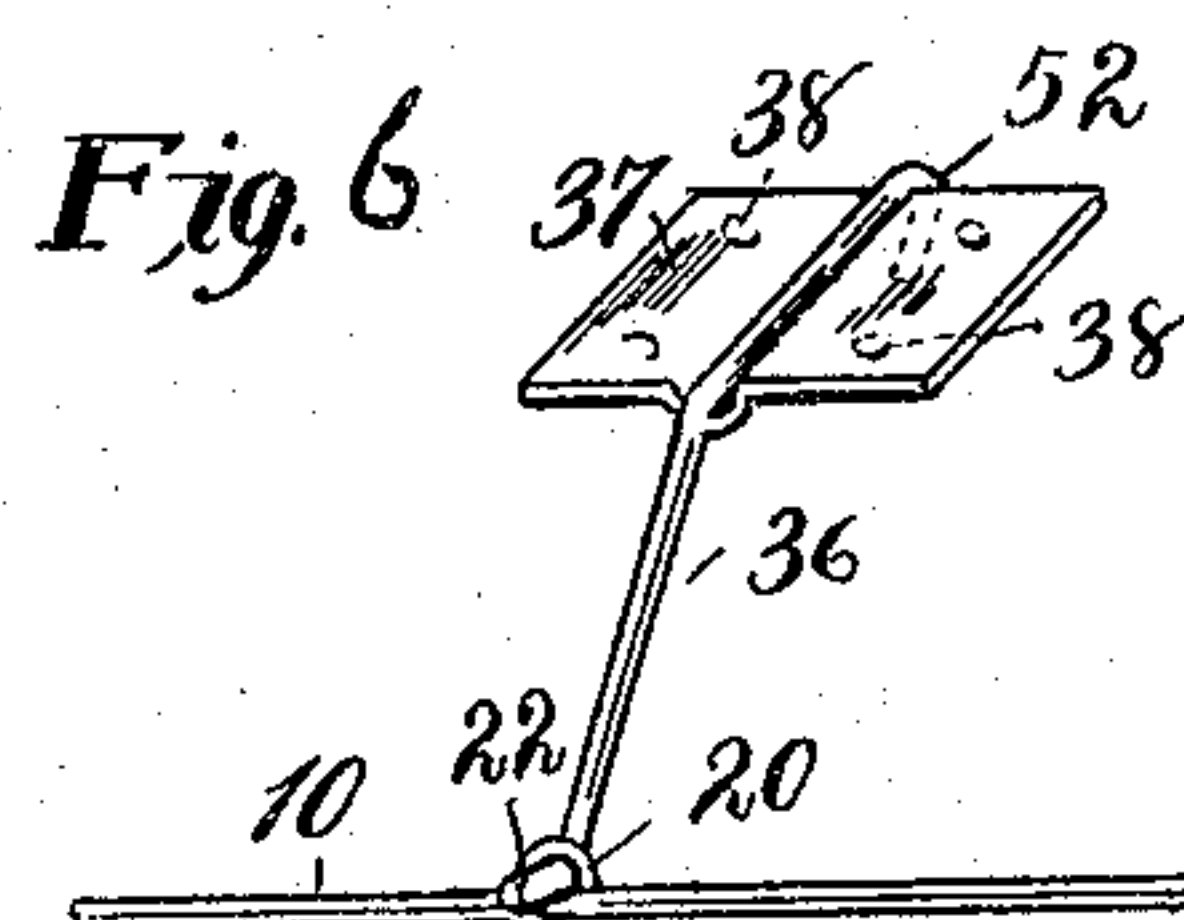
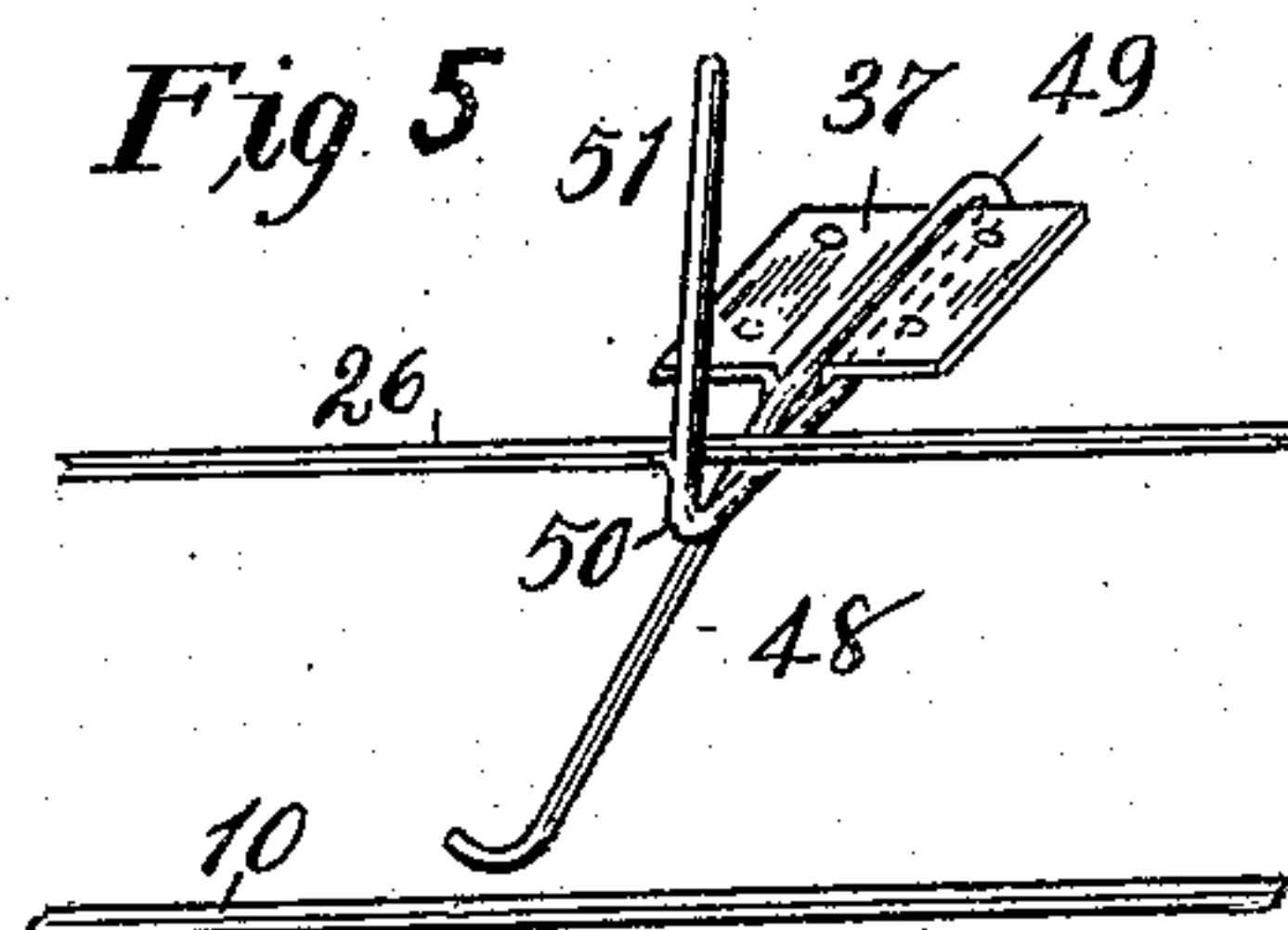
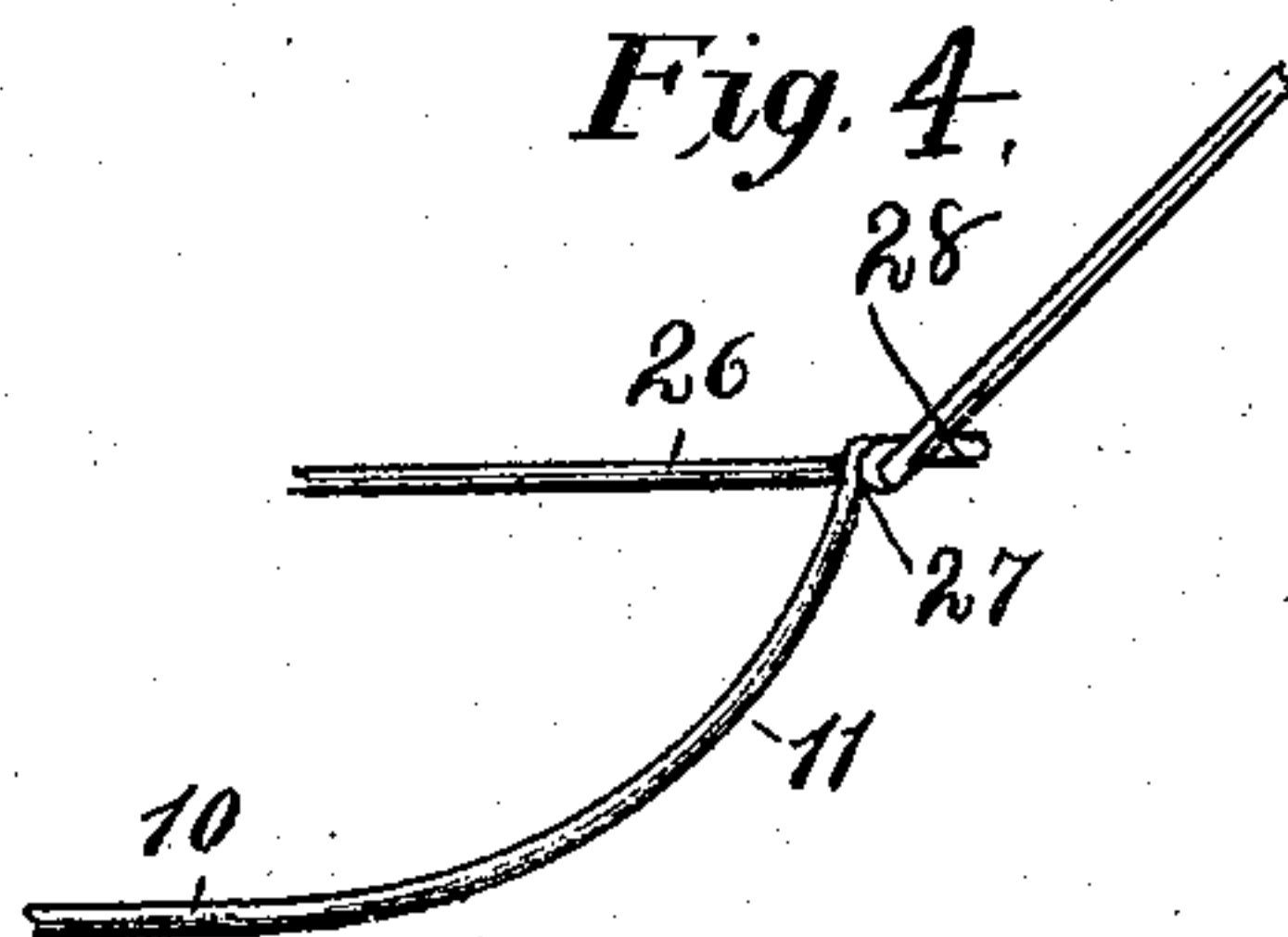
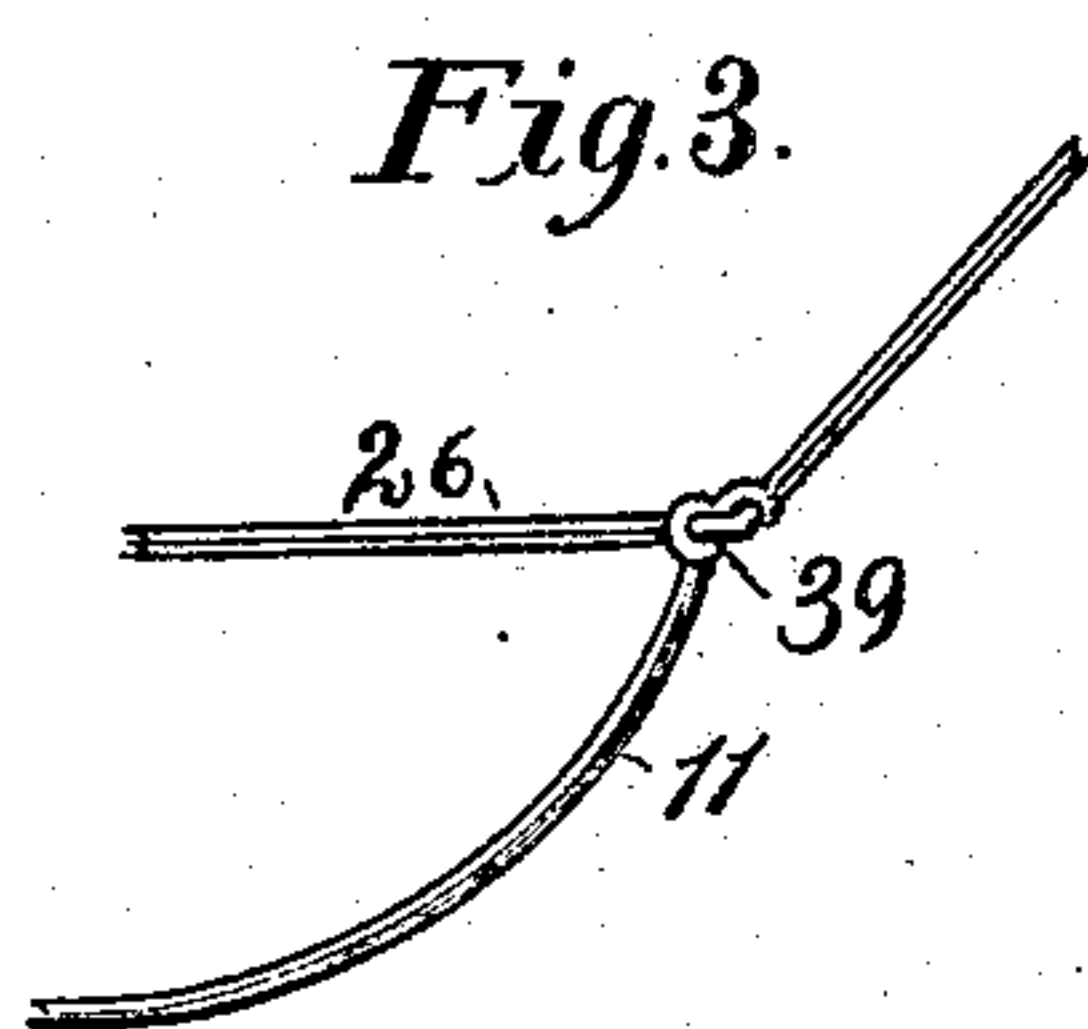
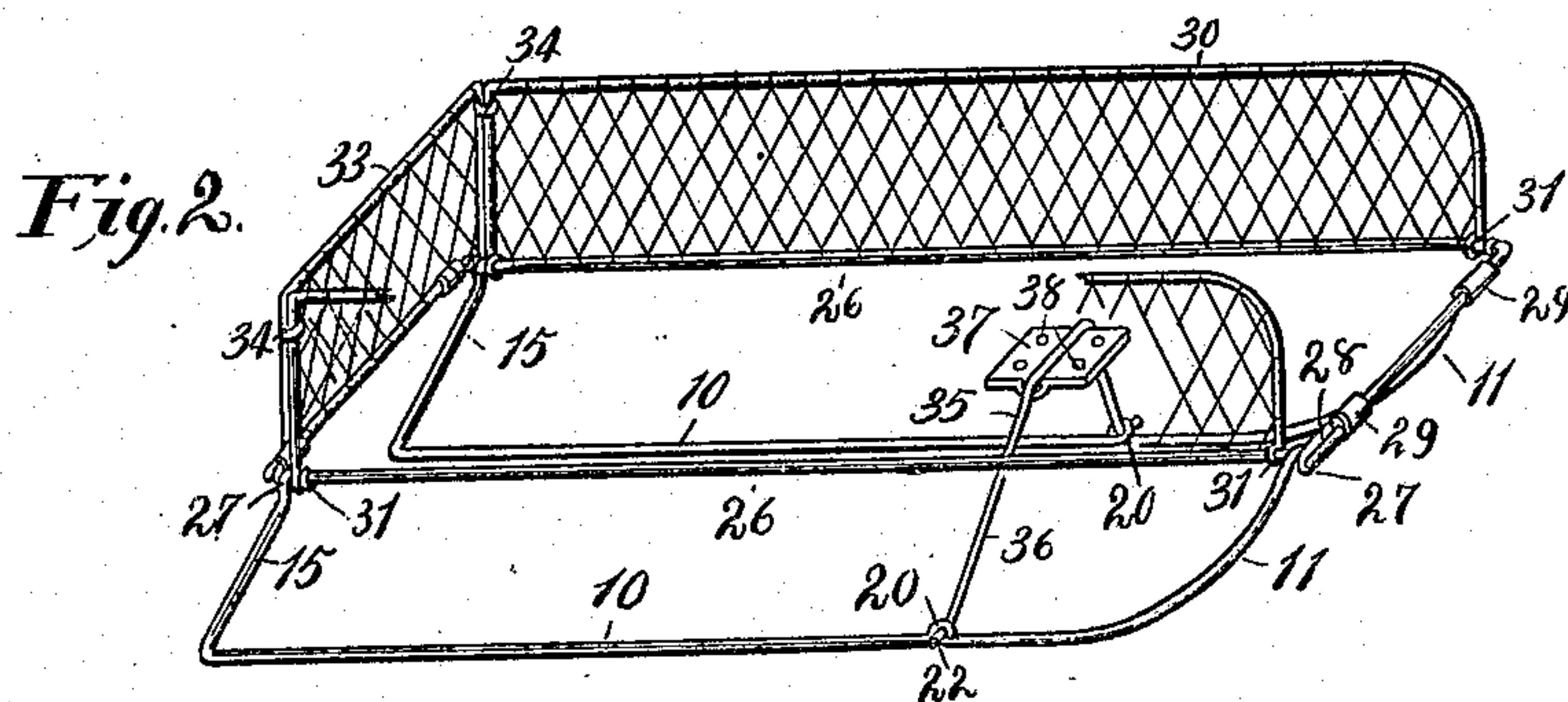
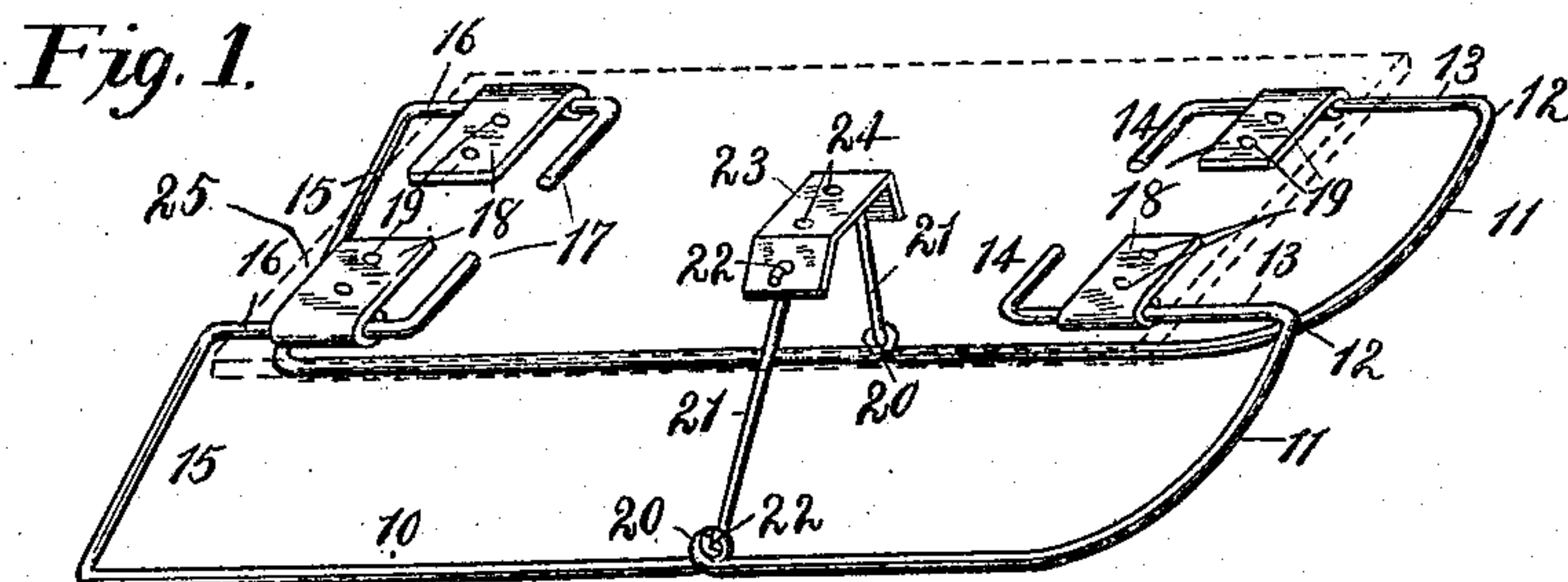


W. L. C. CHAMBERS.  
SLED.  
APPLICATION FILED SEPT. 15, 1906.

930,729.

Patented Aug. 10, 1909.



Witnesses:

Chas. F. Bassett  
Matt. J. Marty

Inventor,  
Worthy L. C. Chambers  
By Frederick Benjamin  
Atty.



# UNITED STATES PATENT OFFICE.

WORTHY L. C. CHAMBERS, OF CHICAGO, ILLINOIS.

## SLED.

No. 930,729.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed September 15, 1906. Serial No. 334,715.

*To all whom it may concern:*

Be it known that I, WORTHY L. C. CHAMBERS, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sleds, of which the following is a specification.

This invention relates to improvements in the construction of sleds and similar devices and particularly to the form, operation and arrangement of the supporting runners.

The especial object of the improvements which form the subject matter of this application is to provide runners that may be folded compactly against the body or seat portion when not in use; that may be readily unfolded or extended into operative position, and that may be effectively braced and held in operative position under the ordinary conditions of use in such devices.

Simplicity, strength, economy and durability of construction are other objects which are conserved by my invention, as will be readily apparent to those skilled in the art to which it relates.

As the essential principles of my invention admit a varied treatment when mechanically applied I have deemed it advisable to show herein, several of the many ways of applying my invention to produce substantially the same result, the variations being in details which involve merely more or less mechanical skill.

In the accompanying drawing which forms a part of this application, I have shown this invention in various forms, and have also illustrated other elements necessary to produce a complete sled.

In the drawings:—Figure 1 is a perspective view of a sled constructed according to one form of my invention; Fig. 2 is a perspective view of a sled with a modified form of connection between seat and runners, and showing an auxiliary frame; Figs. 3 and 4 show fragmentary details of different forms of hinge connections for the runners; Fig. 5 shows a steering device and a modified form of brace; Fig. 6 is a fragmentary detail of a brace and runner.

Referring to the details of the drawing, and particularly to those shown in Fig. 1, 10 represents a sled runner formed from a single steel rod of suitable size and temper which is bent to form the forward bow portion 11, which terminates at its upper end in a rearward bend 12 which forms a horizontal

member 13 which is adapted to lie close to the under side of the seat board shown by dotted lines. Near its rear end, the member 13 is bent at right angles to form the member 14 which is in the same horizontal plane with the member 13. The latter member is rotatably mounted in a socket plate 18 which is rigidly secured to the under side of the sled seat board by suitable bolts passing through holes 19, said bolts not being shown. The rear portion of the runner rod is bent to form the leg 15 which terminates at its upper end in a forwardly extending horizontal member 16, which in turn is bent at right angles to form the member 17. A socket plate 18 forms a bearing for the member 16 and is secured to the bottom of the seat board by suitable screws or bolts passing through the holes 19. The parts 16, 17, and 18 correspond in form and function to the parts 13, 14 and 18 above described, and the sled is equipped with two runners thus formed and connected.

It will be apparent that if the members 13 and 16 are arranged at the edge of the seat board (shown in dotted lines Fig. 1) the runners can be turned in their bearings in the socket plates 18 and folded against the seat board. To maintain the runners in operative position I provide suitable braces, as shown in Figs. 1, 2, and 6, and while I have indicated but one brace for each runner, several may be employed if desired. As illustrated in Fig. 1, each brace consists of a rod 21, bent at its ends to form hooks 22. The lower hook is adapted to detachably engage an eye 20 on the runner 10, and the upper hook is preferably permanently connected with the downwardly bent ends of a plate 23 which is provided with holes 24 to receive attaching screws or bolts by which it may be rigidly secured to the under side of the seat board. As in use, the runners will tend to spread, the braces 21 will also serve as tie-rods to prevent same unless some such retaining means were employed. In Fig. 2 the brace is shown as a single rod 36 which connects with both the runners, is bent at the ends of its legs 36 to engage the eyes 20, and is bent midway its ends to form a horizontal portion adapted to be rotatably seated in plate 37 having holes 38 therein to receive bolts or screws by which it may be rigidly attached to the under side of the sled body or seat.

The brace 48 shown in Fig. 5 consists of



a single rod which has a horizontal part seated in the plate 37, is bent at 49 and doubled under the lower side of said plate and bent upwardly at 50 to provide the handle 51 which extends on the outer side of the frame member 26. The lower end of this brace is bent rearwardly and normally lies against or engages the inner side of the runner to prevent the inward movement of the runners.

26 represents the sled frame which consists of a single rod of suitable material and size, which is preferably bent into the rectangular form shown and has its ends connected together in any approved manner. Upon this frame are hinged the runners shown in Figs. 2 to 4 inclusive. In Fig. 4 I have shown the forward end of the runner bent to form a coil 27 which surrounds the longitudinal or side member 26 of the frame, and the extreme end 28 of the runner extends forwardly at an angle to the coil, and is arranged below the cross-member of the frame, thereby locking the runner against inward pivotal movement. In Fig. 3, the runner end is formed with an eye which embraces the side member of the frame, and with a hook which passes over the upper side of the cross-member of the frame, as shown at 39. With this form of hinge connection the runner may be folded inwardly but not outwardly. In Fig. 2 I have shown the end of the runner bent to lie parallel with the cross-member of the frame, as at 28, and to hold it in such position, and to assist the braces in preventing the inward pivotal action of the runner when in use, have provided a sleeve 29 which is loosely mounted on the cross member of the frame and is adapted to be pushed over the end 28 and the adjacent part of the cross member.

In Fig. 2 I have shown an attachment for my sled, which consists of side frames 30, and rear end frame 33, formed of suitably bent rods, with netting laced between said rods. The ends of the side frames are bent around the sled frame members, and clips 34 couple the several frames together.

When the braces 21, 36 or 48 are not in use they may be folded up against the under side of the sled seat by turning them in their bearings in the plates 23 or 37.

From the construction shown and described, it will be seen that I have provided for interlocking the ends of the runners with a sled seat, or with a sled-seat frame, whereby pivotal action of the runners in one direction will be prevented when the latter are in operative position; that I have provided braces which are pivotally connected with the under side of the sled seat and have their ends detachably connected with the runners so that the latter will be held in operative position, and that I have provided runners

which may be folded against either the upper side or the lower side of the seat, and the braces and so connected with the runners as to hold the latter in operative position irrespective of whether the folding is inward or outward.

In Fig. 1, the ends 14 are shown so bent as to permit the runners to be folded outwardly, but the braces 21 when interlocked with the runners will prevent pivotal action of the runners in either direction. In Figs. 2 and 3 the ends of the runners are shown so bent as to permit the runners to be folded inwardly only.

Having thus described my invention what I claim as new is:—

1. In a sled, a seat, a pair of runners pivotally connected with the seat each consisting of a member having portions adapted to engage said seat, whereby the pivotal movement of the runners is limited to one direction, a brace pivoted on said seat and detachably engaging said runners when in operative position.

2. In a sled, a seat, a pair of runners pivotally connected with said seat each consisting of a rod bent to suitable shape and having its ends bent to engage said seat, whereby the pivotal movement of the runners is limited to one direction, and means for bracing said runners against pivotal movement when in operative position.

3. In a sled, a support, a pair of runners pivoted on said support each consisting of a member having portions adapted to engage said support when in operative position and thereby limit the runners to pivotal movement in one direction, a brace pivotally connected with said support and detachably engaging said runners when in operative position.

4. In a sled, a seat, runners pivotally connected with the seat and having portions adapted to engage the seat when in operative position, a brace pivoted to the under side of the seat and having its ends detachably engaging the runners when in operative position.

5. In a sled, a pair of runners each consisting of a metal rod bent to suitable shape and having its ends bent at an angle, means pivotally supporting said runners, means engaging the bent ends of the runners whereby their pivotal movement is limited to one direction only, and means for bracing said runners.

6. In a sled, a frame, and a seat board or body, a pair of runners pivotally mounted on said frame, each runner consisting of a rod bent to suitable shape, means interlocking with the ends of said runners for limiting their pivotal movement to one direction only, and braces pivotally connected with the seat board and detachably connected directly with the runners.



7. In a sled, a support, runners pivotally connected with said support and having portions interlocking therewith when in operative position, braces pivotally connected with the support and having portions interlocking with the runners when in operative position.

8. In a sled, a support, runners pivotally connected with said support, each of said runners consisting of a rod bent to suitable shape and having its ends bent to engage the support and thereby limit the pivotal action of the runner relative to its support.

9. In a sled comprising a seat or body, a pair of runners pivotally connected with said seat or body, each of said runners consisting of a single rod bent to suitable shape and to form eyes along the upper side of its tread portion, and bracing means detachably connecting said eyes with said seat or body.

10. In a sled comprising a seat, runners pivotally connected with said seat, each runner consisting of a rod having its ends bent to engage the under side of the seat when in

operative position, and braces for said runners each of said braces consisting of a rod having one end adapted to detachably engage a runner and having the other end connected with the seat.

11. In a sled, a seat-board, runners pivotally connected with the under side of said board and adapted to be folded inwardly against the under side thereof, said runners having their ends bent to engage the under side of said board when the runners are in operative position, braces pivotally connected with the under side of the seat-board and adapted to be folded against the under side thereof, said braces and runners having interlocking portions whereby they are held in operative positions.

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

WORTHY L. C. CHAMBERS.

Witnesses:

F. BENJAMIN,  
T. L. VANDEVENTER.