(No Model.)

J. M. BARNES.

SLEIGH.

No. 322,085. Patented July 14, 1885.

Fig. 1.

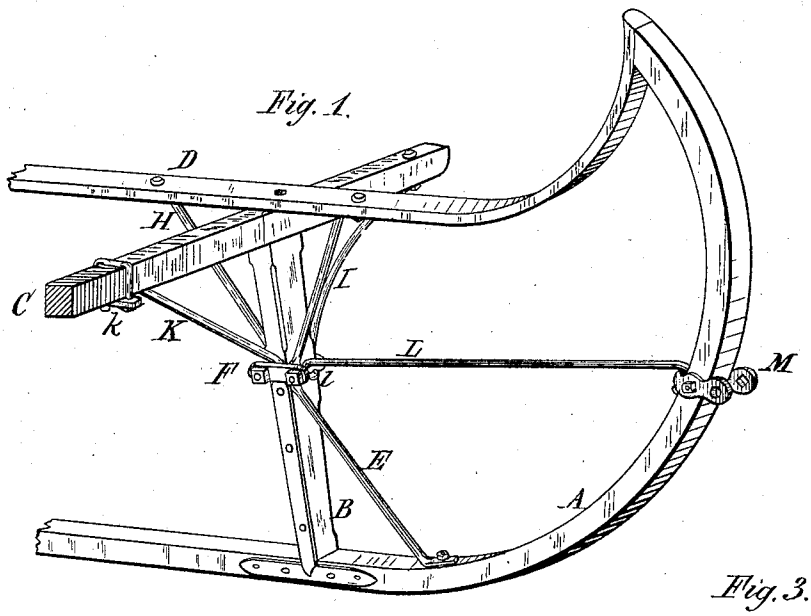


Fig. 2.

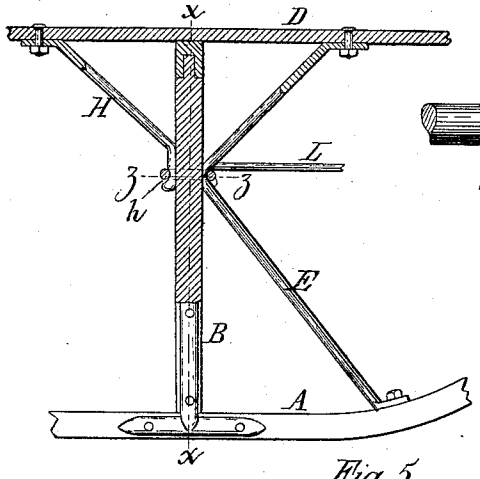


Fig. 3.

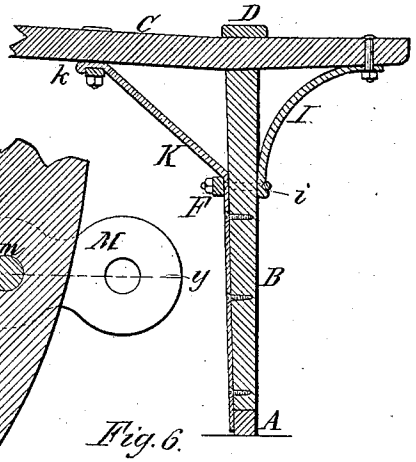


Fig. 4.

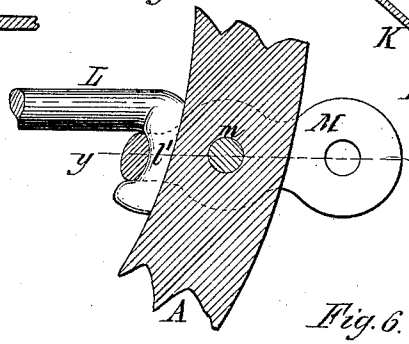


Fig. 5

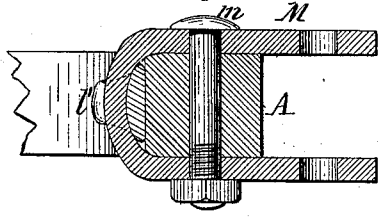
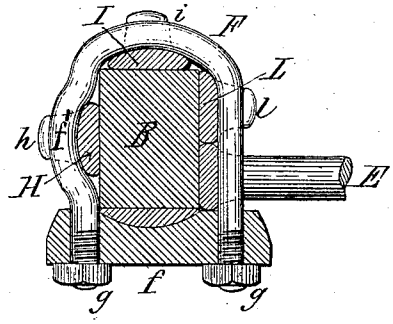


Fig. 6.



Witnesses.
Geo. E. Pitman
Theo. L. Popp

J. M. Barnes Inventor.
By Wilhelm & Bonnet
Attorneys.

UNITED STATES PATENT OFFICE.

JAMES M. BARNES, OF CUBA, NEW YORK.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 322,085, dated July 14, 1885.

Application filed April 8, 1885. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. BARNES, of Cuba, in the county of Allegany and State of New York, have invented new and useful Improvements in Sleighs, of which the following is a specification.

This invention relates to an improvement in the construction of the parts whereby the runner and knee or standard are secured together and to the bolster and longitudinal top piece; and my invention has the object to render the connection between these parts strong, light, and reliable.

My invention consists to that end of the improvements which will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a fragmentary perspective view of a sleigh-runner provided with my improvements. Fig. 2 is a fragmentary longitudinal sectional elevation of the same. Fig. 3 is a cross-sectional elevation in line *x x*, Fig. 2. Fig. 4 is a sectional elevation of the draft-shackle, on an enlarged scale. Fig. 5 is a horizontal section of the same in line *y y*, Fig. 4. Fig. 6 is a horizontal section, on an enlarged scale, in line *z z*, Fig. 2.

Like letters of reference refer to like parts in the several figures.

A represents the runner; B, the knee or standard; C, the bolster, and D the longitudinal top piece secured to the top of the bolster and the upper front end of the runner. All of these parts are of ordinary and well-known construction.

E represents a bent or angle brace arranged between the runner A and top piece, D, on the front side of the knee, and secured with its upper end to the top piece, D, and with its lower end to the runner, while its bent middle portion rests against the front side of the knee, to which the brace is secured by a clip, F. The legs of the latter are arranged on the front and rear sides of the knee and connected on the inner side of the knee by a cross-piece, *f*, which is secured by screw-nuts *g*.

H represents a diagonal brace secured with its upper end to the under side of the top piece, D, in rear of the knee, and resting with its lower end against the rear side of the knee, between the latter and the clip F. The lower end of the brace H is provided on its rear side with a depression, *h*, in which the rear leg of the clip rests, and whereby the lower end of the brace is securely held on the knee by the clip. The rear leg of the clip is provided with a bent portion, *f'*, which embraces the lower recessed end of the brace H, as represented in Fig. 6, and holds the brace against lateral displacement.

I is a curved brace arranged on the outer side of the knee and secured with its upper end to the outer portion of the bolster C, and resting with its lower end against the outer side of the knee. The lower end of the brace I is provided on its outer side with a depression, *i*, in which the outer bent portion or bow of the clip F rests, whereby the lower end of the brace is securely held on the knee.

K is a bent brace, which is secured with its lower portion to the inner sides of the knee and runner by screws, while its upper end is secured by a clip, *k*, to the under side of the bolster C on the inner side of the knee. The cross-piece *f* of the clip rests against the brace K immediately under the bent upper portion of the brace K, and holds the latter firmly against the knee.

L is the draft-rod, extending from the front side of the knee to the front portion of the runner. The rear end of the draft-rod L is provided with a bent portion or hook, *l*, which is clamped against the front side of the knee on one side of the bent brace E by the front leg of the clip.

M is the draft-shackle, secured to the curved front portion of the runner by a transverse bolt, *m*, and having its bent portion arranged on the rear side of the runner and its jaws projecting forwardly on the inner and outer sides of the runner. The front end of the draft-rod L is provided with a bent portion or hook, *l'*, which engages over the bent rear portion of the draft-shackle M and is clamped by the latter against the rear side of the bent front portion of the runner. The recesses of the braces, in which the clip is seated, hold the latter against vertical displacement on the knee.

The braces and draft-rod are secured to the knee by the clip in a strong and reliable manner, without weakening the knee by boring

holes through the same, and the fastening so produced is neat in appearance and can be manufactured at comparatively small expense.

I claim as my invention—

1. The combination, with the runner A, knee B, bolster C, and top piece, D, of the angle-brace E, arranged on the front side of the knee and secured thereto by the clip F, and having its forwardly-projecting lower end secured to the runner A and its forwardly-projecting upper end secured to the top piece, D, substantially as set forth.

2. The combination, with the runner A, knee B, bolster C, and top piece, D, of the diagonal brace H, arranged on the rear side of the knee and having its lower end secured thereto by the clip F, substantially as set forth.

3. The combination, with the runner A, knee B, bolster C, and top piece, D, of the draft-rod L, provided with bent ends, a draft-shackle, M, whereby the front end of the draft-rod is secured to the runner, and a clip, F, whereby the rear end of the draft-rod is secured to the knee, substantially as set forth.

4. The combination, with the runner A, knee B, bolster C, and top piece, D, of the bent braces E and K, diagonal braces H and I, and a clip, F, embracing all of said braces and securing the same to the knee, substantially as set forth.

Witness my hand this 26th day of March, 1885.

JAMES M. BARNES.

Witnesses:

ROBT. C. MEAD,

STEPHEN C. HUNT.