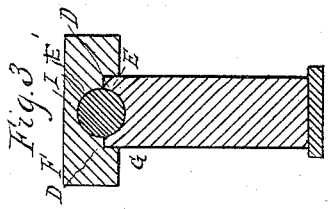
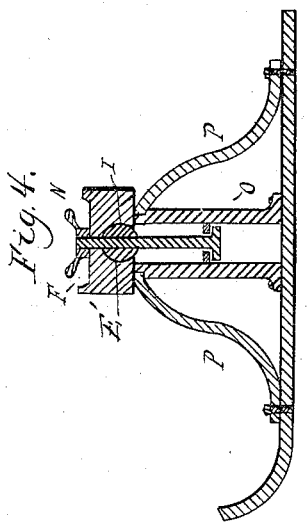
(No Model.)

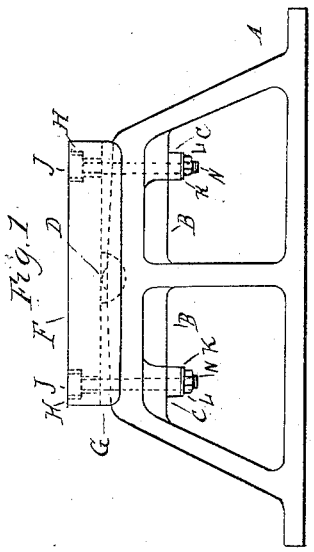
J. MALLON.

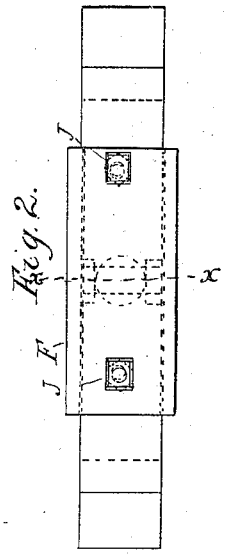
SLEIGH KNEE.

No. 306,412. Patented Oct. 14, 1884.









WITNESSES

E. G. Siggers.

James Mallon
INVENTOR

by C. A. Snow & Co

Attorneys

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES MALLON, OF HOUGHTON, MICHIGAN, ASSIGNOR OF THREE-FOURTHS TO WILLIAM KEHL, HENRY GOLDBERG, AND GEORGE P. McFARLAN, ALL OF SAME PLACE.

SLEIGH-KNEE.

SPECIFICATION forming part of Letters Patent No. 306,412, dated October 14, 1884.

Application filed June 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES MALLON, a citizen of the United States, residing at Houghton, in the county of Houghton and State of Michigan, have invented a new and useful Improvement on Sleigh-Knees, of which the following is a specification, reference being had to the accompanying drawings.

This invention has relation to sleigh-knees; and it has for its object to produce a sleigh-knee that shall possess superior advantages over others of its class in point of cheapness, simplicity, durability, and general efficiency; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

Figure 1 is a side elevation of a sleigh-knee embodying my improvements. Fig. 2 is a plan view of the same. Fig. 3 is a vertical transverse section on the line *x x*, Fig. 2. Fig. 4 is a vertical longitudinal section of a modification.

Referring by letter to the accompanying drawings, A designates the stanchion of the sleigh-knee, which is cast in one piece, comprising the flanges B along the under face of the top portion, the bolt-holes C C, the arc-shaped flanges D D on its upper face, at the sides, on its middle portion, and the ball-seat E at its middle portion, between the arc-flanges D D. The cap-plate F has a longitudinal rectangular groove, G, in its under face wide enough to receive the top of the stanchion A. The cap-plate F is provided near each end with a bolt-hole, H, having a rectangular countersink.

I designates a metal ball, which occupies the ball-seat E in the stanchion and the ball-seat E′ in the cap-plate F.

J J designate bolts with rectangular heads, which rest in the countersinks in the cap-plate F. These bolts J J pass down through the bolt-holes H in the cap-plate F and the bolt-holes C C in the stanchion, and are provided below the flanges B with rubber washers K one-half inch thick and metal washers L one-eighth inch thick, and are held in place by nuts M, as shown. The arc-flanges D D act as rockers for the cap-plate and stanchion, and prevent lateral motion or oscillation of the parts. The cap-plate F is let into the beam of the sleigh by means of two small return-flanges, and is bolted firmly to the beam at the right and left sides.

Instead of the rubber washers K, spiral springs may be used.

The object in using the ball (which has ample play in its seat) and the arc-flanges to produce the rocking motion of the cap-plate upon the stanchion is to prevent the present wear and tear on the sleigh by giving it the rocking motion on the knees. The stanchions are bolted to the runners. This knee is inexpensive, safer, and easier on the sleigh than any now in use, especially in traveling over rough and uneven roads, owing to the rocking motion before mentioned.

In heavy sleighs I use a bolt or set-screw, N, (see modification, Fig. 4,) which is passed down through the cap-plate, ball, and into the circular hollow iron stanchion O, having the rectangular top or shoulder to permit the wrought-iron brace P to slip over it, which brace of itself has a tendency to act as a spring, and at the same time prevent the stanchion from shifting laterally. In this instance the ball is allowed ample play in its seat, and the brace is bolted to the runner. By this construction I attain the rocking motion, the same as in the construction first described.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A sleigh-knee provided with a ball and arc-flanges between the cap-plate and stanchion, and mechanism, substantially as described, for connecting the cap-plate and stanchion, to permit a rocking motion between the cap-plate and stanchion, as set forth.

2. The combination, with the stanchion provided with the arc-flanges, ball-seat, and bolt-holes near its ends on the top part, of the cap-plate having the longitudinal groove, ball-seat, and countersunk bolt-holes, the bolts, rubber washers, metal washers, and securing-nuts, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES MALLON.

Witnesses:

CASPER BRAND,

J. H. RICE.