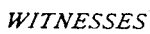


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Fig. 3. *Fig. 4.*



INVENTOR:

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by W. H. Grinstead,
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UNITED STATES PATENT OFFICE.

ROBERT FRANK SIMMONS, OF BROOKLYN, NEW YORK, ASSIGNOR TO NEW YORK STAMPING COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

LINE-PULLEY.

1,033,354.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT FRANK SIMMONS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Line-Pulleys, of which the following is a full, clear, and exact description.

The object of this invention is to provide a line pulley of simple, economical and durable construction.

The invention consists in a line pulley, comprising a frame constructed of sheet metal, preferably sheet steel, having its cheeks constructed to conform to the shape of and entirely conceal the side faces of the pulley wheel or sheave, and having outwardly turned flanges at the entrances to the frame, and a hanger portion adapted to receive a suspending eye or swivel, all substantially as I will proceed now more particularly to set forth and finally claim.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a side elevation of the preferred form. Fig. 2 is an edge view of the pulley of Fig. 1. Fig. 3 is a side elevation, showing another form of suspending swivel, and Fig. 4 is an edge view thereof. Fig. 5 is a side elevation, showing a rigid suspending eye, and Fig. 6 is an edge view thereof.

1 is the sheave, which may be of porcelain, or any other suitable rustless material.

The frame comprises the cheek pieces 2, constructed of metal, preferably sheet steel stamped to shape, and as shown in Figs. 1 and 2, these cheek pieces 2 are formed with the sheave embracing portions 3, of substantially the contour of the outer faces of the sheave and having the semicircular edge 4 coinciding and substantially concentric with the lower edges of the sheaves and the inwardly curved or bent portion 5, coinciding and substantially concentric with and overhanging the upper edges of the sheave, and thus forming a close fit or seat in or upon the cheek pieces for the entire outer or side faces of the sheave. Above said seats or sheave embracing portions, the cheek pieces are provided with extended portions 6, with upwardly converging edges, to form an entrance 7 at front and back for the cord or rope with which the pulley is to be used, and above the extended portions 6, the cheek

pieces are bent inwardly to form ears 8, adapted to be fastened together, as by rivets 9, the metal of the ears between said rivets being pressed outwardly to form opposing semicircular seats 10, to constitute a bearing for the shank 11 of the suspending swivel 12, the shank of said swivel passing through said bearing and held therein by means of a washer 13 fitted upon its headed end 14.

The cheeks 2 are provided with outwardly and laterally curved or flared flanges 15 beginning at a point near the juncture of the inwardly bent portions 5 with the semicircular edges 4, and extending along the extended portions 6 nearly to the tops thereof to constitute a flaring opening or entrance to the frame above the sheave at front and back where the cord or rope enters the pulley, to thus prevent wear upon the rope as it passes through the pulley, and said flanges also serve to strengthen the cheek pieces or frame.

As shown in Figs. 3 and 4, the cheek pieces 2 with the wheel-embracing portions 3 and outwardly turned flanges 15, are of substantially the same construction as shown in Figs. 1 and 2, but in this form of the invention the cheek pieces instead of being made in two parts, as shown in Figs. 1 and 2, are formed from a single blank and connected at their upper ends by means of a dome-shaped bridge 16, having a central perforation adapted to receive the rivet 17 for swivelly connecting the suspending eye 18 to the frame or cheek pieces of the pulley. The suspending eye 18 in its preferred construction is formed of a single blank of sheet metal, and comprises a central concavo-convex portion 19 having two perforated ears 20 bent inwardly from the central concavo-convex portion 19 and pressed closely together with their perforations coinciding, to constitute the eye 21. It will be observed that the rivet 17 passes through the concavo-convex portion 19 of the suspending eye 18 and the dome-shaped bridge 16, and is held in place by means of its headed ends 22 with interposed washers 23.

As shown in Figs. 5 and 6, the cheek pieces 2 are substantially the same as those illustrated in Figs. 1, 2, 3 and 4, but in this form of the device the cheek-pieces are formed of two separate pieces and are provided with outwardly turned flanges 24 terminating near the upper ends of the cheek

pieces, and the suspending eye is made rigid, and is preferably formed of a single piece of metal, comprising two eyes 25 connected by a narrow web 26, the eyes terminating in spacing members 27 having lugs 28 projecting from their opposite sides, adapted to engage slots 29 in the upper ends of the cheek pieces. In assembling the suspending eye to the cheek pieces, the suspending eye is bent or folded upon itself at the connecting web 26 with the eyes 25 coinciding, and the spacing members 27 fitted between the upper ends of the cheek pieces with their lugs 28 passing through the slots 29 in the cheek pieces, the said lugs 28 being bent down upon the outside of the cheek pieces to rigidly secure the parts together.

The sheave 1 is mounted in the cheek pieces 2 by means of the usual shaft 30.

By the constructions herein shown and described, it will be observed that a line pulley of very simple and economical construction is provided, and one which is strong and durable and which is effective in use, and which will in no way mar or injure the rope or cable with which it is used.

I do not wish to be understood as limiting the invention to the exact details of construction herein shown and described, as the same may be changed in various particulars without altering the scope of the invention.

What I claim is:—

1. In a line pulley, a sheave, and a frame in which said sheave is mounted to turn, composed of like cheek-pieces formed of sheet metal, pressed to shape, and including sheave-embracing portions having semicircular edges coinciding with the lower edges of the sheave and inwardly bent portions conforming to and overhanging the upper edges of the sheave and providing seats which closely embrace the sides of the sheave, and upwardly extended portions

forming entrances to said frame above the sheave-embracing portions and provided with outwardly turned flanges adjacent to the entrances to said frame, the upper ends of said cheek-pieces being supplied with a suspending eye.

2. In a line pulley, a sheave, and a frame in which said sheave is mounted to turn, composed of like cheek-pieces 2, formed of sheet metal, pressed to shape, and including sheave-embracing portions 3 having semicircular edges 4 substantially concentric with and extending to the bottom of the sheave, and inwardly bent portions 5 substantially concentric with and overhanging the top of the sheave and providing seats for said sheave, portions 6 extending above the sheave from said inwardly bent portions and forming line entrances to said frame, and outwardly and laterally flared edge flanges 15 extending upwardly on converging lines at the line entrances, the upper ends of said cheek-pieces being united and provided with a suspending device.

3. In a line pulley, a sheave, and a frame in which said sheave is mounted to turn, composed of like cheek-pieces 2 formed of sheet metal, pressed to shape, and including sheave embracing portions 3 having semicircular edges 4, sheave seating portions 5, upward extensions 6 whose edges converge upwardly, said extensions united at their upper portions and provided with a suspending device, the cheek-pieces having the outwardly and laterally flared edge flanges 15 extending from below the upper level of the sheave nearly to the suspending device and forming flared entrances for the line at front and back.

In testimony whereof I have hereunto set my hand this 25th day of March A. D. 1912.

ROBERT FRANK SIMMONS.

Witnesses:

HENRY G. ENGSTROM,
F. B. EASBY.