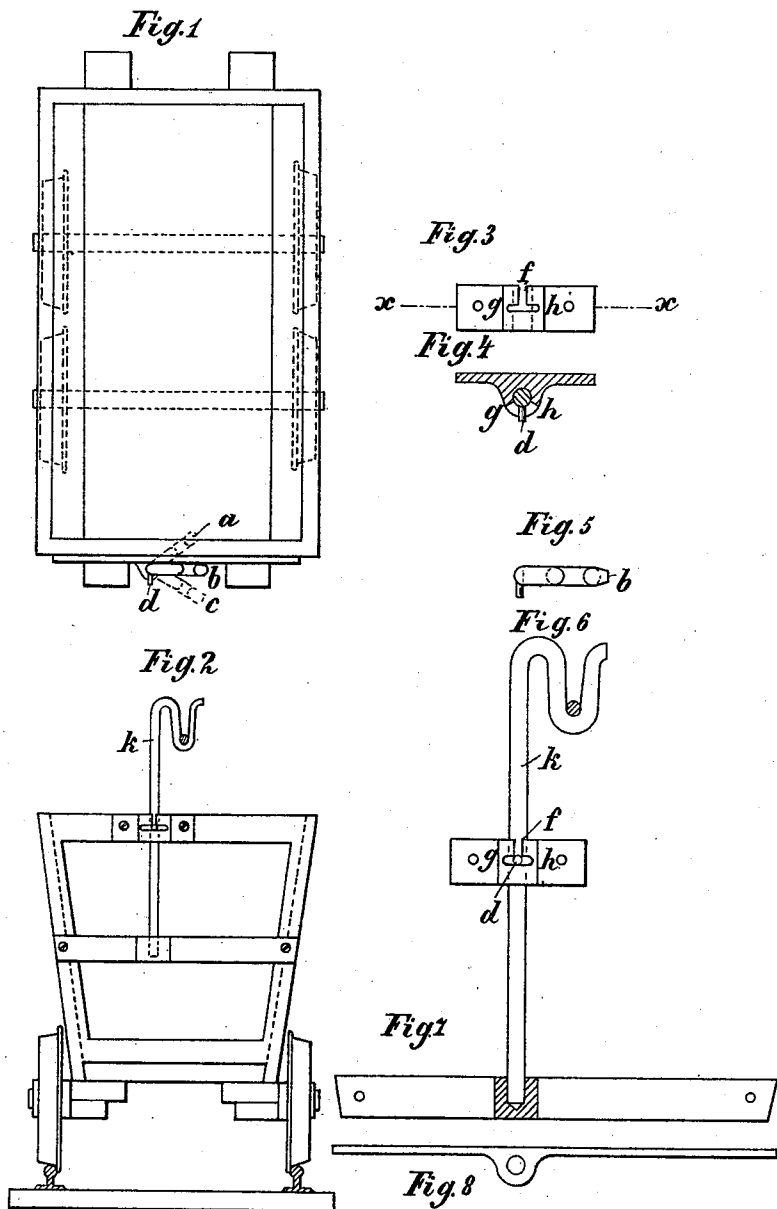


(No Model.)

A. LAUENROTH.
CATCH FORK FOR ROLLEYS IN MECHANICAL UNDERGROUND HAULING.
No. 539,063. Patented May 14, 1895.



Witnesses:
T. H. Hawks
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UNITED STATES PATENT OFFICE.

AUGUST LAUENROTH, OF SULZBACH, GERMANY.

CATCH-FORK FOR ROLLEYS IN MECHANICAL UNDERGROUND HAULING.

SPECIFICATION forming part of Letters Patent No. 539,063, dated May 14, 1895.

Application filed November 22, 1894. Serial No. 529,646. (No model.)

To all whom it may concern:

Be it known that I, AUGUST LAUENROTH, foreman, residing at Sulzbach, near Saarbrücken, in the Kingdom of Prussia, German Empire, have invented new and useful Improvements in Catch-Forks for Rolleys in Mechanical Underground Hauling, of which the following is a specification.

The catch consists of a piece of round iron or steel which is bent at one end in the shape of a fork for taking up the ropes, (Figures 2 and 6.) To facilitate the insertion and extraction of the ropes, the fork is bent out farther above to both sides, while the slit beneath corresponds to the diameter of the ropes. The round shaft (*k*) of the fork runs into two blocks, of which the upper (Figs. 3 and 4) conduct to the shaft and serve to limit the rotation, while the lower block (Figs. 7 and 8) is shut and supports the shaft with the fork.

In the accompanying drawings, Fig. 1 is a plan of the rolleys. Fig. 2 is a front view of the same. Fig. 3 is a front view of the upper block. Fig. 4 is a section on line *xx* of Fig. 3. Fig. 5 is a plan of the upper part of Fig. 6. Fig. 6 is a special front view of the fork-shaft (*k*). Fig. 7 is a partial section and front view of the lower block, and Fig. 8 is a plan of the same.

The shaft ends below either in a point or in a concave or level surface. The surface which serves to support the shaft in the under shut block is shaped so as to conform with this shaft ending. In the middle of the upper block (Fig. 6) the shaft is provided with a round steel peg (*d*), which is at an angle of ninety degrees to the fork curve. (*Vide* Fig. 5.) The upper block has a broad vertical groove (*f*) corresponding to the peg and a horizontal groove of the same breadth from (*g*) to (*h*). Through the vertical groove the fork with the peg can be inserted or disengaged at any time as desired, in attaching and releasing the rolleys. The horizontal groove on the other hand renders possible a rotation of the fork of about sixty to seventy degrees from (*a*) to (*c*) in Fig. 1, limited by the peg. Both blocks are so fixed to the front side of the rolleys either exactly on the angle-iron of the

rolleys or on a plate, that the fork aperture juts out over the middle of the rolleys about the diameter of the rope, if the fork is at right angles to the direction in which the rope pulls. The fork is thus turned about thirty to thirty-five degrees according to the direction in which the rope pulls and the rope so bent that the rolleys are taken along.

The application of rotary fork-shaped catches in which no knots on the rope are necessary and in which the rolleys are taken along rather by bending of the rope, has been known for several years. These forks were however partly of too complicated construction, and partly the ropes were so bent through by their unlimited rotation that the automatic unshackling of the ropes by heightening was rendered difficult and the durability of the rope moreover lessened. These evils have been completely removed by the above-described very simple contrivance which can be changed when desired, in which the rotation of the fork and thereby the bending of the rope is limited.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

A catch-fork for rolleys characterized by a fork shaft (*k*), which is fixed rotary at its lower end with point or a pivot shaped as desired in a fixed block and underneath the fork in a collar and is kept by means of a peg (*d*) in a horizontal groove (*g h*) of the collar in such a manner, that it, if the rope in motion is inserted into its eccentric fork, can be rotated only at an angle ($\angle a d b$ or $\angle b d c$) conforming to the permissible bending of the rope and thereby is assured against being raised out of its block, while an aperture (*f*) perpendicular to the groove (*g h*) allows an easy changing of the catch-fork.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

AUGUST LAUENROTH.

Witnesses:

ALVESTO S. HOGUE,
JEAN GRUND.