TRIPOD FOR SUPPORTING COAL CHUTES AND THE LIKE

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In the delivery of fuel and particularly for the purpose of conveniently transferring it from a coal-laden truck or wagon into the coal bin in the basement of a house or factory building, it is customary to employ the well known device—a chute, into which the coal or fuel is dumped or shovelled and through which it slides to the bin.

The chute is ordinarily of sufficient length to extend from within a few feet of the loaded vehicle to the basement window, on the casing of which its lower end rests, the chute projecting slightly into the basement beyond the window to permit of the coal falling directly into the bin.

The coal entrance end of the chute must necessarily be at a considerably higher elevation than the exit end, to provide for its proper inclination, and therefore some means must be supplied to support that end which is nearer the truck.

It is the purpose of the present invention to provide novel apparatus which will function when in use to accomplish the foregoing requirement.

Briefly, my invention consists in improvements in a tripod device comprising two long legs and one short one, the three legs being pivotally connected together at a point intermediate the ends of the long legs, the latter being provided also, at their top ends, with an interconnecting chute-supporting member in the form of a single chain, one end of which is fixed to one of the long legs and the other end susceptible of extension and retraction through a locking-plate mounted on the other of the long legs.

There is further provided a tri-branch chain, the ends of two of the branches being fixed, respectively, on the two long legs below their pivoting point and the third branch operable in a locking device mounted on the short leg of the tripod.

This particular construction permits of setting up the tripod in various positions with respect to the relative inclination of the legs so that a greater or lesser elevation of the chute-supporting chain may easily be had, with a consequent locating of the receiving end of the chute to give the latter the proper inclination.

Other specific objects will be dealt with as the detailed description of the apparatus proceeds, and for a better understanding of the character of the invention reference should be had to the following specification, taken in connection with the accompanying drawing in which a preferred embodiment thereof is disclosed.

In the drawing, in which similar reference characters are employed to identify like parts in all views—

Fig. 1 is a perspective view of my tripod showing a portion of a coal-chute mounted thereon;

Fig. 2 is a fragmentary view of a truck or wagon body, showing the tripod folded and stored on the side thereof;

Fig. 3 is a perspective view of the chain-locking device;

Fig. 4 is a fragmentary side view of the tripod showing the method of pivotally connecting the three legs, and,

Fig. 5 is an end view of the tripod and the elements employed to store it on the side of the truck body, or on the wall of a building.

Referring to the drawing, and particularly to Fig. 1 thereof, 10 and 11 represent, respectively, the two long legs of the tripod and the shortest one.

Considerably above a point midway of the lengths of the legs 10 and 11 is an eye-bolt 13 which passes through both of these legs and serves as a common pivot upon which they may swing. The upper end of the leg 12 is provided with lateral plates 14, secured to the leg by rivets 15. Through holes 16 in the respective plates passes the rivet 17, the latter also operating through the hole in the eye-bolt 13.

This method of connecting the three legs together allows the two longer ones to open and close, as do scissor blades, and the leg 12 to rotate with the eye-bolt as well as to swing on the axis of the rivet 17. Thus a substantially universal joint is procured for the leg 12 which is of considerable importance and of marked advantage when the tripod is required to be set on terraced or
uneven ground, necessitating placing the leg 12 out of symmetrical relation with the other legs.

Secured in each of the legs 10 and 11, below their mutual pivoting point, is a staple 18, attached to each of which is one of the branches 19 of the tri-branch chain A.

These branches unite at 20 and the chain continues in a third branch 21 to and through the locking-plate 22, shown in enlarged detail in Fig. 3.

The plate 22 has therein a round hole 23 beneath which is a portion vertically slot
ted, as at 24, and on each side of this slot is an outwardly bumped guard 25. As will be seen in Fig. 3, the chain 21 is of the twisted link type so that when the narrow portion 26 of any particular link lies in the slot 24 the wider portion 27 of the outwardly adj
cent link is disposed transversely of the slot, positively preventing movement inwardly of the chain—or in the direction of the arrow.

It will be understood, of course that there is an aperture through the leg itself aligning with the one through the plate.

The opening 28 is sufficiently large to permit of the chain passing bodily therethrough, and when adjustments are to be made, the chain is lifted from the slot 24 and held in alignment with the hole 23, in which position it may be moved in either direction—depending on whether the bases of the three legs are to be extended or retracted relatively.

The chute-supporting chain 29 on which rests the chute 29 is similar to the chain 21, and operates in another locking plate 32 of similar construction to the one on the leg 12.

Both chains, 21 and 28 have large ring links 30 and 31, respectively, on their free ends for the purpose of preventing complete withdrawal of the chains from out of the locking plates 32.

It is obvious that higher or lower elevations of the end B of the chute may be obtained by the actuation of the chains 21 and 28—drawing them outwardly from the locking plates 22 to raise the chute or allowing them to recede in the plates to lower it.

Apparatus of this class on account of its being used by rough workmen is quite apt to be misused by being thrown onto or off the truck or wagon. To provide proper facilities for storing the apparatus on the truck body T so that there is no occasion for its being mishandled, and yet instantly available for use when required, I mount on the body of the vehicle a yoke 32 and forwardly thereof a staple or eye-bolt 33. On the leg 11 of the tripod is a staple 34 to which is attached a snap hook 35. By folding the legs of the tripod, inserting the lower portions thereof in the yoke 32 and snapping the hook 35 in the staple 33, the whole tripod is securely housed on the truck body.

It is perfectly feasible to employ the members 32 and 33 by which to secure the apparatus on the wall of the coal shed, or other fixed location about the coal yard.

The advantages of this tripod will be apparent, especially to those in the coal handling business. More often than not drivers of coal trucks lose much time and expend considerable effort in searching for boxes, barrels or other devices with which the coal receiving end of the chute may be supported. With the present invention this matter of supporting the chute is very conveniently and expedi
tiously taken care of, as the means for accomplishing this is always at hand and readily adaptable to any situation.

In the foregoing the apparatus has been described as being particularly adapted for use in supporting chutes when handling and transferring coal, but it must not be assumed that its use is restricted to this purpose alone.

as, obviously, it may profitably be employed for a similar purpose in moving grain, gravel, boxes or other commodities through chutes. It may also be serviceable in supporting stag
ing for indoor painting, paper hanging and decorating.

The disclosed embodiment of my invention is a preferred one although its preciseness is immaterial provided its essential characteristics are employed, as pointed out in the ap
pended claims.

What I claim and desire to secure by Letters Patent is:

1. In a device of the character described, comprising two long legs pivotally connected at a point intermediate their ends, a short leg making pivotal connection at its upper end with the pivoting means for said long legs, and a chute-supporting chain interconnecting the two long legs at points above their pivotal point, one end of said chain being fixed on one of said long legs and detachably secured to the other.

2. In a device of the character described having characteristics according to claim 1, and in addition a tri-branch chain having two of the branches thereof fixedly connected, respectively, to the two said long legs at points below the pivoting point of said legs, and the third branch detachably secured to the said short leg.

3. In a device of the character described comprising two long legs, an eye-bolt adapted to pivotally connect said legs at a point above their mid-length, a short leg making pivotal connection with the eye of said eye-bolt, a chain fixed to and near the upper end of one of said legs, an aperture in the other of said legs, a plate having an aperture therein mounted on said last mentioned leg, the apertures in said plate and said leg being in alignment, relatively, and capable of passing said chain bodily therethrough, and means on said plate whereby each link in said chain, singly,
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may be secured thereon and said chain held against movement through said apertures.

4. A tripod device comprising two long legs, an eye-bolt pivotally connecting said legs at a point intermediate their ends, a short leg pivoted at its upper end to the eye of said eye-bolt and disposed in such manner that it may swing in a plane parallel to the planes in which said long legs are adapted to swing and also in a plurality of planes at right angles thereto, a chain fixed to one of said long legs, near its upper end, an aperture in the other of said long legs through which said chain operates, a plate on said last mentioned leg having an aperture therethrough in alignment with the aperture in said leg, means on said plate adapted to secure said chain in said plate, at any one of its respective links, against longitudinal movement through said apertures, and a chain fixedly attached to one of said long legs, below the pivoting point thereof, adapted to be detachably secured to said short leg and hold the two said legs, relatively, in various angular positions.

5. A device of the character described, adapted to provide support for one end of a chute, comprising two long legs, pivoting means swingingly securing said legs at a point above their mid-length, a chain on which said chute is adapted to be borne, fixed at one end to one of said legs near its upper end, a locking-plate on the other of said legs through which said chain may pass, means on said plate to lock said chain against movement therethrough at any one of its respective links, a short leg making pivotal connection on the pivoting means for said long legs, and means to restrict the outward movement of the base of said short leg from the base of one or both of said long legs when said device is in operative position.

6. A device of the character described, adapted to support a chute or a platform at various predetermined elevations from its base, comprising two long legs, a bolt on which said legs may swing in parallel and adjacent planes, a short leg having a swivelling connection with said bolt, whereby it may both rotate therewith and swing outwardly therefrom, a chute-supporting, twisted-link chain fixed at one of its ends on and near the top of one of said long legs, an aperture in the other of said long legs, a plate on said last mentioned leg adjacent the aperture therein, a perforation in said plate of sufficient capacity to receive said chain and allow it to pass bodily therethrough, a vertically disposed slot beneath said perforation, of a width to receive, edgewise, the narrow portion of each of the links in said chain, whereby when thus disposed the wider portion of said link is presented transversely to the slot and prevents longitudinal movement of said chain through the aperture in said long leg, a plate having the characteristics of the aforesaid plate mounted on the said short leg, a twisted-link chain operable in said last mentioned plate and extending, by two branches, to the two said long legs, respectively, to which said branches are fixedly secured, and means on said device whereby it can be secured to the side of a truck or the wall of a building.

In testimony whereof I affix my signature.

FRANK C. JOHNSON.