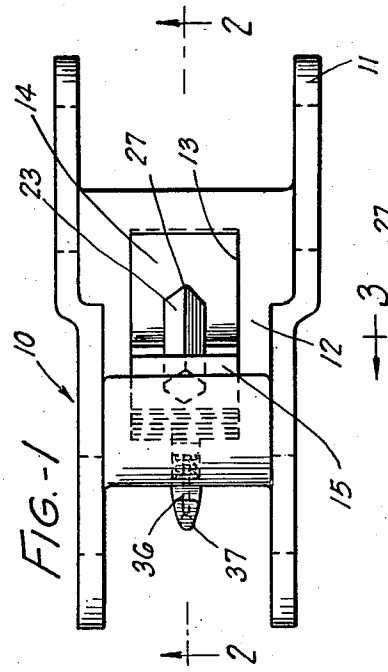
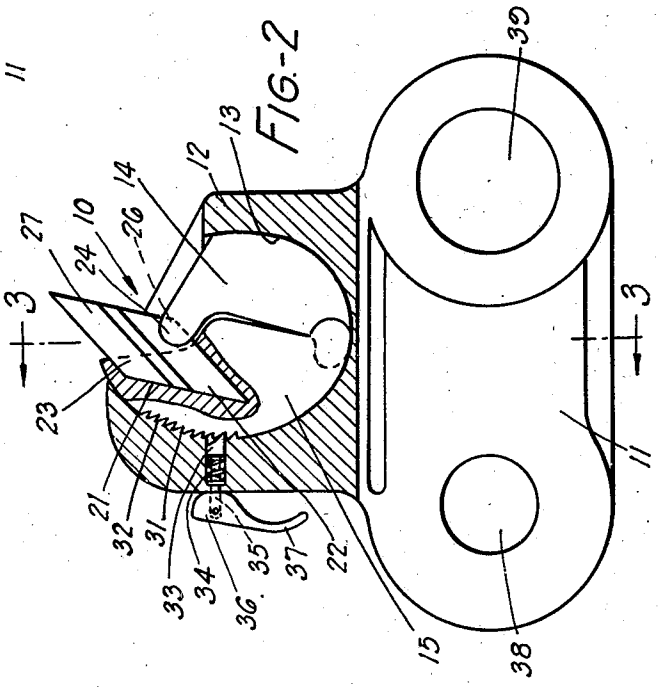
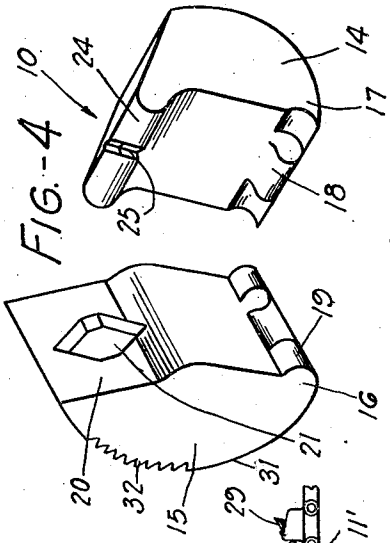
Jan. 11, 1949. E. F. JOHNSTON 2,458,946

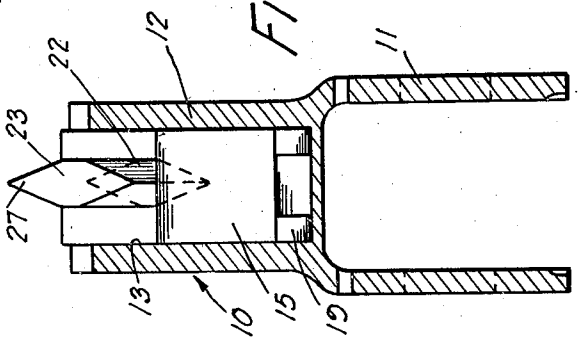
BIT HOLDER FOR COAL CUTTING CHAINS

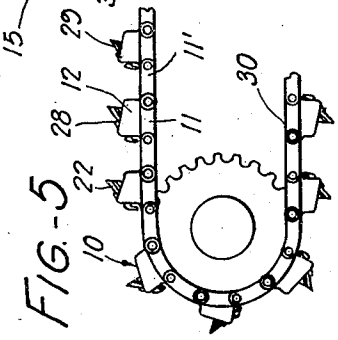
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Attorneys

Patented Jan. 11, 1949 2,458,946

UNITED STATES PATENT OFFICE

2,458,946

BIT HOLDER FOR COAL-CUTTING CHAINS

Edwin F. Johnston, Earlington, Ky.

Application August 28, 1945, Serial No. 613,110

4 Claims. (Cl. 262—33)

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My invention relates to improvements in coal cutting chains and has for its object to provide a bit holder so formed as to permit rapid release for a cutter bit.

A further object of this invention is to provide means whereby a bit may be very rapidly inverted or renewed in the holder.

Another object of this invention is to provide means in a bit holder for maintaining the holder lugs against movement in reversal of the coal cutting chain.

Other features and advantages will become more readily apparent from the following description and the accompanying illustrative drawings in which:

Figure 1 is a plan view of a chain link embracing my invention,

Figure 2 is a sectional elevational view thereof,

Figure 3 is a sectional view taken on line 3—3 of Figure 2,

Figure 4 is a perspective view of a pair of bit holding lugs shown separated, and

Figure 5 is a fragmentary elevational view of a coal cutting chain.

In the accompanying drawings as above enumerated and in the following specification, like characters of reference indicate like parts throughout and in which 10, indicates my invention which comprises a chain link 11, having an upstanding portion 12, provided with an arcuately formed pocket 13, in which is seated a pair of similarly formed lugs 14 and 15, the lower ends 16 and 17, of which are provided with disconnectible hinge members 18 and 19. In the central upper portion 20, of lug 15, is provided a half-diamond shaped recess 21, in which is seated the lower portion 22, of a diamond-shaped cutter 23, which is removably held in the recess 21, by the overhanging portion 24, of the lug 15, said overhanging portion being provided with a slot 25, into which the portion 26, of the cutter 22, is adapted to project when the members 14, 15 and 22, are in operative position, the point 27, of the cutter projecting outwardly of the member 12, to cooperate with other cutters 22, 28, 29, etc., of the chain 30. The arcuate wall 31, of the member 15, is provided with a series of ratchet teeth 32, into which the dog 33, pressed by a spring 34, is adapted to seat in order to hold the member 15, in rearward position when it is desired to remove or change the position of the said cutter, either end of which may be projected for cutting operations. The stem 35 (shown dotted), has pivoted thereto a cam 36, with a lever handle 37, for operation

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thereof, whereby the said dog 33, may be released for the removal of the members 14 and 15, from the said recess or pocket 13. The links 11, 11', etc., are provided with the usual bores 38 and 39, whereby said links may be connected in the usual manner.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Changes in shape, size and rearrangement of details and parts such as come within the purview of the invention claimed may be resorted to, in actual practice, if desired.

Having now described my invention that which I claim as new and desire to procure by Letters Patent is:

1. A chain link having an outwardly projecting block provided with a substantially cylindrical recess, a pair of lugs which combined have their surfaces conforming to the walls of the said recess and adapted to hold a bit, one of the lugs provided with a pocket shaped to conform to the contour of a substantial portion of the bit, said lugs having slip hinge connections at their lower ends, the other lug having a protruding upper edge provided with a socket into which an edge of the bit is adapted to project and whereby the said bit is locked within its seat, means whereby the lugs may be held against movement, a ratchet formed on the outer wall of one of the lugs and a spring controlled dog adapted to engage the ratchet teeth and forming said locking means, and means for holding the dog from engagement with the ratchet teeth.

2. A chain link having an outwardly projecting block provided with a substantially cylindrical recess, a pair of lugs which combined have their surfaces conforming to the walls of the said recess and adapted to hold a bit, one of the lugs provided with a pocket shaped to conform to the contour of a substantial portion of the bit, said lugs having slip hinge connections at their lower ends, the other lug having a protruding upper edge provided with a socket into which an edge of the bit is adapted to project and whereby the said bit is locked within its seat, means whereby the lugs may be held against movement, and a ratchet formed on the outer wall of one of the lugs and a spring controlled dog adapted to engage the ratchet teeth and forming said locking means.

3. A chain link having an outwardly project-

ing block provided with a substantially cylindrical recess forming camming surfaces, a pair of lugs which combined have their surfaces conforming to the walls of said recess for camming action to hold a bit, one of the lugs provided with a pocket shaped to conform to the contour of a substantial portion of the bit, said lugs having slip hinge connections at their lower ends, the other lug having a protruding upper edge provided with a socket into which an edge of the bit is adapted to project and whereby the said bit is locked within its seat, and resiliently tensioned means for preventing the removal of said lugs from the cylindrical recess in said block.

4. A chain link having an outwardly projecting block provided with a substantially cylindrical recess formed with camming surfaces, a pair of lugs which combined have their surfaces comforming to the walls of said recess and adapted to hold a bit, one of the lugs provided with a pocket shaped to conform to the contour of a substantial portion of the bit, said lugs having slip hinge connections at their lower ends,

the other lug having a protruding upper edge provided with a socket into which an edge of the bit is adapted to project for locking the bit within its seat, an arcuate cam rack on the lug formed with the bit-receiving pocket, and a cam retractable spring-projected detent supported by said block and engageable with said cam rack for preventing the removal of said lugs from the cylindrical recess in said block.

EDWIN F. JOHNSTON.

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