

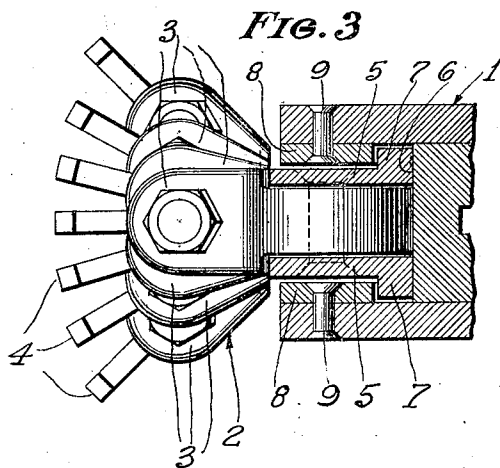
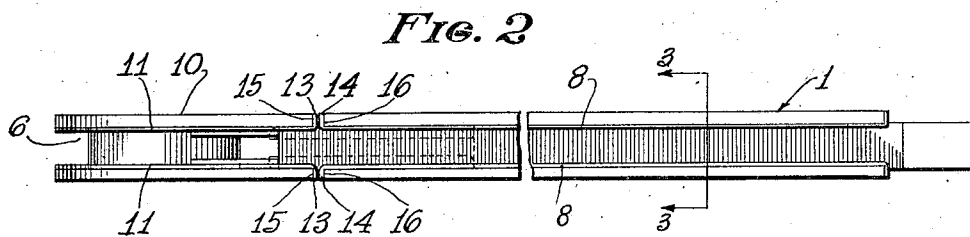
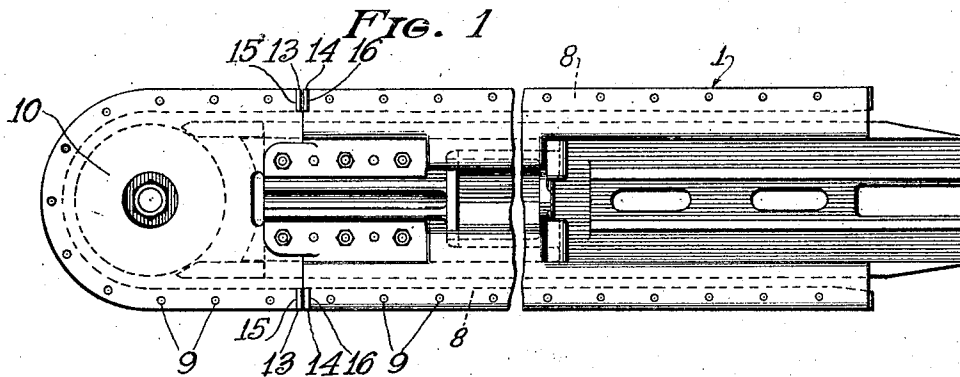
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T. E. PRAY

MINING MACHINE

Filed Aug. 3, 1921



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UNITED STATES PATENT OFFICE.

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MINING MACHINE.

Application filed August 3, 1921. Serial No. 489,517.

To all whom it may concern:

Be it known that I, THOMAS E. PRAY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Mining Machines, of which the following is a specification.

This invention relates to improvements in mining machines and more particularly to chain mining machines of the endless cutter chain type.

The principal object of the invention is to produce an improved construction of the guideway carrying the cutter chain.

In the drawings, which represent one form in which my invention may be embodied, Figure 1 is a plan view showing a mining machine cutter arm, with the cutter chain removed, constructed in accordance with my invention.

Figure 2 is a side view of the cutter arm, and

Figure 3 is an enlarged detailed section taken on line 3—3 of Figure 2.

In the embodiment illustrated, my invention is applied to a cutter bar 1, forming part of a mining machine, and having a cutter chain 2 mounted thereon. Said cutter chain is made up of a series of blocks, 3, 3, having cutter bits, 4, 4, projecting at varying angles therefrom, and connected together with suitable side-straps, 5, 5. The cutter chain moves in a guideway 6, formed about the cutter bar, and is provided with a series of retaining lips 7, 7, extending laterally from the base of the blocks and straps, and engaged with oppositely disposed guide strips, or gibs 8, 8, secured along the upper and lower margins of the guideway, by suitable means such as rivets 9, 9.

The cutter bar is also provided with a cutter head 10, connected to the forward end of the bar. In such case, the cutter head is preferably constructed as a separate unit, detachably connected to the cutter bar, and provided with a separate set of gibs 11, 11, secured thereto, arranged to form a continuation of gibs 8, 8, when the cutter head is attached.

As heretofore constructed, the adjacent ends of the gibs 8, 8 and 11, 11 usually abut end to end, and as so constructed, a slight displacement of the adjacent ends causes the chain to catch thereon, often causing injury to the chain or to the guides. In my im-

proved construction, the adjacent end portions of the gibs are turned outwardly with their faces abutting face to face as indicated by numerals 13 and 14, and suitable recesses 15, 15 and 16, 16 are formed in the cutter head and arm respectively, to accommodate the turned end portions as shown. This arrangement provides a more durable construction and eliminates the disadvantages of the prior construction above pointed out. It is obvious that the invention may also be applied to many other forms of chain guideways in which the gibs are formed of a plurality of abutting sections.

Having described my invention what I claim as new and desire to cover by Letters Patent is:

1. In a mining machine, a guide section having a marginal recess at one end, and a gib on said section having an end portion turned outwardly into said recess, with its end face substantially flush with the adjacent end surface of said guide section.

2. In a mining machine, a gib formed of a plurality of metal strips arranged in alignment with each other, the end portions of adjacent strips being turned outwardly and abutting face to face.

3. In a mining machine, a grooved member forming a chain guide and a pair of oppositely disposed gibs, mounted in said guide, each formed of a plurality of metal strips arranged in alignment with each other, the end portions of adjacent strips being turned outwardly and abutting face to face, substantially as described.

4. In a mining machine, a chain guide comprising a plurality of grooved sections, the abutting ends of said grooved sections being provided with marginal recesses, and gibs mounted in said grooved sections each comprising a metal strip having an end portion thereof turned outwardly and fitting in its respective marginal recess.

5. In a mining machine, a chain guide comprising a plurality of grooved sections one of said sections having a marginal recess at its end and a gib mounted on said section having an end portion thereof turned outwardly into said recess and abutting face to face with the adjacent grooved section.

Signed at Chicago, Illinois, this 1st day of August, 1921.

THOMAS E. PRAY,