Jan. 21, 1969 O. L. CRAYCRAFT 3,422,483

PIPE WIPER

Filed May 2, 1966 Sheet 1 of 2

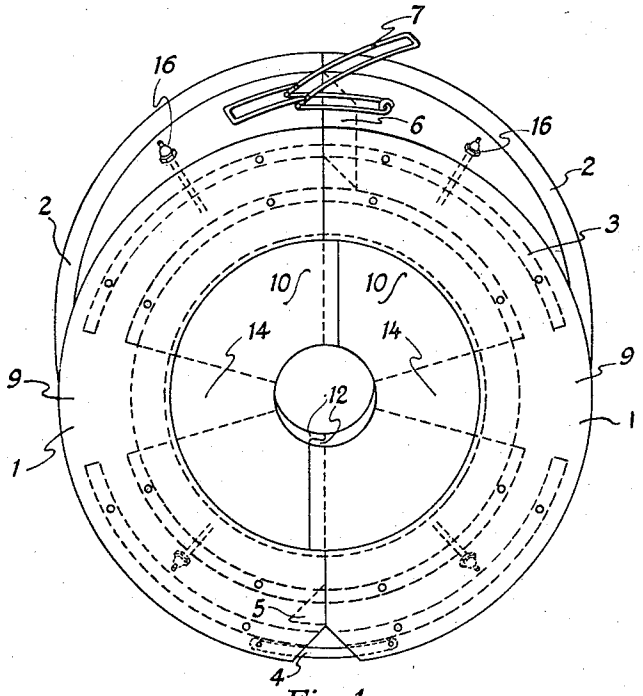

Fig.1

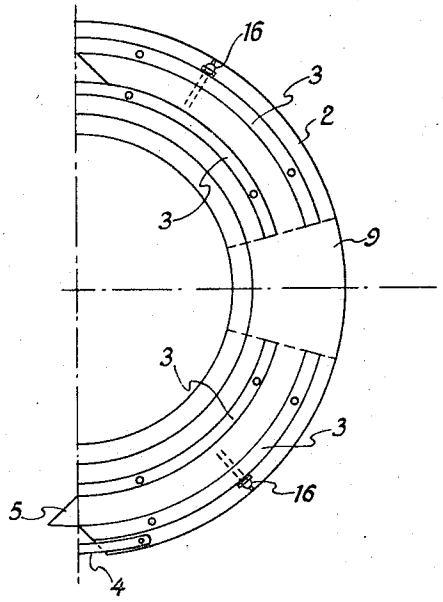

Fig.2

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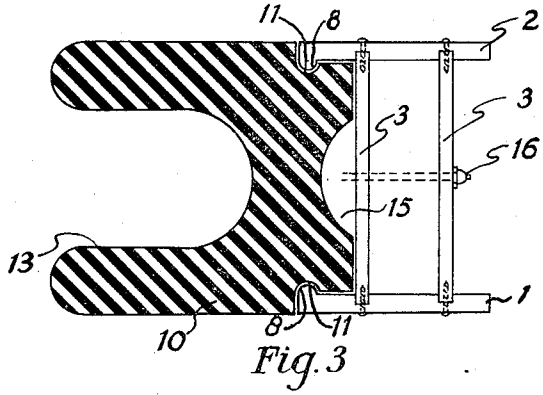

Fig. 3

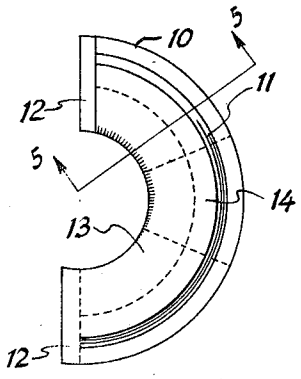

Fig. 4

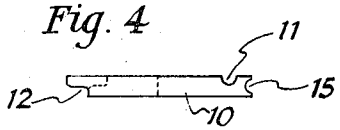

Fig. 5

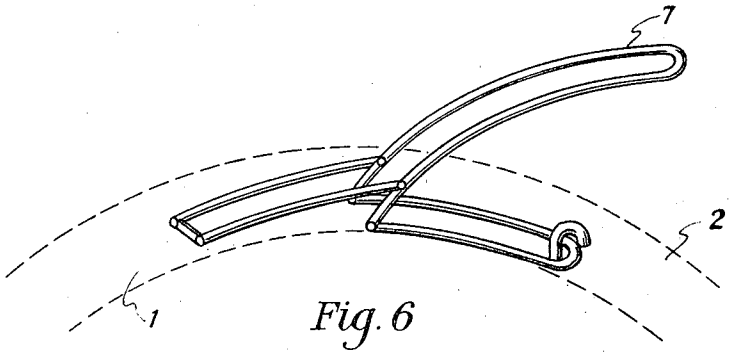

Fig. 6

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3,422,483

PIPE WIPER

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Filed May 2, 1966, Ser. No. 546,850
U.S. Cl. 15—210 1 Claim
Int. Cl. A47l 13/42

ABSTRACT OF THE DISCLOSURE

A wiper device to be detachably secured to a string of pipe, or the like, at a well head, for cleaning the pipe as it is withdrawn from the well bore having a hinged framework and plural wiping elements releasably held therein for removal of the wiping elements from the device when an obstacle is encountered that would otherwise damage said element, said elements being designed for easy reattachment in the device after such removal.

This invention relates to new and useful improvements in a wiper.

It is an object of this invention to provide a device for wiping pipe, and the like, having novel means for attaching same around the object to be wiped, such as a rod or string of pipe in a well bore, to permit ready removal and reattachment as desired.

It is another object of the invention to provide a wiper having a detachable insert that will wipe the pipe, or the like, passing therethrough, and that will yield when a joint or tool, or the like, is drawn therethrough, and will be drawn out of the framework where it may be easily replaced without damage.

It is another object of the invention to provide a pipe wiper having wiping members of novel construction designed to effectively maintain a wiping action on the pipe, or the like, working in a well bore, and to present a barrier preventing inadvertent entrance of debris into the well bore or casing from above.

With the above and other objects in view, the invention has relation to certain novel features of construction, operation and arrangement of parts more particularly defined in the following specification and illustrated in the accompanying drawings, wherein:

FIGURE 1 is a top perspective view of the device.

FIGURE 2 is a top view of the inside wall of one section of the device.

FIGURE 3 is an enlarged cross sectional view, showing the pipe wiping element employed, and the manner in which it is secured in the frame.

FIGURE 4 is a top view of the flexible wiping element.

FIGURE 5 is a side view of the flexible wiping element.

FIGURE 6 is an enlarged perspective view of the latch means employed.

Referring now more particularly to the drawings, the numerals **1, 1, 2, 2,** designate the outside members of the framework sections having the arcuate reinforcing ribs **3, 3** spacing said members **1, 2** apart. The said sections are hinged at **4** and each section has the aligning projections **5, 6** and a latch as **7,** diametrically opposed to the hinge **4,** releasably secures the sections in joined relation. The inner periphery of each side member **1, 1, 2, 2,** is inwardly turned, forming the beads **8, 8** and each rib **3** terminates at its inner end providing a discharge passageway **9, 9** in each section.

The wiping elements **10, 10** are of suitable flexible material, such as hard rubber or neoprene, and are reduced at their outer margin to be received between the members **1, 2** and having the marginal groove **11, 11** at the point of reduction, in which the beads **8, 8** are received

and the inner margins of the elements, being arcuate, providing pipe wiping elements when the sections are joined. The respective ends of each element **10, 10** are reduced vertically as at **12** to permit lapping of the respective elements when in joined relation. The inner peripheral margins of the elements **10, 10** are deeply grooved as at **13** and a passageway **14** extends through each element laterally and flares outwardly into alignment with the passageways **9, 9** in the framework sections.

Lubricating fixtures as **16, 16** extend through the ribs **3, 3** to provide means for introducing lubricants into the groove **15** in the elements **10.**

The elements **10, 10** fit tightly in the framework sections between the members **1, 2,** the bead **8** on the respective members **1, 2** fitting in the groove **11** and restraining the elements therein. As the sections are clamped around a pipe, and the pipe is drawn therethrough, the fluid escaping the first lip of the groove **13** will readily flow through the discharge openings **14** and through the discharge openings **9** of the respective sections, the respective ends of the elements **10, 10** being misaligned to provide a thorough wiping action.

Debris from the area above the wiper will be restrained from entering the area around the pipe or other object being wiped and where a tool head or the like is inadvertently drawn through the wiper, instead of destroying the elements **10, 10,** the groove **15** will permit these elements to yield and release the bead **8** from the groove **11** adjacent the point of contact, and the wiping elements thus withdrawn from the members **1, 2,** and the elements thus withdrawn may be readily replaced, and will suffer no damage by their withdrawal. Where a tool is being withdrawn, or some object larger than the wiper elements, is being moved through the well head, the latch **7** may be readily disengaged and the wiper removed and reattached after the larger object has passed.

A single set of frames may be employed, and as many different sizes of wiping elements as desired may be fitted therein, with the arcuate faces of the wiping elements of the size desired to wipe the various sizes of pipe or other working string in the well bore.

While the foregoing is considered a preferred form of the invention, it is by way of illustration only, the broad principle of the invention being defined by the appended claim.

What I claim is:

1. In a novel wiper, a framework consisting of two hinged sections, each section having a pair of outer members and a pair of reinforcing ribs maintaining said outer members in spaced relation, flexible wiping elements detachably maintained in said sections and abutting against the item to be wiped, said wiping elements having one end reduced to be received by said sections, grooves formed in the point of reduction of said elements, beads on the internal wall of each of said sections to be engaged in said grooves, an outer peripheral groove in said elements and a relatively deeper inside peripheral groove therein, providing means for moving one of said grooves out of engagement with a bead and out of said sections when an obstacle is drawn through said elements.

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