Aug. 16, 1938. R. G. LE TOURNEAU 2,127,084

SHEAVE BLOCK MOUNTING

Filed Jan. 7, 1938

Fig. 1

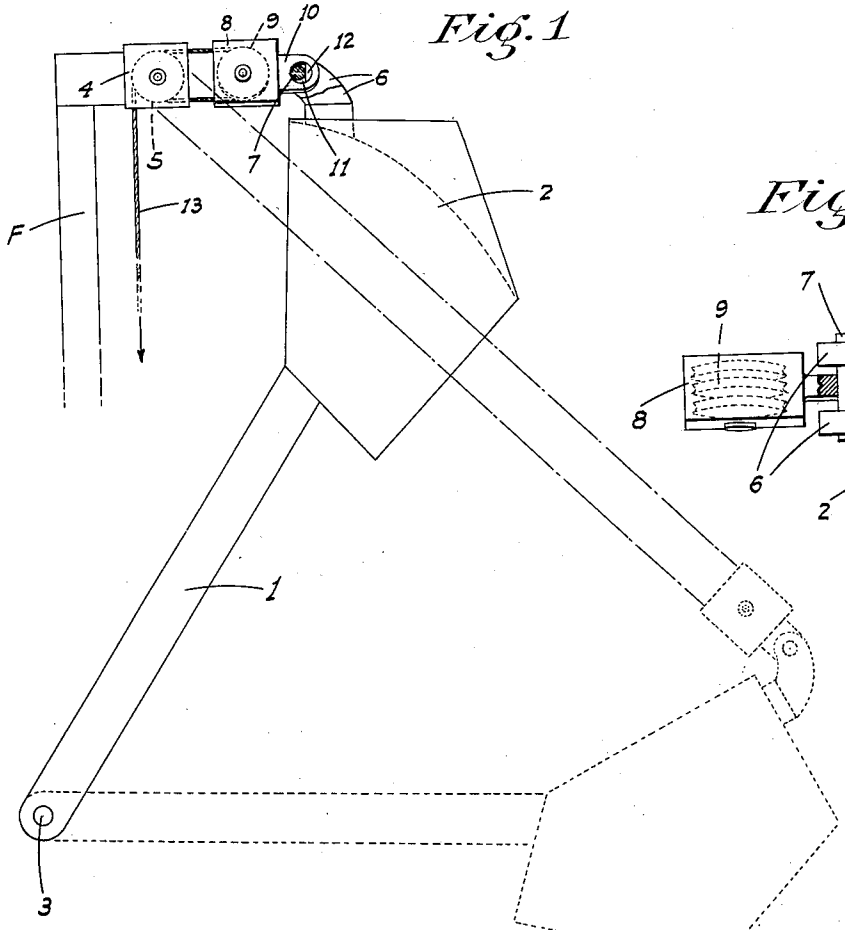
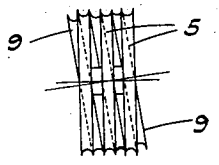


Fig. 2

Fig. 3
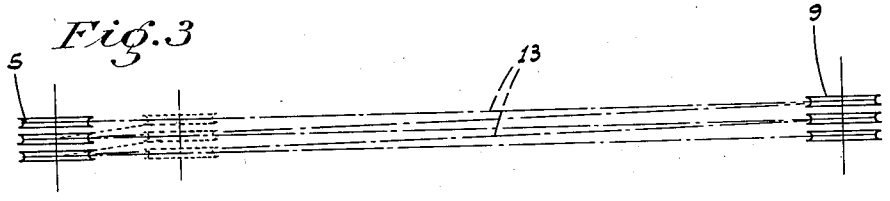


Fig. 4



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SHEAVE-BLOCK MOUNTING

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Application January 7, 1938, Serial No. 183,820

3 Claims. (Cl. 254—195)

This invention relates to the mounting of sheave blocks on movable cable controlled booms and the like, under operating conditions where such sheave blocks are apt to be drawn quite close to the relatively fixed cooperating sheave blocks about which the cables pass.

An arrangement of parts, calling for such relative movement of the sheave blocks, is shown, for instance, in my Patent No. 1,875,047 dated August 30, 1932, as well as in the scraper shown in my copending application for patent Serial No. 179,481, filed December 13, 1937.

When the sheave blocks are fixed on their respective parts in such positions that the pulleys are in permanent parallel alined relation, the cable runs extending between such pulleys are unduly angled when the pulleys are close to each other and tend to bind and wear excessively, or jump the pulleys.

This can, of course, be overcome by the use of sheave blocks mounted with eye or similar universal connections, but such arrangements are not suitable for the kind of implement and the type of construction which I employ.

It is therefore the principal object of my invention to provide what I believe to be a novel form of sheave block mounting which will permit of the movement of the sheave block about a definite circular path, and also allow the same to oscillate or swing in a lateral plane so as to cause the pulleys of the sheave block to properly aline with corresponding ones of the fixed block when said blocks are close to each other.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawing similar characters of reference indicate corresponding parts in the several views:

Figure 1 is a fragmentary side outline of a tractor mounted scraper according to said Patent No. 1,875,047, equipped with my improved sheave block mounting.

Figure 2 is a top plan view of the movable sheave block showing the novel mounting thereof.

Figure 3 is a diagrammatic plan showing the two sheave blocks in widely separated relation, and illustrating the relatively sharp angular relation of the cable runs when the pulleys are close and if the movable block was rigidly mounted.

Figure 4 is a diagrammatic end view of the pulleys of the two blocks in adjacent relationship, and with the movable block mounted according to my invention.

Referring now more particularly to the characters of reference on the drawing, the structure herein shown to illustrate the use of my sheave block mounting comprises side arms 1 supporting a scraper bowl 2 at one end and pivoted at the other end as at 3 in a relatively fixed position.

Secured on a fixed framework F at a certain height above the pivot 3 is a sheave block 4 including pulleys 5. Secured on the bowl 2 at the back and adjacent the top are transversely spaced ears 6, which support a pin 7 extending therebetween. Disposed just above or beyond the ears is another sheave block 8 including pulley 9. A single ear 10 is secured rigid with the back of the block 8 and projects between the ears 6 in spaced relation thereto. This ear 10 is provided with a circular hole 11 considerably larger than pin 7 and through which hole the pin passes. A filler element 12, having a straight chordal face parallel to and opposite the back of the sheave, is secured in the portion of the hole beyond the portion thereof required for the pin, or so that a line drawn through the center of the hole at right angles to and extending from said chordal face to the opposite edge of the hole, will be equal in length to the diameter of the pin. The pin is thus held between diametrally opposed points only, and the sheave block can turn about the pin as an axis without any lost motion, providing for smooth running operation and a minimum of wear. The block can also rock laterally on the pin a limited amount to one side or the other.

The actuating or control cable 13, which passes back and forth between the pulleys of the two sheaves, crosses over on one run as usual from a pulley of one block to an adjacent laterally offset pulley of the other sheave, as indicated in Fig. 3. Thus, when the pulleys of the two blocks approach each other, this cross over would be quite abrupt if it were not for the swivel mounting of the block 8. At it is, the block 8 can swivel laterally as shown in Fig. 4, so as to equally divide the angular relationship of the cable runs on opposite sides of the pulleys, reducing cable wear and the tendency to jump the pulleys to a minimum.

From the foregoing description it will be readily seen that I have produced such a device as

substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention, what I claim as new and useful and desire to secure by Letters Patent is:

1. A sheave-block mounting comprising a relatively thin ear rigid with and projecting from the back of the block, said ear having an initially circular hole therethrough whose axis is parallel to that of the sheaves of the block, a fixed round pin of smaller diameter than the hole projecting therethrough, and an element secured in and partially filling the hole and engaging the pin on one side only while maintaining the pin at a diametrally opposed point in contact with the adjacent wall portion of the hole.

2. A structure as in claim 1, in which the pin engaging face of said element is straight and is disposed in a plane at right angles to the line of pull on the block.

3. A structure as in claim 1, in which the pin engaging face of said element is straight and is disposed in a plane at right angles to the line of pull on the block, and is on the side of the pin farthest from said block.

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