June 13, 1939. T. J. UMPHRES 2,162,653

PIPE RACKER

Filed April 9, 1937

Fig. 1.

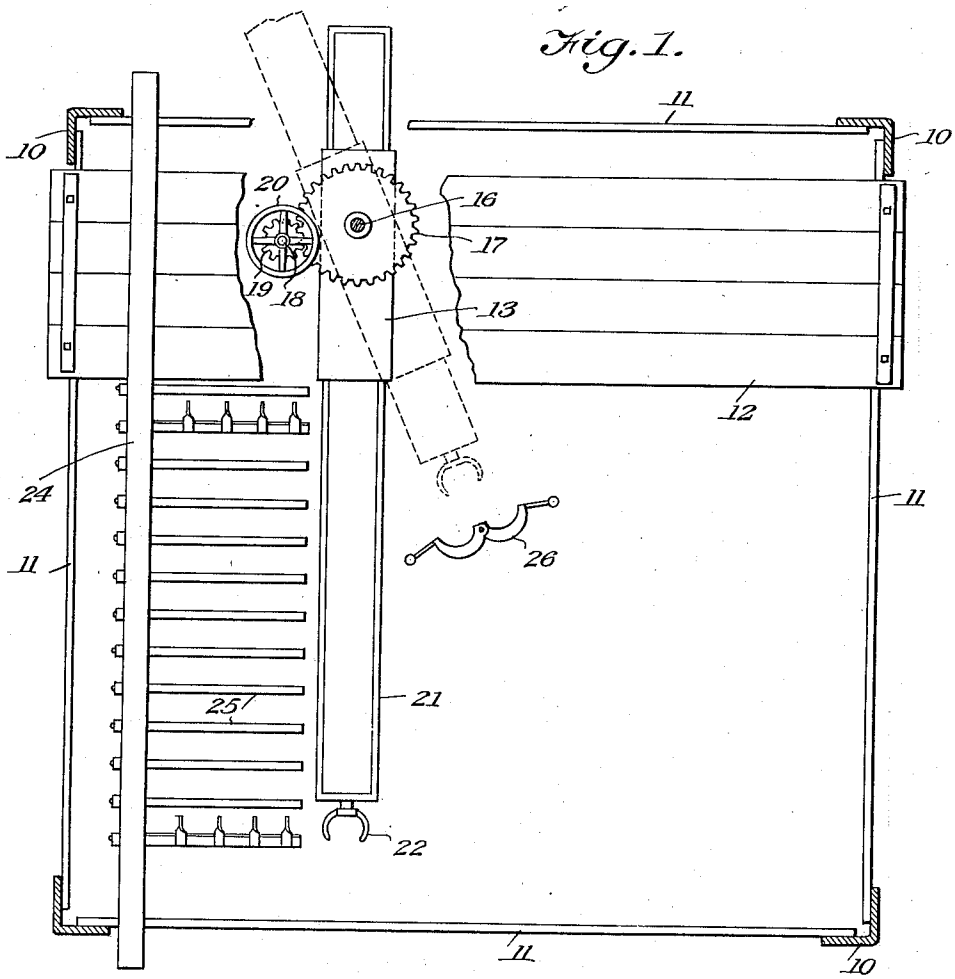


Fig. 2.

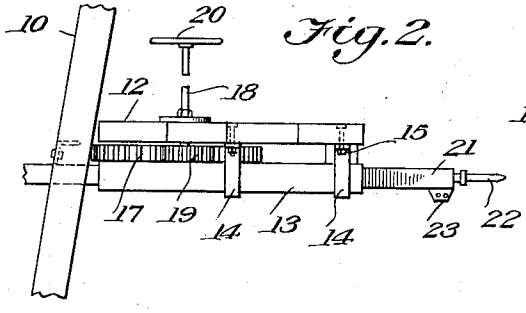
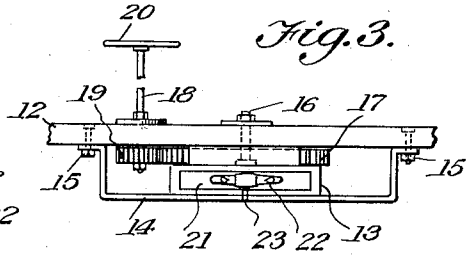


Fig. 3.



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PIPE RACKER

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1 Claim. (Cl. 214—1)

This invention relates to pipe rackers for oil wells and has for an object to provide a device of this character which will enable an operator to place the pipe in the derrick pipe rack with minimum effort, which will relieve the operator of having to swing the elevators out of plumb in order to latch the pipe in the elevators as hitherto, and which will reduce to a minimum the whip in the pipe or drill stem.

A further object is to provide a device of this character which will be formed of a few strong simple and durable parts, which will be inexpensive to manufacture, and which will not easily get out of order.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing forming part of this specification

Figure 1 is a cross sectional view through a derrick showing in top plan a pipe racker constructed in accordance with the invention.

Figure 2 is a side elevation of the pipe racker.

Figure 3 is an end elevation of the pipe racker.

Referring now to the drawing in which like characters of reference designate similar parts in the various views, 10 designates the legs and 11 the girders of a derrick. The fourble board 12 spans the girders. These parts are conventional.

In carrying out the invention the pipe racker is shown to comprise a casing 13 which is mounted upon the top or the bottom of the fourble board and in the present embodiment, is shown as mounted upon the bottom of the board by strap hangers 14 which are bolted to the fourble board, as shown at 15. The casing is preferably of rectangular formation in cross section and is pivoted adjacent its rear end to the fourble board by means of a pivot stud 16. The casing may thus be swung in an arc in a horizontal plane and is limited in swinging movement by contact of the sides of the hangers 14, as best shown in Figure 3.

A gear 17 is fixed to the pivot of the casing. A shaft 18 is journaled on the fourble board and is provided with a pinion 19 which engages the gear. A hand wheel 20 is fixed to the shaft by means of which the casing may be turned about its vertical axis.

A bar 21 similar in cross section to the casing and considerably longer than the casing is mounted in the casing for sliding movement with respect thereto. The bar is provided at its front end with a substantially U-shaped shoe 22 in which is placed the pipe to be racked, or which is engaged with the pipe to be removed from the rack. The bar is provided at its front end with a downwardly directed member 23 which may be connected to means for moving it forwardly or rearwardly and such means may be a steam engine, electric motor or other means. Also the manually operable means for turning the casing and bar may be replaced by power means.

In operation the pipe racker just described may be used by the derrick man as a platform to stand upon to enable him to place the pipe in the derrick pipe rack without much effort and thus will eliminate much danger and hazard hitherto existing, as the derrick man has hitherto had nothing to stand upon except the ends of the fingers of the pipe rack, shown conventionally at 24, after he leaves the fourble board.

In practice the shoe 22 holds the pipe in line while it is being pushed out from the side of the fourble board to be landed in whatever finger 25 of the pipe rack the operator may desire. Then the pipe racker is swung back on its pivot to receive the next pipe. A pipe may be placed in the shoe, and the casing swung around in line with the elevators by manipulating the hand wheel 20, and thereupon the power may be applied to extend the bar 21 outwardly and push the pipe into the jaws 26 of the elevators which jaws snap together and take hold of the pipe. In this manner the operator is relieved of the necessity of swinging the elevators out of plumb in order to latch the pipe in the elevators as heretofore.

From the above description it is thought that the construction and operation of the invention will be fully understood without further explanation.

What is claimed is:

A pipe racker comprising the combination of a derrick, a platform on the derrick, a casing pivoted near its rear end on the platform and swingable on a vertical axis, a gear fixed to the pivot of the casing for rotating the casing, a shaft journaled on the platform, a pinion on the shaft engaging the gear, a hand wheel fixed to the shaft, a bar telescopically assembled with the casing and of longer length than the casing, a member connected with the bar to which may be connected means for moving the bar forwardly or rearwardly relatively to the casing, and a shoe on the free end of the bar adapted to be engaged with the pipe to be racked or to be withdrawn from the rack.

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