F. A. McKEE.

DRAG SAW MACHINE.

APPLICATION FILED SEPT. 15, 1914.

1,173,824.

Patented Feb. 29, 1916.

2 SHEETS—SHEET 1.

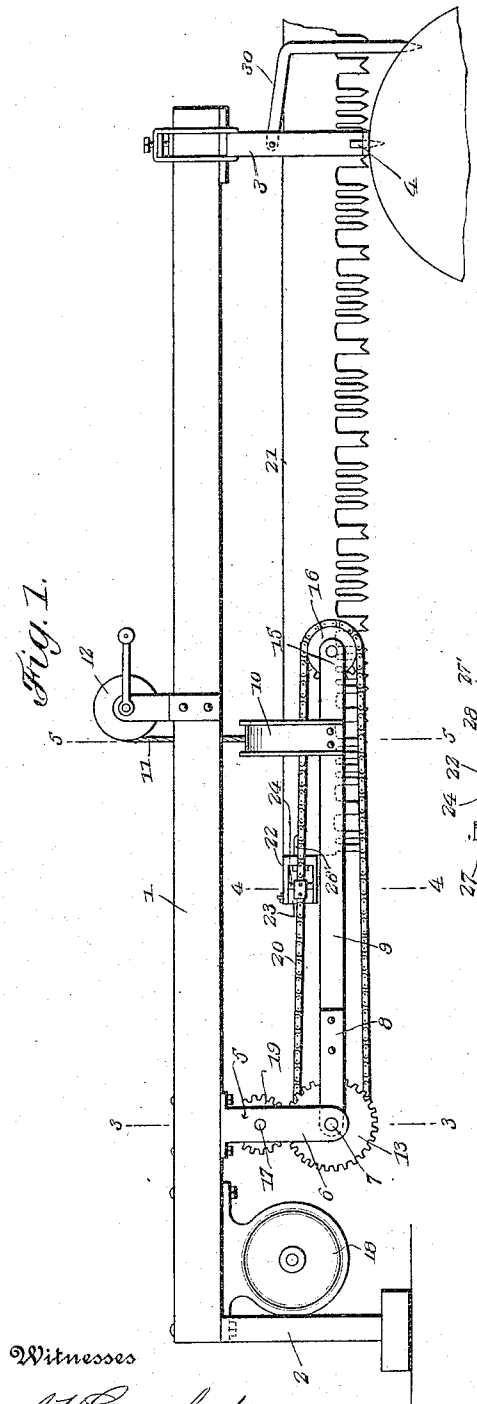


Fig. 1.

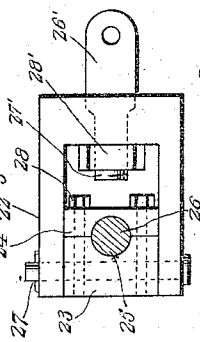


Fig. 7.

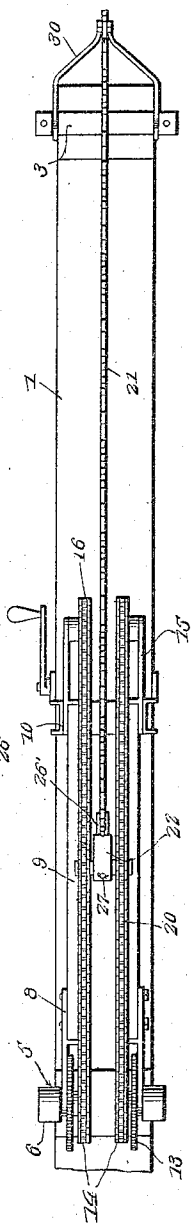


Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 5.

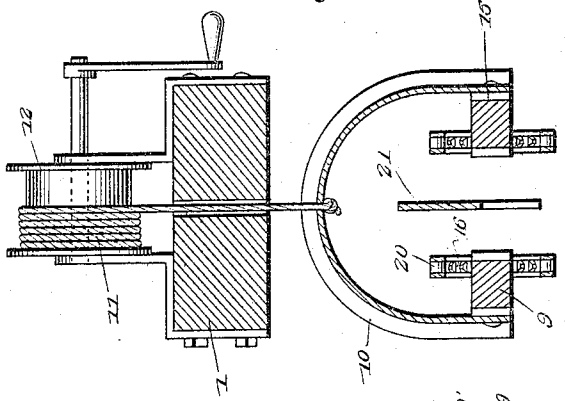


Fig. 6.

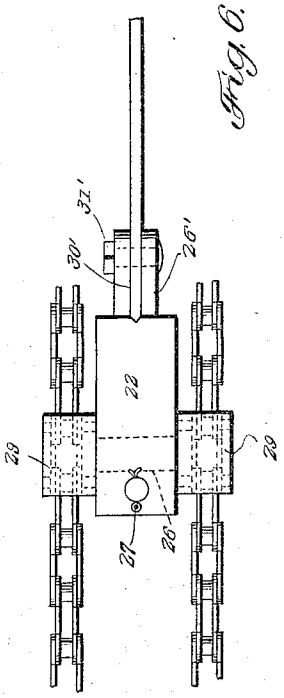


Fig. 3.

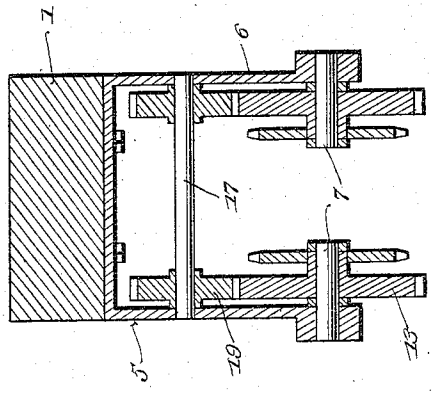


Fig. 8.

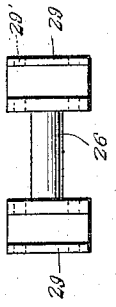
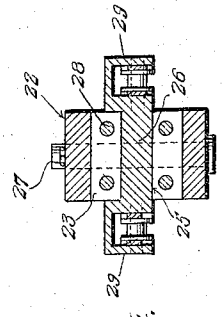


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK A. McKEE, OF FORTUNA, CALIFORNIA.

DRAG-SAW MACHINE.

1,173,824. Specification of Letters Patent. Patented Feb. 29, 1916.

Application filed September 15, 1914. Serial No. 861,857.

To all whom it may concern:

Be it known that I, FRANK A. McKEE, a citizen of the United States, residing at Fortuna, in the county of Humboldt and State of California, have invented new and useful Improvements in Drag-Saw Machines, of which the following is a specification.

The invention relates to a drag saw machine, wherein parallel endless chains are utilized as the reciprocatory power means for the saw.

The main object of the present invention is the provision of a drag saw machine in which simultaneously and similarly operated chains having connection with the intermediately arranged saw are utilized as reciprocatory propelling means for the saw, whereby the desired length of stroke may be imparted through mechanism which is readily portable and compact.

The invention in the preferred form of details will be described in the following specification, reference being had particularly to the accompanying drawings, in which:—

Figure 1 is a side elevation of the improved machine. Fig. 2 is a plan of the same. Figs. 3, 4, and 5 are sections respectively on the lines 3—3, 4—4, and 5—5 of Fig. 1. Fig. 6 is an enlarged plan of the attaching means between the saw and chains. Fig. 7 is a side elevation of the attachment block. Fig. 8 is a bottom plan view of crank pin.

Referring particularly to the accompanying drawings, the improved drag saw machine comprises a main shaft or supporting bar 1 of appropriate length supported at one end upon a standard 2 and at the opposite end through adjustable connected log rest 3 terminating in spur or dog 4 to be forced into the log.

Secured to the bar 1 a short distance in advance of the rear thereof is what I term a stirrup 5 in the depending spaced legs 6 of which near their lower ends are mounted stub shafts 7, said shafts being in alinement transversely of the machine.

Supported on each shaft inwardly of the leg is a bracket 8 in which in advance of the shaft is secured what I term a cradle bar 9.

The cradle bars are coextensive in length to that of the operating chains and are adjustably supported at their forward ends through the medium of the cable strut 10 connected by a cable 11 with the manually operable windlass 12 mounted upon the upper surface of the main bar.

The respective bracket plates present spaced sections at their connection with the stub shaft and on each shaft between the spaced sections of the bracket plate are rotatably mounted a combined gear and sprocket, the gear 13 exceeding the sprocket 14 in diameter.

The forward ends of the cradle bars are provided with brackets 15 in which, in advance of the ends of the cradle bars are rotatably mounted sprockets 16, longitudinally alining respectively with the sprockets 14 at the opposite ends of said cradle bars.

Mounted in the leg 6 of the stirrup above the stub shafts 7 is a shaft 17 adapted to be operated in any suitable manner by a motor 18 also suspended from the main bar, though it is to be understood that the shaft 17 may be driven in any suitable manner. Gear pinions 19 are mounted upon the shaft 17 and adapted to respectively mesh with the gears 13 of the combined gear and sprockets, whereby movement is imparted to the latter in the operation of the motor.

Endless chains 20 of any usual or preferred type connect the respectively alined sprockets 14 and 16, so that the construction presents a pair of endless similarly and simultaneously operated sprocket chains traveling lengthwise above and below the cradle bars.

The saw 21 is of ordinary or usual type, and at its rear end is connected to the respective chains through the medium of an attachment shown more particularly in Fig. 6. This attachment comprises a stirrup member 22 between the bottom and top plates of which are mounted bearing blocks 23 and 24. These blocks are of suitable bearing material and each formed with a semi-cylindrical bearing 25 to receive what is termed crank pin 26. The upper block is held in stirrup by a bolt 27, while screws 28 secure the blocks together.

The crank pin is provided in the bearing blocks with hollow elongated extensions 29, in which an appropriate length of the chain is secured by pins 29′.

The stirrup is provided with a removable connecting bolt 26′ passing through the end or cross section of the stirrup and threaded within the same at 27′ to receive a nut 28′.

That end of the connector beyond the stirrup is formed with a longitudinally extending slot 30′ in which the saw is inserted, a pin 31′ securing the saw in place.

A saw guide 30 of any usual or preferred type, is carried by the log rest to guide the saw beyond the log.

From the above description it will be obvious that in the operation of the motor a similar and simultaneous movement will be imparted to the parallel chains, by reason of which movement a necessary reciprocatory movement will be imparted to the saw to perform sawing operation. From the use of the chains, the desired length of movement is imparted to the saw without the necessity of usual cranks or similar mechanism, whereby the machine is much more compact than the usual type of machine and more readily portable.

What is claimed is:—

1. A sawing machine comprising a main bar, a stirrup depending therefrom adjacent one end, spaced cradle bars projecting forwardly from said stirrup and pivotally connected therewith, sprocket wheels mounted upon said stirrup and on the foremost ends of said cradle bars, endless chains movable over said sprockets, a saw pivotally mounted between the said cradle bars, a connection between the chains and saw for imparting a reciprocatory movement to the latter, and means for lowering and raising the forward ends of said cradle bars.

2. A sawing machine comprising a main bar, a stirrup depending from one end thereof, spaced cradle bars extending forwardly from the stirrup and pivotally connected therewith, sprocket wheels mounted in the stirrup and on the free ends of said cradle bars, endless chains movable over said sprockets, means for operating said chains, a saw positioned between said cradle bars and mounted for free independent rocking movement, an element secured to one end of the saw having lateral extensions connecting the latter with both of said chains for reciprocating said saw, and means for adjustably supporting the free ends of said cradle bars.

3. A sawing machine comprising a main bar, a stirrup depending from one end thereof, spaced cradle bars extending forwardly from the stirrup and pivotally connected therewith, means for adjustably supporting the free ends of said cradle bars, sprockets mounted on said stirrup and on the free ends of the cradle bars, endless chains movable over said sprockets, a saw positioned between said cradle bars and chains, and mounted for vertical rocking movement, a stirrup secured to one end of the saw, bearing blocks carried by the stirrup, a crank pin mounted between the blocks, said pins having lateral extensions connecting the saw with both of the chains as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK A. McKEE.

Witnesses:
ETHEL E. NELSON,
HENRY NELSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."