T. M. McINTOSH.

ROPE MAKING MACHINE.

APPLICATION FILED JULY 28, 1908.

954,686.

Patented Apr. 12, 1910.

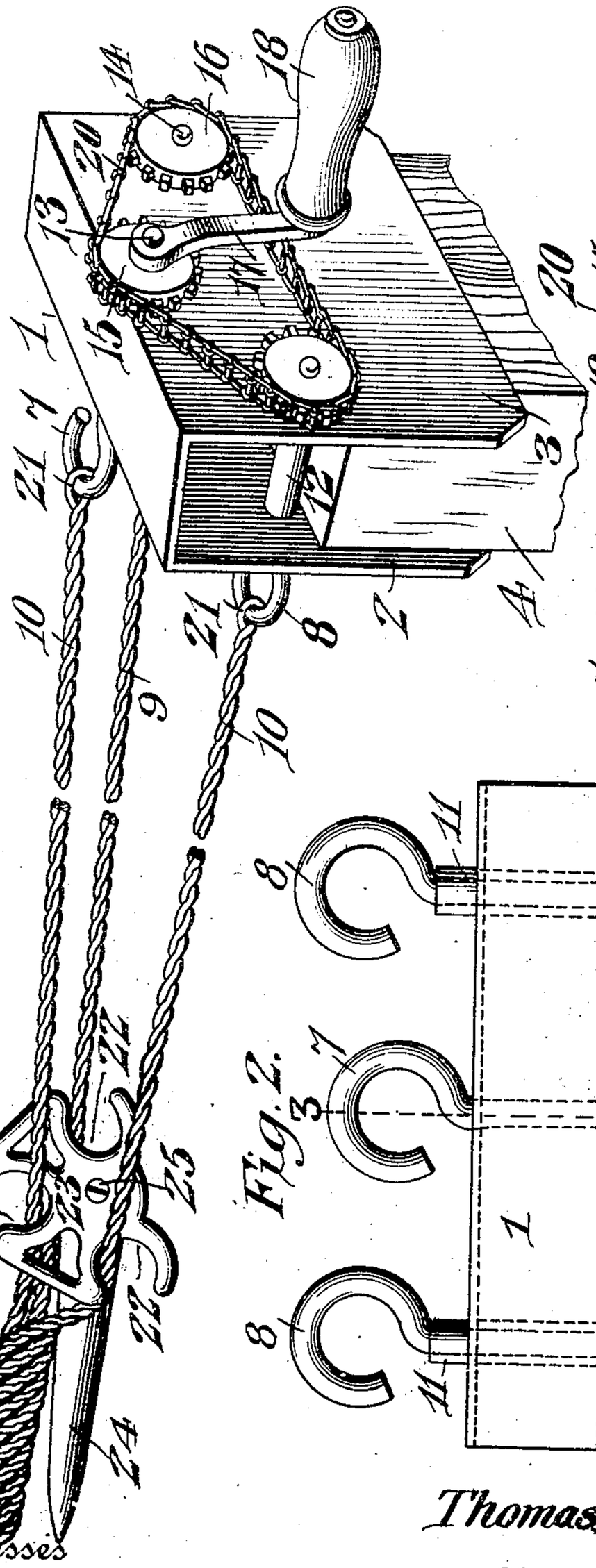

Fig. 1.

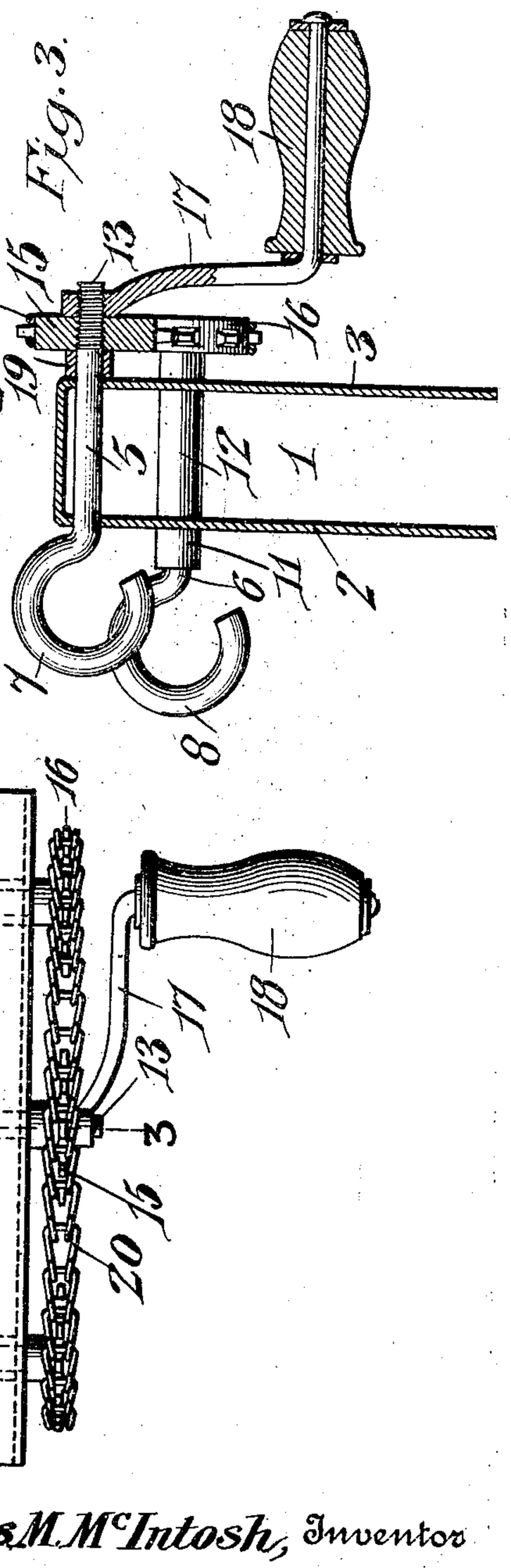

Fig. 3.



Fig. 2.

Witnesses

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# UNITED STATES PATENT OFFICE.

THOMAS M. McINTOSH, OF FAIRFIELD, IOWA.

## ROPE-MAKING MACHINE.

954,686. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed July 28, 1908. Serial No. 445,713.

*To all whom it may concern:*

Be it known that I, THOMAS M. McINTOSH, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented a new and useful Rope-Making Machine, of which the following is a specification.

The object of the present invention is to rope making machines.

The object of the present invention is to improve the construction of rope making machines, and to provide a simple, inexpensive and efficient machine, designed for the use of farmers and various other persons requiring halter ropes, tethering ropes, and the like, and capable of enabling a rope of any size or length to be easily and cheaply manufactured.

A further object of the invention is to provide a rope making machine of this character, adapted, without the use of fastening devices, to be readily mounted on a fence rail, the side of a wagon body or similar support for rigidly holding the machine in position for enabling the gearing to be conveniently operated.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a perspective view of a rope making machine, constructed in accordance with this invention. Fig. 2 is a plan view. Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a casing, designed to be constructed of sheet metal, or other suitable material and composed of parallel vertical sides 2 and 3, and a connecting top portion. The casing is open at its bottom and ends to enable it to be fitted upon and embrace the upper end of a post 4, or other suitable support, and the sides 2 and 3 are equipped with alined bearings for the shanks 5 and 6 of central and side strand twisting hooks 7 and 8. The casing straddles the upper end of the post, and the rigid sides firmly engage the support afforded by the upper end of the post.

The strand twisting hooks, viewed horizontally or in plan view, as shown in Fig. 2, are arranged in an arcuate series, the side hooks being projected in advance of the casing so as to maintain the center and side strands 9 and 10 at a uniform length and at a uniform tension. The side strand-twisting hooks 8 are maintained in their projecting position with relation to the casing by front spacing sleeves 11, arranged on the shanks of the hooks and interposed between the engaging portions of the same and the front side 2 of the casing. The sides of the casing are maintained in parallelism by intermediate sleeves 12, arranged on the shanks of the side hooks and extending across the space between the sides of the casing and adapted to rest upon the upper end of the post or upon the upper edge of a rail or the side of a wagon or other support upon which the device may be placed. The sleeves also serve to maintain the shanks of the side hooks out of contact with the support and prevent friction from such source. The central hook 7 is located in a plane above the plane of the side hooks, and is thereby arranged above and out of contact with the support.

The rear ends 13 and 14 of the shanks of the hooks are threaded for the reception of sprocket wheels 15 and 16, which are interiorly threaded to screw on the threaded ends of the shanks of the hooks. The threaded portion of the shank of the central hook also receives an operating crank 17, provided with a threaded aperture for engaging the threaded end 13 of the central hook and equipped with a handle 18. The threads of the shanks of the hooks or right end threads, and the movement of the wheels and the crank handle incident to the operation of the machine tends to screw the wheels and the crank handle on the shanks of the hooks, and there is no liability of the parts accidentally unscrewing, and it is unnecessary to provide locking devices for preventing retrograde rotation on the wheels of the shanks of the hooks. The sprocket wheels are maintained in spaced relation with the rear side 3 of the casing by means of spacing sleeves 19, interposed between the casing and the sprocket wheels. The hooks are ro-

tated in the same direction preferably by means of a chain belt or sprocket chain 20, arranged on and meshing with the sprocket wheels 15 and 16. When the crank handle is rotated in a forward direction, the strand twisting hooks will be simultaneously rotated in the same direction. The central or upper strand twisting hook and its sprocket wheel are located above the horizontal plane of the side hooks and their sprocket wheels, and the sprocket chain has inclined flights extending from the side sprocket wheels to the central sprocket wheel. The particular arrangement of the central sprocket wheel above the side sprocket wheels gives the sprocket chain a better hold on the central sprocket wheel than would be the case were all the sprocket wheels arranged in the same horizontal plane, and the central sprocket wheel is thereby effectually prevented from slipping.

Each hook operates to twist two or more strands, which are formed by doubling a piece of twine of the desired length to form a loop 21 for engaging the hook. The rope is composed of six or more strands, each pair of strands being twisted together by the individual rotary movement of the central and side hooks. After the strands have been twisted to the desired tension, they are arranged in guiding recesses 22 of a manually operable guide, consisting of a head 23 and a marline pin 24. The head is preferably in the form of a casting, and is centrally secured by a screw 25 to the blunt end of the marline pin, which is preferably made of wood. After the strands have been twisted to the desired tension, they are held back of the head of the manually operable guide, which is moved forwardly as the machine is operated. The strands will form themselves into a rope, and the tightness of the twist of the rope is controlled by the manually operable guide. After the guide has been advanced along the strands to the hooks of the machine and the rope completed, the side strands are removed from the side hooks and are placed upon the central hook. The machine is then given a few backward turns, which completes the rope making operation. A convenient slip noose can be made by passing the opposite end of the rope through the loops as they come off the central hook. The openings of the loops can be enlarged by forcing the end of the marline pin into them to permit the free end of the rope to pass freely through the loops. Any fuzz or beard may be removed from the rope by singeing it with a lighted match.

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

1. A rope making machine including central and side strand twisting hooks, the side hooks being projected in advance of the central hook to form an arcuate series to maintain the strands at uniform length, and gearing connected with the hooks for rotating the same.

2. A rope making machine including central and side strand twisting hooks arranged in an arcuate series with the side hooks projecting in advance of the central hook, the central hook being located above the plane of the side hooks, side sprocket wheels connected with the side hooks, a central sprocket wheel connected with the central hook and located in a plane above the side sprocket wheels, a sprocket chain arranged on the sprocket wheels and having inclined flights extending upwardly from the side sprocket wheels to the central sprocket wheel, and a crank handle connected with one of the sprocket wheels.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

THOMAS M. his × mark McINTOSH.

Witnesses:
A. D. LONG,
R. D. ERICKSON.