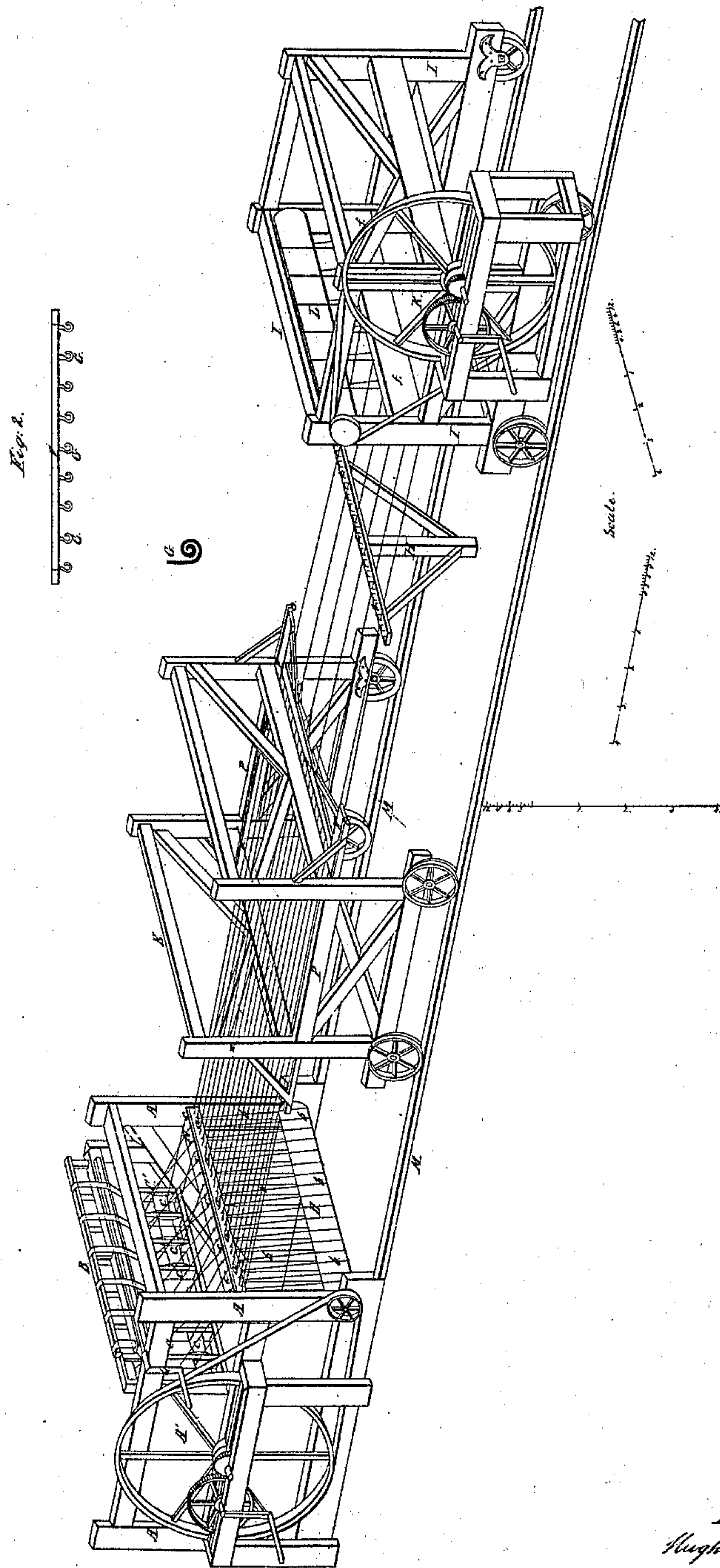


H. McCUBBEN.  
MACHINE FOR MAKING TWINE OR SMALL CORD.  
No. 3,220. Patented Aug. 17, 1843.



Witnesses.  
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HUGH MCCUBBEN, OF PETERSBURG, VIRGINIA.

IMPROVEMENT IN MACHINERY FOR MAKING VARIOUS KINDS OF TWINE AND SMALL CORD.

Specification forming part of Letters Patent No. 3,220, dated August 17, 1843.

*To all whom it may concern:*

Be it known that I, HUGH MCCUBBEN, of the town of Petersburg, in the county of Dinwiddie and State of Virginia, have invented certain Improvements in the Machinery for Making Various Kinds of Twine and Small Cord; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawings, Figure is a perspective view of the essential parts of my improved machine. A A is the frame of the twisting-machine, and A' the band-wheel by which motion is given to the spindles and other apparatus concerned in the giving the twist to the yarn from which the twine is to be made. C C are the bobbins which contain the yarn, C' C' being the frame by which they are sustained. D is a drum that serves to drive the spindles which run in the box N N, and around the whirls of which passes an endless band b b, that, lapping alternately around the drum and one of the whirls, preserves an equal tension on each of them. c c are eyes or fair leaders on the top of the box N N, through which the threads of yarn are to be passed separately preparatory to their being hitched to the hooks of the spindles a a. From these fair leaders the ends are carried through wires bent spirally, as at G, and inserted in the underside of the back rail of the sliding frame F.

Fig. 2 shows the back end of the frame F with its spirally-bent wires G G, this sliding frame constituting a part of what I call the intermediate "traveling" and "laying" machine E, which moves back and forth on the ways or railroad M M. The frame F F slides back and forth in grooves d d within the check-pieces O O of the intermediate machine E, by which arrangement the frame F may be made to occupy either the front or the rear part of said machine.

II is a stake, which is firmly fixed in the ground and of which there must be such a number as may be required by the length of twine to be formed. These stakes should be about fifteen feet apart, and they are furnished with wire staples or other similar device, as shown at e e, between which the strands are to drop while the spinning is being effected. Where stakes have been heretofore used for a like purpose, they have been made to swing or slide on one side to allow the traveling carriages to pass back and forth,

and one of the peculiar features of my machine is the constructing of the traveling carriages so that they shall pass freely over the stakes, there not being in said machines any timbers or apparatus to interfere with these stakes, an arrangement which gives great facility in the operation of spinning.

I I is the back-twist traveling carriage for giving the back twist to the twine, said carriage running on the railway M M in the same manner with the carriage E E. The band-wheel of this carriage is shown at K. The drum or cylinder L carries the bands which actuate the spindles of this machine, upon which the twine is hooked in the ordinary way. These spindles are not seen in the drawings, being hidden by the timber ff; but they consist simply of hooked spindles with whirls on them such as are used in the twisting-machine, but usually only one-third as numerous.

When this machine is to be used, the strands of yarn are first passed from the bobbins C C through the fair leaders c c, thence to the eyes formed by the spirally-bent wires on the underside of the sliding frame F F, the strands being so far kept single. Two, three, or more are then hitched on to the hooked spindles of the back-twist machine I I. The yarns are then severally cut from the bobbins C C of the twisting-machine and hitched on to the hooks of the spindles a a. The machine is then ready to be put into operation. The intermediate traveling machine E is at this period near to the back-twisting machine I I. The yarns are to be twisted sufficiently to be ready for the back twist when the machine I I is to be put into operation, the twisting-machine A A being still kept in motion. As the operation goes on the traveling machine will approach the twisting-machine, and when the intermediate machine E is close up to it the sliding frame F F will be made to advance in its grooves to the front of the machine E, so that the doubling and twisting will be effected close up to the twisting-machine.

Although the continuing of the twisting operation while the back twist is being given is not in itself new, but is the general practice in manufacturing single ropes of large size, it is yet a new feature in the twine-machine where a considerable number of strands are simultaneously twisted, and the twine

manufactured by this process is of a greatly improved quality, the seine or other kinds of twine requiring a firm texture being specially adapted to the uses for which they are intended.

B is a reel placed on the twisting-machine, onto which the yarn is to be reeled in skeins by the turning of the winch Q.

Having thus fully described the nature of my improved machine for the manufacturing of twine and small cord, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The combining together of the twisting, the intermediate traveling, and the back-twist

machines so constructed as that they will pass over stationary stakes, as above set forth.

2. The manner of combining the sliding frame with the intermediate traveling frame by which it is allowed to run in grooves from the back to the front of said frame; and these improvements I claim whether the within-described machine be made precisely in the form herein represented or in any other producing the same effect by means substantially the same.

HUGH McCUBBEN.

Witnesses:

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