

(No Model.)

J. McCAHEY.  
BRAIDING MACHINE.

No. 275,061.

Patented Apr. 3, 1883.

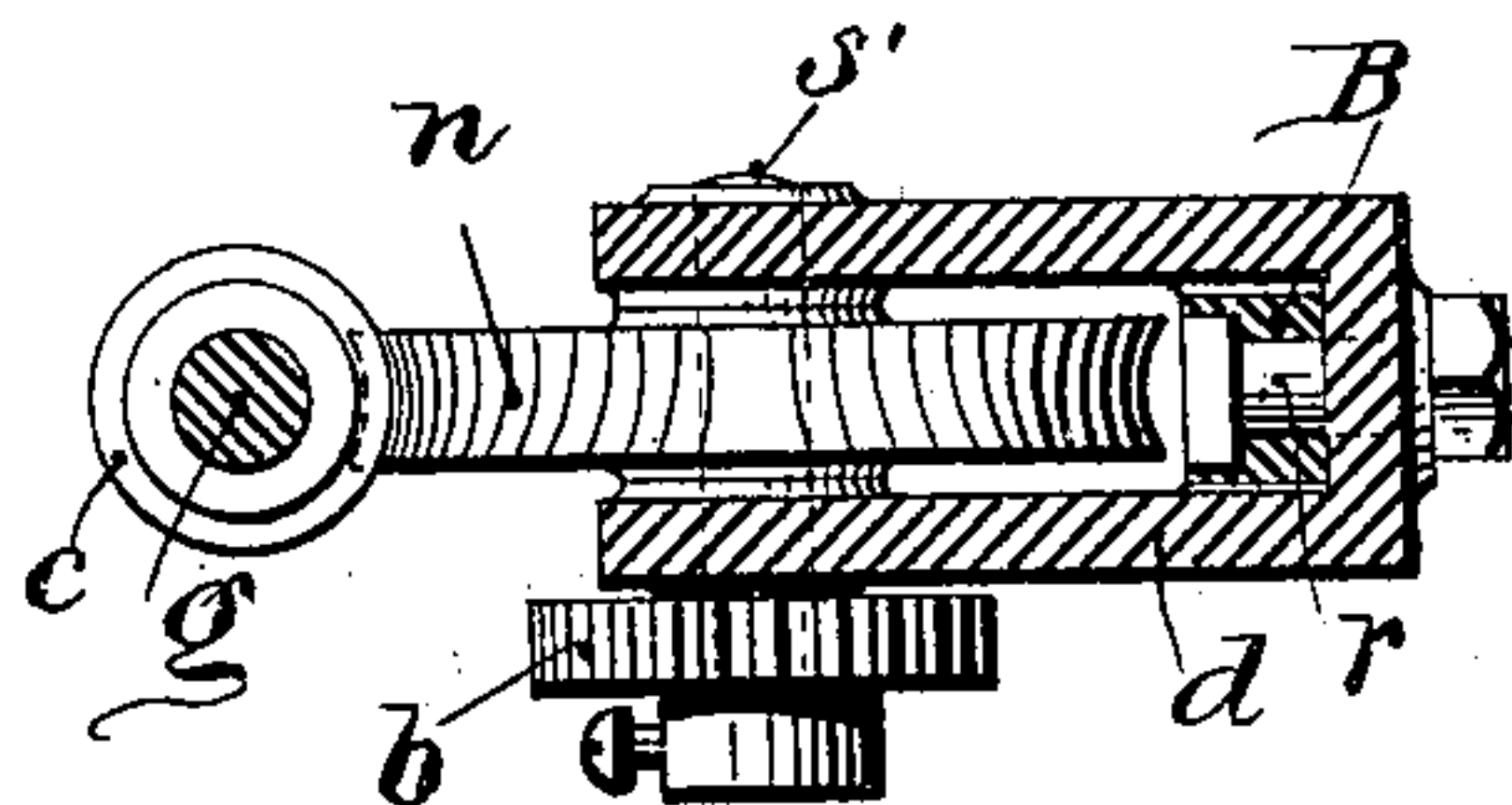


FIG. 3.

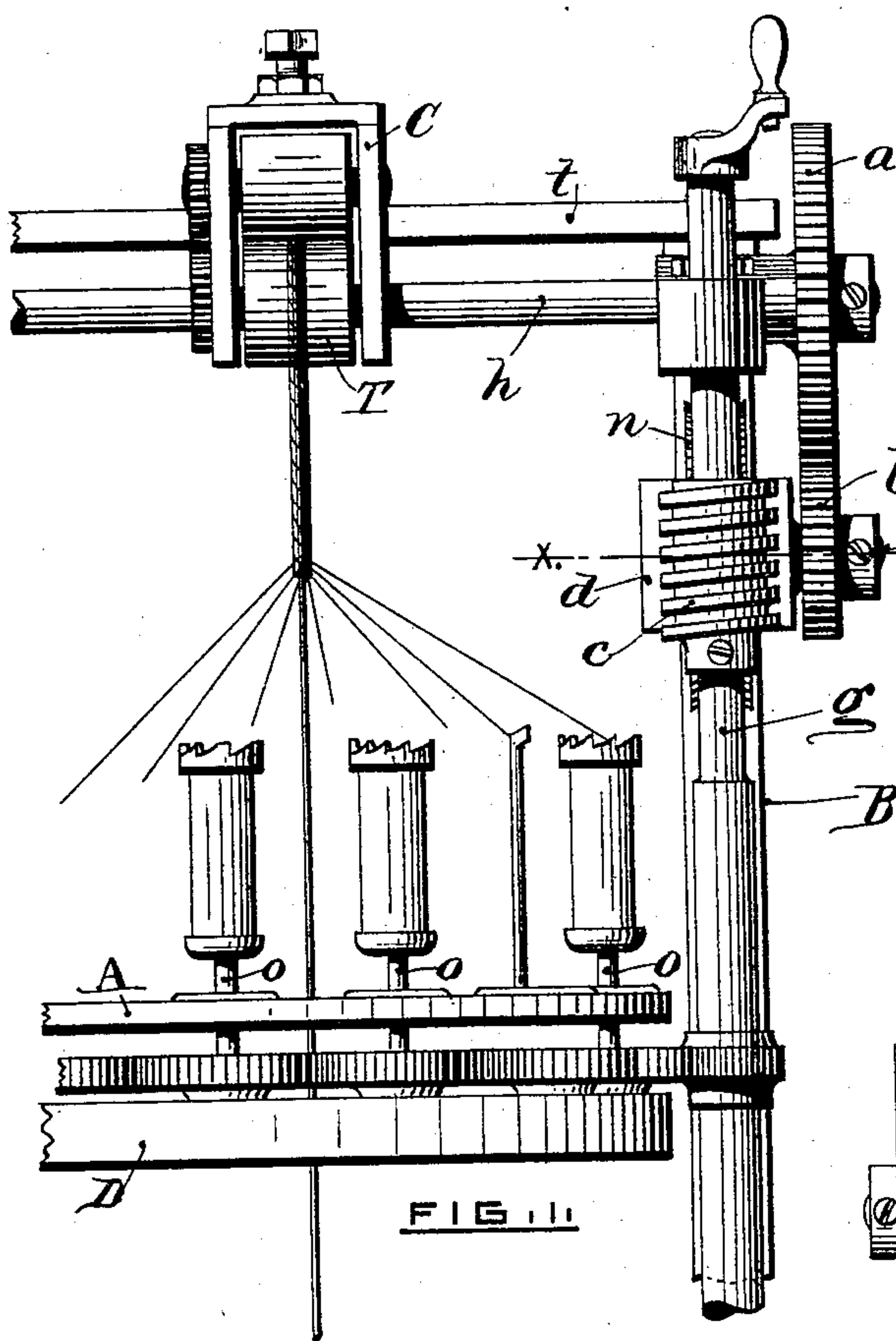


FIG. 1.

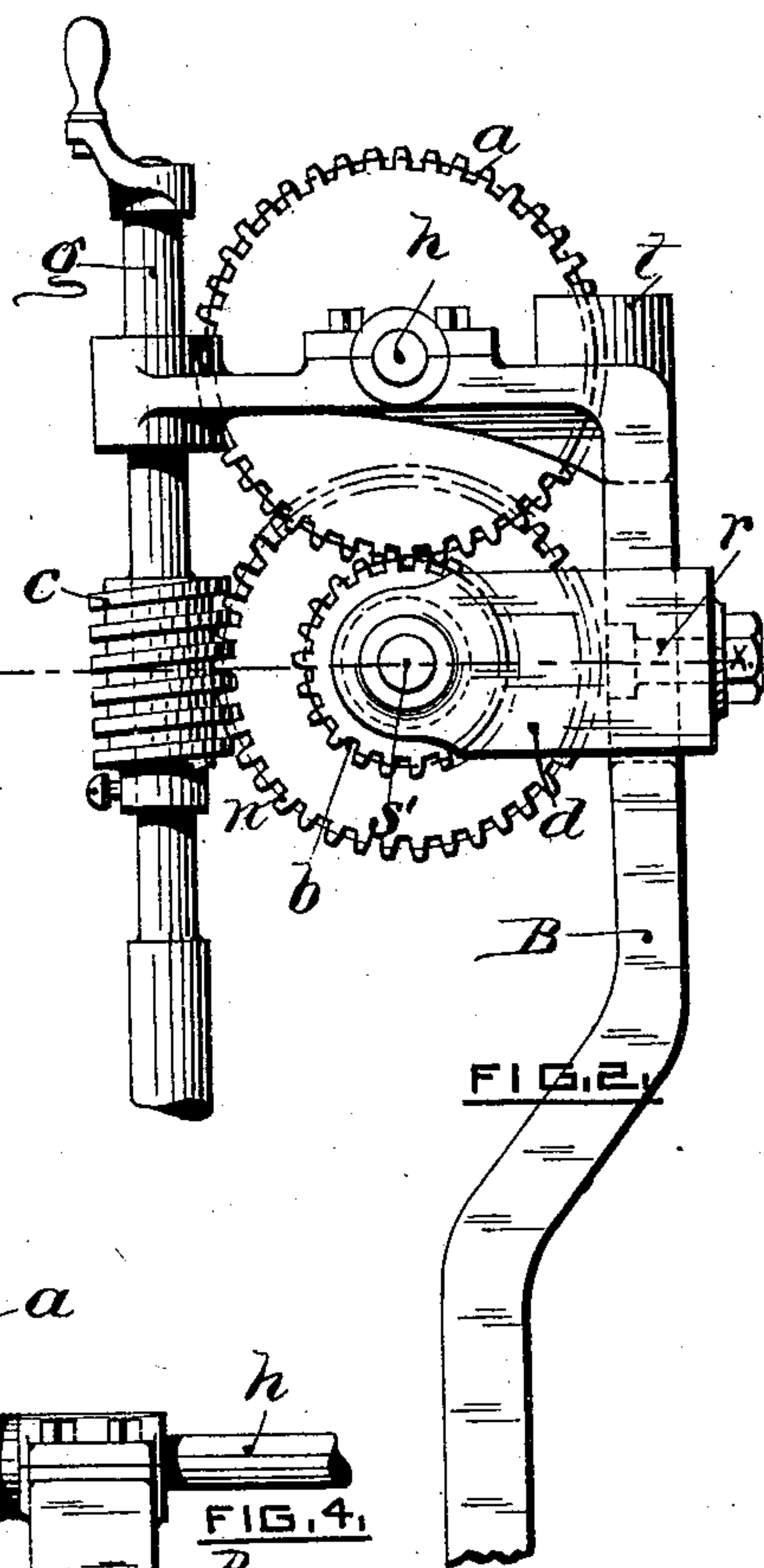


FIG. 2.

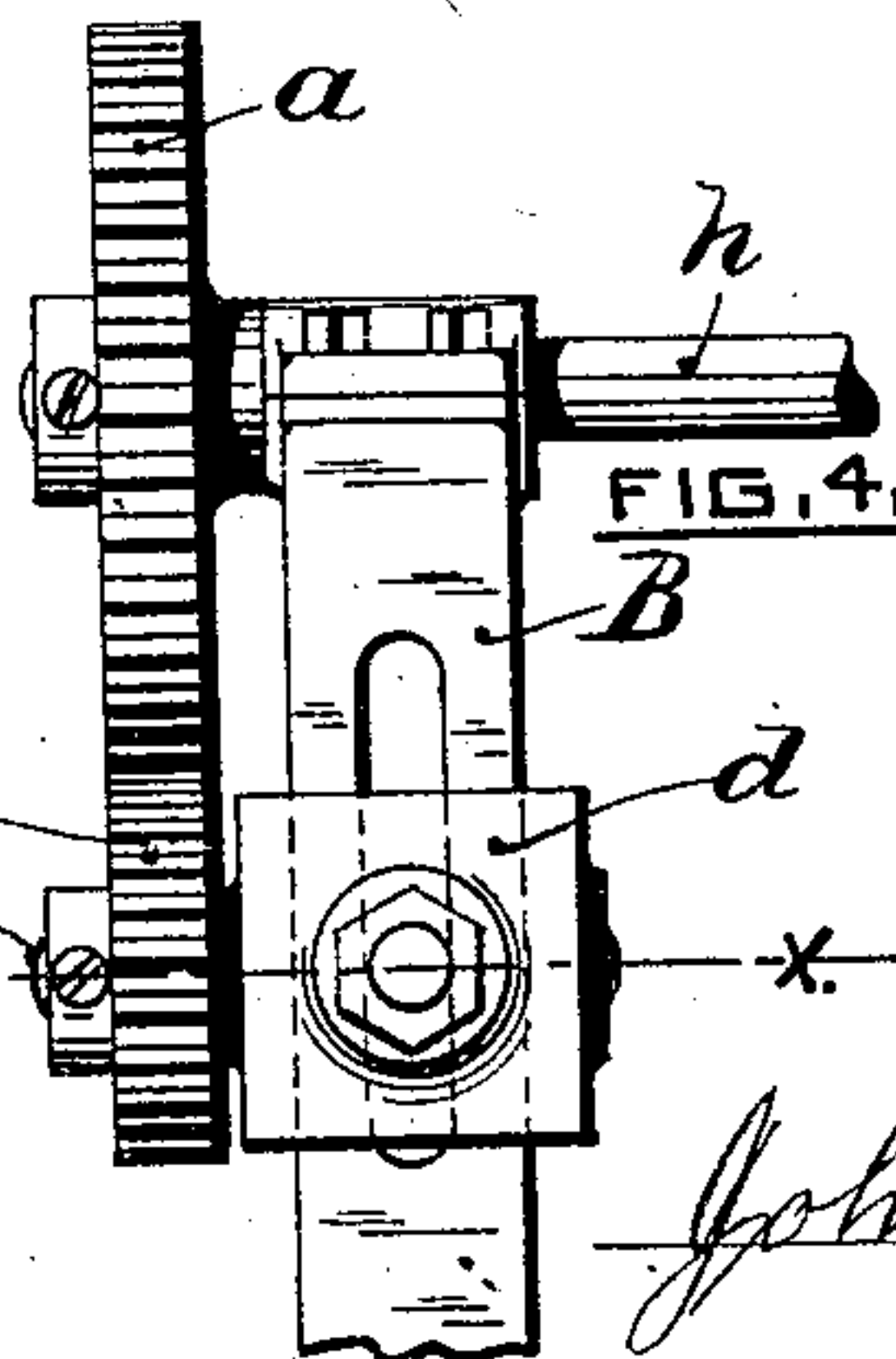


FIG. 4.

WITNESSES:

*H. N. Fennor*

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INVENTOR,

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# UNITED STATES PATENT OFFICE.

JOHN McCaHEY, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO HIMSELF  
AND THE NEW ENGLAND BUTT COMPANY, OF SAME PLACE.

## BRAIDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 275,061, dated April 3, 1883.

Application filed September 11, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN McCaHEY, of the city and county of Providence, in the State of Rhode Island, have invented certain new and  
5 useful Improvements in Braiding-Machines, of which the following is a full and correct description, reference being had to the accompanying drawings, forming a part of this specification.

10 My invention relates to the "feed-motion" of braiding-machines; and it consists in a combination of gearing with the usual worm and worm-gear, by which any desired degree of speed can be obtained, and also in certain ar-  
15 rangements of adjustable parts, whereby the changes from one speed to another are readily made.

In the drawings, Figure 1 shows a front elevation of the upper part of a braiding-machine.  
20 Fig. 2 is a side view at the right of the same. Fig. 3 shows a cross-section taken through the line *xx* in Figs. 1 and 2. Fig. 4 shows a back view of the feed-motion improvement.

The parts of the machine are designated as  
25 follows:

A is the top plate. D is the lower plate. *o o o* are travelers with spools. C T are the take-up rolls through which the finished braid passes. B is one of the standards that sup-  
30 ports the top bar, *t*, to which the frame holding the take-up rolls is attached. *h* is the take-up shaft, held in bearings attached to the top bar or to standard B. *d* is a clamp fastened to the standard B by a screw-bolt, *r*, passing  
35 through a slot in the standard. This clamp *d* holds a short shaft, *s'*, to which is secured the worm-gear *n*. *g* is an upright shaft, held in a bearing in the table below and at the top in a bearing attached to the top bar. *c* is a worm  
40 fitted to slide freely on the upper part of the shaft *g*, and is secured to it at any point by a set-screw in its hub. The take-up roll T is fast on the take-up shaft *h*, and is geared to the roll C. The outer ends of the two shafts *h* and *s'*  
45 are made of the same size, so that the change-gears (two only of which are shown, *a b*) may be used on either shaft, to which they are secured by set-screws in their hubs when in use.

In operation, when a change in the take-up is required because of a change in the size of  
50 the braid being made, or for other reasons, one of gears *a* or *b* is loosened and taken off its shaft and another larger or smaller in size, according to whether the speed is to be increased or diminished, is put on in its place and se-  
55 cured by its set-screw. Then the nut on the bolt *r* is loosened and the clamp *d* moved up or down on the standard until the two gears on the shafts *h* and *s* will mesh properly into  
60 each other. Then the set-screw in the hub of the worm *c* is loosened, and the worm set up or down on the shaft until it shall engage properly with the teeth of the worm-gear *n*, when it is made fast by the set-screw.

It will readily be seen that a set of several  
65 gears varying in size a few teeth will, by their various combinations and capability of being used on either shaft *h* or *s*, produce a great variety of speeds for the take-up rolls; and the arrangement of the sliding clamp and worm  
70 makes it very easy to adjust the gears and worm and worm-gear, so that they will all work properly together.

As this improvement is not confined to any one kind of braider, but is applicable to the  
75 various machines used, it is not deemed necessary to a full understanding of it to make a description of the other parts of the machine.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the shaft *g* and the worm *c*, arranged to slide thereon, with the worm-gear *n*, slotted standard B, and clamp *d*, arranged to slide on said standard, substantially as described, and for the purposes set forth. 85

2. The combination of the change-gear *a b*, shafts *h* and *s'*, with the shaft *g*, with its worm *c*, arranged to slide thereon, the worm-gear *n*, slotted standard B, and clamp *d*, arranged to slide on said standard, substantially as and for  
90 the purpose set forth.

JOHN McCaHEY.

Witnesses:

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BENJ. ARNOLD.