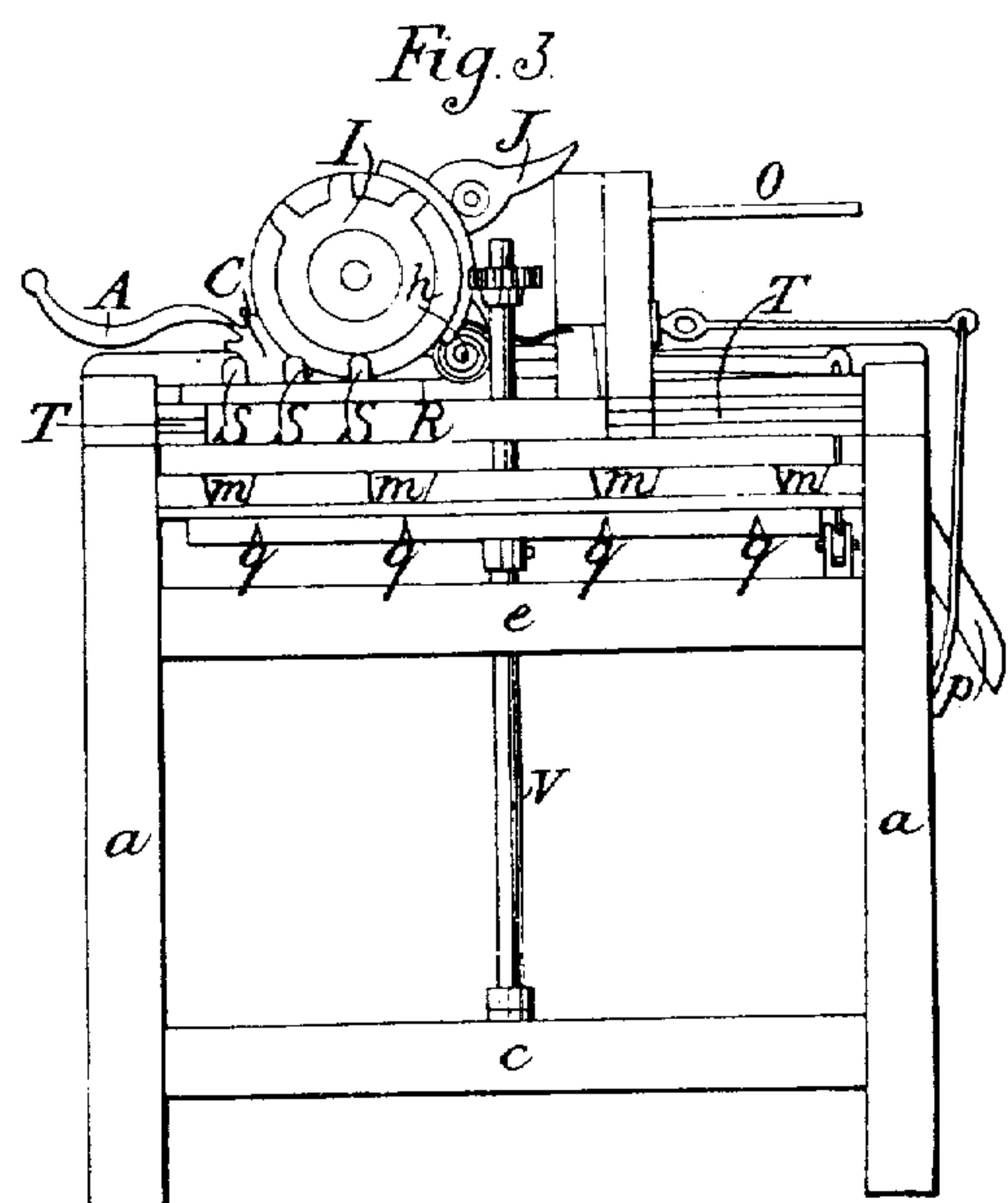
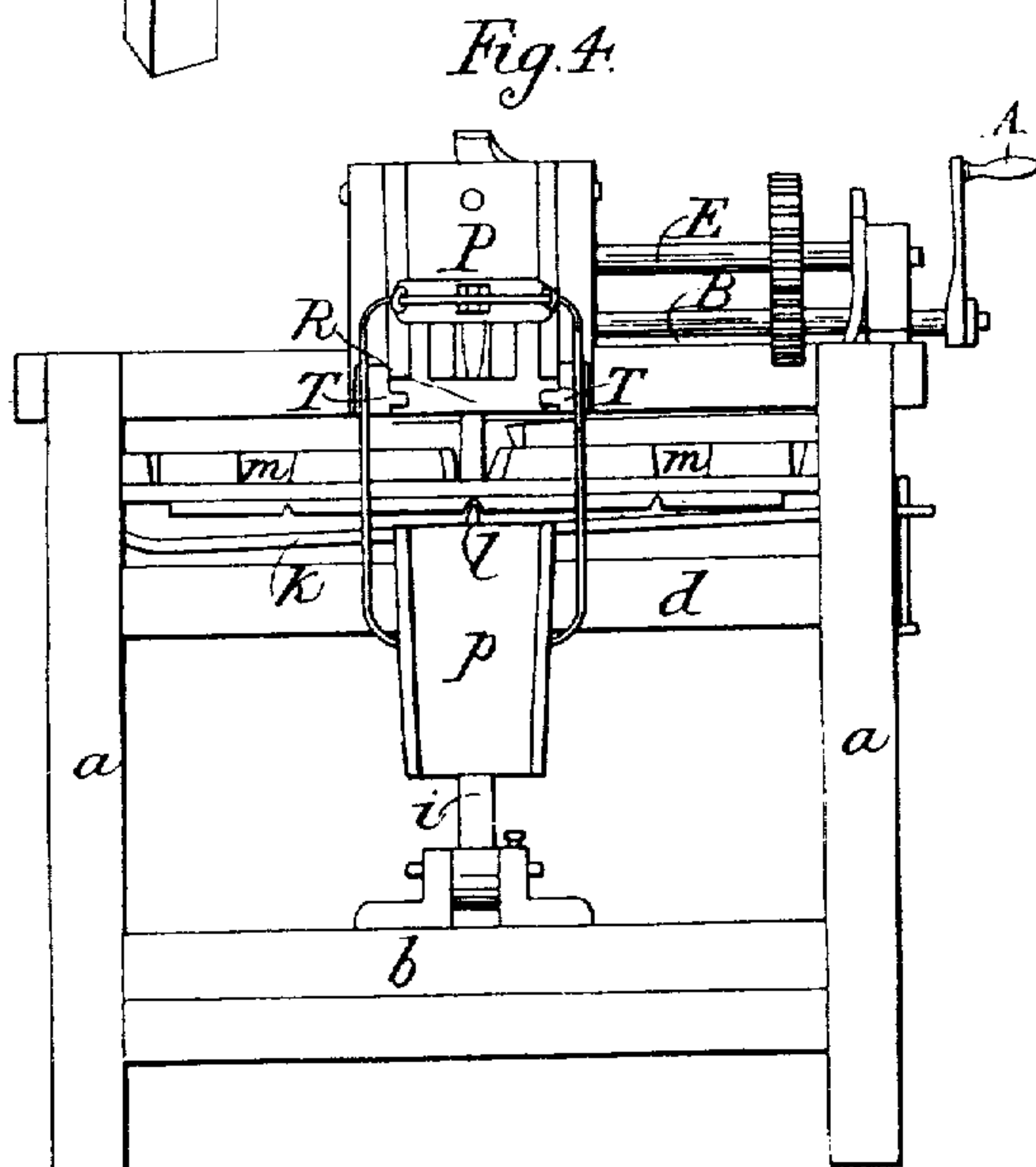
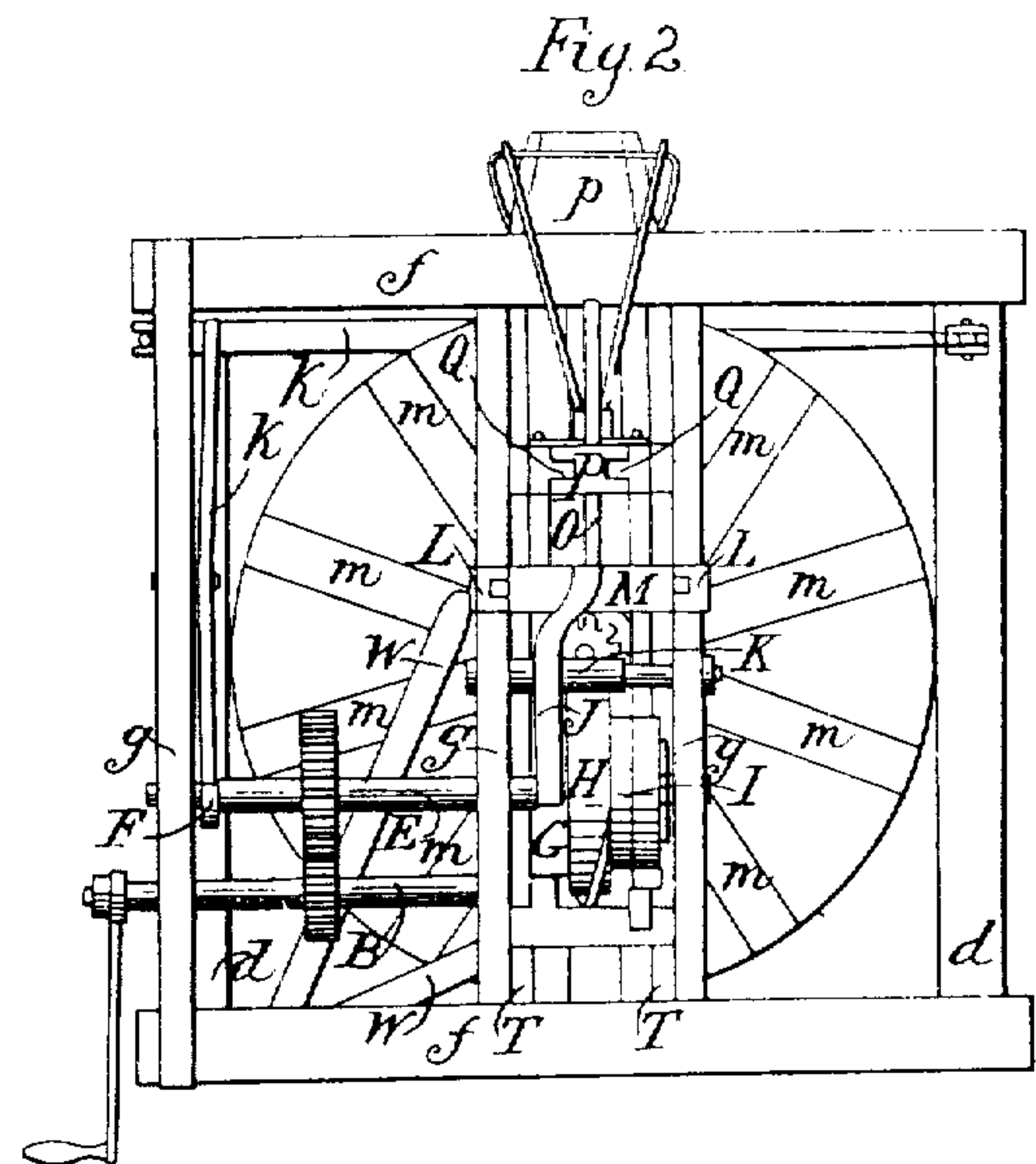
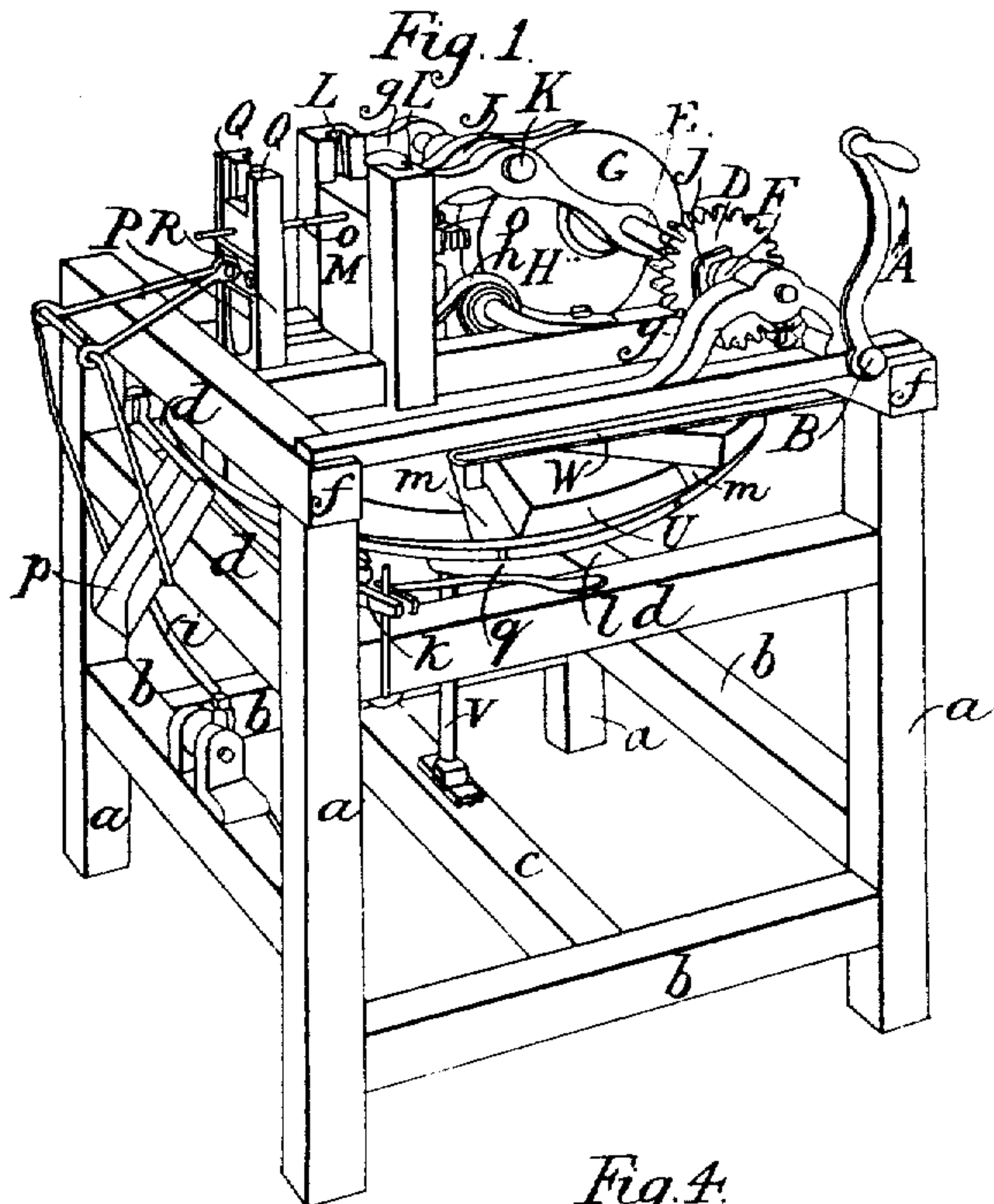


No. 10,070.

PATENTED OCT. 4, 1853.

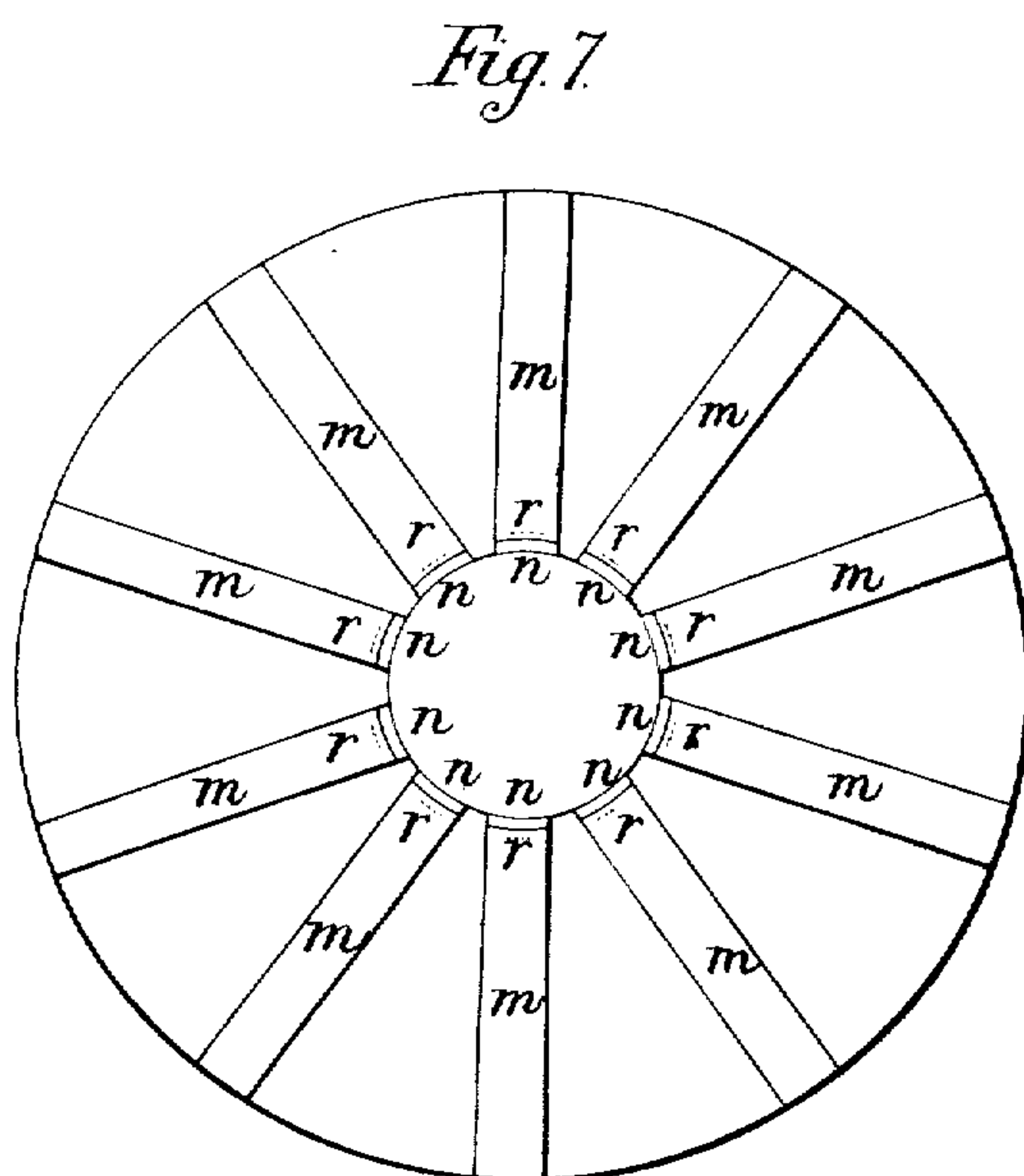
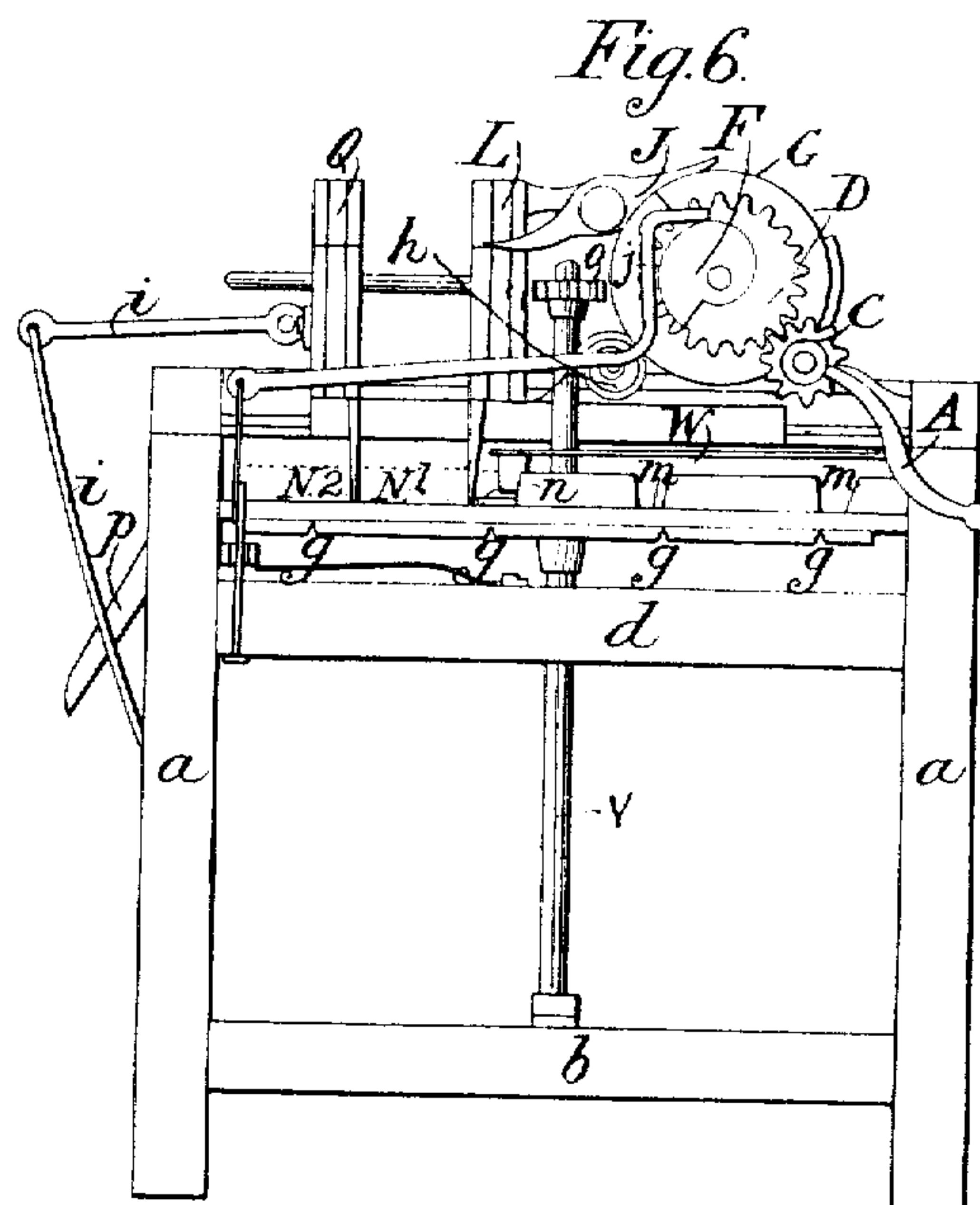
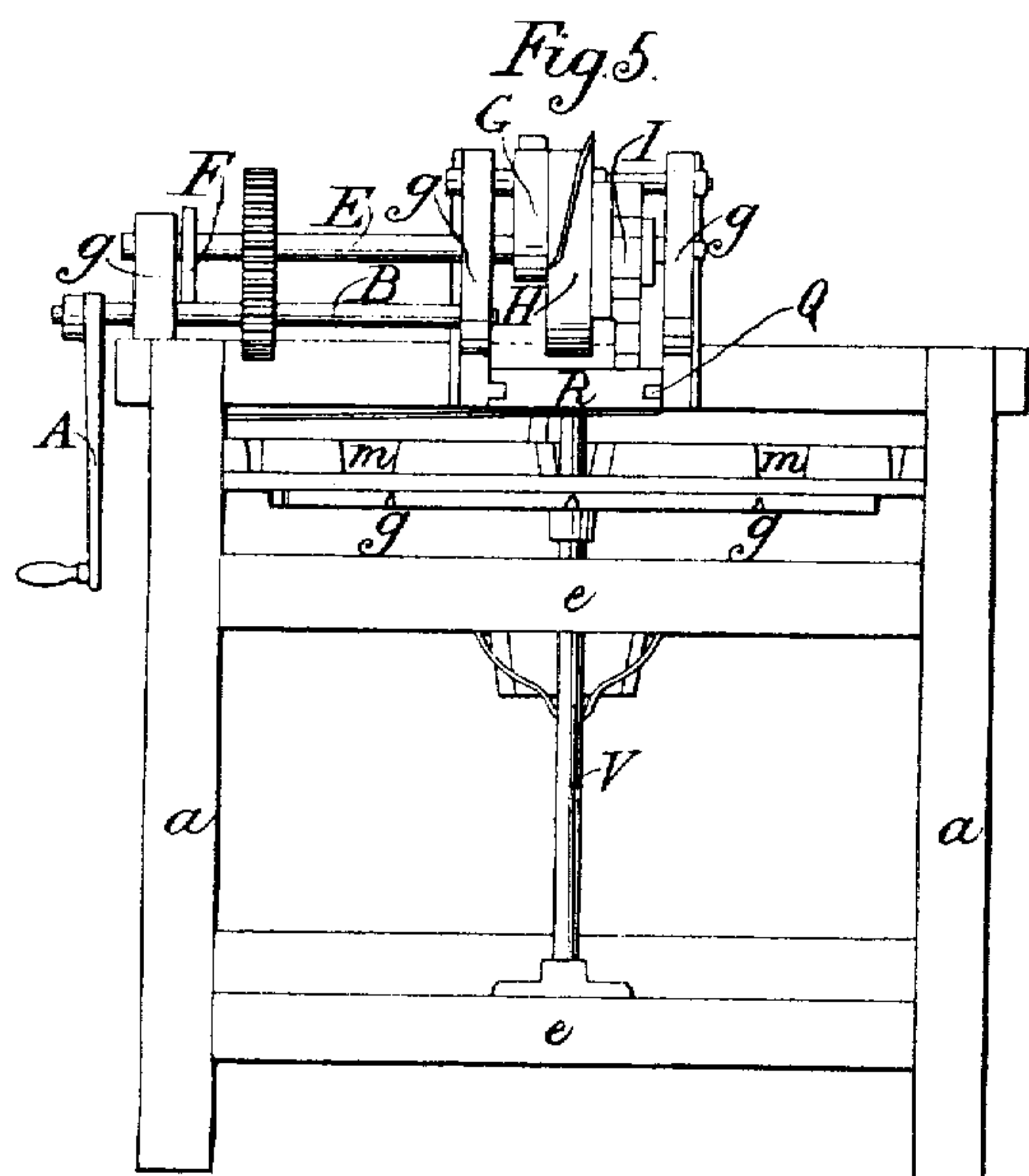
T. C. HARGREAVES.  
MAIZE HUSKING MACHINE.

2 SHEETS—SHEET 1.

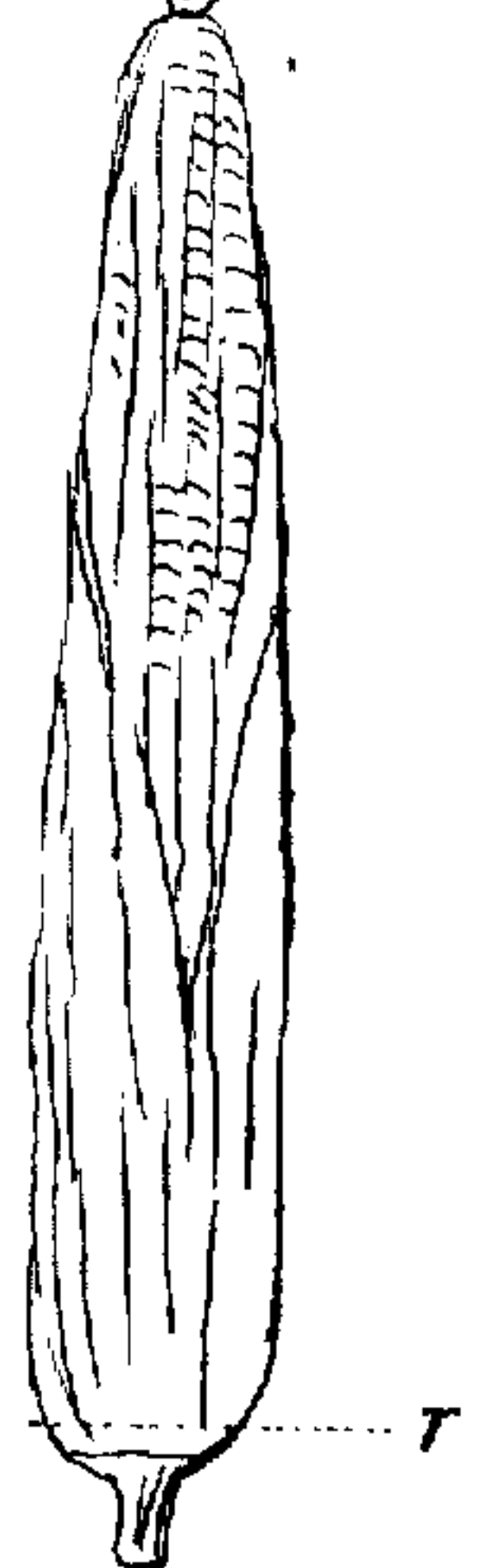


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MAIZE HUSKING MACHINE.

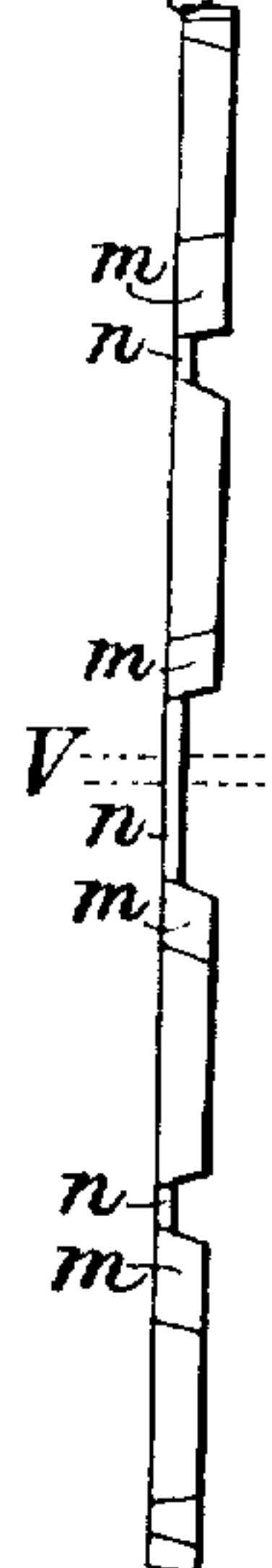
2 SHEETS—SHEET 2.



*Fig. 8.*



*Fig. 9.*





# UNITED STATES PATENT OFFICE.

THOMAS HARGREAVES, OF SCHENECTADY, NEW YORK.

## MAIZE-HUSKING MACHINE.

Specification of Letters Patent No. 10,070, dated October 4, 1853.

*To all whom it may concern:*

Be it known that I, THOMAS C. HARGREAVES, of Schenectady, in the county of Schenectady and State of New York, have  
5 invented a new and useful Machine for Husking Maize or Indian Corn; and I do hereby declare that the following is a full, clear, and exact description of the construction of the same, reference being had to the  
10 annexed drawings, making a part of this specification, in which—

Figure 1, is a perspective view. Fig. 2, is a top view. Figs. 3, 4, 5 and 6 are separate side views. Fig. 7 is an elevated sectional  
15 view and Fig. 8, represents an ear of corn, with husk.

*a, a, a, a,* are uprights for the frame.

*b, b, b, b,* are cross pieces in the frame.

*c,* is a bar or piece framed in *b, b,* with  
20 step for spindle shaft fastened thereon.

*d, d, d,* are cross pieces in the frame.

*e,* is a bar or piece framed in *d, d,* with spindle box fastened thereon.

*f f* are the two longitudinal top pieces,  
25 supporting *g, g, g,* in and upon which the various shafts, gearing, cutters, chisels, gates, cams, levers, racks, ways, and slides work.

*A* is the handle which operates the machine, attached to the shaft *B*, on which is  
30 a pinion *C* working into wheel *D* on a shaft *E* with cams *F, G, H, I* thereon.

*J* is a lever on shaft *K*.

*L, L,* are grooves in *g, g,* in which is gate  
35 *M* with chisel or cutter *N*<sup>1</sup>, and traversing rod *o* attached thereto.

*P* is a gate with chisel or cutter *N*<sup>2</sup> attached, working in two ribs *Q Q* of the slide  
40 *R* on which are three cogs *S, S, S* on ways *T, T*.

*h,* is a spring for gate *M*.

*i* is a spring for slide *R*.

*j,* is a lever acting on spring and lever *k* on which lever is a stud, *l,* rising in notches  
45 *q* on the under part of circular plate *U*. The plate *U* is fastened on spindle shaft *V* which works in a step on piece *c*.

*m, m, m,* are ten passage ways or grooves on top of plate *U* extending to circular  
50 rim *n*.

*o,* is a pinion on shaft *V*.

*W* is an elbow with a stud on the end of one arm, and a groove or slot on the end of the other arm, having a stud working there-  
55 in from the under part of the end of slide *R*.

*p,* is a receiving trough.

The plate *U* must be placed in such a manner as to allow the cutters to descend one quarter, or three eighths of an inch in advance of the circular rim *n*. Fig. 7 represents the circular plate *U* with the grooves  
60 *m,* and rim *n*. In a working machine this rim *n,* should be raised from the bottom of the groove *m* about three-eighths of an inch. The dotted line *r* in Figs. 7 and 8 shows  
65 where the cutters descend. Fig. 9 is a sectional view of the plate *U*, showing grooves *m* and rim *n*.

Having thus described the construction of my machine I will now state its manner of  
70 operation. The ears of corn with husks thereon, are placed in the passageways (*m*) of the circular plate, (*U*) with the stalk end toward the center of the machine, above the rim; (*n*) and the base of the ear against  
75 the rim, (*n*) and as the handle (*A*) is turned, the cam *G* acts on lever *J* which causes the gate (*M* and *P*) with cutters (*N*<sup>1</sup> and *N*<sup>2</sup>) to descend and pierce the ear; the chisel or cutters being about five eighths of  
80 an inch broad, they partially sever some of the leaves on the upper side of the husk, and divide the cob, at or through the first row of kernels; as shown at the dotted line, *r*,  
Fig. 8; but does not cut any of the sides or  
85 under part of the husk; when thus cut, the cam wheel (*I*) acts on the cogs (*S S S*) on the slide (*R*) and forces the gate (*P*) with cutter *N*<sup>2</sup> and the ear of corn free from any  
90 leaf or husk, to the outer edge of the circular plate (*U*) into the receiving trough.

The chisels or cutters being made narrow, when the cutter (*N*<sup>2</sup>) carries out the ear of corn the husk splits and divides before it, being held by *N*<sup>1</sup> and on *N*<sup>2</sup> reaching the  
95 outer edge of the plate it springs up as also *N*<sup>1</sup>, thereby releasing the husk, which passes on with the movement of the plate (*U*) and is removed by the elbow (*W*) at the husking of the next ear. When the cutters re-  
100 lease the husk the spring (*i*) returns gate *P* ready to act in conjunction with gate *M* on the next ear.

The cam *F* acts on lever *j*, pressing down the spring and lever *k*, which releases the  
105 stud from one of the notches in the under side of the circular plate, where it was held while throwing out the ear and husk through separate compartments or grooves. The cam *H* then moves one cog of the pinion  
110 *o*, on top of the shaft, *V*, causing another ear and husk to move ready for the cutters.

The ears of corn are not prepared for the machine other than by breaking them from the stalk in the usual manner; the stem whether long or short passes above the rim, 5 *n*, and does not interfere with the action of the machine.

My machine can be constructed with various forms of chisels, cutters and gates, and these substituted by a slide or lever, to break 10 the ear at the designated part. A lever with a cutter, and a cylinder with projecting forks could also be worked; also a revolving cutter with arms which would cut and remove the husks at the same time. 15 Stationary brushes can be fixed at the ends of the grooves, near the receiving trough, which would remove the "silk" from the ear; also a revolving brush may be applied for the same purpose.

20 The machine can be operated by levers, springs, cams, racks and pinions, disposed and arranged in a variety of forms; the plate U can also be constructed with a gear on the outer rim, turned by a pinion. A 25 plate can be used in any form, from circular to square, and may be substituted by

a drum, rack, flexible ribbed sheet or endless apron or a machine with any number of cutters, having the ears conveyed by an endless apron or grooved rack, can be made 30 for horse power.

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

1. The application of the chisel (*N*<sup>1</sup>) or chisels (*N*<sup>1</sup> and *N*<sup>2</sup>) cutter or cutters, in com- 35 bination with the gate (*M*) or gates (*M* and *P*) operated by gearing or other means substantially as herein described.

2. I claim the construction of the circular plate *U* or its equivalent as herein de- 40 scribed; in combination with the cutters for severing the cob, and the elbow lever for discharging the husks as set forth.

3. I claim the combination of cam *F*, lever *j* and spring *k* with stud *l*, for holding the 45 circular plate *U* stationary, while removing the ear and husk from the machine, or any other equivalent as herein specified.

THOS. C. HARGREAVES. [L. s.]

Witnesses:

JOHN HINDE, .

JAMES HARGREAVES,