

(No Model.)

3 Sheets—Sheet 1.

C. JEWELL.
REVOLVING SHELF.

No. 380,897.

Patented Apr. 10, 1888.

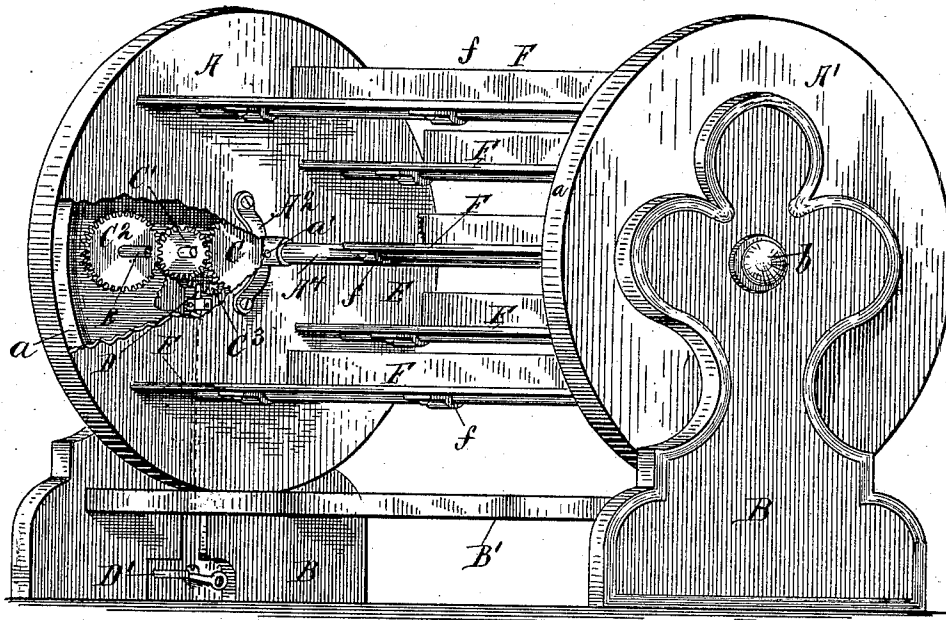


Fig. 1

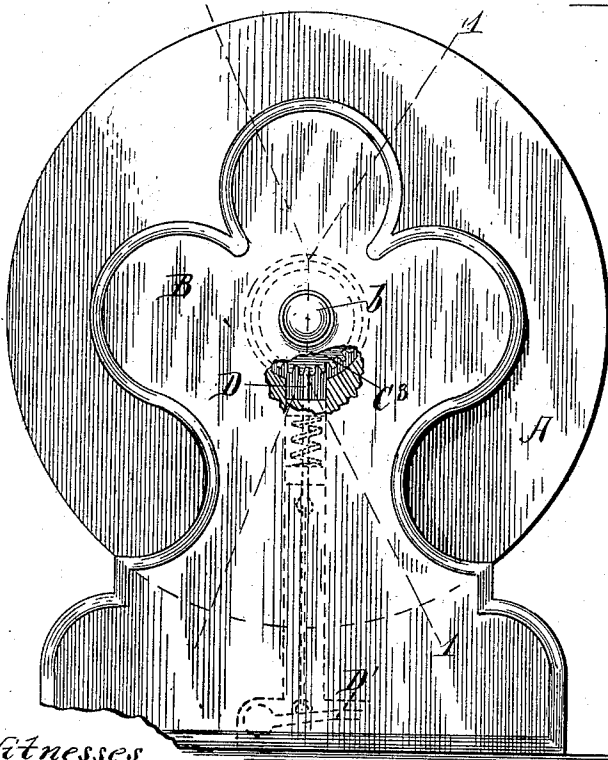


Fig. 2

Witnesses
W. C. Corlies
R. R. Smith.

Inventor
Crews Jewell.

By C. C. Crawford. Atty

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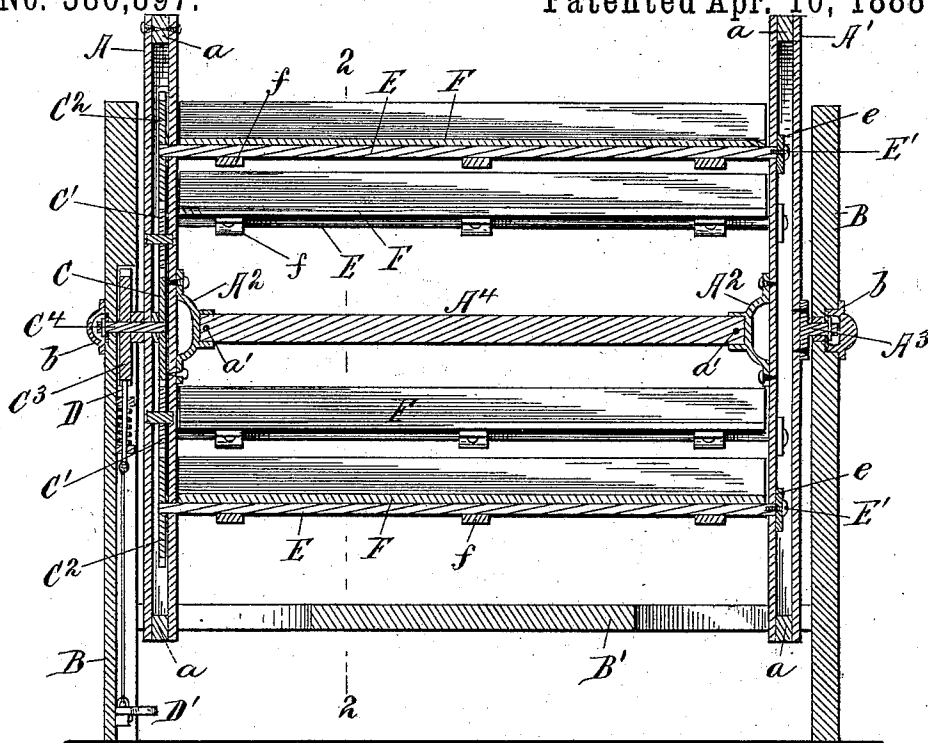


Fig 3

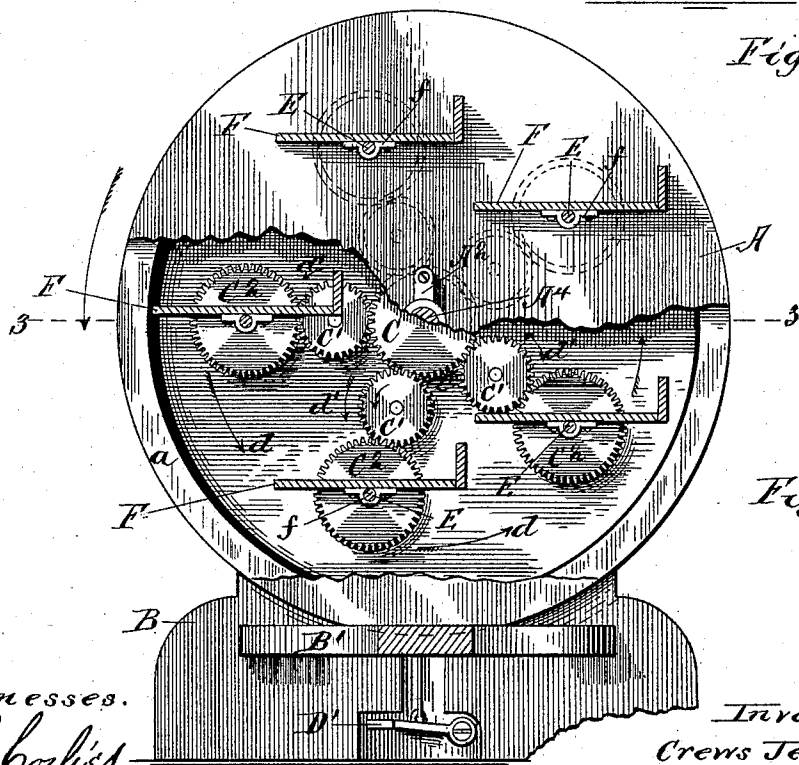


Fig 4

Witnesses.

W. C. Bodley
R. R. Sandis.

Inventor.
Crews Jewell.

By. E. D. Crawford
Atty.

(No Model.)

3 Sheets—Sheet 3.

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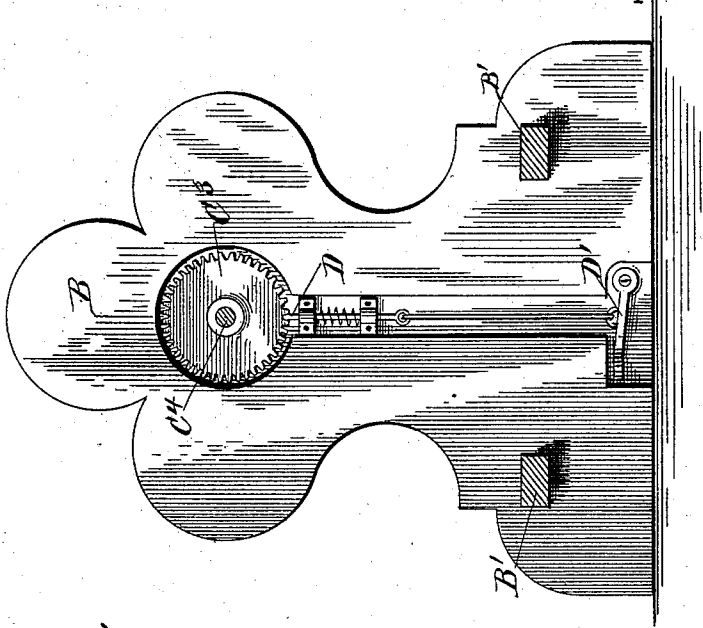
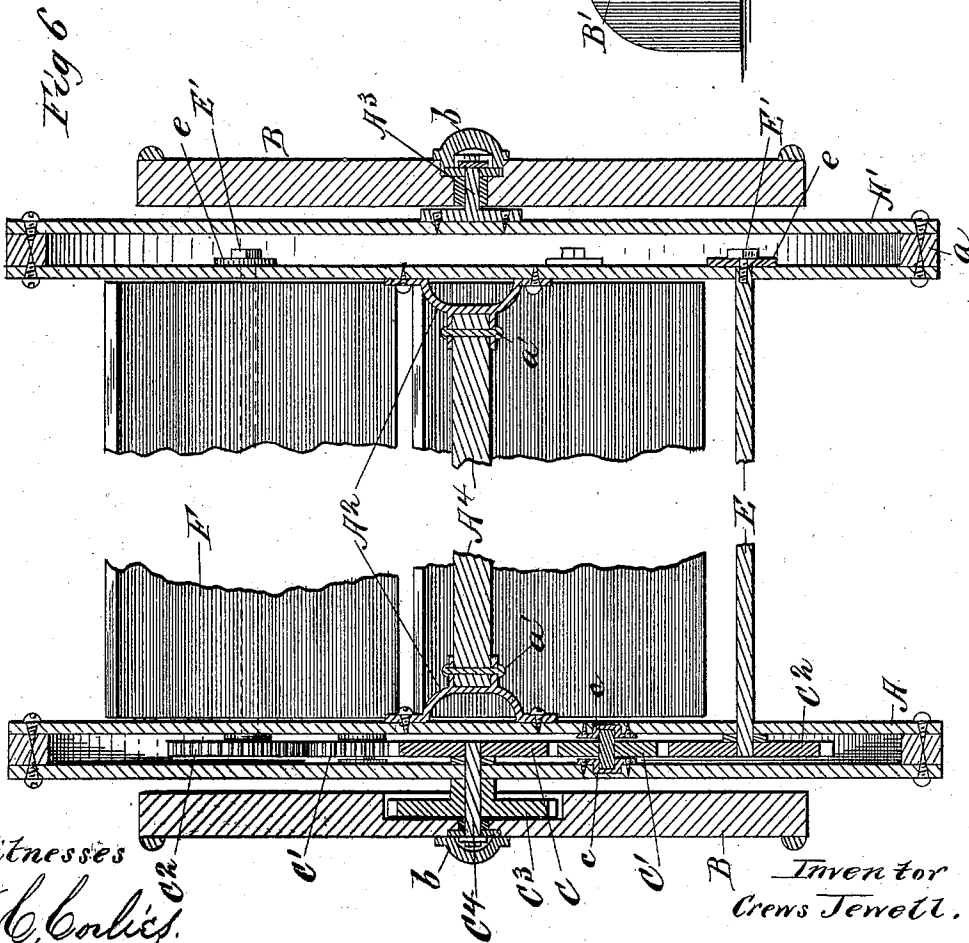


Fig 5



Witnesses
W. C. Conley.
J. P. Smith.

Inventor
Crawford Jewell.

By E. C. Crawford,
Att'y

UNITED STATES PATENT OFFICE.

CREWS JEWELL, OF WINTER PARK, FLORIDA, ASSIGNOR OF THREE-FOURTHS
TO WILLIAM S. HARBERT AND WILLIAM T. RICKARDS, BOTH OF EVANSTON,
ILLINOIS.

REVOLVING SHELF.

SPECIFICATION forming part of Letters Patent No. 380,897, dated April 10, 1888.

Application filed December 31, 1887. Serial No. 259,539. (No model.)

To all whom it may concern:

Be it known that I, CREWS JEWELL, a citizen of the United States, residing at Winter Park, in the county of Orange and State of Florida, have invented a certain new and useful Improvement in Revolving Shelves, set forth in the following specification, reference being had to the accompanying drawings, in which—

10 Figure 1 is a perspective view of the system of revolving shelves embodying my invention, a portion of it being broken away. Fig. 2 is an end elevation of the same at the left end of the perspective view. Fig. 3 is a vertical longitudinal section of the same, taken on the
15 broken line 1 1 of Fig. 2. Fig. 4 is a vertical cross-section taken on the line 2 2 of Fig. 3, but being partly broken away, so as to show a portion of a series of gears. Fig. 5 is an inside elevation of the standard at the left hand of the apparatus. Fig. 6 is a plan section
20 taken on the line 3 3 of Fig. 4, but somewhat enlarged.

Like letters refer to like parts in all the drawings.

My invention relates to improvements in revolving shelves; and it has for its object to secure between two cylinders properly supported a system of shelves in such manner
30 that as the cylinders revolve the shelves will continue unchanged in respect to their angle with the vertical, at the same time descending, passing around, then rising successively with the revolution of the cylinders.

35 I will now proceed to describe in detail the construction and operation of the apparatus whereby my invention is carried into effect, and will then set forth what I claim as novel therein.

40 I refer again to the drawings. A and A' represent the cylinders, between which the shelves are secured; A¹, the spindle connecting these cylinders; A², the socket-bearings, which are screwed to the cylinders and in
45 which the spindle A¹ is secured by the pins a', for the purpose of transmitting motion from one cylinder to the other; A³, a short shaft secured to the outer head of the cylinder A'; B, standards designed to support the cylinders,
50 having socket-bearings through them to re-

ceive the journals of A³ and C'; B', a cross-brace designed to hold together the lower part of the standards. The heads of the respective cylinders are screwed to the dividing-rings a. Within the cylinder A is a system of gear-wheels consisting of one or more series of gear-wheels of three each, C, C', and C², the center wheel, C, being common to each series and having a diameter equal to that of the outside wheel, C². Opposite to the center wheel, C, in a recess in the adjacent standard, is a ratchet-wheel, C³, said two wheels being secured on the same shaft, C¹. Below C³ is a spring-detent, D, engaging with the teeth of wheel C³ and operated by the treadle D'. 65

I will now describe one of the series of gear-wheels, and such description is to be taken as applying to each of the series. In such series C is at the center of the cylinder A, which is next to the standard in which the wheel C is located. The wheel C' is located next to the wheel C, and the wheel C² outside of the wheel C'. Secured to the wheel C² is a shaft, E, extending horizontally to the inner head of the opposite cylinder. Here it is secured by a screw, E', passing through the inner head of the cylinder and a metal washer, e. F is a shelf secured on the shaft E by suitable clamps, f. The shelves are made sufficiently narrow to pass each other as the cylinders revolve. 80 The gear-wheel C' is secured on a short shaft journaled in the socket bearings c, which are secured within the cylinder to its heads. Rosettes b are placed over the ends of the journals on the outside of the standards. 85

The above mechanism is operated as follows: Applying the hand to one of the cylinders, these may be revolved, and thus the wheel C² is made to move around in the direction of the arrows d; or the motion may be reversed. C² does not itself revolve its axis. Thus its shelf F is kept constantly in the same plane. This may be, as desired, horizontal or inclined, being regulated by means set forth below. While wheel C² moves in the direction of the arrow d, wheel C' will revolve on its axis, in the direction of the arrow d', around the periphery of the wheel C. After the desired inclination of the shelves is secured, the wheel C does not revolve, being held firmly in position by the 100

action of the spring-detent D engaging with the teeth of the wheel C². However, when it is desired to change the plane of the shelves, the treadle D' is depressed, and the detent D is thus disengaged from the teeth of the wheel C³, which controls the plane of the shelves, and thereupon the shelves may be freely moved, and by raising or lowering the outer edge of any shelf the shaft E will be revolved in corresponding degree, and with it the wheel C². The movement of the wheel C² will produce a corresponding revolution of the wheels C' and C, and the wheel C will thus cause each of the other sets of wheels to revolve correspondingly, and the plane of all the shelves will be changed correspondingly. When the desired inclination of the shelves is secured, the treadle D' may be released and the spring-detent D will again engage with the teeth of the wheel C³, and the shelves will be held firmly in their new position. Thus I have provided a most convenient receptacle for books of reference, engravings, atlases, &c. Putting its standards upon casters, it can be easily moved to any desired place in a room. The person using it can do so with equal convenience, whether sitting or standing, since a shelf can be brought to any desired height and the revolution of the cylinders be then stopped.

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

1. In a system of revolving shelves, the respective series of gear-wheels C, C', and C², in combination with the shafts E and the shelves F, the ratchet-wheel C³, the spring-detent D and treadle D', and the cylinders A and A', connected by the spindle A⁴ and supported by the short shafts A³ and C⁴, journaled in the standards B, substantially as and for the purposes specified.

2. In a system of revolving shelves, the gear-wheel C', secured on a short shaft which revolves in the socket-bearings c, secured between the ends of the cylinder A, in combination with the gear-wheel C², which is rigidly secured on one end of the shaft E, upon which is rigidly secured the shelf F, and which passes through the inner heads of the cylinders A and A', and with the gear-wheel C, secured on one end of the short shaft C⁴, passing through the outer head of the cylinder A and through the

adjacent standard B, substantially as and for the purposes specified.

3. In a system of revolving shelves, the gear-wheel C, secured within and at the center of the cylinder A on the short shaft C⁴, journaled in the center of the outer head of the cylinder A and in the adjacent standard B, in combination with the gear-wheel C', secured on a short shaft placed in socket-bearings between the heads of the cylinder A, so that said gear-wheel will revolve and engage with gear-wheel C², to which is rigidly secured the shaft E, having secured rigidly upon it the shelf F, substantially as and for the purposes specified.

4. In a system of revolving shelves, the ratchet-wheel C³, located in a recess of the standard B adjacent to the cylinder A, and secured on the short shaft C⁴, journaled in said standard and in the center of the cylinder A, in combination with the spring-detent D and treadle D', with which it is connected at its lower end, and which is secured to said standard near the base of the same, substantially as and for the purposes specified.

5. In a system of revolving shelves, the combination, substantially as set forth, of the connecting-spindle A⁴, the cylinder A, secured at its center on the short shaft A³, journaled in a socket-bearing in the adjacent standard B, the cylinder A, having in its center a bearing for the short shaft C⁴, journaled at its outer end in the adjacent standard B, and having the gear-wheel C and the ratchet-wheel C³ secured on it, the gear-wheel C', and the gear-wheel C², to which is rigidly secured the shaft E, having secured rigidly upon it the shelf F.

6. In a system of revolving shelves, the combination of the shafts E, secured to the shelves F, the outside gear-wheels, C², the series of gear-wheels C C', and the cylinder A, substantially as and for the purposes specified.

7. In a system of revolving shelves, the cylinder A, having a socket-bearing to receive a journal of the short shaft C⁴, in combination with the respective series of gear-wheels C, C', and C², the shafts E, and the connecting-spindle A⁴, substantially as and for the purposes specified.

CREWS JEWELL.

Witnesses:

MARY L. JEWELL,
J. S. CAPEN.