(No Model.) 3 Sheets—Sheet 1.

H. WESTPHAL.

TRAVELING DISPLAY STAND.

No. 426,890. Patented Apr. 29, 1890.

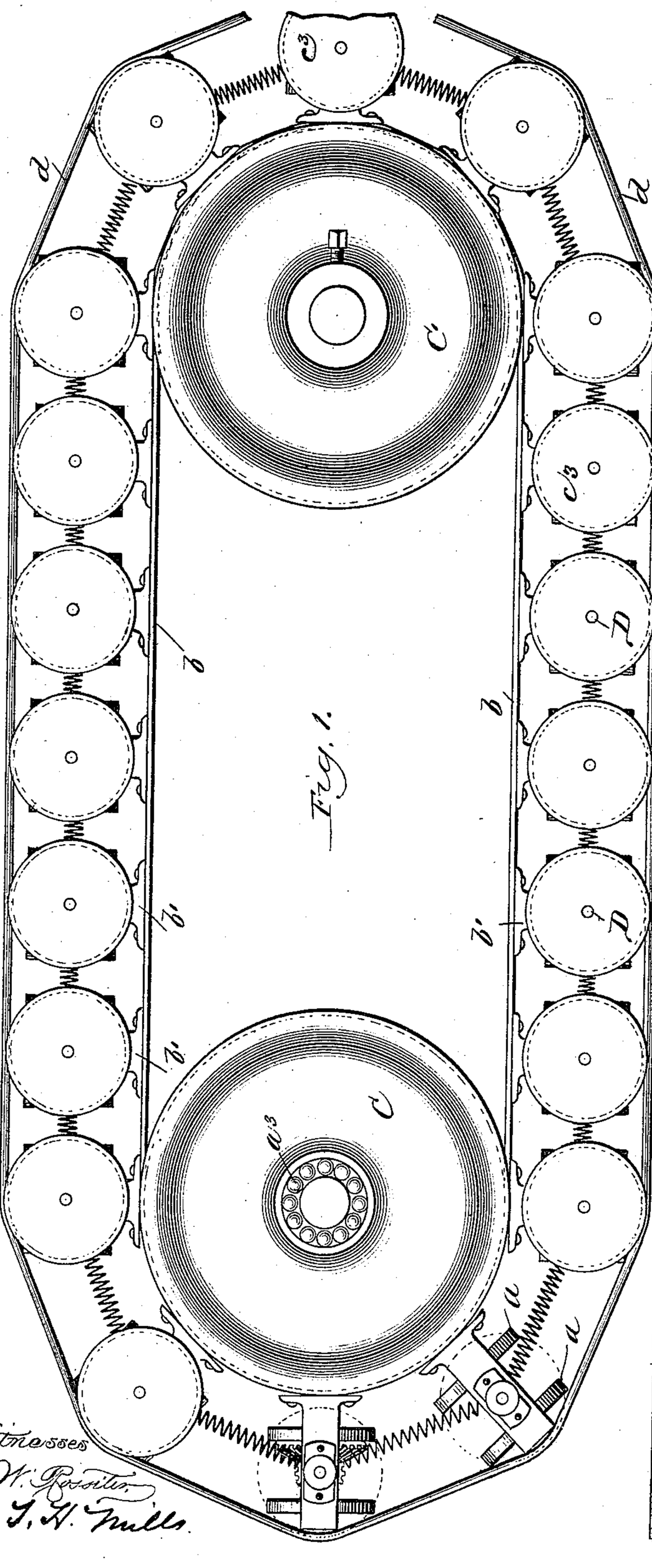

Fig. 1.

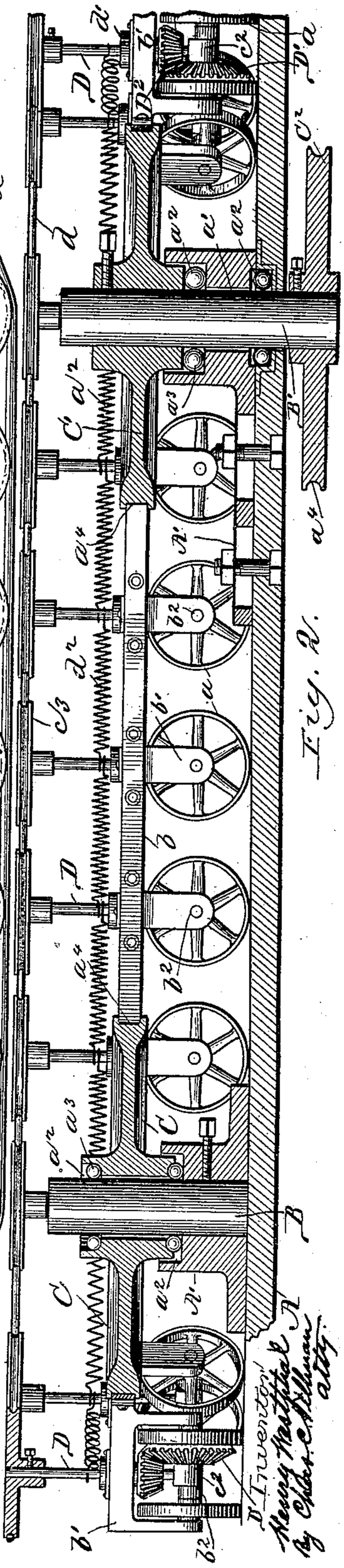

Fig. 2.

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Fig. 3.

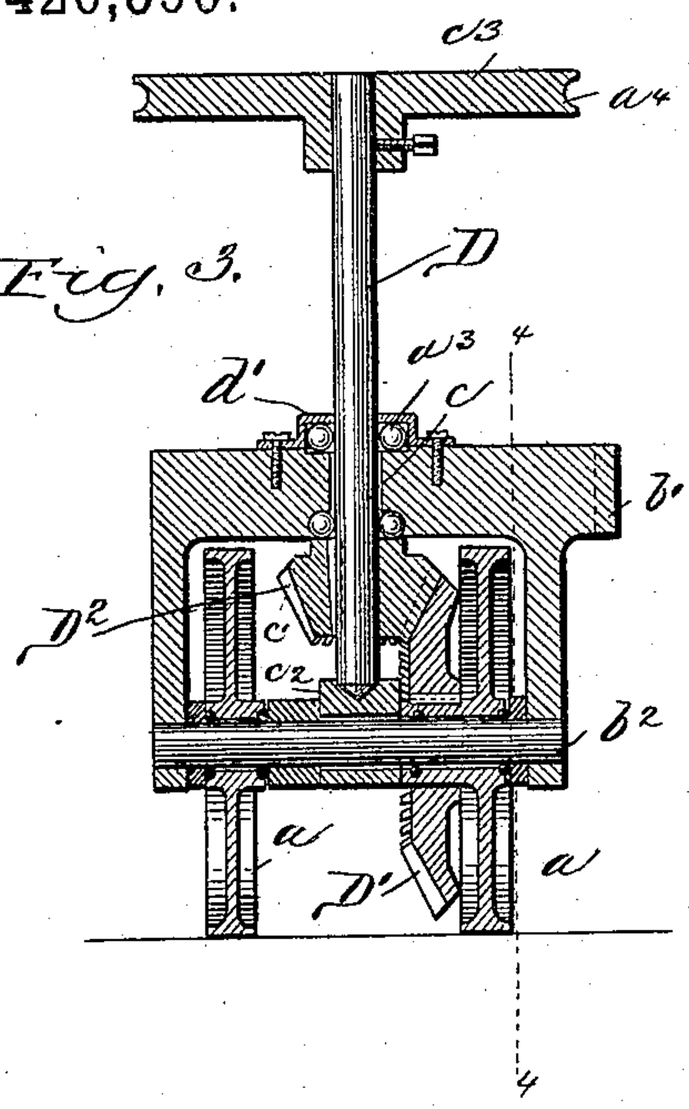


Fig. 4.

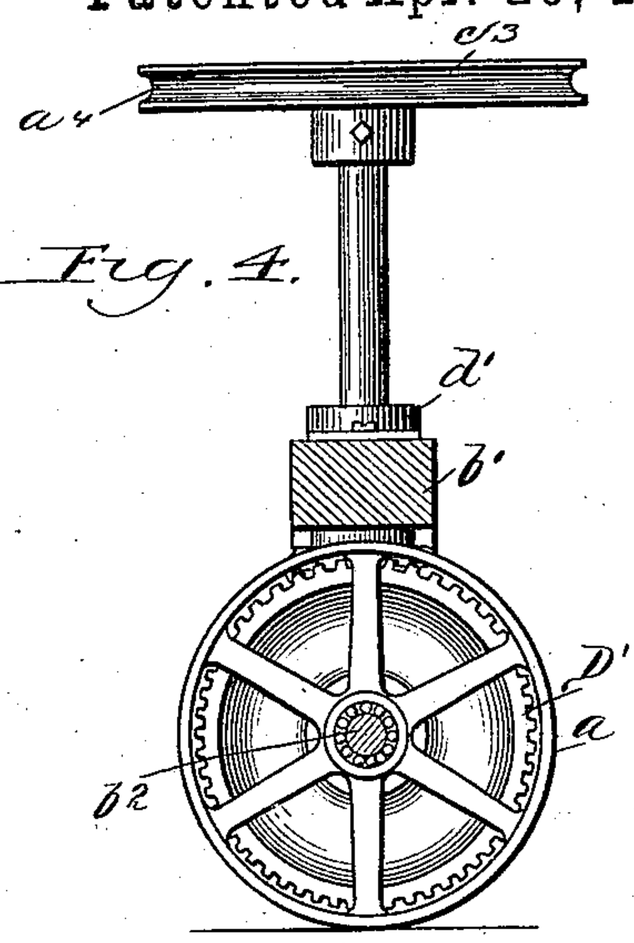


Fig. 1.

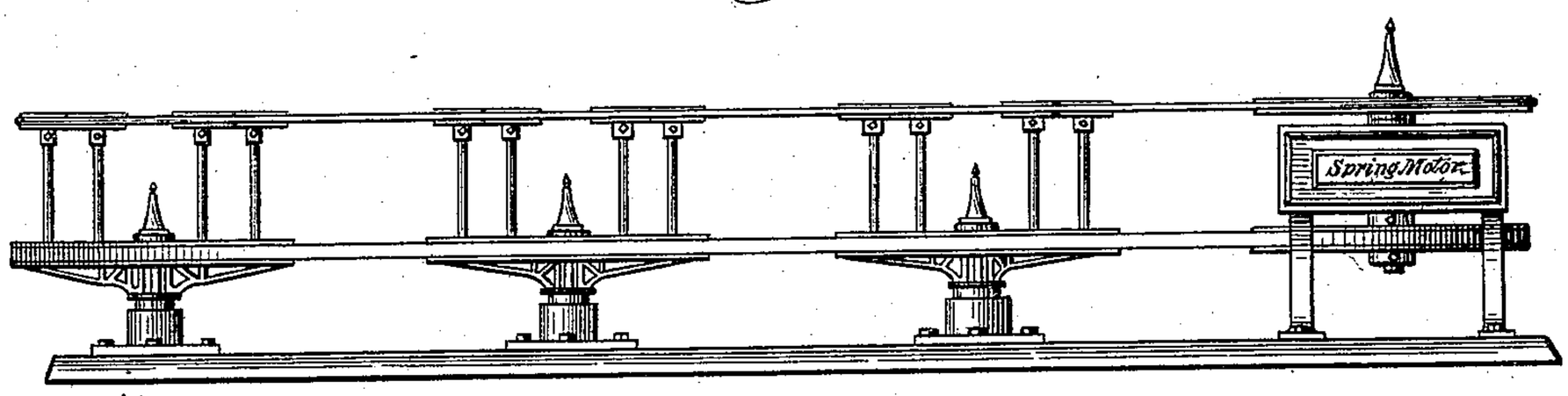
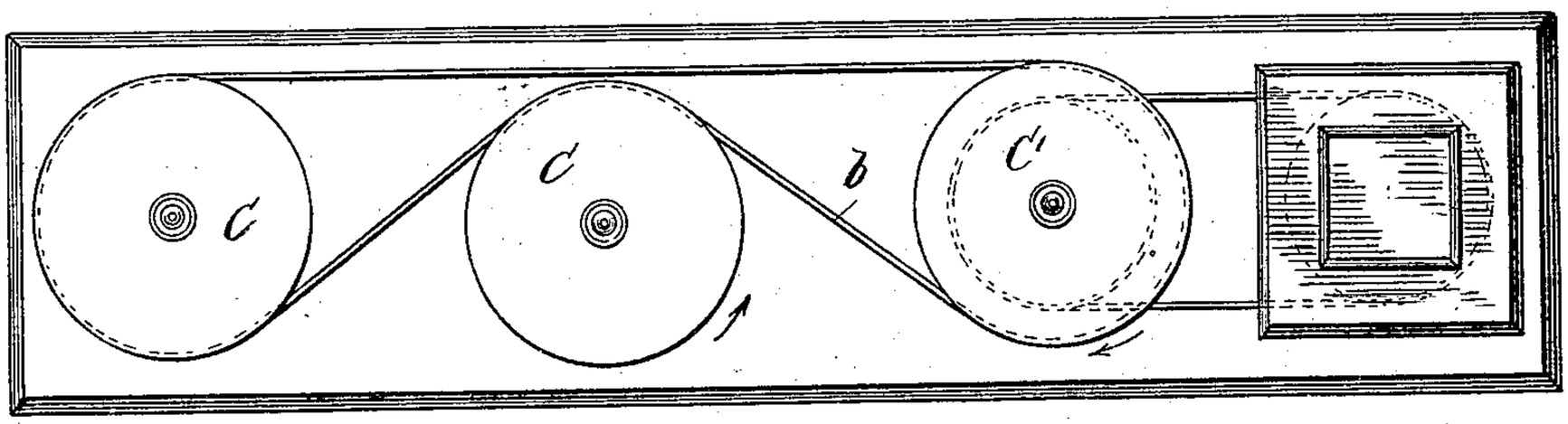


Fig. 8.



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(No Model.) 3 Sheets—Sheet 3.

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TRAVELING DISPLAY STAND.

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Fig. 5.

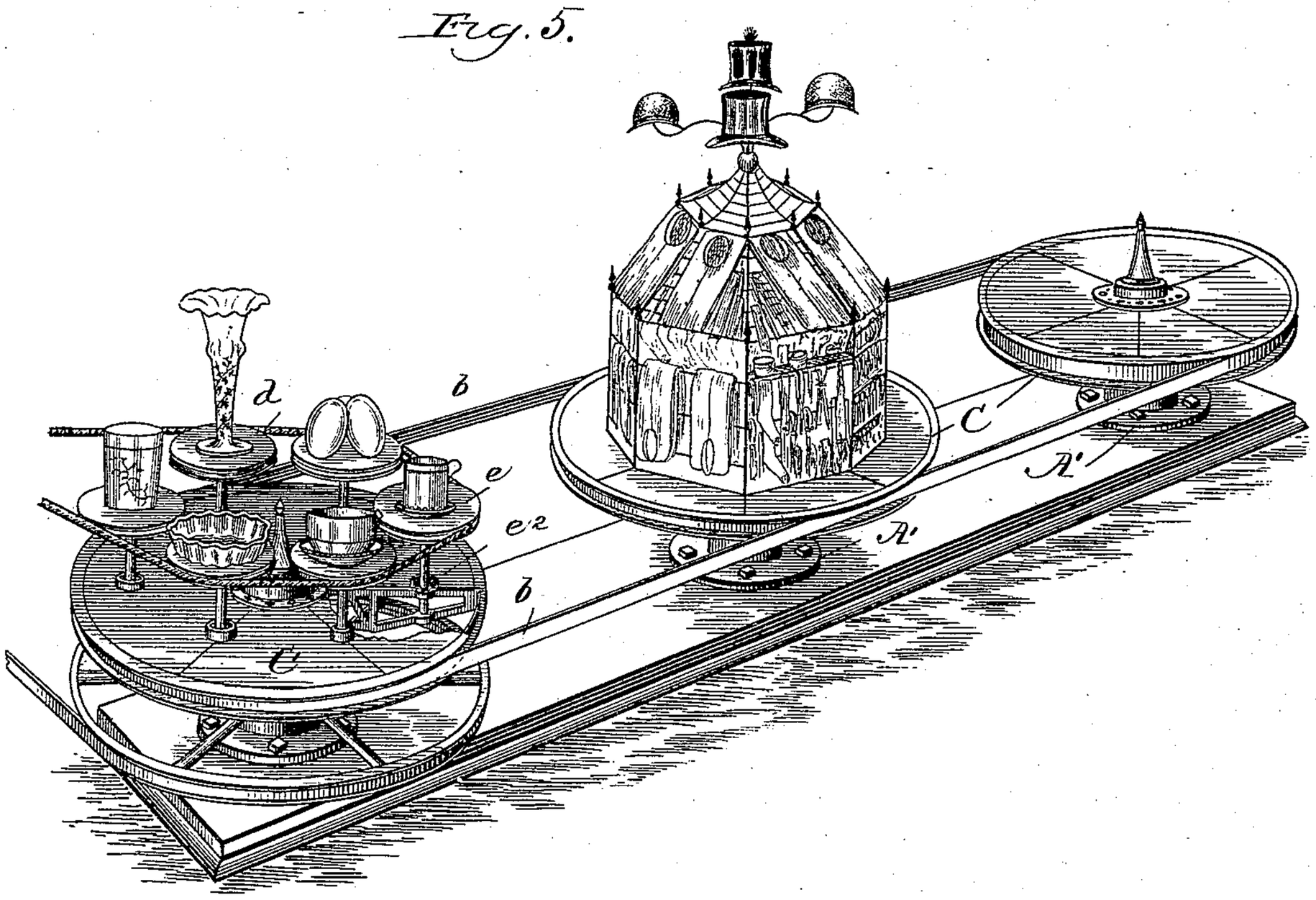
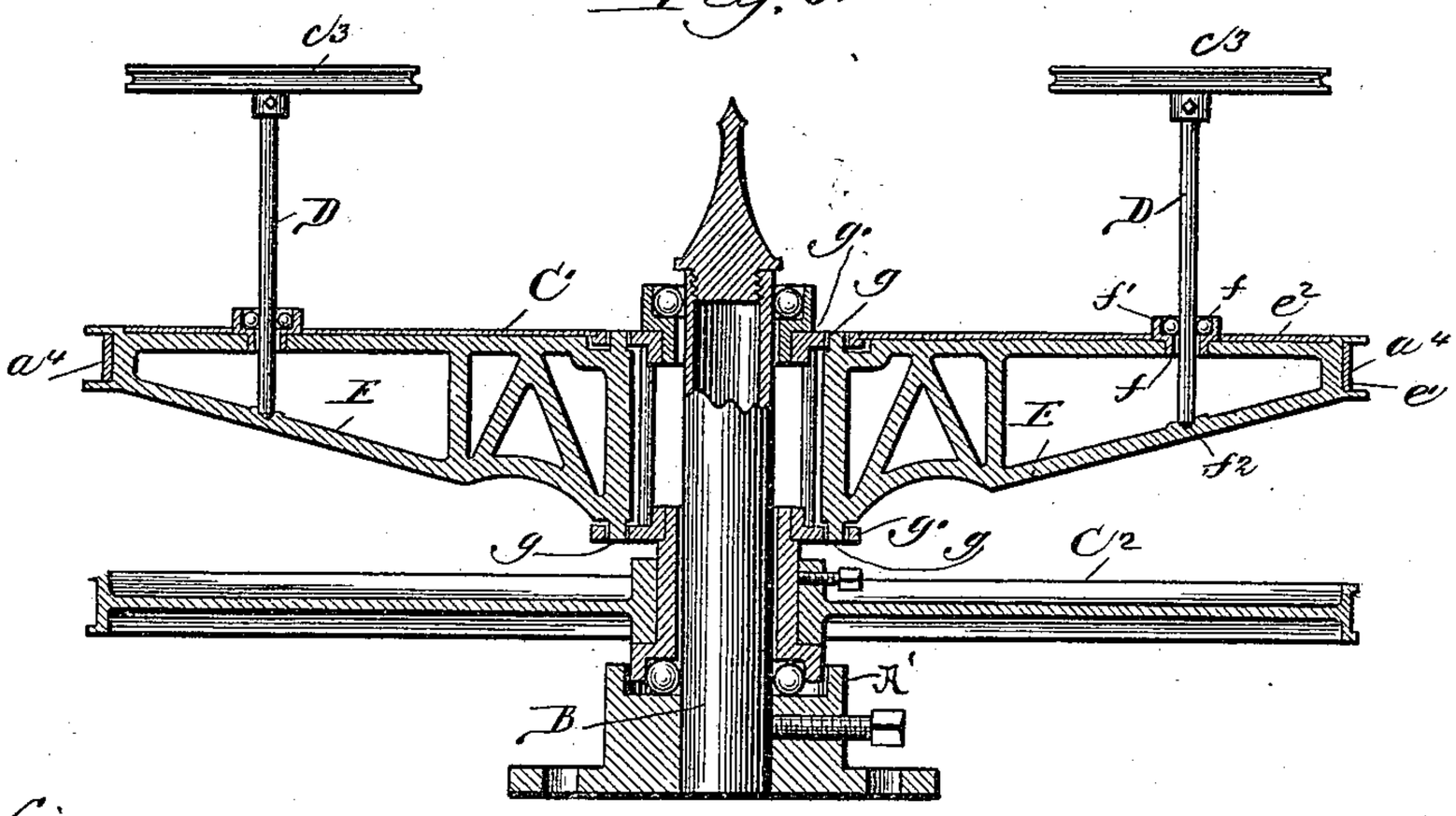


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY WESTPHAL, OF CHICAGO, ILLINOIS.

TRAVELING DISPLAY-STAND.

SPECIFICATION forming part of Letters Patent No. 426,890, dated April 29, 1890.

Application filed July 27, 1889. Serial No. 318,975. (No model.)

To all whom it may concern:

Be it known that I, HENRY WESTPHAL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Traveling Display-Stands, of which the following is a specification.

My invention relates to improvements in traveling display-stands to be used for exhibiting goods in the windows of stores; and it consists in certain peculiarities of the construction and arrangement of the same, as will be hereinafter more fully set forth and specifically claimed.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a plan view of my invention with two of the stands or tables removed. Fig. 2 is a longitudinal section of the same, taken on line 2 2 of Fig. 1. Fig. 3 is a vertical sectional view of one of the stands or tables and its carriage, showing the construction thereof in detail. Fig. 4 is a vertical sectional view of the same, taken on line 4 4 of Fig. 3. Fig. 5 is a perspective view of a modification in operation with a portion of one of the table-pulleys broken away, showing the bracket. Fig. 6 is a detail vertical section of one of the table-pulleys carrying the elevated stands, as shown in Fig. 5. Fig. 7 is a view in elevation of Fig. 5, showing each of the table-pulleys carrying elevated stands. Fig. 8 is a plan view of the same with the elevated stands removed and having the belt so applied as to revolve the table-pulleys in opposite directions.

Similar letters refer to like parts throughout the different views of the drawings.

A represents a platform or base with a smooth upper surface, upon which the series of wheels or casters *a a* travel. To this platform at suitable points are secured plates or castings A′, provided with suitable holes *a′* for the socket of the vertical spindle B, and journal-bearing for the driving-shaft B′, and having suitable depressions a^2 for the reception and retention of the anti-friction balls a^3, which are placed in said grooves or depressions and diminish the friction incident to the bearings, as is well understood. On the upper portion of spindle B, I loosely journal the pulley C, which has its periphery preferably formed with a circumferential groove a^4, which retains the endless belt *b* in place, and prevents it slipping either up or down. The upper and lower portions of the hub of this pulley may be provided with depressions a^2 similar to those in the castings A′, and for a like purpose. On the upper part of the driving-shaft B′, which is loosely journaled in the casting A′ and platform A, I journal and rigidly secure thereto a pulley C′, which I may form at its periphery with a similar groove, as in pulley C, and for a like purpose, and may provide the lower portion of the hub with depressions a^2, as before. To the lower part of the driving-shaft B′ is rigidly secured a pulley C^2, to which is applied the power for operation.

To the outside of the endless belt *b*, I removably secure a number of riders *b′*, carrying rollers or casters *a*, which rollers or casters may be rigidly secured to or loosely journaled on suitable axles b^2, which axles may be rigid or loosely journaled in the depending sides of the riders.

Through the upper part of each of the riders is formed a hole *c*, having an enlargement or groove *c′* at its bottom and retaining anti-friction balls a^3. Passing through this hole is a table-supporting standard D, having its lower end pointed and pivoted or socketed in a collar c^2, fitting around the axle b^2 near its center, and removably provided at the top with a circular table or stand c^3, preferably having its periphery grooved, as at a^4, for the reception of the belt *d*, which passes around and contacts with each of the entire series of tables c^3, as is clearly seen in Fig. 1, and rotates them. On the top plate of the rider *b′*, and around the standard D, I form or provide a boxing *d′* for retaining the anti-friction balls a^3. The standards D are connected together at suitable points between the boxing *d′* and the stands c^3 by spiral springs d^2, which assist in holding the standards erect and at proper distances apart.

At each end of the view in Fig. 2 I have shown one of the traveling casters provided with a beveled cogged gear D′ on the inner surface of the wheel, which gear engages with

a similar gear D^2, secured to the standard D within the rider b', as is clearly seen in Fig. 3. It will therefore be readily understood that by applying the necessary power to the pulley C^2 the device will be set in motion, and that the revolution of the pulley C', engaging with the pulley C through the endless belt b, having secured thereto and carrying the traveling stands c^3, will revolve the same around the pulleys, and that the revolution of the casters having the gearing D' and D^2 will revolve the stands thereon, which, being connected to each of the entire series of stands by means of the cord or belt d, will give to them a like movement.

Fig. 5 illustrates my invention with the traveling stands detached, and shows one of the pulleys C' provided with and carrying a number of elevated stands e, similar to the stands c^3, and operated by a belt d, as before. One of the other pulleys C, which also forms a circular table, is dressed with goods for display. In Fig. 6 is shown my preferable construction of these large table-pulleys, in which E are a number of brackets or arms, preferably of cast-iron and of the form shown, radiating from the shaft B, and having the outer end preferably formed with a groove a^4. Around the arms I place a band or tire e', forming a circular surface for the belt b, and on the top is secured a floor e^2 of any desired material. Through the floor and the upper portion of the bracket is a hole f, provided with a suitable boxing f', which may be cast in the arm or secured thereto for holding the anti-friction balls a^3. The supporting-standard D rests upon its point on the lower portion of the arm or bracket, as shown at f^2, and is journaled in and held erect by a suitable boxing either cast in or secured to the upper portion of the arm or floor. The upper and lower portion of the inner end of the bracket is formed with projections g, which fit into grooved collars g', surrounding the shaft B, which shaft may be provided with anti-friction balls, as before described. Below this pulley, and journaled on the same shaft, is the pulley C^2, to which is applied the operating-power by means of an endless belt.

The operation of the device is obvious by reference to Fig. 5.

In Fig. 7 I have shown three large table-pulleys of the same construction shown in Fig. 6 and described above, and provided with the elevated stands and operated by means of a belt applied directly to said pulleys. In this case the upright shafts are rigidly secured to the castings A', or may be a part thereof, and upon the shafts the pulleys are loosely journaled, as will be readily understood. It is obvious that I may provide each of the pulleys at their peripheries with sprockets to engage with a suitable endless belt, or may use the pulleys provided with a smooth periphery and ordinary belt, as shown.

In Fig. 8 I have shown a plan view of Fig. 7 without the elevated stands, having the belt b so applied as to rotate the pulleys in opposite directions.

In Fig. 2 are shown two only of the casters provided with the beveled gear; but I may employ more when the necessity of the case may require; or I may provide each one with a right or left gear, respectively, so that the belt d may be dispensed with and the revolution of the stands will be in opposite directions; or I may dispense with both the gears and belt d, in which case the stands will be stationary, yet will travel around the pulleys, as before. It is also obvious that instead of using two small wheels or casters, as shown, I may employ one only with the gear when desired.

While I have shown my invention with anti-friction ball-bearings, I may substitute therefor any suitable anti-friction devices or may dispense with such devices and employ any suitable bearings; but in order to enable the device to be easily operated by a limited amount of power I prefer to use the anti-friction bearings, as shown.

It will be seen and understood by reference to Fig. 6 that I may rigidly secure the shaft B' to the casting A' and loosely journal thereon the pulleys C^2 C', in which case the two pulleys are rigidly connected together.

In Fig. 2 I have shown the driving-shaft B' extending through and below the floor or platform A, and having the pulley C^2 secured to its lower portion, thus enabling me to apply the power for operation from the basement.

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

1. A traveling display-stand consisting of a platform or floor provided with suitable bearings having vertically journaled or secured therein two or more shafts, upon which are mounted pulleys operated by means of an endless belt carrying and having secured thereto a series of riders provided with wheels and tables or stands, substantially as and for the purpose specified.

2. A traveling display-stand consisting of a platform or floor provided with suitable bearings and having vertically journaled or secured therein two or more shafts, upon which are mounted pulleys operated by an endless belt carrying and having secured thereto a series of riders provided with caster rollers or wheels and having vertical standards supporting tables, substantially as shown and described, and for the purpose set forth.

3. A traveling display-stand consisting of a platform or floor provided with suitable bearings having journaled or secured therein two or more shafts, upon which are mounted pulleys operated by an endless belt carrying and having secured thereto a series of riders having wheels and vertical standards supporting tables contacting with and revolved by means of a belt, substantially as and for the purpose set forth.

4. A traveling display-stand consisting of a

platform or floor provided with suitable bearings having journaled or secured therein two or more shafts, upon which are mounted pulleys operated by an endless belt carrying and having secured thereto a series of riders having wheels provided with beveled gears, and standards having at the upper ends tables or stands and at the lower ends a beveled gear to engage with the gear on the wheels, substantially as shown and described, and for the purpose set forth.

5. In traveling display-stands, a platform having a driving-shaft journaled therein and provided with anti-friction balls and bearings, and an upper and lower pulley secured to said shaft, in combination with a shaft secured to the platform, a pulley having anti-friction balls and bearings loosely journaled on said shaft, and belts, for operation substantially as set forth.

6. In traveling display-stands, the platform A, provided with castings A′, having bearings a^2, anti-friction balls a^3, a driving-shaft B′, journaled in the casting and platform, and the pulleys C′ and C², provided with grooved peripheries a^4, journaled on shaft B′, in combination with a shaft B, socketed in the casting A′, having bearings a^2 and anti-friction balls a^3, the pulley C, having groove a^4, loosely journaled on the shaft B, and having the bearings a^2 and anti-friction balls a^3, and the belt b, all constructed, arranged, and operating substantially as set forth.

7. In traveling display-stands, the combination of the platform A, provided with castings A′, having bearings a^2, anti-friction balls a^3, the driving-shaft B′, having the pulleys C′ C², provided with grooves a^4, the shaft B, having bearings a^2, anti-friction balls a^3, the pulley C, having groove a^4 and bearings a^2, and anti-friction balls a^3, with the endless belt b, having secured thereto a series of vertical standards, each supporting a table, all arranged and operating substantially as shown and described, and for the purpose set forth.

8. In traveling display-stands, the combination of the platform A, provided with castings A′, having bearings a^2, anti-friction balls a^3, the driving-shaft B′, having the pulleys C′ C², provided with grooves a^4, the shaft B, having bearings a^2, anti-friction balls a^3, the pulleys C, having grooves a^4 and bearings a^2, anti-friction balls a^3, with the endless belt b, having secured thereto a series of riders b', having wheels a, standards D, circular tables c^3, provided with grooves a^4, and the cord d, all constructed, arranged, and operating substantially as set forth.

9. In traveling display-stands, the platform A, having mounted thereon the shafts B B′, and the pulleys C C′, journaled on the shafts, in combination with an endless belt b, having secured thereto a series of riders b', having wheels a, and vertical standards D, each supporting a table c^3, having groove a^4, and belt d, contacting with said tables, substantially as set forth.

10. In traveling display-stands, the combination of the endless belt b, having secured thereto a series of riders b', having wheels a, provided with beveled cogged gears D′, axles b^2, collars c^2, standards D, socketed at their lower ends in the collar c^2, and having anti-friction ball-bearings d', tables a^3, removably secured to the top of the standards, with pulleys C C′ journaled on suitable shafts mounted on a platform or floor, substantially as and for the purpose set forth.

11. In traveling display-stands, the combination of the platform A, the shafts B B′, the pulley C², belt b, and pulleys C C′, consisting of the brackets E, having groove a^4, projections g, collar g', floor e^2, and band e', all constructed, arranged, and operating substantially as and for the purpose set forth.

12. In traveling display-stands, the combination of the platform A, the shafts B B′, the pulley C², belts b d, and pulleys C C′, consisting of the brackets E, having groove a^4, projections g, collar g', floor e^2, band e', standards D, supporting tables c^3, having grooved peripheries for holding the belt d, and the standard D, socketed in the bracket, as at f, and having anti-friction ball-bearings f', all constructed, arranged, and operating substantially as and for the purpose set forth.

13. In traveling display-stands, a table-pulley consisting of the brackets E, having grooves a^4, projections g, floor e^2, band e', and collar g', substantially as specified.

14. In traveling display-stands, the riders b', having the wheels a, having beveled cogged gear D′, axles b^2, collar c^2, the hole c, having enlargement c', the boxing d', anti-friction balls a^3, the standards D′, having beveled cogged gears D², and tables c^3, substantially as set forth.

15. In traveling display-stands, the riders b', having wheels a, axles b^2, and standards D, having tables c^3, substantially as shown and described, and for the purpose set forth.

In witness whereof I have hereunto set my hand and affixed my seal this 20th day of July, 1889.

HENRY WESTPHAL. [L. S.]

In presence of—

CHAS. C. TILLMAN,

DANL. A. RAY.