H. O. JOHNSON.

SAMPLE DISPLAY APPARATUS.

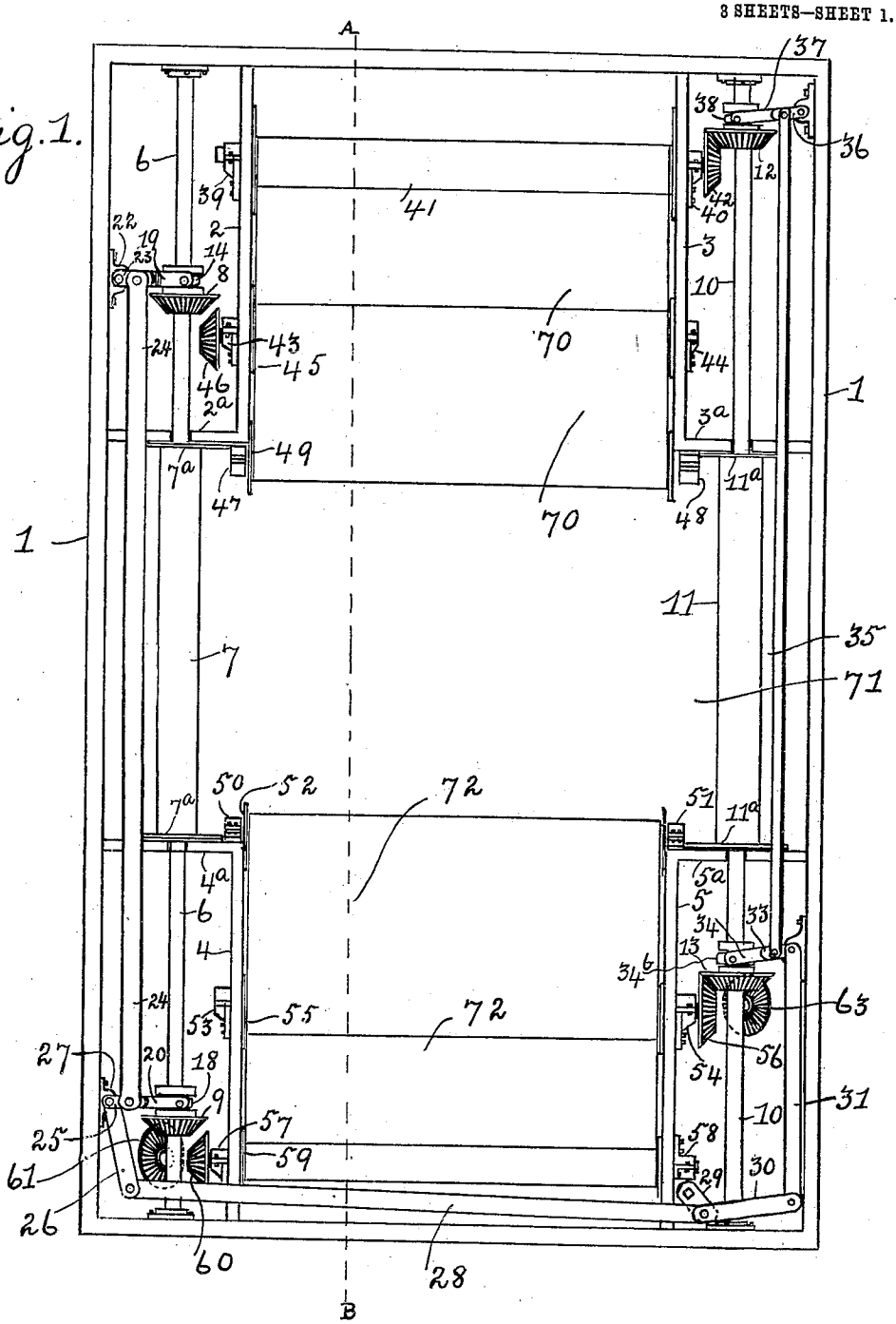
APPLICATION FILED MAR. 23, 1908.

921,713.

Patented May 18, 1909.

3 SHEETS—SHEET 1.

Fig. 1.



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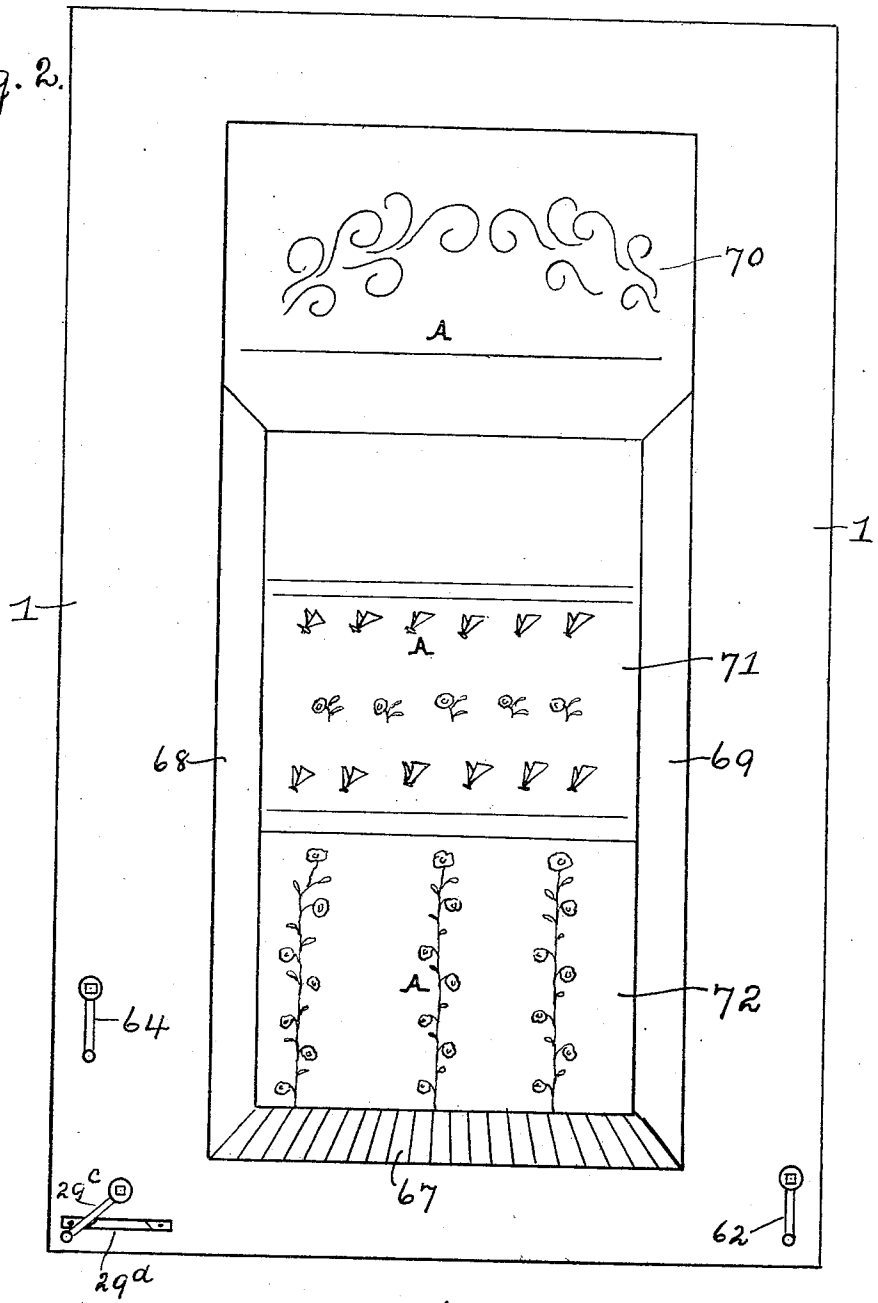
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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

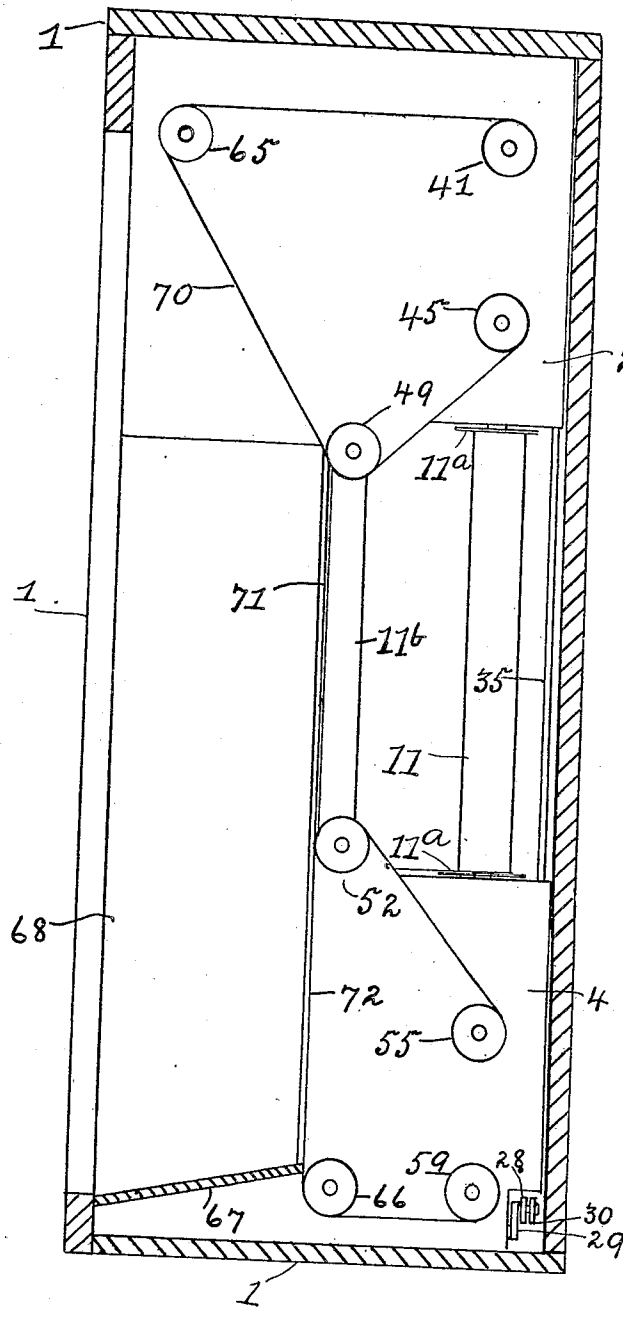


Fig. 4.

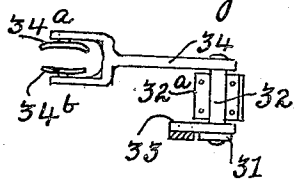


Fig. 5.

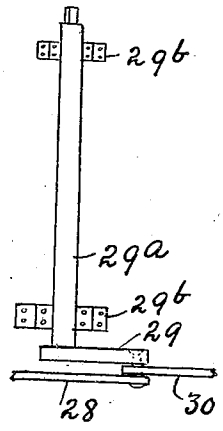
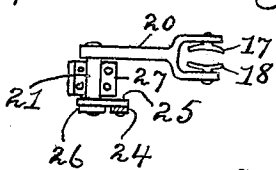


Fig. 6.



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UNITED STATES PATENT OFFICE.

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SAMPLE-DISPLAY APPARATUS.

No. 921,713. Specification of Letters Patent. Patented May 18, 1909.

Application filed March 23, 1908. Serial No. 422,618.

To all whom it may concern:

Be it known that I, HENRY O. JOHNSON, a citizen of the United States, residing at Virginia, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Sample-Display Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to sample display apparatus, and has for its object the provision of means for displaying successive sets of samples of various fabrics, together with the appropriate trimming therefor, or for displaying successive sets of designs on paper, each set comprising a section of wall paper, a section of border paper and a section of ceiling paper, said sections being samples of papers appropriate for use in papering a single apartment. With these and other objects in view, it comprises the constructions, combinations and arrangements of parts hereinafter described and claimed.

In the drawings, Figure 1, is a rear elevation of said invention, with the rear wall or cover omitted. Fig. 2 is a front elevation of said invention. Fig. 3, is a vertical section of said invention on the line A—B of Fig. 1. Fig. 4 is a detail plan view partly in section, of portions of gear lifting devices forming part of said invention. Fig. 5, is a detail plan view partly in section of some other portions of gear lifting devices forming part of said invention. Fig. 6 is a detail plan view partly in section of some other portions of gear lifting apparatus forming part of said invention.

In the drawings, 1 is a casing in which are positioned the vertical partitions or supports, 2, 3, 4 and 5 and the horizontal partitions or supports, 2^a, 3^a, 4^a and 5^a, or their mechanical equivalents of any suitable form or structure. 6 is a rotatable vertical shaft positioned within said casing, or housing, at one side thereof, upon which shaft and between the supports 2^a and 4^a is keyed a spool 7 preferably having end flanges 7^a. Upon said shaft is splined a pinion 8 and a pinion 9. A rotatable vertical shaft 10 is mounted within said casing at the opposite side thereof, upon which latter shaft and between said supports 3^a and 5^a is keyed a spool 11, preferably having end flanges 11^a. Upon said shaft 10 are splined pinions 12 and 13. Each of said pinions 8, 9, 12 and 13, is provided with an annularly grooved hub.

Engaging the groove in the hub of the pinion 8, are jaws 14 (similar to the jaws 17 and 18) which are pivoted to the tines of a fork 19 (similar to the fork 20, Fig. 6) which fork 19 is rigidly secured to a rock bar, not shown, but similar to the rock shaft 21. The first said rock shaft is journaled in the journal box 22 and has rigidly secured to its opposite end a lever 23, to which is pivoted one end of a connecting rod 24, the opposite end of which rod is pivoted to one end of a lever 25, which is rigidly secured to one end of the said rock shaft 21 (Fig. 6). To said end of said rock shaft 21 is also rigidly secured (as by mounting it upon a squared end formed on said rock shaft) one end of a lever 26. Said rock shaft 21 is journaled in the journal box 27 and to the opposite end of said rock shaft 21 is rigidly secured the fork 20, to the tines of which are pivoted the aforesaid jaws 17 and 18, which jaws engage the groove in the hub of the pinion 9. The opposite end of the lever 26 is pivotally connected to one end of a connecting bar 28 and the opposite end of said connecting bar 28 is connected to a wrist pin carried by an eccentric 29, which eccentric is rigidly secured to a rock shaft 29^a journaled in suitable bearings 29^b. Also secured to said wrist pin is one end of a connecting link 30, the opposite end of which is pivotally secured to the power end of a lever 31, which is rigidly mounted at its opposite end on one end of a rock shaft 32 journaled in bearings 32^a. Upon one end of said rock shaft 32, is rigidly mounted a lever 33, and upon said rock shaft is also rigidly mounted a fork 34, to the tines of which are pivotally secured the jaws 34^a and 34^b, which jaws are adapted to engage an annular groove formed in the hub of the pinion 13. To the free end of the lever 33 is pivotally connected one end of a connecting rod 35, the opposite end of which is pivotally connected to the free end of a lever 36 which is rigidly secured at one end to a rock shaft (not shown, but similar to the rock shaft 32) to which rock shaft is rigidly secured a fork 37 to the tines of which are pivotally secured jaws 38 adapted to engage an annular groove formed in the hub of the pinion 12.

Journaled in suitable bearings as 39 and 40, mounted on the support 2 and 3 respec-

tively, is a spool 41, having a pinion 42 keyed to its shaft, which pinion is adapted to be engaged by the pinion 12 when the pinion 12 is in operative position. Journaled in suitable bearings, as 43 and 44, and extending from said support 2 to said support 3, is a spool 45 having a pinion 46 keyed to its shaft, which pinion 46 is adapted to be engaged by said pinion 8 when said pinion 8 is in operative position. Journaled in suitable bearings as 47 and 48 is an idler spool 49. Journaled in suitable bearings as 50 and 51 is an idler spool 52. Journaled in suitable bearings, as 53 and 54, is a spool 55 having a pinion 56 keyed to its shaft, which pinion 56 is adapted to be engaged by the pinion 13 when said pinion 13 is in operative position. Journaled in suitable bearings as 57 and 58 is a spool 59 having a pinion 60 keyed to its shaft, which pinion 60 is adapted to be engaged by the pinion 9 when said pinion 9 is in operative position.

61 is a drive gear keyed to a shaft extending through one wall of the casing and adapted to be turned by any suitable means, as by a crank 62. Said gear 61 is adapted to engage the pinion 9 when said pinion 9 is in operative position, but is set at such an angle that it will not engage the pinion 60 at any time.

63 is a drive gear keyed to a shaft extending through the wall of the casing and adapted to be turned by any suitable means, as by a crank 64. Said gear 63 is adapted to be engaged by the pinion 13 when said pinion 13 is in operative position, but is set at such an angle that it will not engage the pinion 56 at any time. The rock shaft of the eccentric 29, extends through the casing and may be rocked by any suitable means, as by the crank 29^c. Said crank 29^c may be held at either end of its path of travel by a spring block 29^d mounted upon the face of the casing.

65 and 66 are idler or guide rollers or spools mounted in suitable end bearings. All of the spools 41, 45, 49, 52, 55, 59, 65 and 66 are parallel with each other and approximately of the same length.

67 is a floor, preferably made to imitate the floor of a room. If desired, said floor may be carpeted or covered with a fabric (not shown).

68 and 69 are mirrors set at opposite angles, and extending from said floor approximately to the horizontal plane of the upper end of the spools 7 and 11; but the height of said mirrors may be varied as desired.

70 is a strip of samples of ceiling paper pasted or otherwise secured together; one end of said strip being firmly secured to said spool 41, the strip being, in the first instance, wound a plural number of times around said spool, thence carried forwardly over the roller 65, thence downwardly and backwardly beneath the roller or spool 49, thence upwardly and back of the spool 45 to which its opposite end is securely fastened.

71 is a strip of samples of border papers pasted or otherwise secured together and secured at one end to the vertical spool 11 and in the first instance carried a plural number of times around said spool, thence directed forwardly around a vertical guide roller 11^b, thence, transversely of the casing, to and around a vertical guide roller (not shown) similar to the roller 11^a, thence rearwardly to the spool 7 to which it is fastened at its opposite end.

72 is a strip of samples of wall paper fastened together, which strip is secured at one end to the spool 55, around which it is in the first instance, wound a plural number of times, thence said strip is led upwardly and forwardly to and over the guide roller 52, thence downwardly and beneath the guide roller 66, thence rearwardly to the spool 59, to which it is secured at its opposite ends. The construction is such that the major part of the length of the strip 70 may be reeled off of the spool 41 and on to the spool 45, by rotating the spool 45 in one direction and may be reeled back again on the spool 41 by reversing the direction of rotation of the spools, the power being applied in the first instance to the spool 45 and in the latter instance to the spool 41. In similar manner the strip mounted on the spools 7 and 11 may be reeled back and forth from one of said spools 7 and 11 to the other of them. In similar manner the strip mounted on the spools 55 and 59 may be reeled back and forth from one of said spools 55 and 59 to the other of them. Said paper carrying spools and their driving means are preferably so constructed that they will all move at the same rate of speed, and are of equal diameters with each other so that the strips carried thereby will each move an equal distance in a given period. The samples composing each strip are arranged in the same order as samples designed to be associated with them for inspection are arranged in the other strips, so that when sample A of ceiling paper is exposed to view at the front of the machine, sample A of border paper will be exposed in proper relation to it and sample A of wall paper will be simultaneously exposed in proper relation to said border paper, thus giving the spectator an opportunity to judge how the papers from which such samples were taken would look when placed together as they are designed to be.

If desired, samples of cloth or silk may be substituted in place of one or another or all of the papers, and braid or other trimming may be substituted for the border paper, thus making the device of use to dry goods

houses. Or, if desired, sheets showing the colors of house paints may be substituted for the samples of wall papers, to show various harmonious combinations of paint or stain colors.

In operation, the samples being adjusted as described on the rolls, and the pinions 8 and 9 being first thrown into engagement with the pinions 46 and 60 respectively, and the pinion 9 being simultaneously thrown into engagement with the gear 61, all of which engaging of pinions and gears is accomplished by throwing over the eccentric 29 by means of the shaft 29^a and the crank or key 29^c, which operates through the proper connecting rods, levers, rock bars, forks, jaws and hubs to move said pinions 8 and 9 into engagement with said pinions 46 and 60 respectively and to move said pinion 9 into engagement with said gear 61, and which said throwing over of the eccentric operates through other said levers, connecting rods, rock shafts, forks, jaws and hubs to move said pinions 12 and 13 out of engagement with said pinions 42 and 56 respectively, the gear 61 is turned in the proper direction by the crank or key 62, thus turning the pinion 9 which turns the pinion 60 and the shaft 7 and pinion 8 and pinion 46 causing the spool 45 to reel from the spool 41 and causing the spool 7 to reel from the spool 11 and causing the spool 59 to reel from the spool 55. By throwing the eccentric 29 back to former position, the pinions 8 and 9 are put out of operation and the pinions 12 and 13 are put into operation; then by rotating the gear 63, the spool 41 is caused to reel from spool 45, and spool 11 is caused to reel from spool 7, and spool 55 is caused to reel from spool 59. By throwing the eccentric to center, all the spools become idlers because of the disengagement of all the pinions, and the spools may then be manipulated by hand to correct any displacement of the sample strips that may have occurred.

It is obvious that within the spirit and scope of my claim said construction may be modified in various ways.

What I claim is:

As a new article of manufacture, a display apparatus comprising a casing, a set of parallel reels positioned near one end thereof, a set of parallel reels positioned near the opposite end of said casing and extending parallel to the first said set, one of the reels of each of said sets being provided with a terminal pinion near one side of said casing, another of the reels of each of said sets being provided with a terminal pinion near the opposite side of said casing, a rotatable shaft positioned near one side of said casing and intersecting of the line of the rotary axis of each of said reels, pinions slidably keyed to said shaft, one of said shaft pinions being adapted in operative position to engage the pinion on one of the reels of one of said sets and in retracted position to disengage therefrom, the other of said shaft pinions being adapted to engage the pinion on one of the reels of the other of said sets and in retracted position to disengage therefrom, a rotatable shaft near the opposite side of said casing intersecting the line of the axes of rotation of the reels of each of said sets, a pinion slidably keyed to the latter said shaft and adapted in operative position to engage the pinion on the other of the reels of the other of said sets, means for simultaneously moving the pinions on either one of said shafts into operative position and for simultaneously retracting the pinions on the opposite said shaft, means for rotating one of said shafts, means for rotating the other of said shafts, and a third set of reels comprising a reel carried by each of said shafts intermediate of the pinions thereon.

In testimony whereof I hereunto affix my signature, in presence of two witnesses.

HENRY O. JOHNSON.

Witnesses:

JAMES T. WATSON,

PAUL THOMPSON.