Aug. 24, 1926. 1,597,262

J. H. BLOODGOOD

TRAVELING ADVERTISING DEVICE

Filed Nov. 28, 1925 2 Sheets-Sheet 1

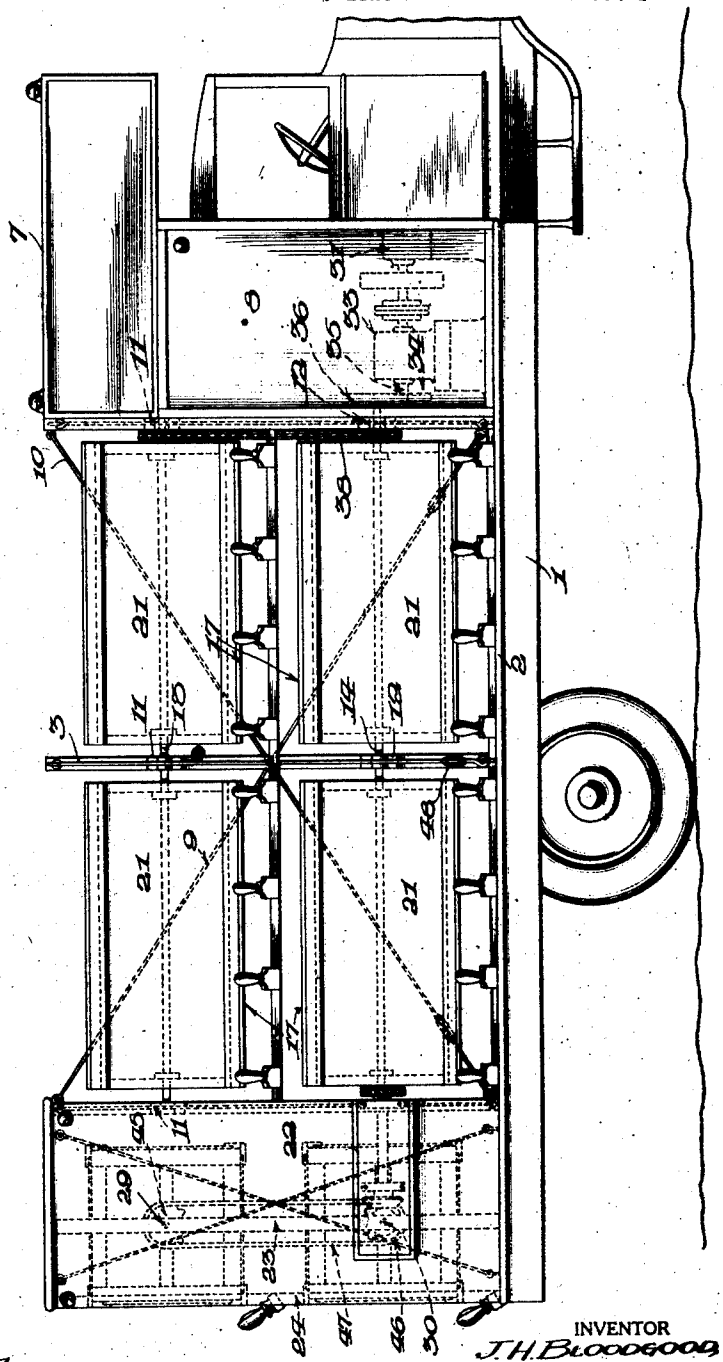


Fig. 1.

WITNESSES

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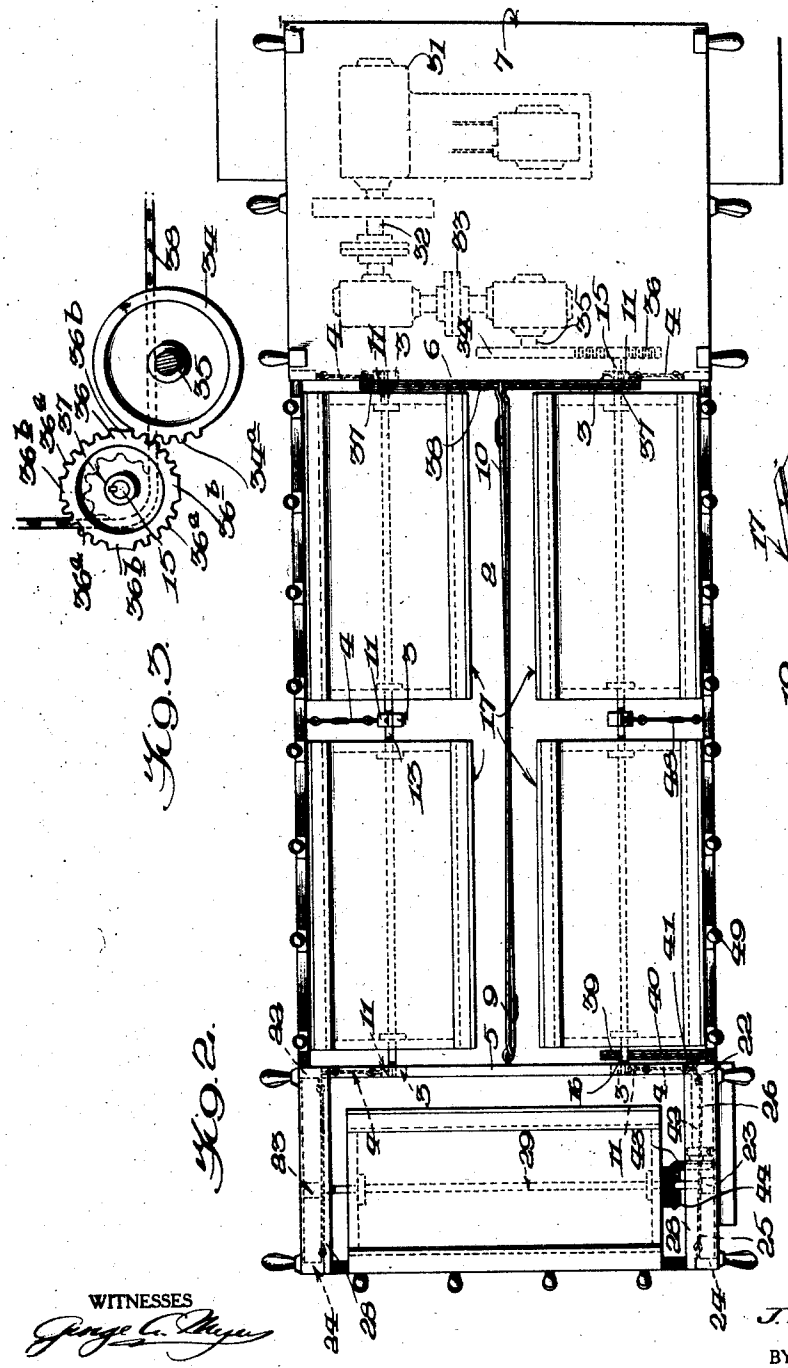


Fig. 2.

Fig. 3.

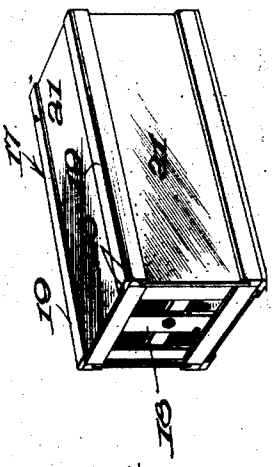


Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

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TRAVELING ADVERTISING DEVICE.

Application filed November 28, 1925. Serial No. 72,054.

My invention relates to advertising devices and more particularly to an advertising device which is carried by a vehicle, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of the invention is the provision of an advertising device which affords facilities for supporting a plurality of rotary display units on a vehicle and for operating the display units so that the rotary movement of each display unit will be intermittent and each display unit will be held stationary at spaced intervals during each complete rotation thereof to permit thorough inspection of the respective display faces of the display unit by persons adjacent to the vehicle.

A further object of the invention is the provision in a traveling advertising device of the character described of a supporting structure on the vehicle which is simple in construction but is extremely strong, well braced and durable.

A still further object of the invention is the provision in a traveling advertising device of the character described of a novel and highly effective arrangement of a plurality of display units so that the respective display faces of each display unit will be successively disposed in position to permit relatively good inspection thereof by persons who are adjacent to the device.

Other objects and advantages of the invention will be apparent from the following description, considered in conjunction with the accompanying drawings, in which

Figure 1 is a side elevation of an advertising device embodying the invention mounted on the frame of a vehicle, only a portion of the vehicle being shown,

Figure 2 is a plan view of the device.

Figure 3 is a side elevation of a portion of the driving mechanism of the device, showing particularly two cooperative intermittent gears, and

Figure 4 is a perspective view of one of the display units of the device.

In Figure 1, the numeral 1 designates the frame of a vehicle, which in actual practice probably will be a motor truck. The supporting structure of the device is supported on the frame 1 and may be secured to the latter in any suitable known manner. This supporting structure includes a flat base 2 which may be the floor of the vehicle body. Posts or standards 3 are mounted on the base 2 in any suitable known manner and are arranged in rows which extend longitudinally of the base 2 relatively adjacent to but spaced from the side edges of the base 2 as best seen in Figure 2. Moreover, the rows of standards 3 terminate at a considerable distance in advance of the end of the base 2 which will be hereinafter referred to as the rear end thereof, as shown in Figure 2.

The standards 3 are strongly stayed to the base by means of the downwardly and outwardly inclined brace rods 4. Also the standards 3 at the rearward ends of the hereinbefore mentioned rows are connected at their upper ends by a cross bar 5 and the standards 3 at the front ends of the rows are secured to the rear wall 6 of an upright open box-like structure 7 which is supported at the upper ends of side walls 8 on the front end portion of the base 2. The cross bar 5 is stayed to the base 2 by an inclined brace rod 9 and the rear wall 6 of box-like structure 7 likewise is stayed to the base 2 by an inclined brace rod 10. The brace rods 9 and 10 cross each other above the longitudinal median line of the base 2 and are inclined to extend in the direction of length of the base 2.

Three standards 3 are comprised in each row that extends longitudinally of the base 2 in the embodiment of the invention that is illustrated in the drawings, although obviously a greater or less number of the standards 3 may be provided in each row if desired. Adjacent standards 3 in each row have horizontally aligned bearings 11 on the outer faces thereof adjacent to but spaced from the upper ends of the standards and also have horizontally aligned bearings 12 secured on the outer faces thereof at a considerably lower level, all as shown in Figure 1. A longitudinal shaft 13 is journaled in the bearings 11 on the standards 3 of each row and extends the full length of the associated row of standards 3.

A longitudinal shaft 14 is journaled in the bearings 12 on each row of standards 3. One of the shafts 14 extends forwardly of the front standard of the associated row of standards 3 as indicated at 15 and also rearwardly of the rear standard 3 of that row, as indicated at 16. The portions of the

shafts 13 and 14 which extend between adjacent standards 3 in each row carry identical display units generally designated 17, each of which is mounted on its supporting shaft to rotate with the latter. Each display unit 17 comprises a frame that includes a pair of end members 18 which are centrally supported on the associated shaft 13 or 14, each of such end members being square in configuration and having a central opening through which the associated shaft 13 or 14 extends, said end members 18 being secured to the supporting shaft in any suitable known manner. The end members of the frame of each display unit 18 are connected at their corners by longitudinal angle bars 19. The side edges of the longitudinal bars 19 are formed with longitudinally extending rabbets or grooves 20 for engaging with the longitudinal edge portions of removable side panels 21, which thus are supported on the display unit between adjacent longitudinal bars 19. The frame of each display unit 17 therefore may support four of the removable panels 21 and each panel may have any desirable advertising matter or other matter produced thereon. Each panel 21 may be slid longitudinally to and from position to be supported by adjacent longitudinal bars 19 of the frame of a display unit 17.

The rear end portion of the base 2 has pairs of transversely aligned spaced uprights 22—22, 23—23, and 24—24 mounted thereon, corresponding uprights 22, 23 and 24 being located on the base 2 adjacent to the side edges of the latter. Corresponding uprights 22 and 24 are stayed to the base 2 by inclined brace rods 25 and 26, respectively, and the corresponding uprights 22, 23 and 24 support side plates or walls 27. Corresponding uprights 22, 23 and 24 are connected at their upper ends by longitudinal connecting bars 28, the upright 23 being located midway between the associated uprights 22 and 24. The uprights 23 are formed to provide a pair of horizontally aligned upper bearings for rotatably supporting a cross shaft 29 which is disposed at the level of the shafts 13. The uprights 23 also are formed to produce a pair of horizontally aligned lower bearings for a cross shaft 30 which is disposed at the level of the shafts 14. Each of the shafts 29 and 30 has one of the display units 17 secured thereon.

The invention contemplates the provision of a suitable mechanism for driving the display units 17 in unison so that each display unit will be turned intermittently about the axis of its supporting shaft so that each display unit will remain sationary for a short period of time while a display panel thereof is in vertical position so that it can be viewed by a person at one side of or at the rear of the supporting vehicle. The driving mechanism may include a suitable power plant which may be of any suitable known type of construction and which is shown more or less diagrammatically at 31 in Figure 3. This power plant has a drive shaft 32 from which power may be transmitted through a suitable speed reduction mechanism shown more or less diagrammatically at 33 to a driving gear 34. The driving gear 34 is secured on the driven shaft 35 of the speed reduction mechanism. The shaft 35 may be referred to as a jack shaft. The parts of the driving mechanism that have been described so far are supported on the front end portion of the vehicle and the driven shaft 35 of the speed reduction mechanism is parallel to the shafts 13 and 14. This driving gear 34 is of the intermittent type as shown best in Figure 3 and is arranged to cooperate with a smaller intermittent gear 36. The latter is secured on the extending front end portion 15 of the hereinbefore indicated one shaft 14. The front end portions of the shafts 13 and 14 carry sprockets 37 about which an endless chain 38 is trained.

The driven gear 36 has four similar series of teeth 36^a spaced regularly circumferentially thereof and alternating with block portions 36^b having concavely curved outer faces. The driving gear 34 has a series of teeth 34^a for cooperating with the series of teeth 36^a successively, there being one more tooth 34^a than the teeth 36^a of each series. The remaining and greater portion of the periphery of the gear 34 is smooth and is adapted to cooperate with the concavely curved surface of each block portion 36^b of the gear 36 to prevent rotation of the gear 36 until the teeth 34^a of the drive gear engage teeth 36^a of the driven gear. The driven gear is secured on the extending end portion 15 of one of the shafts 14 so that one of the panels 21 of each display unit on a shaft 13 or 14 will be disposed in position to be viewed by a person at one side of the supporting vehicle each time and while the smooth peripheral portion of the gear 34 is cooperating with a block portion 36^b of the gear 36 to prevent rotation of the gear 36.

The extending rear end portion 16 of said one shaft 14 carries a sprocket 39. A chain 40 connects the sprocket 39 with a sprocket 41 on the adjacent end of a second motion shaft 42. The latter is journalled in bearings on adjacent uprights 22 and 23 and carries a bevel gear 43 in mesh with a bevel gear 44 on the cross shaft 30. The cross shafts 29 and 30 carry sprockets 45 and 46, respectively, connected by a chain 47, whereby the display units at the rear of the device on the cross shafts 29 and 30 and the display units at the sides of the device on the shafts 13 and 14 will have synchronous motion about their respective axes.

Each of the stay rods 4, 9, 10, 25 and 26 may comprise sections adjustably connected by a turn buckle, as at 48.

Light emitting elements, such as the electric lamp bulbs 59, may be arranged on the supporting structure of the device in position to illuminate the display panels at the outer sides of the display units. These light emitting elements are shown as being arranged in rows at the sides of the device and at the rear of the device and also at the edges of the open box-like structure 7. The latter may serve as a compartment or stand for accommodating a plurality of musicians.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. When the drive shaft 32 is rotating continuously, the shafts on which the display units are supported will be actuated so that the display units will be turned one quarter of a revolution at one time and each display unit will remain at rest for a period of time with one of the display panels 21 thereof in vertical position and facing laterally outward from the supporting structure, the display panels 21 of each display unit being held stationary in outwardly facing position for the same length of time during a complete rotation of the display unit.

Obviously, the invention is susceptible of embodiment in forms other than that which is illustrated in the accompanying drawing, and I therefore consider as my own all such modifications and adaptations thereof as fairly fall within the scope of the appended claims.

I claim:—

1. A device of the character described comprising a movably supported frame structure, display units rotatably supported at the sides and at one end of the frame structure, each display unit being mounted to rotate about an axis, each display unit being rectangular in cross sectional contour and having four display faces, a drive shaft, motion transmitting means between said drive shaft and said display units for turning said display units in unison so that each display unit will be turned one quarter of a revolution at a time and then will remain stationary for a period of time, each display unit remaining stationary when a display face thereof is turned laterally outward from the frame structure.

2. A device of the character described comprising a movably supported frame structure, display units rotatably supported at the sides and at one end of the frame structure, each display unit being mounted to rotate about an axis, each display unit being rectangular in cross sectional contour and having four display faces, a drive shaft, motion transmitting means between said drive shaft and said display units for turning said display units in unison so that each display unit will be turned one quarter of a revolution at a time and then will remain stationary for a period of time, each display unit remaining stationary when a display face thereof is turned laterally outward from the frame structure, said display means including a speed reduction unit and two cooperating intermittent gears.

3. An advertising device of the character described comprising a movably supported base, standards on said base, certain of said standards being disposed in rows adjacent to the sides of the base and other of said standards being disposed on the rearward end portion of said base, vertically spaced shafts rotatably supported by the standards on the side portions of the base, vertically spaced shafts extending transversely of the base, and supported rotatably by the standards on the rearward end portion of the base, display units secured to said shafts to rotate therewith, each of said display units having a plurality of display faces arranged regularly about the axis of the display unit, motion transmission means between one of said longitudinal shafts and one of said cross shafts, sprockets on said cross shafts, a chain trained about said sprockets, sprockets on said longitudinal shafts, a chain trained about said last named sprockets, a power plant includingg a drive shaft, a jack shaft, a speed reduction unit between said drive shaft and said jack shaft, an intermittent gear on said jack shaft, and a second intermittent gear on one of said longitudinal display unit supporting shafts for receiving motion from said first named intermittent gear.

4. In a device of the character described, the combination with a vehicle having a frame of a base mounted on the frame, standards mounted on the base, brace members and staying members between adjacent standards, adjustable stay members between the upper ends of certain of said standards and said base, and rotary display units supported between adjacent standards.

5. A device of the character described comprising a movably supported frame structure, a plurality of display units rotatably supported thereon, each display unit having a plurality of faces designed to present advertising matter or the like, and means for driving the display units in unison so that the display faces of said display units will be disposed successively in positions to face laterally outward from the frame structure and will remain stationary in outwardly facing position for a period of time during each complete rotation of each display unit, said driving means including two cooperating intermittent gears, one of which is adapted to drive the other inter-

mittently, the driven gear having four regularly spaced series of teeth alternating with block portions having concavely curved outer faces and the drive gear having but one series of teeth adapted to mesh with the series of teeth on the driven gear sequentially, the periphery of the drive gear being smooth for the remaining and greater portion of its circumference and being adapted to cooperate with the concavely curved faces of the block portions of the driven gear to prevent rotation of the latter when the teeth on the drive gear are out of engagement with teeth on the driven gear.

JAMES HENRY BLOODGOOD.