W. H. BROWN.

DISPLAY MACHINE.

APPLICATION FILED JAN. 16, 1913.

1,079,105.

Patented Nov. 18, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

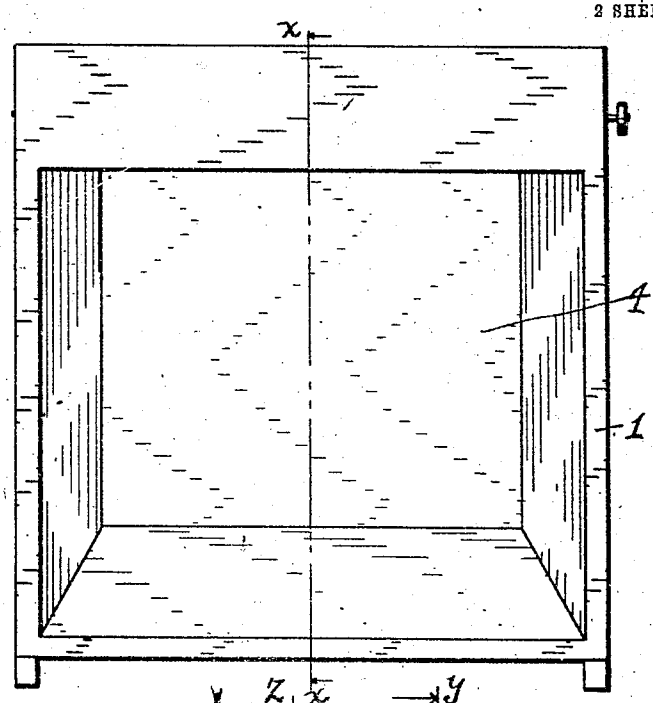
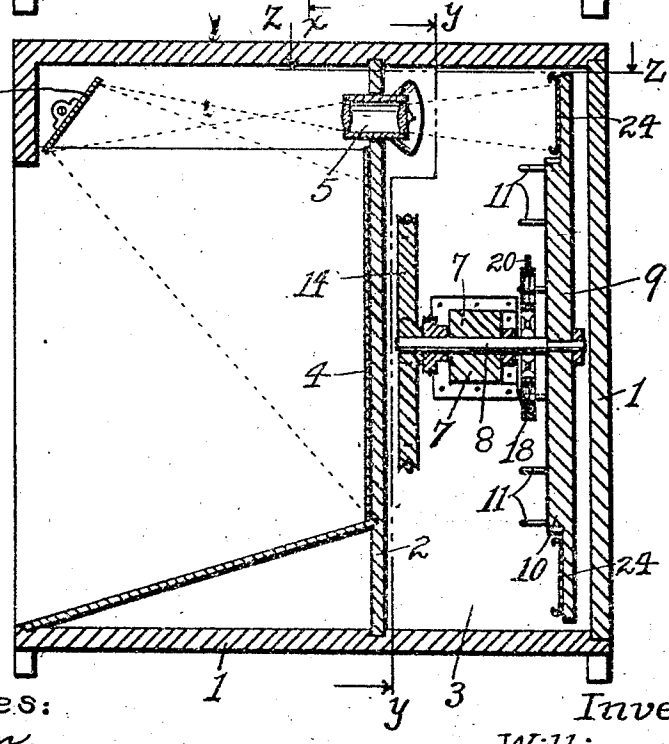


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

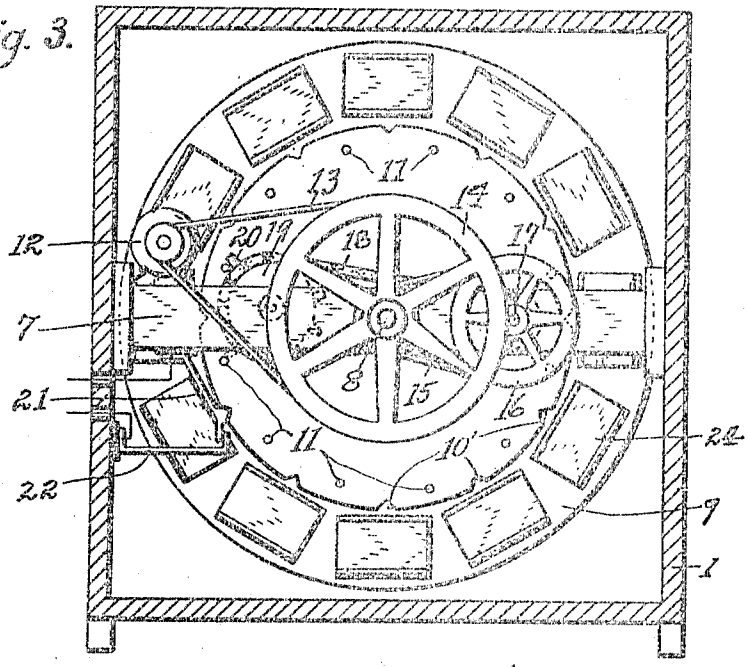


Fig. 4.

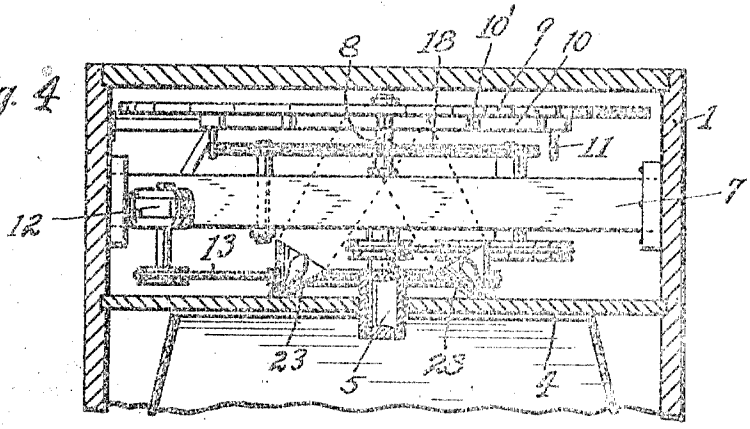
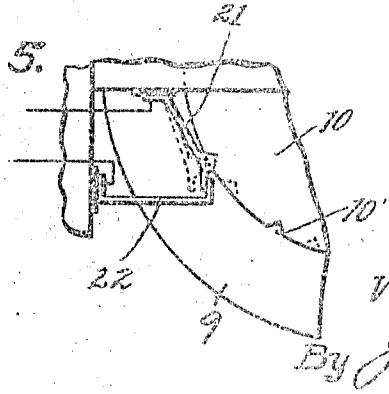


Fig. 5.



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UNITED STATES PATENT OFFICE.

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DISPLAY-MACHINE.

1,079,105. Specification of Letters Patent. Patented Nov. 18, 1913.

Application filed January 16, 1913. Serial No. 742,345.

To all whom it may concern:

Be it known that I, WILLIAM H. BROWN, a citizen of the United States, and a resident of the city of Bangor, county of Van Buren, and State of Michigan, have invented certain new and useful Improvements in Display-Machines, of which the following is a specification.

My invention relates to improvements in display machines especially adapted for advertising purposes and has for its object the provision of an improved machine of this character which is simple of construction and efficient in operation.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a front elevation of a machine embodying my invention, Fig. 2, a section taken on line *x*—*x* of Fig. 1, Fig. 3, a section taken on line *y*—*y* of Fig. 2, Fig. 4, a section taken on line *z*—*z* of Fig. 2, and Fig. 5, an enlarged detail view of a circuit breaker employed in the machine.

The preferred form of construction as illustrated in the drawings comprises a suitable cabinet 1 which is open at the front and is provided with a closed partition 2 dividing off the rear portion thereof into a closed compartment or "dark room" 3. A luminous screen 4 of aluminum cloth or other suitable material is arranged on the outer face of partition 2, as indicated and a lens tube 5 is passed through partition 2 centrally above screen 4, as indicated. A mirror 6 is arranged in the upper forward portion of cabinet 1 opposite lens tube 5 in position to reflect the rays of light transmitted by lens tube 5 onto screen 4. A removable supporting beam 7 is arranged centrally in dark room 3 and a shaft 8 is mounted on said beam. A rotatable disk 9 is loosely mounted on shaft 8 and is provided on its forward face with a notched cam disk 10 having a plurality of pins 11 projecting forwardly therefrom. An electric motor 12 is also mounted on beam 7 and connected by means of a belt 13 with a driving pulley 14 secured to the forward end of shaft 8. Shaft 8 is connected by means of a belt 15 with a driving pulley 16 on a countershaft 17 and countershaft 17 serves to drive a sprocket chain 18 passing over an idler sprocket wheel 19 mounted on beam 7, as indicated. Sprocket chain 18 carries an outwardly projecting finger 20 adapted to engage pins 11 and rotate disk 9 intermittently as will be readily understood. By this arrangement it will be observed, that the speed of motor 12 will be very much reduced and that upon each complete operation of sprocket wheel 18, finger 20 thereon will engage one of the pins 11 and cause a partial rotation of disk 9.

A spring held circuit breaker 21 is arranged to ride upon the periphery of cam disk 9 and is provided with a nose adapted to enter the notches 10′ in said cam disk. This circuit breaker coöperates with an electric contact 22, said circuit breaker and contact being connected in series with electric lights 23, as will be readily understood by those skilled in the art. The pins 11 and notches 10′ are so positioned relative to each other and to the operative stroke of pin 20, that at the termination of each intermittent movement caused by pin 20, the nose on circuit-breaker 21 enters a corresponding notch 10′ thus holding disk 9 in position and at the same time closing the circuit for lights 23. Then when cam disk 10 again rotates the nose on circuit breaker 21 is forced out of the corresponding notch 10′ and the circuit for lights 23 is broken, so that during the movements of disk 9, the lights 23 will be extinguished, thus saving current during such movements and preventing the blurring of the matter displayed during this time.

Cam disk 9 is provided on its forward face with a plurality of holders 24 which are adapted to receive display cards such as ordinary advertising cards or other suitable cards, said holders being positioned relatively to notches 10′ and pins 11 so that one of said holders will be positioned directly behind lens tube 5 during the time when disk 9 is stationary. The lights 23 are arranged on opposite sides of lens tube 5 and are inclined as shown so as to cast their light directly upon the holder and display member thus positioned directly behind lens tube 5. This casts a strong light upon said display member and this light is reflected through lens tube 5 onto mirror 6 and thence onto screen 4 thus displaying the matter onto the corresponding display card enlarged upon said screen. By this arrange-

ment, it will be observed that ordinary opaque or nontransparent display cards may be readily employed and an attractive display of the matter thereon shown upon screen 4. This specific form of construction will be found to be simple, capable of economical manufacture and highly efficient in use.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. In a device of the kind described, the combination of an intermittently operated picture carrying disk having spaced notches therein; an electric light circuit; a switch in said electric light circuit comprising a stationary member and a movable member, the latter riding on said picture carrying disk and adapted to engage said notches to close the electric light circuit, substantially as described.

2. A device of the kind described comprising a frame; a picture carrying disk mounted in said frame and provided with spaced notches therein; a motor in said frame; an intermittent gearing connecting said motor and said picture carrying disk; an electric light circuit; and an electric light switch in said circuit comprising a stationary member in said frame and a resilient member having one end secured to said frame and its other end riding on said picture carrying disk engaging the notches therein, said switch being closed only when said picture carrying disk is still and said resilient member engaging said notches, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM H. BROWN.

Witnesses:

JOSHUA R. H. POTTS,

HELEN F. LILLIS.