No. 714,839. Patented Dec. 2, 1902.

J. A. WATSON & W. H. ROSE.

APPARATUS FOR ADVERTISING OR LIKE PURPOSES.

(Application filed Mar. 8, 1902.)

(No Model.) 3 Sheets—Sheet 1.

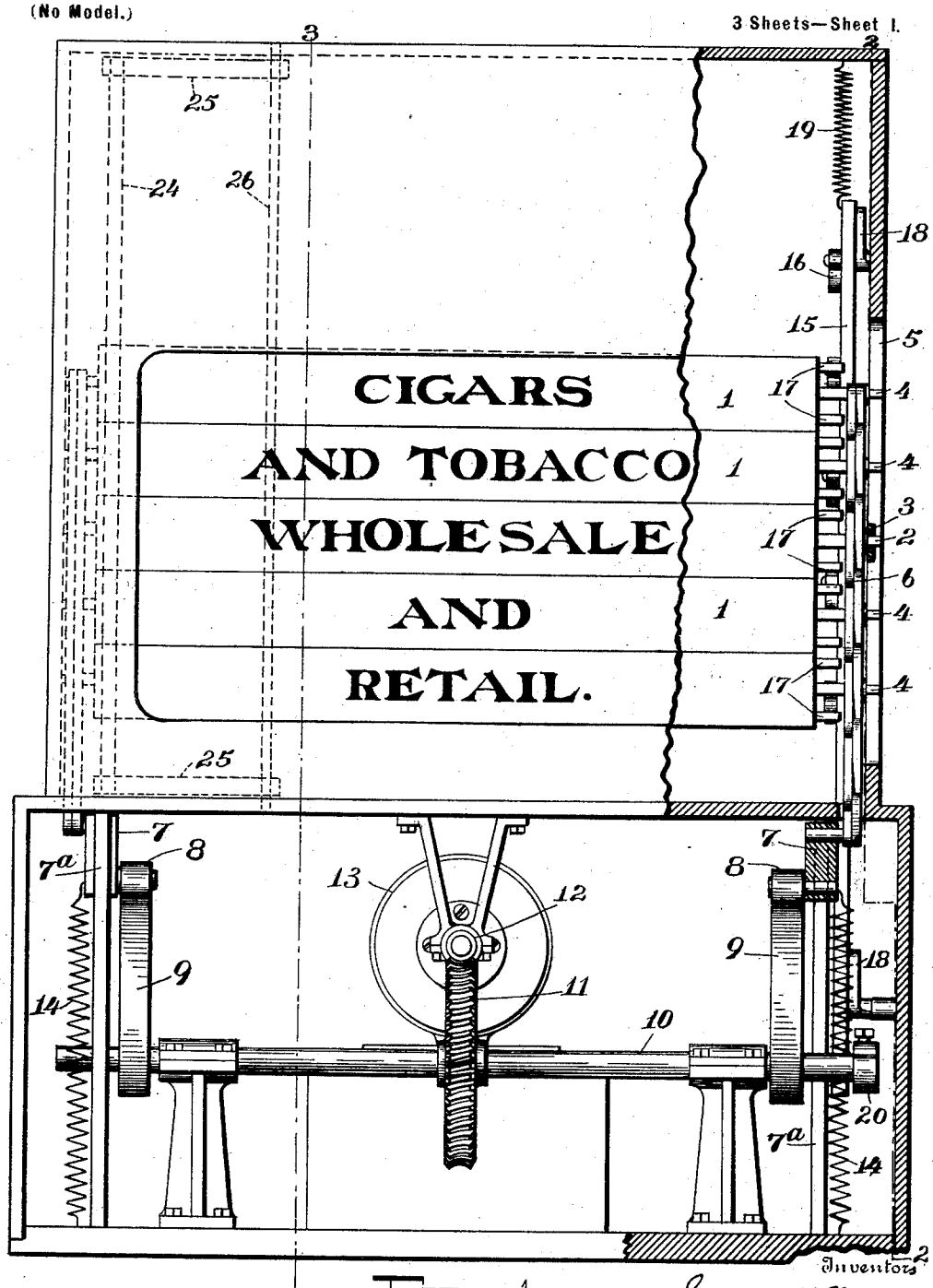


FIG. 1.

Witnesses

Percy C. Bowen

Arthur L. Bryant

Inventors

James A. Watson

William H. Rose

By Watson & Watson

Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 714,839. Patented Dec. 2, 1902.

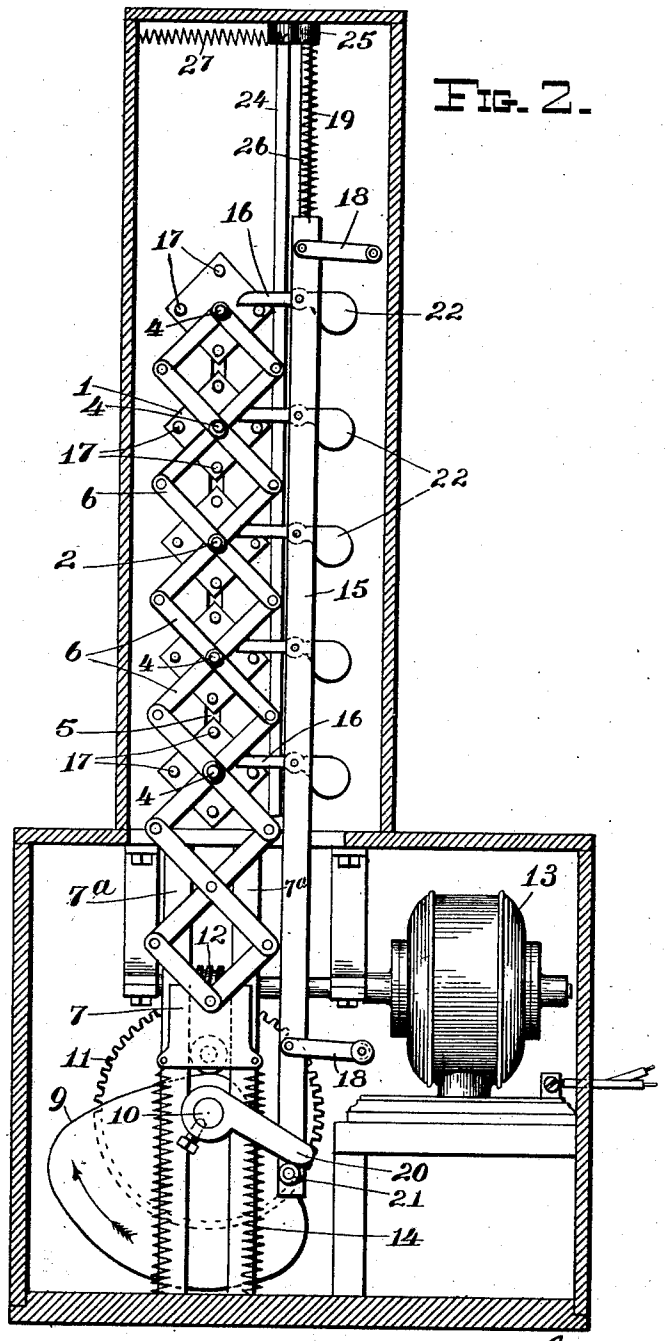
J. A. WATSON & W. H. ROSE.

APPARATUS FOR ADVERTISING OR LIKE PURPOSES.

(Application filed Mar. 8, 1902.)

(No Model.) 3 Sheets—Sheet 2.

FIG. 2.



Witnesses
Percy C. Bowen
Arthur L. Bryant

Inventors
James A. Watson
William H. Rose
By Watson & Watson
Attorneys.

THE NORRIS-PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 714,839. Patented Dec. 2, 1902.

J. A. WATSON & W. H. ROSE.

APPARATUS FOR ADVERTISING OR LIKE PURPOSES.

(Application filed Mar. 8, 1902.)

(No Model.) 3 Sheets—Sheet 3.

FIG. 4.

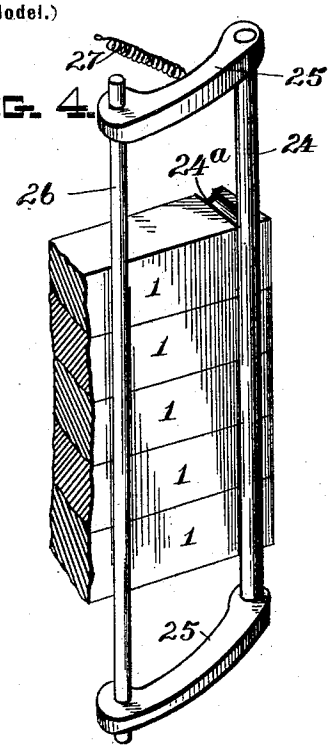


FIG. 3.

Witnesses

Percy C. Bowen

Arthur L. Bryant

Inventors

James A. Watson

William H. Rose

By Watson & Watson

Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES A. WATSON, OF WASHINGTON, DISTRICT OF COLUMBIA, AND WILLIAM H. ROSE, OF BALTIMORE, MARYLAND.

APPARATUS FOR ADVERTISING OR LIKE PURPOSES.

SPECIFICATION forming part of Letters Patent No. 714,839, dated December 2, 1902.

Application filed March 8, 1902. Serial No. 97,344. (No model.)

To all whom it may concern:

Be it known that we, JAMES A. WATSON, residing at Washington, District of Columbia, and WILLIAM H. ROSE, residing at Baltimore, State of Maryland, citizens of the United States, have invented certain new and useful Improvements in Apparatus for Advertising or Like Purposes, of which the following is a specification.

This invention comprises a changeable sign or advertising device which can be operated to automatically display a series of signs or pictures in succession.

The main feature of the invention consists in a series of prisms, preferably rectangular in cross-section, superposed so that their front faces are in a common plane. The several corresponding faces of the prisms will be provided with sections of pictures, designs, or other advertisements, which will be shown as a whole when the faces are brought to the front in a common plane. Mechanism is provided for imparting to the prisms a partial rotation periodically to change the sign. When four, six, or eight sided prisms are used, signs may be exhibited simultaneously back and front of the apparatus.

In the accompanying drawings, Figure 1 is a front view of a changeable sign constructed according to our invention, parts being broken away to show the operating mechanism. Fig. 2 is a right side elevation, the casing being shown in section on the line 2 2 of Fig. 1. Fig. 3 is a section on the line 3 3 of Fig. 1, and Fig. 4 is a perspective view of the device for alining prisms.

In the drawings we have shown a series of five rectangular prisms 1, which are adapted to exhibit four signs, each of the four faces of each prism having thereon a portion of one sign. The middle prism rotates on central spindles or trunnions 2, which are mounted in fixed bearings 3. The prisms above and below the middle one have similar spindles 4, which are movable vertically in slotted guides 5. In order to rotate the prisms, it is necessary to separate them, so that the angles of adjacent prisms may pass each other. This separation may be accomplished in various ways, the simplest, perhaps, being to mount the spindles of the prisms in lazy-tongs 6. As shown in the drawings, the lazy-tongs are adapted to work up and down from the fixed bearing 3, and the prisms above the middle are thus made to counterbalance the prisms below it. To the lower ends of the lazy-tongs are connected blocks 7, provided with rolls 8, which ride on cams 9 on a shaft 10, said shaft being operated, as shown, by a worm-wheel 11, worm 12, and electric motor 13. The cams are so shaped that once in each revolution the prisms are separated and then brought together again, being held together during a considerable portion of the revolution of the shaft. Springs 14 are provided for holding the rolls 8 in contact with the cams 9. The blocks 7 slide in guides 7^a.

Means are provided for turning the prisms when they are separated. As shown, this portion of the mechanism comprises a bar 15, which carries a series of pivoted pawls 16, adapted to engage pins 17 in the ends of the prisms. Each prism has as many pins as it has sides. The pawls as spaced on the bar correspond with the positions of the prisms when they are separated. The bar 15 is so mounted that it will move toward and from the prisms as it is moved down and up. As shown, this is accomplished by connecting the bar pivotally to two pivoted bars or links 18. A spring 19 normally holds the bar in its uppermost position, and in moving to this position it swings away from the prisms, as shown in Fig. 3. At the moment when the prisms are separated, as shown in Fig. 2, an arm 20 on the shaft 10 engages a roll or pin 21 on the rod 15 and draws it down, causing said rod to swing toward the prisms and the pawls 16 to engage the pins 17 on the prisms. The prisms are thus simultaneously turned through ninety degrees. The cams then close the lazy-tongs and bring the prisms close to-

gether to form a continuous sign. As this is accomplished the rod 15 is released from the arm 20 and springs back to its normal position. In order that the backward or upward movement of the rod 15 may not disturb the prisms, the pawls 16 are loosely pivoted. They are held in the normal horizontal position by counterweights 22 and pins 23.

As an additional means for alining the prisms and preventing any possible derangement we provide an alining-bar 24, which is yieldingly pressed against the prisms. The bar 24 engages circumferential grooves 24ª on the prisms, and thus alines them longitudinally and prevents overmotion when they are rotated. As shown, this bar is carried by arms 25 of a rock-shaft 26, and it is drawn against the prisms by a spring 27. As the alining-bar 24 may produce some wear upon the prisms, it is preferably applied at one end beyond the visible portion of the sign, as illustrated in Fig. 1.

As shown, our sign is inclosed in a suitable casing provided with a sight-opening 28, having a glass plate 29.

Our invention is particularly adapted for use with rectangular prisms, and when so used four complete signs or views are exhibited successively. The principle of the invention, however, might be applied to prisms having different numbers of sides. Triangular and four-sided prisms will present unbroken surfaces when brought together. Prisms having additional numbers of sides will present broken surfaces; but they are, nevertheless, useful for some purposes.

We desire to be understood that our invention is not limited to the precise construction and arrangement of mechanism illustrated and described, as we have produced in it different forms, and illustrate the form above described simply as the preferred embodiment of the invention.

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

1. In an apparatus for advertising and like purposes, the combination of a series of prisms arranged in juxtaposition, means for moving them apart and bringing them together, and means for turning the prisms to bring corresponding faces into a common plane.

2. In an apparatus for advertising and like purposes, the combination of a series of prisms arranged in juxtaposition means for periodically moving them apart and bringing them together, and means for turning the prisms while they are separated.

3. In an apparatus for advertising and like purposes, the combination of a series of prisms arranged in juxtaposition, the corresponding faces of the several prisms bearing sections of a unitary design or advertisement, means for moving said prisms apart and bringing them together, and means for turning said prisms simultaneously through a partial revolution while they are separated.

4. In an apparatus for advertising and like purposes, the combination of a series of prisms arranged in juxtaposition, means for moving said prisms toward and from each other, means for turning the prisms, and means for sustaining the prisms in such manner that they counterbalance each other.

5. In an apparatus for advertising and like purposes, a vertically-arranged series of parallel prisms, means for moving said prisms toward and from each other, and means for turning the prisms while they are separated.

6. In an apparatus for advertising and like purposes, the combination of a vertically-arranged series of parallel prisms, means for moving said prisms to separate them, means for supporting the prisms in such manner that they counterbalance each other, and means for turning the prisms while they are separated.

7. In an apparatus for advertising and like purposes, the combination of a vertically-arranged series of parallel prisms, fixed bearings for the middle prism, movable bearings for the remaining prisms, and means connecting the movable bearings whereby the movable prisms above and below the middle prism counterbalance each other.

8. In an apparatus for advertising and like purposes, the combination of a series of parallel prisms with two lazy-tongs systems in which said prisms have bearings, and means for periodically rotating the prisms.

9. In an apparatus for advertising and like purposes, the combination of a series of parallel prisms, means including a constantly-rotating power-shaft for periodically separating said prisms and bringing them together, and means operated from said power-shaft for turning the prisms when they are separated.

10. In an apparatus for advertising and like purposes, the combination of a series of parallel prisms, two lazy-tongs systems in which said prisms have bearings, a power-shaft, cams on said power-shaft for operating the lazy-tongs, and means for periodically turning the prisms.

11. In an apparatus for advertising and like purposes, the combination of a series of parallel prisms, means for periodically separating the prisms, a series of pins on said prisms, and a series of pawls arranged to engage said pins periodically and turn the prisms to bring new faces into a common plane.

12. In apparatus for advertising and like purposes, the combination with the prisms, and means for separating the prisms, of pins on said prisms, the movable bar, the pawls on said bar adapted to engage said pins, and means for periodically moving the bar.

13. In an apparatus for advertising and like purposes, the combination of a series of

prisms, means for separating the prisms and bringing them together periodically, means for turning the prisms while separated, and means for alining the prisms after they are turned.

14. In apparatus for advertising and like purposes, the combination with a series of parallel rotatable prisms having circumferential grooves, of a spring-pressed alining-bar arranged to engage said grooves to aline the prisms and prevent overmotion.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES A. WATSON.
WILLIAM H. ROSE.

Witnesses to signature of J. A. Watson:
ARTHUR L. BRYANT,
GEO. E. TERRY.
Witnesses to signature of William H. Rose:
BERNARD A. SCHMITZ,
GRAY DYSON R. HOLMES.