

(No Model.)

J. B. COX.
THAUMATROPE.

No. 503,927.

Patented Aug. 22, 1893.

Fig. 3.

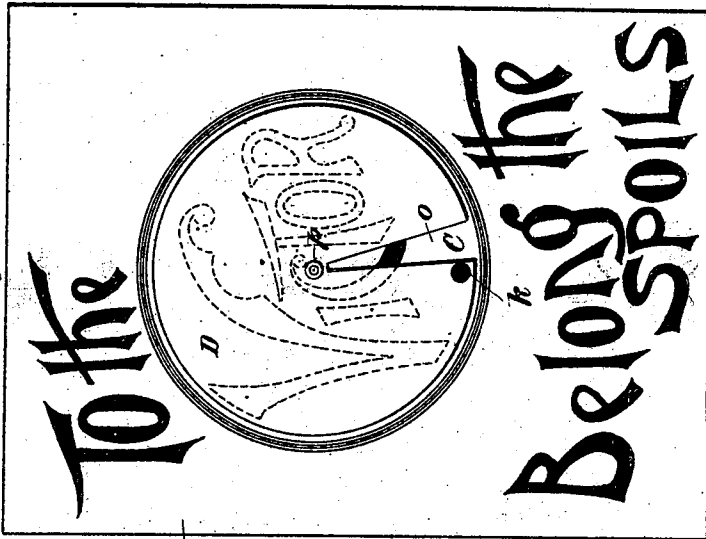


Fig. 2.

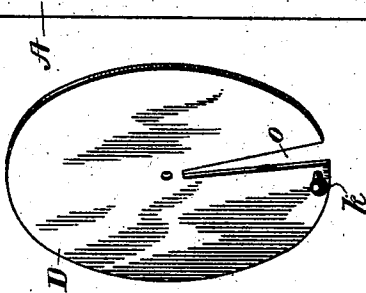


Fig. 5.

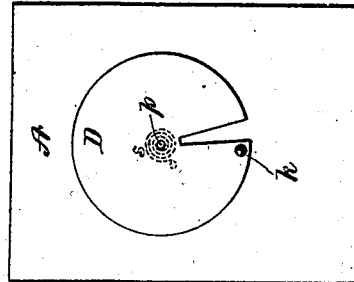
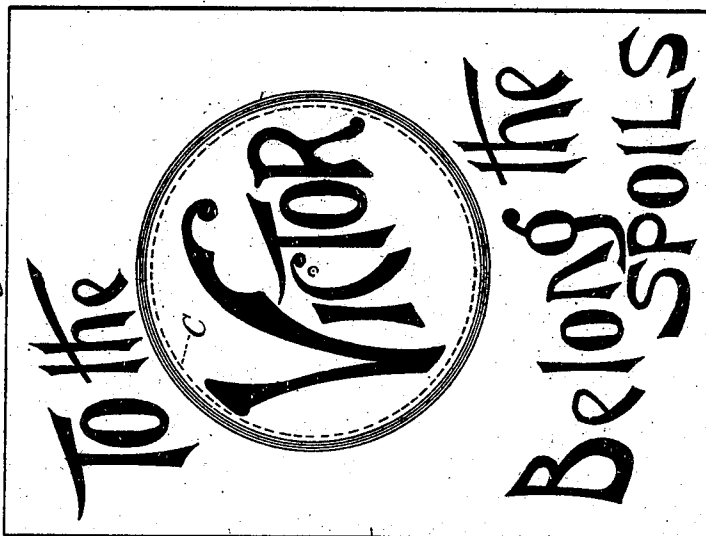


Fig. 1.



WITNESSES:

Frank S. Ober
Chas. E. Peters

A—

Fig. 4.



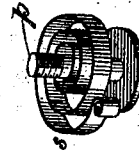
INVENTOR,

James B. Cox

BY

Wittmck Dunn
ATTORNEY.

Fig. 6.



UNITED STATES PATENT OFFICE.

JAMES B. COX, OF BROOKLYN, ASSIGNOR OF TWO-THIRDS TO GEORGE B. HURD AND FRANK B. HURD, OF NEW YORK, N. Y.

THAUMATROPE.

SPECIFICATION forming part of Letters Patent No. 508,927, dated August 22, 1893.

Application filed March 18, 1893. Serial No. 466,569. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. COX, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Thaumatrope; 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 ap-
10 pertains to make and use the same.

This invention relates to an instrument in which the permanency of visual impressions is utilized to reveal readable words, phrases and other inscriptions printed, stamped or otherwise impressed or mounted in relief on
15 a card, plate, board or other surface, and the invention consists of a card, plate, board or surface on which are printed, stamped, impressed or mounted, so as to be distinguish-
20 able from the surface of the card forming the background any desired words, phrases, figures or other matter for instruction, amusement, information or advertisement, one or more of the said words, phrases, figures, &c.,
25 being concealed by a rotatable opaque disk mounted on a pivot fixed in the face of the card or other surface, and having a sector shaped piece cut out of it or rendered trans-
30 parent, if preferred, so as to reveal a sector shaped space on the face of the card, whereby when the disk is rotated the word, phrase or other inscription under the disk is rendered visible and readable.

In the accompanying drawings Figure 1
35 represents a card, plate or board on which is printed an inscription; Fig. 2, a disk which is intended to be mounted on a pivot on the card so as to conceal the inscription. Fig. 3 represents the card and disk placed together
40 with the inscription picked out in broken lines; Fig. 4, a transverse section of the card and disk taken through the pivot. Fig. 5 represents a modification of the invention in which a spring is provided to automatically
45 oscillate the disk, and Fig. 6 represents the spring used for this purpose.

Referring to the drawings, A is a card plate or board which may be made of any suitable material as paper, wood, sheet metal, celluloid,
50 &c. On the surface of this disk, within a circle C, of less diameter than the disk pres-

ently described, is printed, stamped, pressed or otherwise mounted or impressed, a word, for example, "Victor" in well defined letter-
ing and strongly marked relief from the sur- 55
face of the card. In the present case, the let-
tering is black on a white ground, but it may
be readily understood that any color or col-
ors may be substituted, it being only neces-
sary that there should be a marked contrast 60
between the letters (more especially the out-
lines thereof) and the ground on which they
are printed, stamped or otherwise placed. This word, it is intended, shall be entirely con-
cealed by the disk D, which is mounted on a 65
pivot *p* fixed in the center of the circle and
secured thereon by a nut or washer held by
riveting the end of the pivot against the
washer as may be preferred. Outside of the
circle C, there may be printed or otherwise 70
formed on the surface of the card, words,
phrases, sentences or other matter which, to-
gether with the concealed word may convey
certain information which may be of an in-
structive or amusing character, or it may be 75
parts of an advertisement, of which the con-
cealed word forms a distinguishing element
as, for example, the trade mark, name or sym-
bol of the article or articles advertised, or
missing part or parts of a word, phrase or 80
sentence outside of the circle which, when re-
vealed, informs the public of the character
and qualities of the article advertised or pub-
lished. The disk D has a sector shaped sec-
tion cut out of it whereby is formed an open- 85
ing *o* through which the surface of the card
below is exposed. But, as may be seen, in-
stead of an opening, the sector shaped space
may be merely a transparent section of the
disk (the remainder in all cases being quite 90
opaque) so that the surface of the card can
be plainly seen through it. Near the periph-
ery of the disk adjacent to one side of the
opening of transparent section a knob *k* is
placed which should be of a heavy material, 95
the purpose of which is to furnish means by
which the disk can be easily and rapidly ro-
tated or given a rotary motion, and also to
serve as a weight that will cause the disk in-
variably to come to rest with the opening 100
downward, as shown in Fig. 3, whereby the
word under the disk will always be concealed

when the disk is at rest and can only be discovered by turning or whisking the disk.

Constructed as above described, the word, phrase, &c., under the disk are entirely concealed, but by causing the disk to rotate at a certain speed as the opening *o* passes over every part of the word in the course of the rotation of the disk every part becomes visible and owing to the rapidity of the motion and the permanency of the impression on the eye the effect is to make the whole word visible as long as the rotation continues, and the word thus made visible and readable being associated with the words, phrases, &c., outside of the circle, the entire printed matter contained on the surface of the card may be read together and thereby the information in the way of advertisement or other matter communicated to the reader. The rotary motion may be made continuous by connecting the disk with clock work mechanism. Furthermore the rotation may be made to continue automatically for a considerable time after the first impulse has been given, by means of the device shown in the modification, Figs. 5, 6, this device consisting of a helical spring *s*, having one end attached to the pivot *p* and the other end to the card. When a rotary impulse is given to the disk, the spring is wound up and in unwinding the disk is rotated backward and thus, by the alternating retraction and expansion of the spring an oscillating motion is given to the disk, during which the word is kept visible, and which continues until the force is exhausted. In place of a sector shaped space a series of radial slits may be formed in the disk at proper intervals apart.

I claim—

1. The combination of a stationary flat surface having a word, phrase, symbol or sentence printed or otherwise formed upon it within

a circle, other words, phrases or sentences outside of the circle, the entire inscription forming a sentence an opaque rotatable disk mounted on a pivot and covering the matter within the circle, said disk having a sector shaped opening or transparent sector shaped space formed in it, whereby, when the disk is rotated the inscription becomes readable, substantially as specified.

2. The combination of a stationary flat surface having a word, phrase, symbol or sentence printed or otherwise formed upon it within a circle other words, phrases or sentences outside of the said circle, the entire inscription forming a sentence, an opaque rotatable disk mounted on a pivot and covering the matter within said circle, said disk having a sector shaped opening or transparent sector shaped space formed in it, and means for giving an oscillating motion to the disk, whereby when the disk is rotated the matter concealed by the disk is discovered and the entire inscription becomes readable, substantially as specified.

3. The combination of a flat surface having a word phrase, symbol or sentence printed or otherwise formed upon it within a circle, other words, phrases or sentences, outside of the said circle, an opaque rotatable disk mounted on a pivot and covering the matter within said circle, said disk having a sector shaped opening or transparent sector shaped space formed in it and a weight for causing the disk to come to rest with the sector shaped space downward, substantially as specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

JAMES B. COX.

Witnesses:

WILTON C. DONN,
CHAS. E. PETERS.