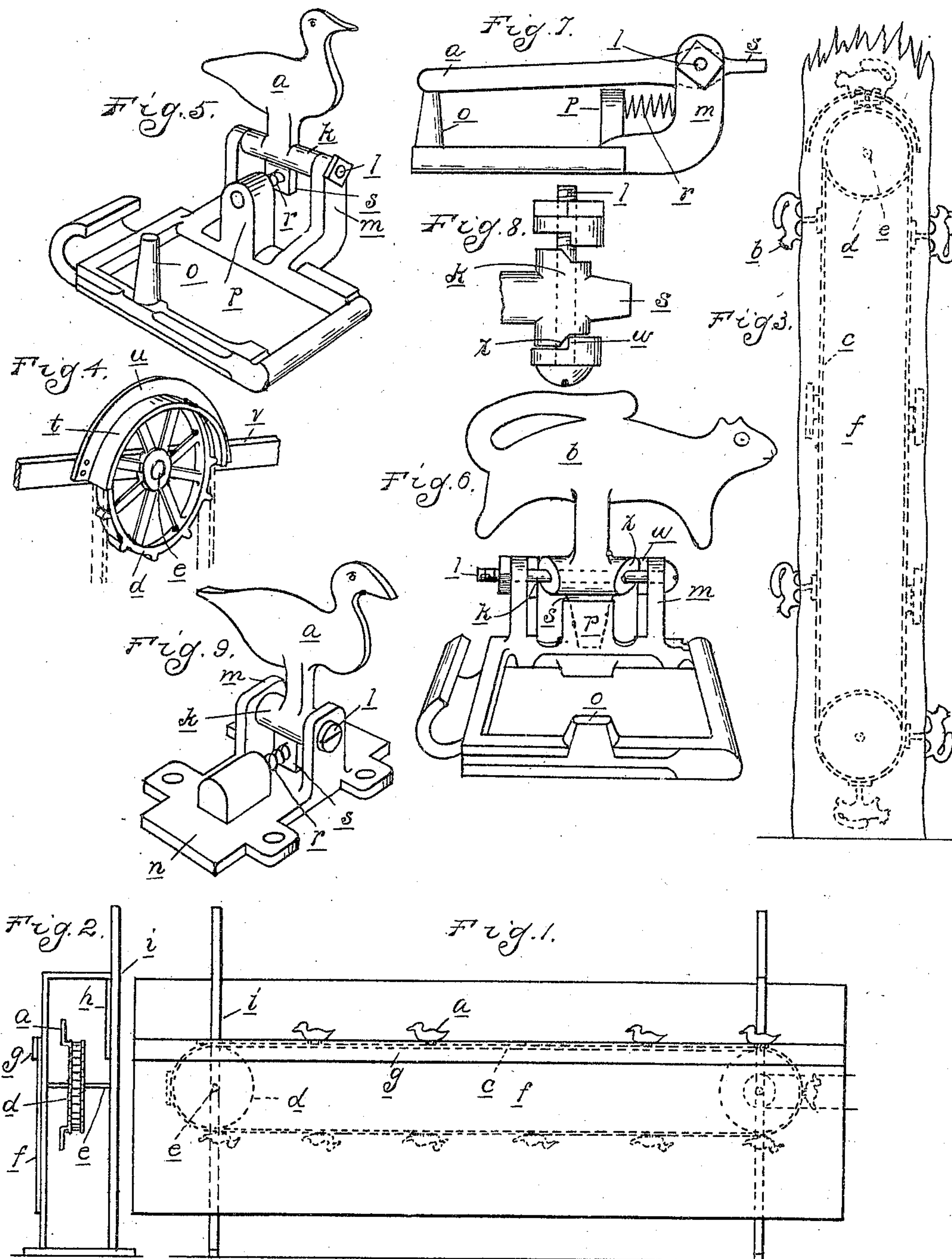


No. 789,909.

PATENTED MAY 16, 1905.

J. HEROLD.
TARGET.

APPLICATION FILED APR. 13, 1903.



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TARGET.

SPECIFICATION forming part of Letters Patent No. 789,909, dated May 16, 1905.

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To all whom it may concern:

Be it known that I, JOHN HEROLD, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Targets, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in moving targets for shooting-galleries; and the objects of my improvements are, first, to provide an indestructible moving image; second, to provide an image that will immediately disappear when hit, and, third, to provide means for replacing these images into position after they have moved from this position upon being hit by the projectile used by the marksman. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the complete mechanism with images traveling horizontally. Fig. 2 is an end view of the same. Fig. 3 is an elevation of the mechanism with images traveling vertically. Fig. 4 is a view of the mechanism for returning the images to the position where they may be used for targets when traveling vertically. Figs. 5 and 6 are views of images attached to the links of detachable chain belting. Fig. 7 is an end view of the same. Fig. 8 is a detail of Fig. 6. Fig. 9 is a view of an image and its support attachable to ordinary canvas or leather belting.

Similar letters refer to similar parts throughout the several views.

As shown in the drawings, the images *a* and *b* may travel either vertically or horizontally. They are attached to the belt *c*, which may be of leather, canvas, or detachable chain, commonly known as "link belting," which belt passes around the wheels *d*, which in turn are supported by the shafts *e*. One of these shafts is driven at any desirable speed by any preferred motor. (Not shown.) The plate *f*, reinforced by the strip *g*, protects the belt and wheels, while the plate *h* forms a background. These plates may be supported by the framework *i*. In Fig. 3 the plate *f* is shown to represent a tree-trunk.

The images are mounted on the pivot-pieces

k, through which pass the pivots *l*, which in turn are supported by lugs *m*, attached to the link of the belt, or, as in Fig. 9, to the support *n*, which is attached to the leather or canvas belt. When the image is struck by the projectile fired from the right in Fig. 7, it drops backward to the position shown in that view, resting on the lug *o*. In case it should be more desirable that the projectile come from the left, Fig. 5, the image is caused to fall forward and rest on the lugs *o*, as before, by the following mechanism: To the links of the chain and to the support *n* is attached the lug *p*, carrying the spring *r*. Projecting down from the pivot-piece *k* is the arm *s*, which normally rests against the spring. When the projectile strikes the image, Fig. 5, from the left, the blow will cause the spring to be compressed. The recoil of the spring in turn will force the arm *s* out so far that the image will fall.

When the image has passed down around the end wheel, gravity will cause it to again assume a vertical position.

The weight of the image is on one side of the belt, causing it to sag, the result being that the image leans outward from the belt, thus avoiding any tendency to fall.

In Fig. 4 is shown the device for causing the images in Fig. 3 to resume or keep their position as targets while passing around the upper wheel. Whenever the image has been hit and assumes the position in Fig. 7, the arm *s* projects outward from the chain. As the image ascends, this arm will contact with the flange *t* on the guard *u*, which is supported by bar *v*, and upon passing around the upper wheel the arm *s* will be depressed, thus raising the image. When the image passes around the lower wheel, it will fall into proper position.

The construction of the pivot-pieces *k* (shown in Figs. 6 and 8) is especially valuable when the mechanism is used as shown in Fig. 3. In this case gravity has little opportunity to hold down the image. I therefore provide a clutch consisting of the lugs *m*, with shoulders *w*, and the pivot-pieces *k*, with the inclined shoulders *x*. When the image is in the forward position, the lower shoulder *x*, Fig. 8, rests

on lower shoulder *w*. After being struck by the projectile and assuming the position of Fig. 7, the two shoulders will assume the positions with reference to each other of Fig. 8, the inclines then preventing the image from resuming its forward position, but not preventing the flange *t* from forcing the image to assume it.

The operation of this device is evident from the description of the construction. As shown in Fig. 1, whenever an image has been hit it drops and remains down until it passes over an end wheel. As shown in Fig. 3, the images when hit turn to their backward position and retain it until they pass around either one of the wheels. Upon passing around the upper they are forced to the forward position, while upon passing around the lower wheel gravity causes them to drop to the forward position.

While I have described the moving targets in the form of images as applied to a chain or belt, I do not desire to be limited to this particular application, as it is obvious that the targets may be movably connected to any type of carrier.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a moving target, a support for the images, an image pivoted to said support, a spring carried by said support and an arm on the image for contacting with said spring substantially as described.

2. In a moving target, a belt comprising links, a pair of lugs attached to said links, an image pivoted to said lugs, a third lug carrying a spring, an arm on the image for contacting with said spring and a fourth lug for supporting said image when in its lowered position, substantially as described.

3. In a moving target, the combination with an endless carrier, of a series of targets pivoted longitudinally thereon for relative transverse rocking movement, and resilient means for limiting the movement of the targets in one direction and for converting thereto a movement in the opposite direction when hit by a projectile.

4. In a moving target, the combination with

a support, of a target mounted thereon for relative rocking movement, and a spring member for the target arranged to be compressed when said target is struck by a projectile and to afterward expand to throw the target out of normal position.

5. In a moving target, a support, a target pivoted thereto for relative rocking movement, a yielding abutment upon said support, and a projection carried by the target adapted to engage the abutment.

6. In a moving target, the combination with an endless carrier, of a series of pairs of vertical arms thereon, an image for each pair of arms, carrying a tubular bearing interposed between said arms, a pin engaging the bearing and arms, and serving as the image-pivot, and resilient means for normally maintaining the image in an upright position.

7. In a moving target, a support for the images, an image pivoted to said support, a spring carried by said support, and an arm on the image for contacting with said spring, for throwing the image out of normal position when hit by a projectile.

8. In a moving target, a support for the image, an image pivoted to said support, a spring carried by said support, an arm on the image for contacting with the spring for throwing the image out of normal position when struck by a projectile, and means on the support for limiting the movement of the target.

9. In a moving target, a support for the image, an image pivoted to said support, resilient means associated with said image for retaining it in normal position when under normal condition, and for throwing it out of normal position when hit by a projectile, and means for limiting said movement of the image.

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

JOHN HEROLD.

Witnesses:

JAMES P. BARRY,
H. C. SMITH.