

No. 710,008.

Patented Sept. 30, 1902.

J. D. ROBERTSON.
EJECTOR MECHANISM FOR REVOLVERS.

(Application filed Nov. 4, 1901.)

(No Model.)

Fig. 1.

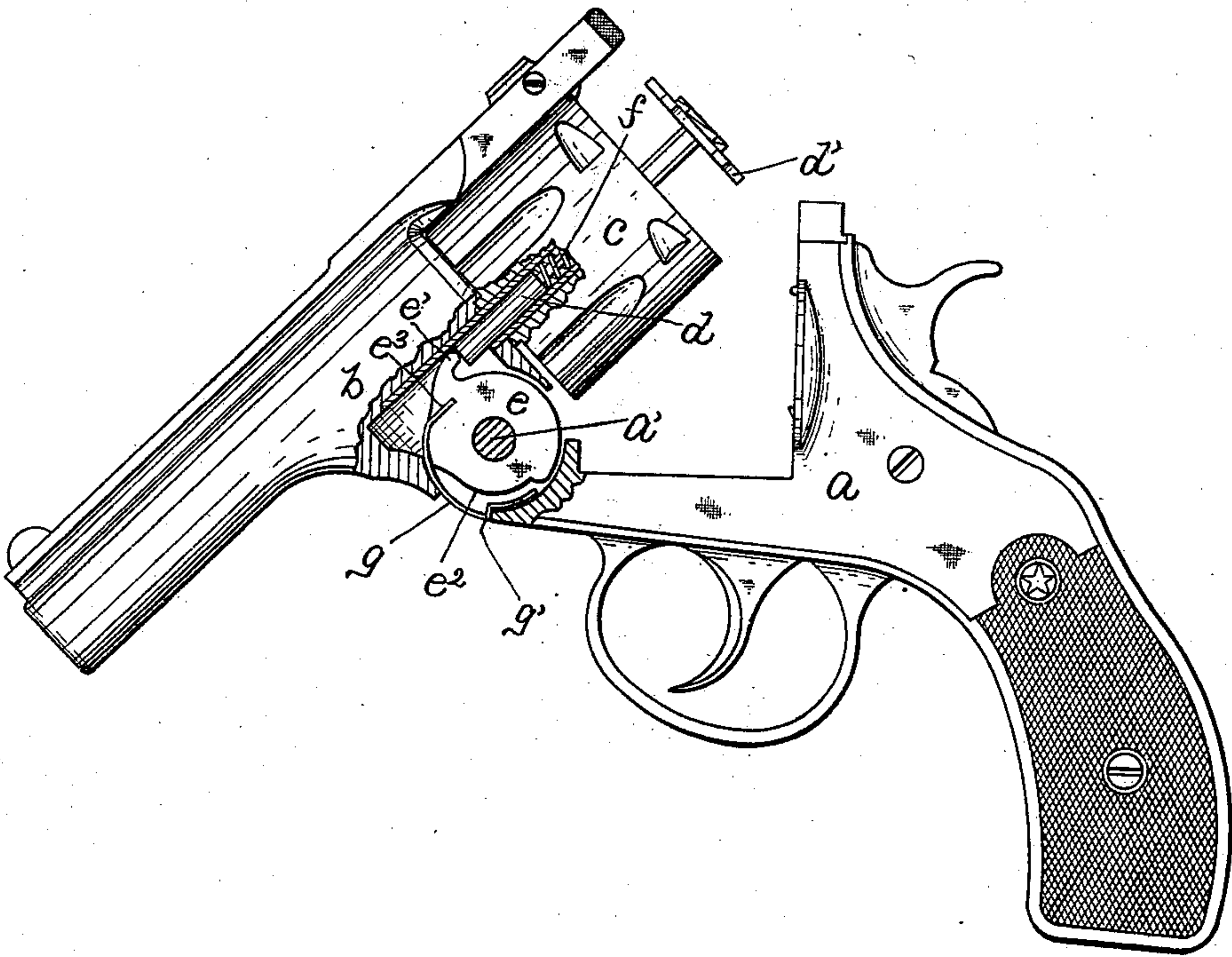


Fig. 2.

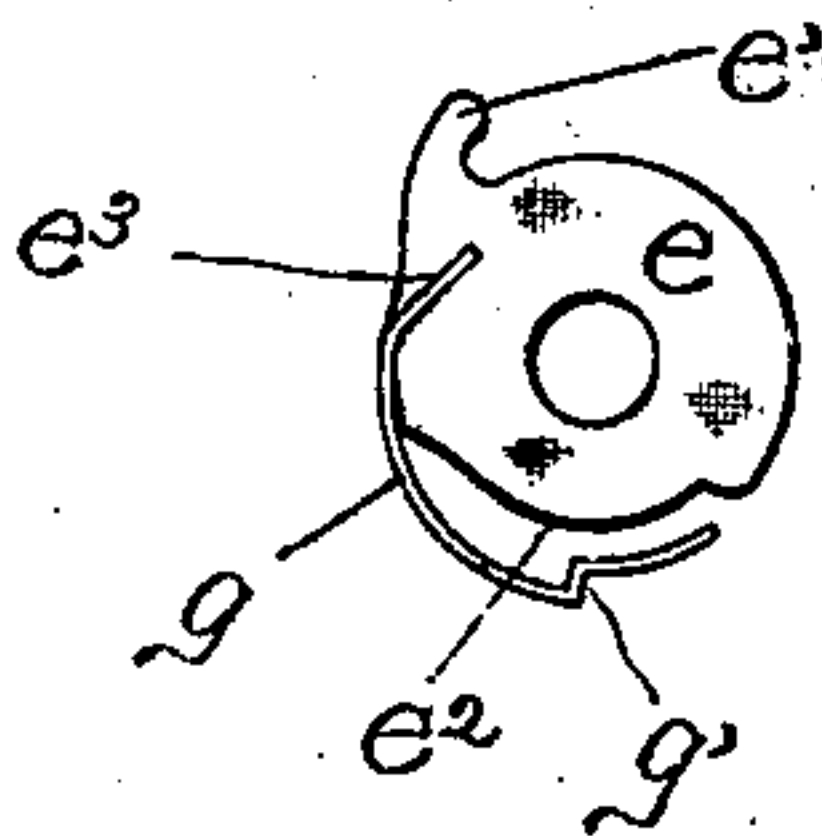
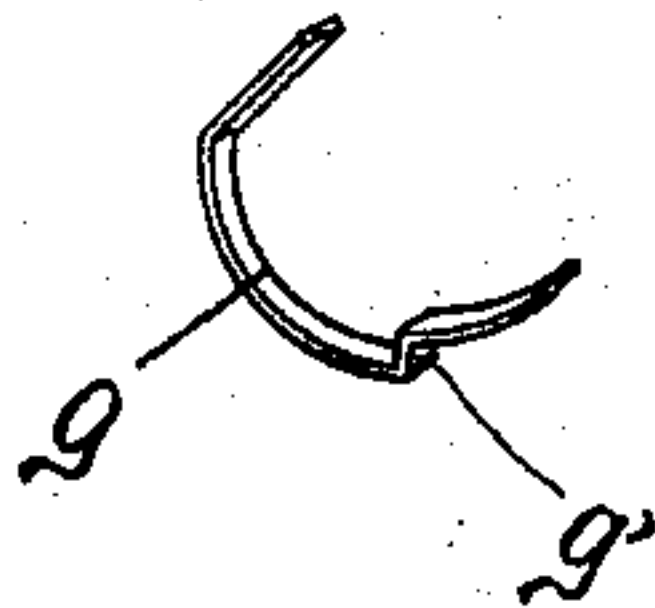


Fig. 3.



WITNESSES

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JAMES D. ROBERTSON, OF NORWICH, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE THAMES ARMS COMPANY, (CORPORATION,) OF NORWICH, CONNECTICUT.

EJECTOR MECHANISM FOR REVOLVERS.

SPECIFICATION forming part of Letters Patent No. 710,008, dated September 30, 1902.

Application filed November 4, 1901. Serial No. 80,975. (No model.)

To all whom it may concern:

Be it known that I, JAMES D. ROBERTSON, a citizen of the United States, residing at Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Ejector Mechanism for Revolvers, of which the following is a full, clear, and exact description.

The object of this invention is to improve the mechanism provided in "hinge-revolvers" for automatically forcing the ejector-stem rearward when the barrel is tilted away from the frame.

Various devices, more or less complex, have been patented heretofore for the same purpose; but my present aim is to provide an extremely simple device that may be cheaply produced and which will operate as satisfactorily as the more complex and expensive forms.

The accompanying drawings illustrate my said improvement.

Figure 1 is a side elevation of a revolver embodying the same, portions of the frame, barrel, and cylinder being broken away to expose the interior construction and the arrangement of the several operative parts. Fig. 2 is a detached view of the cam that engages the ejector-stem, and Fig. 3 is a perspective view of a peculiarly-shaped spring that forms one of the principal elements of my present invention.

In the drawings the letter *a* indicates the frame of a revolver, *b* the barrel, and *c* the cylinder, the barrel being hinged to the frame at *a'*.

The letter *d* denotes a short rod or stem that is adapted to slide freely in the cylinder, and said stem has secured to its rear end a spider *d'*, that engages the flanged heads of the cartridges in the manner usual in this class of arms—that is to say, when the stem and spider are forced rearwardly the spider draws all of the cartridge-shells out of the cylinder.

In order to operate the ejector automatically when the barrel is tilted on its hinge, it has been a common practice to locate a cam in the barrel-hinge in the path of the front

end of the ejector-stem, said cam being held immovable until the cartridge-shells have been ejected from the cylinder, when said cam is released and is caused to move out of the path of the ejector-stem, as I shall explain.

Within the cylinder *c* is a spiral spring *f*, that is mounted on the ejector-stem between a shoulder on said stem and a shoulder in the cylinder, and said spring by its expansive tendency seeks constantly to return the spider *d'* to its seat in the cylinder.

The cam *e*, which I have already mentioned incidentally, is located in the barrel-hinge and mounted so as to rock freely on the hinge-screw *a'*. Projecting from the said cam into the opening provided for the ejector-stem *d* is a hook or horn *e'*. That edge of the cam that is exposed to view when the arm is closed is cut away, as at *e²*, and slitted, as at *e³*, to receive one end of a flat spring *g*, the end of the spring being driven forcibly into the slit, thus rendering the spring practically a part of the cam.

The spring *g* is formed with an angular bend *g'* near its lower (free) end, which bend abuts the front lower portion of the frame when the arm is closed, and, in fact, until the barrel has been tilted sufficiently to eject the cartridge-shells, the abutment of the bend *g'* with the frame serving to hold the said cam and frame in a fixed relation to each other until such time as the spring *g* is forced inward sufficiently to release the bend *g'* from such abutment, when the spiral spring *f* at once forces the ejector-stem forward, and the ejector-stem in turn rocks the released cam. It should be noted that the spring *g* when in its normal position is eccentric to the hinge-screw *a'*. While the barrel is being tilted to open the arm its lower edge *h* engages the outer face of spring *g* and gradually forces said spring toward screw *a'* until the bend *g'* is forced from its abutting engagement with the frame, thus leaving the cam free to be rocked by the ejector-stem, as I have already explained. When the barrel is tilted back to its closed position, the cam is at the same time rocked backward by the engagement of the barrel with the cam-horn *e'* and the bend

g' again springs outwardly into position to engage the frame *a*. The spring *g*, with its bend *g'*, thus provides very simple and effective means for controlling the cam, and it
5 has the additional advantage of being adaptable to arms of this class as now most commonly constructed.

Having described my invention, I claim—

1. In combination with the ejector-stem
10 and frame of a hinged firearm, a cam for operating said stem and a spring mounted in said cam to lie on the outer edge thereof to be normally eccentric therewith, the said spring being formed with a shoulder adapted
15 to engage the said frame, substantially as described.

2. In combination with the ejector-stem and frame of a hinged firearm, a cam for op-

erating said stem having its edge cut away and a slit beyond the cut-away portion, and
20 a spring having one end secured rigidly in said slit and its free end having an angular bend to engage the lower portion of the frame and a portion to extend beyond the said bend and lie in the cut-away portion, the said
25 spring traversing the cut-away portion and disposed to lie normally eccentric with the edge of the cam, substantially as shown and described.

Signed at Norwich, Connecticut, this 23d
day of October, 1901.

JAMES D. ROBERTSON.

Witnesses:

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