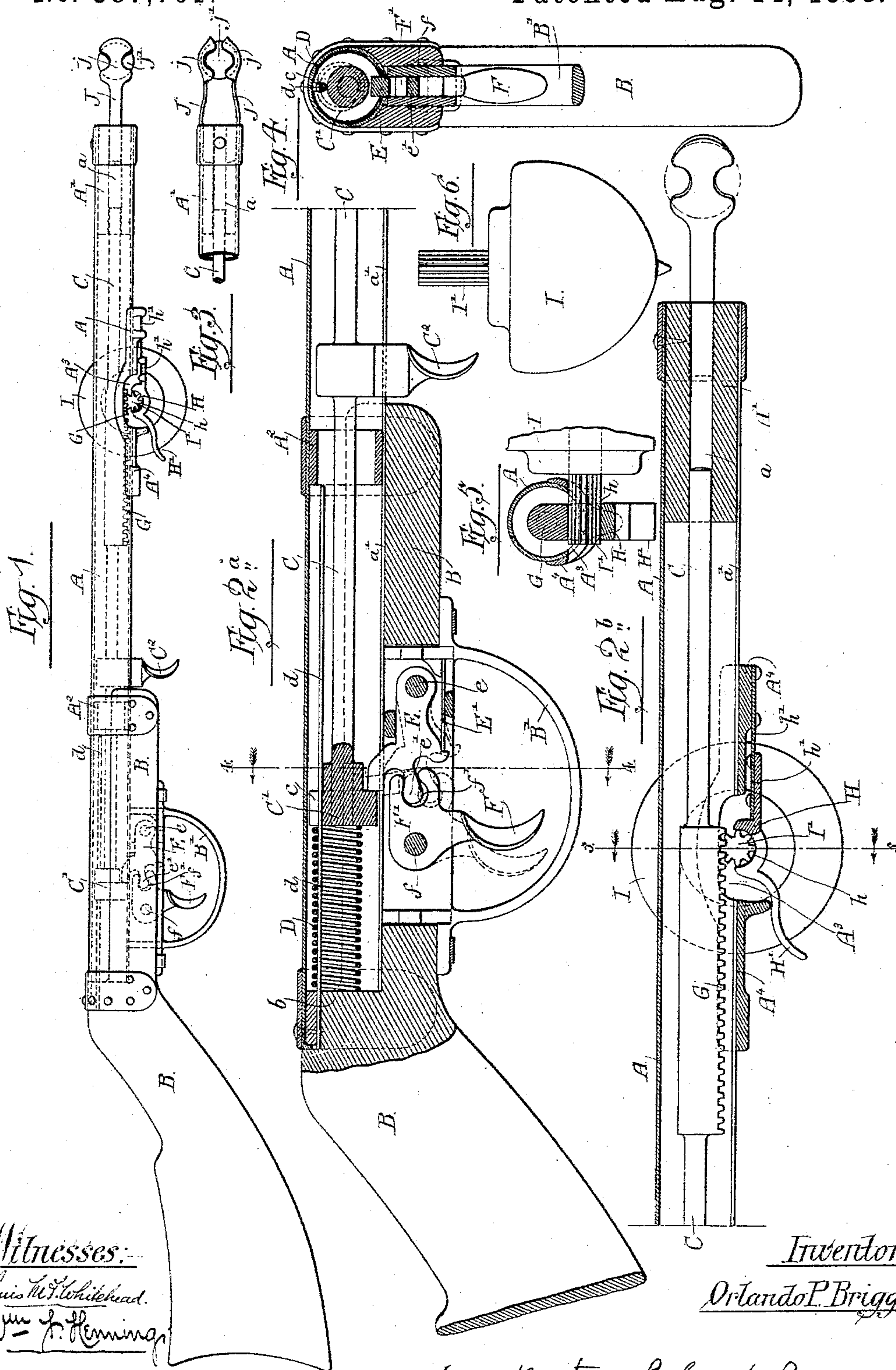


O. P. BRIGGS.

TOP SPINNING TOY SPRING GUN.

No. 387,761.

Patented Aug. 14, 1888.



Witnesses:
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Wm. J. Hemming.

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by: Mayhew, Poole & Brown
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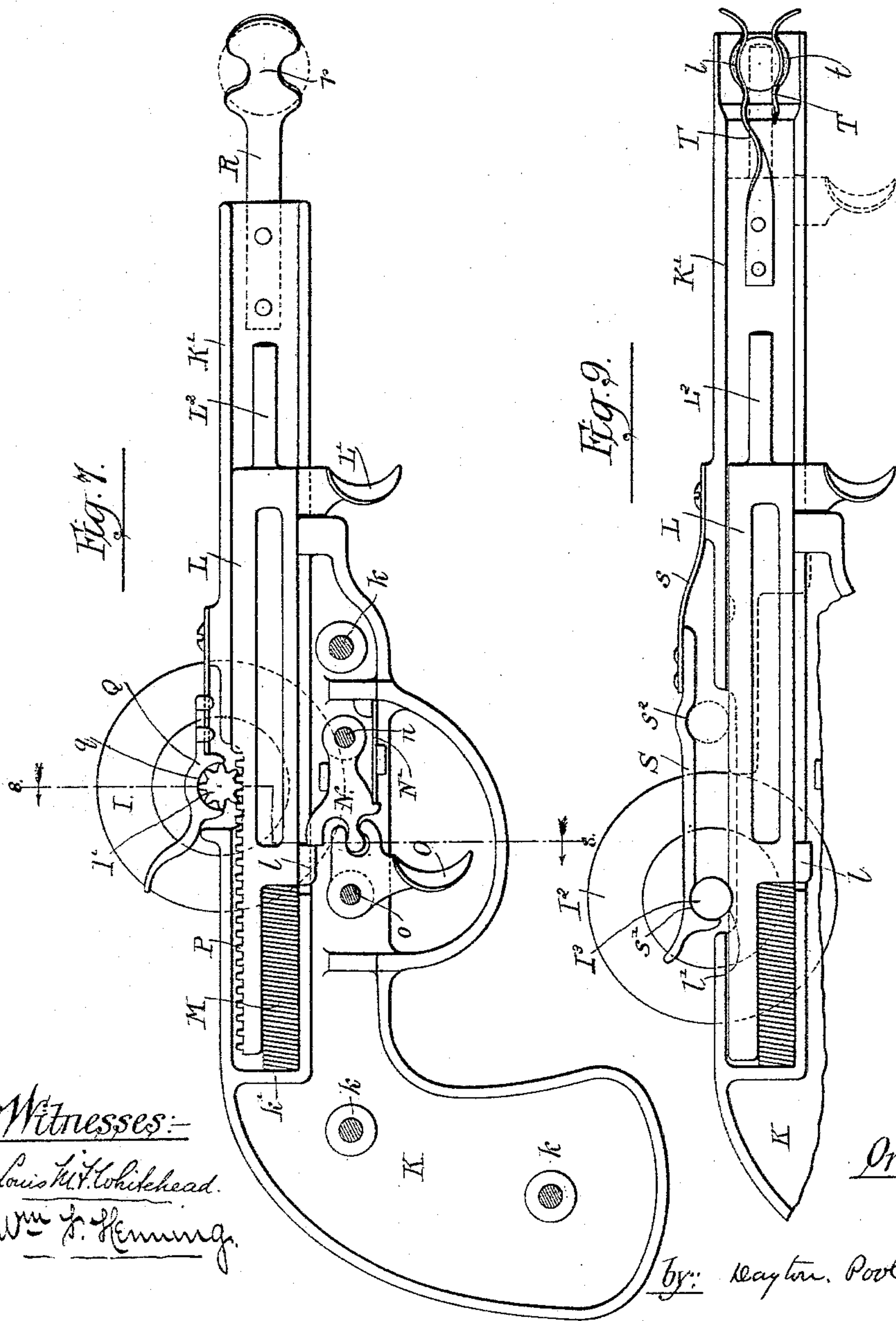
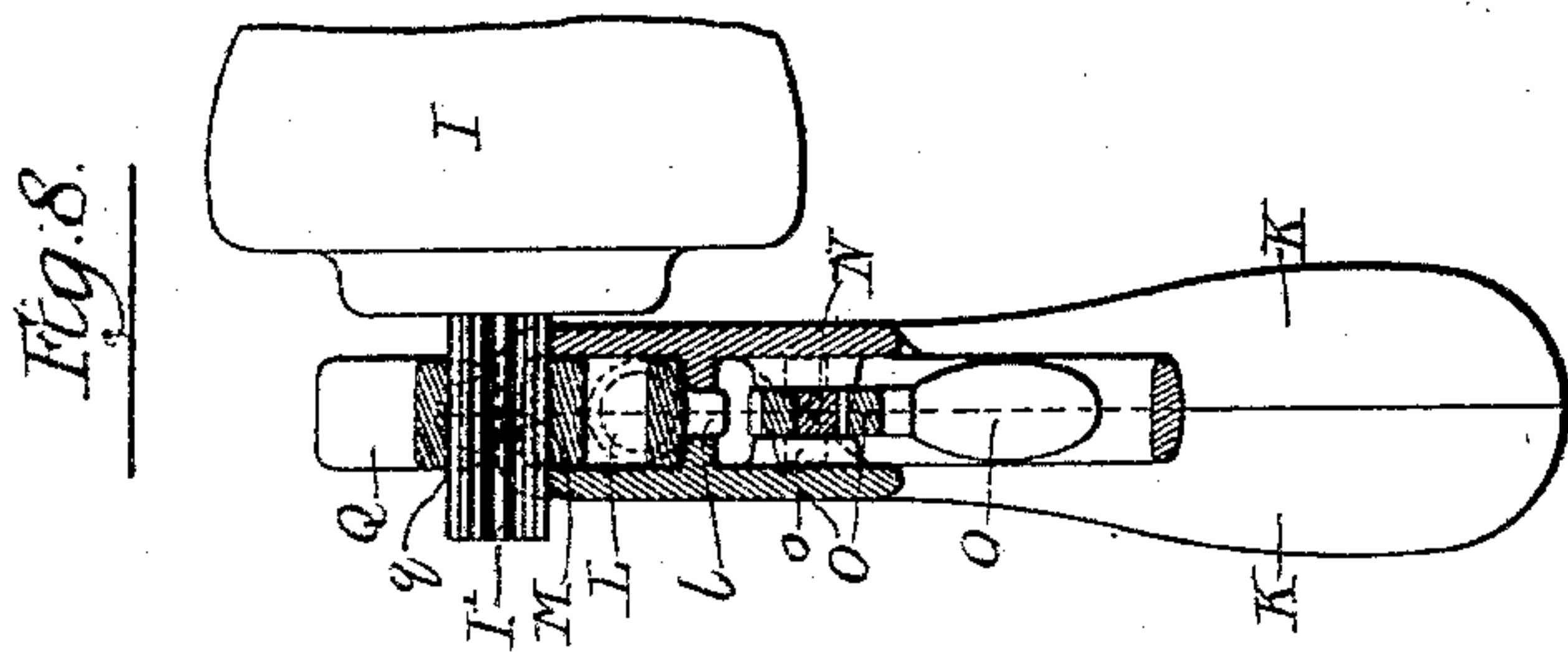
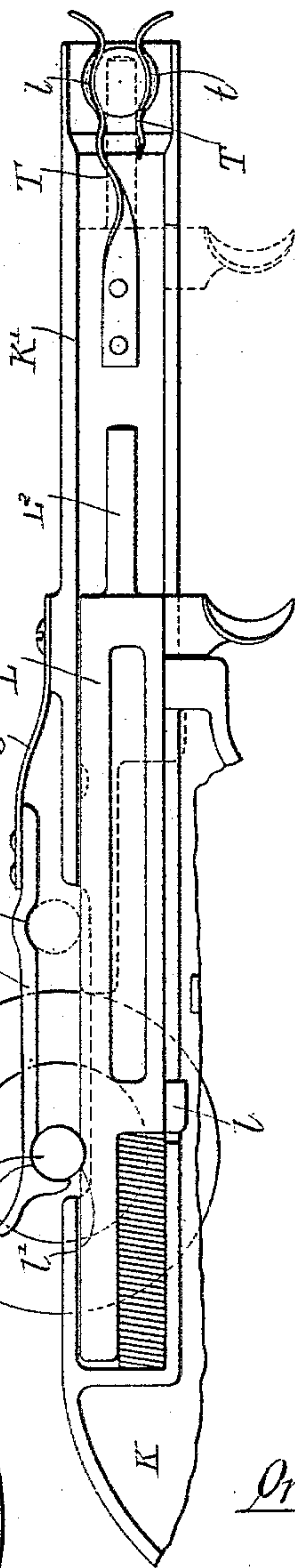


Fig. 9.



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UNITED STATES PATENT OFFICE.

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TOP-SPINNING TOY SPRING-GUN.

SPECIFICATION forming part of Letters Patent No. 387,761, dated August 14, 1888.

Application filed May 8, 1888. Serial No. 273,166. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO P. BRIGGS, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements in Toys; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part
10 of this specification.

This invention relates to a novel toy in shape of a gun or pistol adapted both for spinning a top and for shooting a ball or marble.

The invention consists in the matters hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of one convenient form thereof. Fig. 2^a illustrates a sectional view, on a large scale, of the
20 rear or lock part of the toy. Fig. 2^b shows the muzzle part of the toy on an enlarged scale. Fig. 3 is a detail plan view of the parts shown in Fig. 1. Fig. 4 is a detail section taken upon line 4 4 of Fig. 2^a. Fig. 5 is a
25 detail section taken upon line 5 5 of Fig. 2^b. Fig. 6 is a side view of a top adapted for use with the toy illustrated. Fig. 7 is a sectional view of the toy when made in the form of a
30 pistol and entirely of metal. Fig. 8 is a section of the same, taken upon line 8 8 of Fig. 7. Fig. 9 is a fragmentary section illustrating a modification of the top-spinning devices.

The form of my invention, made to resemble a gun, is shown in Figs. 1 to 5, and is made
35 as follows:

A is the barrel, made of tubular form and of sheet metal and attached to the wooden stock B.

40 C is a rod arranged centrally within the barrel A, said rod being held or guided at its rear end by means of a disk or piston, C', which fits and slides within the barrel A, and at its front, and by means of a filling-piece, A',
45 secured in the muzzle of the barrel, and provided with a central guide-passage, a, within which the forward end of the rod C fits and slides.

50 D is a spiral spring compressed between the piston C' and an abutting surface, b, of the stock B, at the rear end of the barrel.

d is a guide-rod secured in the stock and extending forward through the spring and through a notch, c, and the upper part of the piston C'. Said rod d reaches to a point be-
55 yond the forward limit of the throw of the said piston C', and is for the purpose of holding the spring D in operative position.

E is a detent-lever mounted upon a pivot, e, beneath the barrel A, the rear end of said
60 detent passing through a longitudinal slot in the lower part of the barrel in position to engage the piston C' when the spring D is compressed. Said detent E is held normally in
65 position to engage the piston C' by means of a spring, E'.

F is a trigger mounted upon a pivot, f, in the stock, and provided with a horizontal part, F', having at its forward edge a notch, f', which
70 engages a projection, e', upon the detent E. By pulling the trigger backwardly the rear end of the detent E is depressed and the piston C' released to allow the spring to throw the rod C forward. The forward movement of
75 said rod is limited by a stop, herein shown as formed by means of a ring, A², secured in the barrel in position to engage the piston C'.

C² is an arm or handle attached to the rod C and extending through a slot, a', in the under side of the barrel. Said arm or handle is
80 adapted to be grasped by the hand or finger for the purpose of pulling the rod backwardly and compressing the spring.

G is a toothed bar or rack attached to the rod C and located within the barrel A, said
85 rack-bar being herein shown as made integral with the rod. In the side of the barrel A, adjacent to the said rack-bar, is an opening, A³, around which is desirably secured a re-enforcing plate, A⁴, although this latter will not be
90 necessary in case the barrel is made otherwise than of thin sheet metal.

H is a yielding spring or bar connected with the barrel over the opening A² and opposite the rack-bar G, said bar being provided in its
95 face adjacent to the rack-bar with a concave cylindric recess, h. Said bar H, in the particular construction shown, is connected with the barrel by means of a single flat steel spring, h', attached to one end of the bar. The said
100 bar H is desirably provided with a finger-piece or handle, H', at its free end, by which it

may be sprung or pushed away from the rack-bar. Said rack-bar G and the recessed yielding bar H together form the top-spinning part of the device.

5 I, Fig. 6, is the top, which is provided at its upper end with the cylindric toothed spindle I'. In its main part or body the top may be of any common or preferred form. The toothed spindle I' is adapted to intermesh with the
10 rack-bar G, while its diameter is such as to fit within the semi-cylindric socket *h* in the yielding bar H. Said socket is made perfectly smooth, so that the toothed spindle will turn freely therein.

15 The top is inserted between the rack-bar and spring-bar when the rod C is thrust rearwardly and the spring D compressed, the forward end of the rack-bar at this time being opposite the socket *h*. In its forward move-
20 ment in the rear end the rack-bar passes to a point forward of said socket. In placing the top in the device the spring-bar H is thrust outward to allow the insertion of the spindle between the rack-bar and the bar H, the fin-
25 ger-piece H being employed for this purpose if found necessary. After the spindle I' of the top has been inserted, the top will be held in engagement with the rack-bar by the pressure of the said bar H. When the parts are in the
30 position described, if the trigger is pulled and the rod released, the rack-bar will be thrown quickly forward, thereby giving rapid rotary motion to the top, which latter will be released at the moment that the rack-bar passes for-
35 ward of the notch or socket *h*, when the top will drop on a surface beneath it and continue to spin. The toy is of course held in such position as to maintain the top-spindle vertical at the moment the top is released.

40 The toy constructed as above described is adapted also for shooting balls or marbles by means of devices, as follows:

J J are spring-arms attached to the muzzle end of the barrel and extending forwardly
45 therefrom. At the free ends of said arms are formed cup shaped holders *j j*, adapted to sustain a ball or marble, *j'*, in a position in front of and in alignment with the rod C. Said rod is made of such length that when released and
50 thrown forward, in the manner described, it will strike the ball or marble, dislodge it from said holders *j j*, and project it forward with considerable force.

B' is a curved trigger-guard, desirably at-
55 tached to the stock B and extending around trigger F.

In Figs. 7 and 8 I have shown another desirable embodiment of my invention, wherein the toy is made principally of cast metal and
60 in form to resemble a pistol. The toy in this instance is formed in two parts or sections, K K, each consisting of a single casting, the sections being joined together by rivets *k k*.

K' is the barrel part of the pistol, formed by
65 opposite longitudinal recesses in the castings K K, which recesses are arranged to form guides for a longitudinally-movable rod, L,

which slides therein. Said rod is moved by means of a spiral spring, M, placed between it and a transverse wall, *k'*, at the inner end
70 of the barrel. Said rod is provided adjacent to the forward end of the spring with a depending lug, *l*, adapted to engage a detent, N, which is actuated by a spring, N', and a trigger, O, arranged in the same manner as is the
75 corresponding parts shown in Fig. 2^a. The said detent N and trigger O are mounted upon pivots *n* and *o*, secured in the castings K K. At its forward end the rod L is provided with a handle, L', extending through a slot in the
80 barrel to a point below the same in position convenient to be grasped by the hand or finger for compressing the spring, as clearly shown in the drawings.

P is a rack-bar formed or secured upon the
85 outer edge of the rod L near the rear end of said rod.

Q is a spring-bar provided with a semi-cylindric socket, *q*, arranged opposite the rack-
90 bar P and adapted to engage the toothed spindle I' of a top, I, in the same manner as is the similar bar shown in Fig. 2^b.

R R are spring-arms attached to a muzzle of the pistol and having sockets *r r*, adapted to hold a marble between them. The rod L
95 is in this instance provided with a cylindric prolongation, L², at its forward end, of proper length to act upon a marble held between the said arms when the rod is thrown forward by the springs. The operation of this device is
100 similar to the one before described.

In Fig. 9 I have shown a somewhat different construction in a means for revolving the top. In this instance the apparatus is pro-
105 vided with a sliding rod, L, actuated in the same manner as is the rod L shown in Fig. 7. The said rod L is without any teeth or rack-bar for engagement with the top, and the latter (indicated at I²) is provided with a smooth or cylindric spindle, I³, adapted for
110 contact with the smooth edge of said rod L, and adapted to be placed between said rod and a spring or yielding bar, S, arranged parallel thereto. Said spring-bar is attached to the main part of the device by means of a
115 spring, *s*, and is provided with a notch, *s'*, arranged opposite a shallow transverse groove, *l'*, in the rod L. Said notches *s' l'* are adapted to receive the cylindric spindle I³ of the top and to hold said spindle accurately at right
120 angles to the bar, this being necessary to insure the spindle remaining engaged with the said rod I² and the bar S when the said bar L is moved endwise, in the manner hereinafter described. The spindle is held in place in
125 said notches by the pressure of said spring-arm. A notch, *s'*, is arranged at the rear end of the spring-rod S, while the notch *l'* is located at a considerable distance forward of the rear end of the rod L. When the spindle of
130 the top is placed in said notches *s' l'* in the manner described, the said rod L being at the rearward limit of its movement and the spring compressed when the said rod is released and

thrown forward, the spindle I^3 will be rolled along between the edge of the rod and bar S, and a rapid rotary motion will thereby be given to the top, the top of course being moved bodily forward by the action of the moving rod. The top will be released at the forward limit of the movement of the rod L by the entrance of the spindle I^3 into the recess s^2 in the surface of the spring-bar S. The same result will be produced, however, in case the rear end of the said rod L passes forward of the said spindle, which will occur when the parts are proportioned in the particular manner shown.

Spring-arms T T, provided with sockets tt , for holding the marble, are shown in Fig. 9 as located within the barrel K' , said arms being arranged to hold the marble in the same manner as before described. This arrangement, however, conceals the greater part of said arms, thereby giving to the toy a greater resemblance to an ordinary pistol.

I claim as my invention—

1. The combination, with a top provided with a cylindric spindle, of a spinning apparatus comprising a longitudinally-movable rod, a spring for actuating the same, a detent and trigger for holding the spring compressed and releasing the same, and a yielding bar opposing said rod and adapted to hold the cylindric spindle of the top in engagement with the rod when the latter is moved endwise, substantially as described.

2. The combination, with a top provided with a cylindric toothed spindle, of a spinning device comprising a longitudinally-movable rod provided with a rack-bar, a spring for moving said rod, a detent and trigger for holding the spring compressed and releasing the same, and a recessed yielding bar opposing the rack-bar and adapted to hold the toothed spindle of the top in engagement therewith, substantially as described.

3. The herein-described toy having the form of a gun or pistol and provided with a barrel, a sliding rod within the barrel, a spring for actuating the rod, a detent and trigger for

holding the spring compressed and releasing the same, and a yielding bar having a recess opposed to the said sliding rod and adapted to receive and hold in contact with the rod the cylindric spindle of a top, substantially as described.

4. The herein-described toy having the form of a gun or pistol, provided with a barrel and a longitudinally-movable rod therein, a spring for actuating the rod, a detent and trigger for holding the spring compressed and releasing the same, and spring-arms at the end of the barrel provided with holders at their free ends to receive and hold a ball or marble, substantially as described.

5. The herein-described toy having the form of a gun or pistol and provided with a barrel and a longitudinally-movable rod within the barrel, a spring for actuating the rod, a detent and trigger for holding the spring compressed and releasing the same, a spring-bar provided with a recess opposing an edge of the rod and adapted to hold in engagement with the rod the spindle of a top, and spring-arms attached to the end of the barrel and provided with holders adapted to sustain a marble or ball in front of and in alignment with said rod, substantially as described.

6. The herein-described toy having the form of a gun or pistol and provided with a slotted barrel, a longitudinally-movable rod within the barrel provided with an arm or handle extending through the slot of the same, a spring actuating said rod, a detent and a trigger for holding the spring compressed and releasing the same, and a spring-bar provided with a socket arranged in position opposed to the said rod and adapted to hold the cylindric spindle of a top in engagement with the said rod, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

ORLANDO P. BRIGGS.

Witnesses:

C. CLARENCE POOLE,
E. B. ELLIAS.