

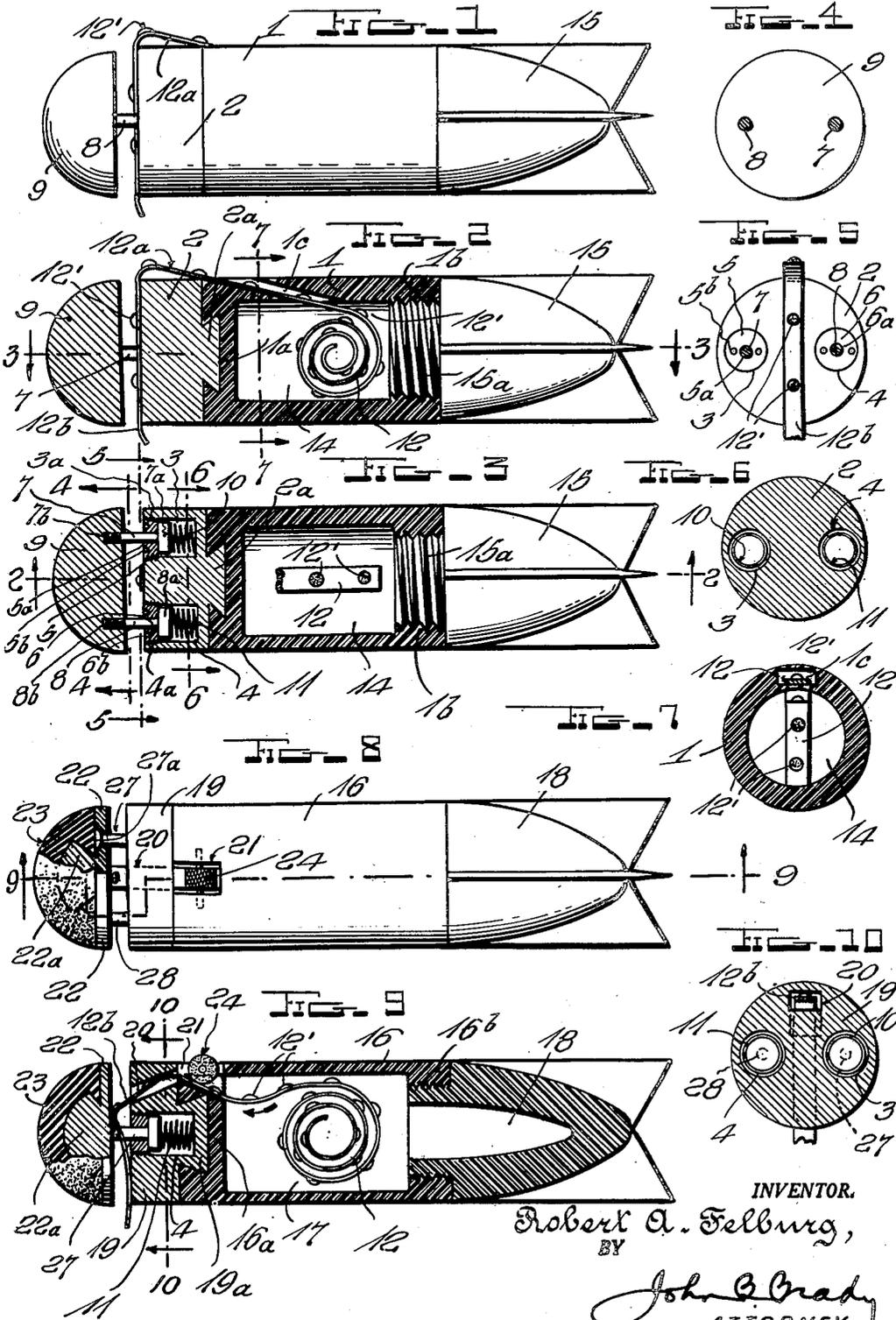
April 7, 1953

R. A. FELBURG
TOY BOMB AND MECHANISM FOR FEEDING
EXPLOSIVE CAPS THERETHROUGH

2,633,671

Filed May 8, 1947

5 Sheets-Sheet 1



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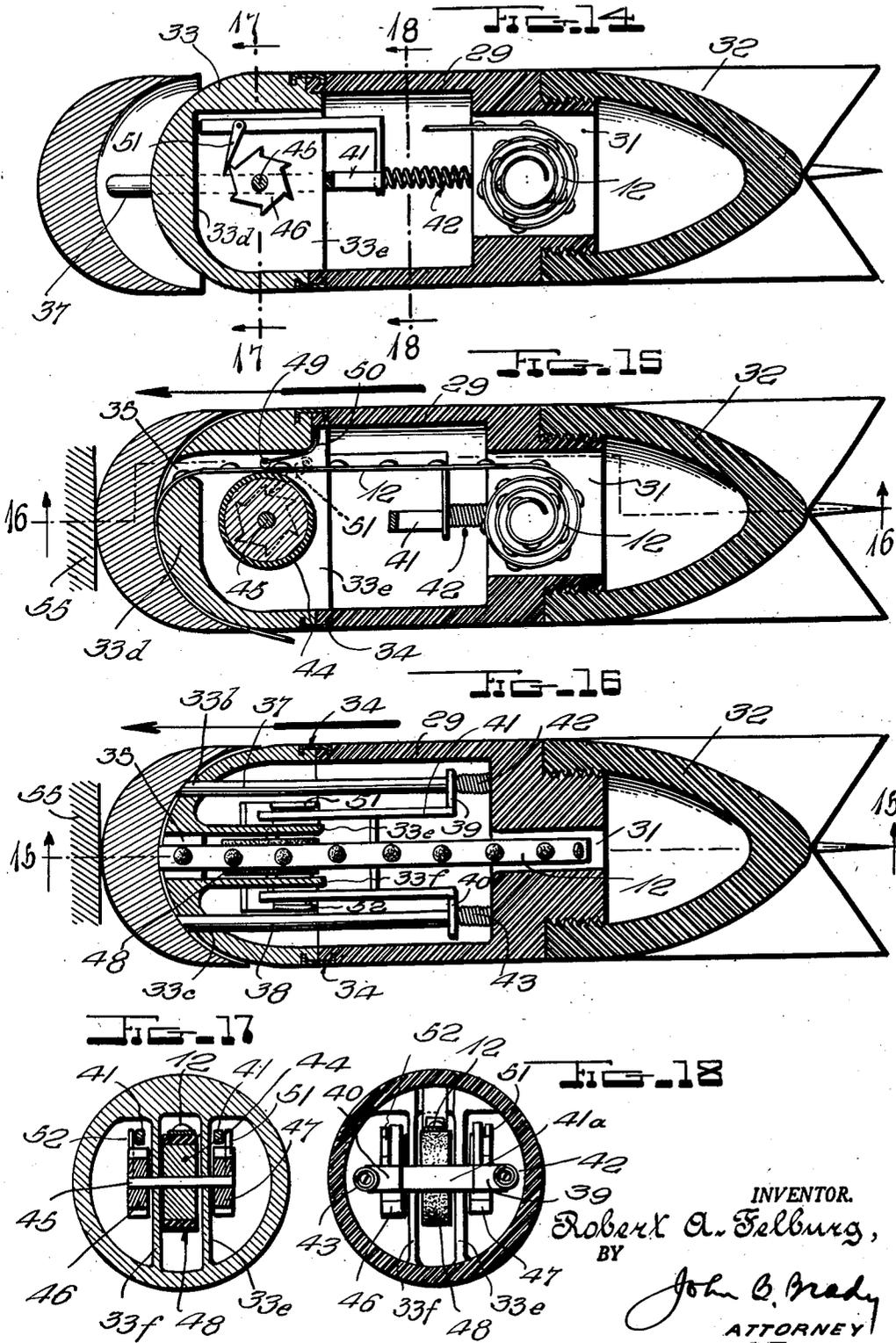
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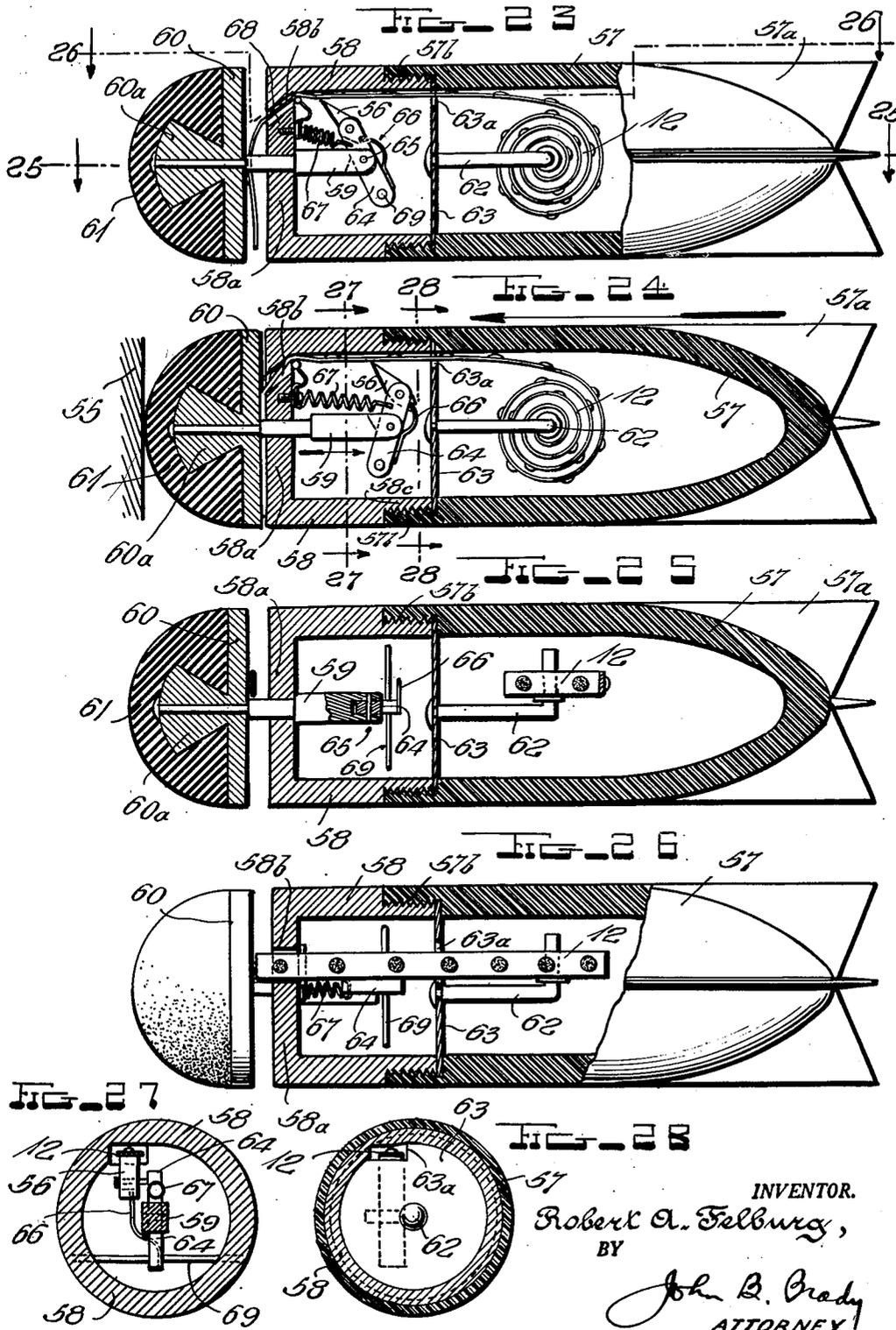
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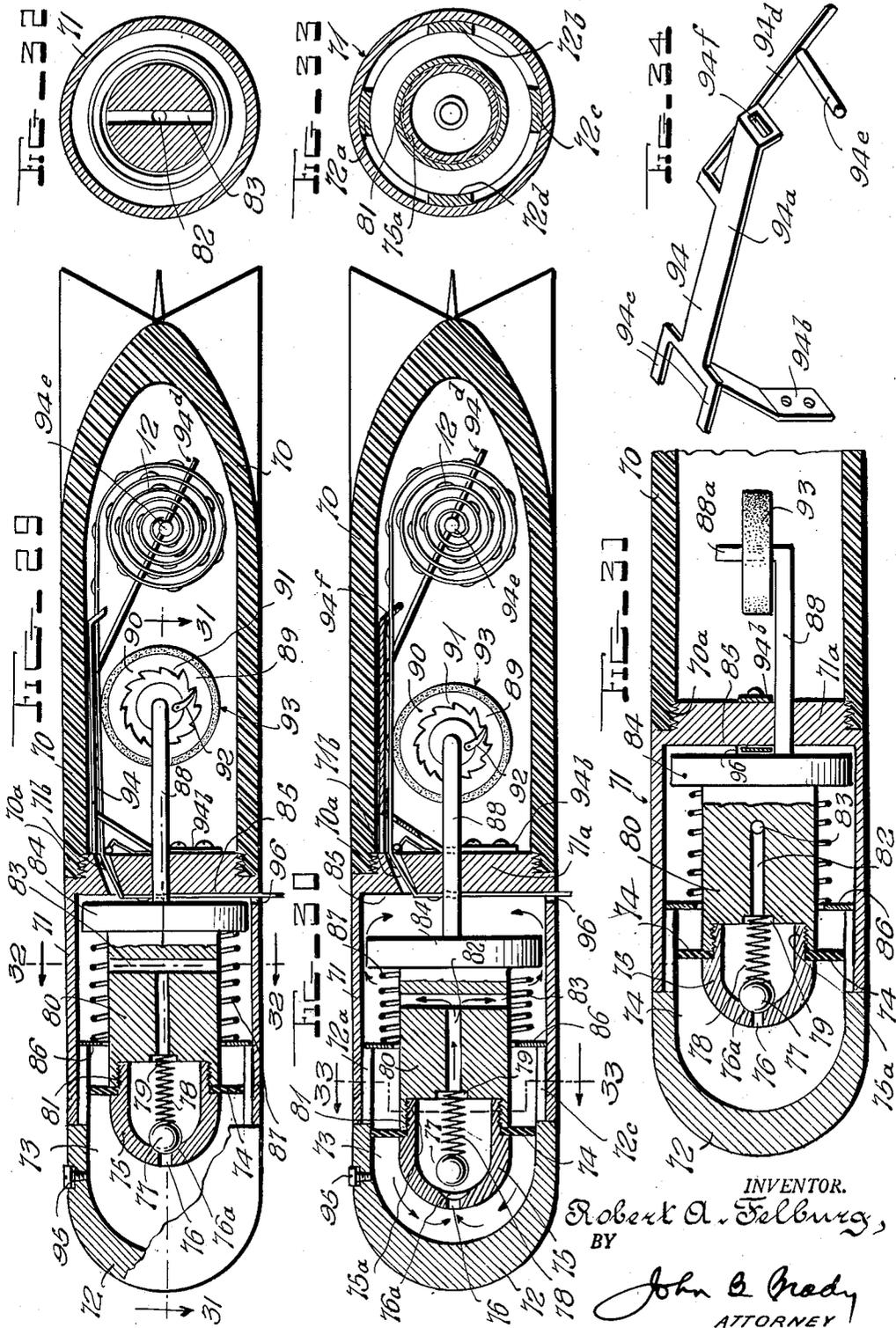
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UNITED STATES PATENT OFFICE

2,633,671

TOY BOMB AND MECHANISM FOR FEEDING EXPLOSIVE CAPS THERETHROUGH

Robert A. Felburg, Newark, N. J.

Application May 8, 1947, Serial No. 746,723

16 Claims. (Cl. 46—200)

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My invention relates broadly to toys and more particularly to a toy cap explosive bomb.

One of the objects of my invention is to provide a construction of toy bomb which simulates an actual bomb and which may be used as an amusement device for setting off an explosive charge.

Another object of my invention is to provide a construction of toy bomb simulating an actual bomb and which contains a magazine reloader for replenishing the explosive charge after each explosive operation.

Still another object of my invention is to provide a construction of toy bomb containing a roll of explosive caps which may be successively moved into position for effecting repeatedly explosive operations simulating an actual bomb.

A further object of my invention is to provide a mechanism for a toy bomb for automatically advancing an explosive charge to a position for effecting an explosion each time the bomb is dropped or thrown.

A still further object of my invention is to provide a construction of magazine type toy bomb which may be inexpensively manufactured from metal and a plastic material on a mass production scale and successively operated to effect repeated explosions.

A still further object of my invention is to provide a construction of toy bomb including a delayed action mechanism which operates after a predetermined time period to produce an explosive action.

Other and further objects of my invention reside in the details of construction of the delayed action mechanism for an explosive toy bomb as set forth more fully in the specification hereinafter following by reference to the accompanying drawings in which:

Figure 1 is a side elevational view of a toy bomb of the magazine type embodying my invention in which repeated charges are successively moved to firing position under manual control; Fig. 2 is a longitudinal sectional view through the bomb taken substantially on line 2—2 of Fig. 3; Fig. 3 is a longitudinal sectional view through the bomb taken substantially on line 3—3 of Fig. 2; Fig. 4 is a transverse sectional view taken substantially on line 4—4 of Fig. 3; Fig. 5 is a transverse sectional view taken substantially on line 5—5 of Fig. 3; Fig. 6 is a transverse sectional view taken substantially on line 6—6 of Fig. 3; Fig. 7 is a transverse sectional view through the magazine of the toy bomb taken substantially on line 7—7 of Fig. 2;

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Fig. 8 is a top plan view of a modified form of magazine type toy bomb embodying my invention in which the feeding of successive charges is effected by manually operated finger controlled roller projecting through one side of the bomb; Fig. 9 is a longitudinal sectional view taken substantially on line 9—9 of Fig. 8; Fig. 10 is a transverse sectional view taken substantially on line 10—10 of Fig. 9; Fig. 11 is a side elevational view of a further modified form of magazine type toy bomb embodying my invention in which the feeding of explosive charges is accomplished automatically with each impact operation of the bomb; Fig. 12 is a longitudinal sectional view taken through the automatic feed form of toy bomb of my invention, the view being taken substantially on line 12—12 of Fig. 13; Fig. 13 is a longitudinal sectional view through the bomb of the form shown in Figs. 11 and 12, the view being taken substantially on line 13—13 of Fig. 12; Fig. 14 is a longitudinal sectional view through the bomb of Figs. 11—13, the view being taken substantially on line 14—14 of Fig. 12; Fig. 15 is a longitudinal sectional view through the bomb taken substantially on line 15—15 of Fig. 16 and showing the mechanism compressed by impact of the bomb against an objective; Fig. 16 is a longitudinal sectional view through the bomb taken substantially on line 16—16 of Fig. 15; Fig. 17 is a transverse sectional view taken substantially on line 17—17 of Fig. 14; Fig. 18 is a transverse sectional view taken substantially on line 18—18 of Fig. 14; Fig. 19 is a detail plan view of the coupling means between the impact head of the bomb and the charge feeding mechanism with parts broken away and illustrated in section; Fig. 20 is a side elevational view of the coupling means illustrated in Fig. 19; Fig. 21 is an end view of the coupling means shown in Figs. 19 and 20; Fig. 22 is a detail view of the connection between the spring means within the bomb magazine and the coupling means of Figs. 19—21; Fig. 23 shows a further modified form of automatic feed mechanism for the explosive charges in a magazine type toy bomb; Fig. 24 is a longitudinal sectional view of the toy bomb illustrated in Fig. 23, but showing the movement of the explosive charge feed mechanism under a condition of impact of the bomb; Fig. 25 is a longitudinal sectional view through the bomb structure of Figs. 23 and 24 taken substantially on line 25—25 of Fig. 23; Fig. 26 is a fragmentary sectional view through the bomb of Figs. 23—25 taken substantially on line 26—26 of Fig. 23 and showing the impact head and the

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guiding tail of the bomb in side elevation; Fig. 27 is a transverse sectional view taken substantially on line 27—27 of Fig. 24; Fig. 28 is a transverse sectional view taken substantially on line 28—28 of Fig. 24; Fig. 29 is a longitudinal sectional view through a further modified form of toy bomb constructed in accordance with my invention and employing a delayed action mechanism for effecting an explosive operation of the bomb a predetermined time after the impact of the bomb with respect to an objective, the view showing the bomb at the instant of a firing operation thereof; Fig. 30 is a longitudinal sectional view through the bomb of Fig. 29 but illustrating the bomb at the time that the mechanism is hurled forward; Fig. 31 is a fragmentary longitudinal sectional view taken substantially on line 31—31 of Fig. 29; Fig. 32 is a transverse sectional view taken substantially on line 32—32 of Fig. 29; Fig. 33 is a transverse sectional view taken substantially on line 33—33 of Fig. 30; and Fig. 34 is a perspective view of the supporting and guiding mechanism for the roll of explosive caps employed in the magazine of the structure illustrated in Figs. 29—33.

Referring to the drawings in detail reference character 1 designates the plastic hollow cylindrical body structure of the toy bomb which is closed at the end 1a thereof and internally screw-threaded at the end 1b thereof. The end 1a receives the cylindrical anvil head 2 which is provided with an undercut projection 2a which may be readily molded into the plastic material of the body structure 1. The cylindrical anvil head 2 is provided with a pair of cylindrical pockets or recesses 3 and 4 disposed at spaced intervals on either side of the center thereof. The cylindrical pockets or recesses 3 and 4 are screw-threaded adjacent their open ends at 3a and 4a for receiving the screw-threaded circular closure plate members 5 and 6. Plate members 5 and 6 are centrally apertured at 5a and 6a for the passage of the cylindrical rod-like stems of attachment members 7 and 8. The attachment members 7 and 8 are each provided with headed ends 7a and 8a and screw-threaded ends 7b and 8b which enter the impact head 9. In the form of my invention shown in Figs. 1—3 a metallic impact head 9 is employed into which the screw-threaded ends 7b and 8b of the attachment members 7 and 8 extend. In the assembly of the toy bomb a pair of compression coil springs 10 and 11 are seated in the cylindrical pockets or recesses 3 and 4 and serve as cushioning means for the headed ends 7a and 8a of the attachment members 7 and 8. Before screwing the attachment members 7 and 8 into the impact head 9 the screw-threaded circular closure plate members 5 and 6 are passed loosely over the rod-like attachment members 7 and 8 and then the attachment members 7 and 8 are screwed into the impact head 9. As thus assembled the screw-threaded circular closure plate members 5 and 6 are screwed into secured position in engagement with screw-threads 3a and 4a using a small wrench which will readily fit between the space provided between the impact head 9 and the cylindrical anvil head 2, the wrench being engaged in suitable sockets represented at 5b and 6b. The headed ends 7a and 8a are cushioned against compression coil springs 10 and 11 tending to normally maintain impact head 9 in spaced relation to anvil head 2 as shown in Figs. 1—3.

In this position the roll of explosive caps rep-

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resented at 12 located within the magazine 14 interiorly of the hollow cylindrical body structure 1 may have the end thereof shown at 12a passed through the angularly inclined slot 1c in body structure 1 and threaded between the anvil head 2 and impact head 9 and between the attachment members 7 and 8 as shown more clearly in Fig. 3 preparatory to an explosive operation. The roll of explosive caps shown at 12 contains spaced explosive charges represented at 12' which are brought in to register between anvil head 2 and impact head 9 and exploded as the bomb is thrown against an objective.

A molded tail section 15 having a screw-threaded extension 15a thereon is adapted to enter the internal screw-threads 1b in the end of the hollow magazine 14 to form both a guide for the bomb and an attachable and removable cover therefor. When the roll of explosive caps 12 is consumed the molded tail portion 15 is unscrewed from the magazine 14 and a fresh roll of caps inserted. The toy bomb may be repeatedly used after it is thrown a number of times against an objective for repeated explosions without refill. The size of the magazine 14 is sufficient to receive a very substantial number of charges in the magazine roll.

Referring to Figs. 8—10 I have shown the means for facilitating the resetting of the bomb for a repeat operation after each firing operation. In this arrangement the cylindrical body portion of the bomb is illustrated at 16 having a hollow magazine 17 therein for housing the roll of explosive caps 12 with a solid front end portion 16a and an internally threaded rear end portion 16b. The rear end portion 16b receives the attachable and detachable molded tail 18 which permits the magazine 17 to be opened and closed when a roll of explosive caps is replaced within the magazine. The front portion 16a of the cylindrical body 16 receives the anvil member 19 which is anchored therein by molding projection 19a into the material of the cylindrical body 16. The anvil member 19 and the plastic body 16 both have aligned coacting slots therein as represented at 20 and 21. Slot 21 provides a passage for the tape from the roll of explosive caps 12 which passes through slot 21 as represented at 12a and through the coacting slot 20 as represented at 12b to the firing position between the rear plate 22 of the impact head 23 and the anvil member 19.

To facilitate the feeding of the explosive caps from roll 12 I provide a knurled finger actuated roller 24 journaled within slot 21 of body structure 16. The knurled finger actuated roller 24 frictionally engages the tape 12 and feeds the tape 12 progressively to firing position after each operation of the bomb.

In the form of my invention illustrated in Figs. 8—10 the impact head 23 is formed from hard rubber vulcanized over the projection 22a on plate 22. The coupling members between plate 22 and the anvil member 19 are similar to the attachment members 7 and 8 in the arrangement illustrated in Figs. 1—3, except that in facilitating manufacture and production I have substituted pins 27 and 28 which are riveted into plate 22 and project rearwardly therefrom. These same pins 27 and 28 each have the screw-threaded circular closure plate members 5 and 6 slipped thereover and then the rear ends of the pins 27 and 28 are upset in a manner similar in position and function to heads 7a and 8a of Figs. 1—3 as represented generally at 27a in Fig. 8. Compression

coil springs 10 and 11 occupying screw-threaded sockets 3 and 4 in anvil member 19 continuously urge the headed ends of pins 27 and 28 as represented at 27a outwardly to enable the explosive cap tape carrying explosive charges 12' to be advanced between anvil 19 and plate 22 in preparing the toy bomb for each repeat operation.

In Figs. 11-22 I have illustrated the construction of an automatic feed mechanism for a toy bomb constructed in accordance with my invention. In this arrangement the cylindrical body structure for the bomb has been shown at 29 having a screw-threaded rear end portion 30 with a slotted longitudinally extending chamber 31 therein which receives the roll of explosive caps 12. The body structure 29 is molded from plastic material and receives the molded tail structure 32 which is screw-threaded on the rear end portion 30 and serves to simulate the appearance of the tail of a bomb and also to provide guide fins for directing the trajectory path of the bomb when thrown. The tail portion 32 may be unscrewed or replaced upon body portion 29 from time to time in renewing the roll of explosive caps 12. A metallic anvil streamlined head 33 is arranged to be connected to the front end of the cylindrical casing 29 by means of a steel resilient snap ring 34 having inwardly directed circumferential flanges adapted to extend into circumferential grooves 29a and 33a adjacent the adjoining peripheral edges of the anvil head 33 and the cylindrical body structure 29. The anvil head 33 is slotted at 35 for the passage of the strip of explosive caps from roll 12 as represented at 12a. The caps 12' move around the anvil head 33 to positions represented at 12b where they are struck by the interior surface of the substantially semi-spherical impact head 36. The impact head 36 is of streamlined contour and conforms with the contour of the anvil head 33 and is adapted to move from the position illustrated in Figs. 11-14 to the position illustrated in Figs. 15 and 16 upon impact with an objective. The impact head 36 has a pair of rod-like members 37 and 38 extending rearwardly therefrom and through apertures 33b and 33c in the anvil head 33 to a position interiorly of the cylindrical body structure 29. The rod-like members 37 and 38 connect to the outwardly extending lugs 39 and 40 of the slidable frame 41. Each of the lugs 39 and 40 are cushioned against compression coil springs 42 and 43 disposed within the interior of the hollow body structure 29 and secured adjacent the rear wall 29c thereof. The coil springs 42 and 43 tend to continuously urge frame 41 forward limited by the contact thereof with the interior end wall 33d of the anvil head 33 and by abutment of the transverse member 41a with the web-like partitions 33e and 33f interiorly of the anvil head 33 as shown more clearly in Fig. 14. The connection between the coil springs and the lugs 39 and 40 is typified by the showing in Fig. 22 which shows screw member 42a fastened over one of the end convolutions of coil-like spring 42 and screwed through lug 39 and into rod-like member 37. The connection for coil spring 43 with lug 40 is similar.

The webs 33e and 33f provide a journaling means for the feed roller 44 carried by transverse shaft 45 on each end of which there is provided a ratchet wheel 46 and 47. As ratchet wheels 46 and 47 revolve feed roller 44 is revolved. Feed roller 44 is provided with an encircling live rubber surface 48 which frictionally grips the strip 12 of explosive caps 12' in association with the friction pressure roller member 49 carried by

spring strip 50 fastened to the interior of the anvil head 33. Pressure friction roller 49 in coaction with the movement of feed roller 44 tends to advance the strip 12 automatically to present explosive caps over the anvil head 33 as coil springs 42 and 43 push frame 41 forwardly. This is accomplished by means of the pawls 51 and 52 projecting from frame 41 into the path of the ratchet wheels 46 and 47 for engaging and advancing the ratchet wheels step by step thus revolving the friction roller 44 and advancing the strip of explosive caps 12. As the bomb is thrown against an objective impact head 36 strikes the caps 12' at the position 12b against anvil head 33 exploding the caps and moving pawls 51 and 52 rearwardly in which direction the pawls are free to slide angularly over the inclined ratchet teeth of ratchet wheels 46 and 47. However, pawls 51 and 52 do not yield in the opposite direction upon the forward stroke of the frame 41 but impart positive driving step forces against the ratchets advancing the ratchet wheels and moving the friction feed roller to advance the strip of caps 12 to a position for replacing the explosive charge over the anvil head 33. As the bomb meets the objective 55 as shown in Figs. 15 and 16 an explosion of the cap results whereas when the bomb is picked up ready to be hurled again as a missile the pawl and ratchet mechanism through the energy stored in compression springs 42 and 43 advance the strip of caps to present the next explosive charge over the anvil head 33.

In Figs. 23-28 I have illustrated a simplified construction of toy bomb in which automatic feed of the strip of caps 12 is effected by means of a dog 56 which engages the strip of caps 12 for advancing the strip after each explosive operation. In this arrangement the tail portion of the bomb is formed from a hollow molded casing 57 having tail guide means 57a molded integrally therewith and terminating in a forward end 57b which is internally screw-threaded for receiving the external screw-threaded cylindrical end portion 58. The screw-threaded cylindrical end portion 58 forms a housing for plunger member 59 which is slidable through the closure head 58a of the cylindrical end portion 58 and is attached to the anvil plate 60 carrying the resilient rubber nose 61. Anvil plate 60 forms the impact means with respect to closure head 58a for exploding the caps fed from the roll 12 in the strip which passes through the angularly inclined slot 58b in the closure head 58a. The roll of caps shown at 12 is supported on the angularly bent rod member 62 which is supported by transverse plate member 63 gripped between the screw-threaded terminus 58c of the screw-threaded cylindrical end portion 58 and the shoulder of the plastic tail portion 57. Plate 63 is slotted at 63a for the passage of the strip of caps 12 in their passage through the screw-threaded cylindrical end portion 58 and through the slot 58b therein.

The strip of caps from the roll 12 is advanced as required for detonation by means of the dog 56 carried by lever 64 pivotally mounted at 65 on the end of plunger 59. The pivotally mounted dog 56 is tensioned by means of spring member 66 whereby the pivotally mounted dog 56 is free to move rearwardly and slide over the strip of caps 12, as the plunger 59 is moved rearwardly as illustrated in Fig. 24 when the nose 61 of the toy bomb strikes the surface 55. However, after the impact compression spring 67 which extends between lever 64 and the connection 68 in the

rear of closure head 58a pulls the pivotally mounted dog 56 forwardly engaging the strip of caps 12 and moving a fresh cap in the detonating position between closure head 58a and anvil plate 60.

In the manufacture of the device rod 62 is staked to the plate 63 and may be readily assembled interiorly of the housing as cylindrical tail portion 57 is screwed into the cylindrical end portion 58. The rubber nose or end piece 61 is readily forced over the projection 60a extending from the anvil plate 60 for securing the nose 61 to the anvil plate 60. Lever 64 is pivotally mounted on transverse pin 69 which extends transversely of the cylindrical head portion 58 as shown more particularly in Fig. 27. Renewal of the roll of caps 12 may be made from time to time by simply unscrewing tail piece 57 from cylindrical head portion 58 and replacing the roll of caps.

In Figs. 29-34 I have illustrated a delayed action type of toy bomb which automatically effects an explosion after the bomb has reached the objective and has gravitated to a position of rest. The delayed action bomb is formed by three members, that is, the tail portion 70 formed from plastic material, the intermediate cylindrical portion 71 having a reduced end section 71a which is screw-threaded into the screw-threaded end 70a of the tail portion 70, and a nose portion 72 which is frictionally or otherwise engaged with the cylindrical portion 71. The nose portion 72 has a multiplicity of spaced segmental projections 72a, 72b, 72c and 72d extending therefrom which fit within the end of the cylindrical section 71 for aligning the three sections on the same axis. The nose section 72 contains a hollow cylindrical portion represented at 73 within which the disc-like piston member 74 is displaceable. The disc-like piston member 74 carries the dashpot head 75 which is of hollow section provided with a port 76 in the forward end thereof having a seat 76a for a ball valve 77 which is spring-pressed by compression spring 78 seated in the centrally arranged recess 79 in the cylindrical member 80. Cylindrical member 80 has an internally screw-threaded recess 81 in the end thereof which receives the screw-threaded terminus 75a of dashpot head 75 at the same time clamping the disc-like piston member 74 in position as shown. The seat 79 is contiguous with central longitudinally extending port 82 in member 80 which is connected by transverse port 83 for delivering compressed air around the loosely fitting anvil head 84 to the rear of the anvil head 84 intermediate anvil head 84 and the face 85 of the reduced end section 71a of cylindrical section 71.

I provide a transversely extending annular plate 86 disposed within the cylindrical section 71 adjacent the ends of member 72a, 72b, 72c and 72d as shown. This plate serves as an abutment against which compression coil spring 87 operates. Compression coil spring 87 is yieldably interposed between the anvil head 84 and the abutment stop plate 86 and tends to force anvil head 84 in the direction of face 85 of the reduced end section 71a. Anvil head 84 and its associated cylindrical member 80 and dashpot 75 are connected with plunger rod member 88 which extends slidably through the reduced end section 71a and carries on its rearward angularly bent extremity the ratchet feed roller mechanism indicated generally at 89. The ratchet feed roller mechanism 89 includes a roller member 90

journalled on the inturned end 88a of rod member 88 and free to revolve thereon under control however of the internal ratchet 91 and the engaging pawl 92. The pawl and ratchet mechanism associated with roller mechanism 90 is so arranged that the rearward stroke of rod member 88 merely rolls the frictional surface 93 of roller mechanism 90 against the strip of explosive caps 12 which are fed through the guide bracket 94 and through the aperture 71b in the end of cylindrical section 71 to a position intermediate face 85 and anvil head 84.

The bracket 94 is constructed as illustrated more clearly in perspective view in Fig. 34 to provide for a flat support 94a for the strip of caps from roll 12 as the caps are fed off from roll 12. Bracket 94 is formed from a single strip of material and is provided with a fastening attachment portion 94b which can be secured to the rear reduced end section 71a. Bracket 94 includes a bifurcated portion 94c which extends on opposite sides of slot 71b for directing the feeding of the strip of caps from roll 12 intermediate face 85 and anvil head 84. Bracket 94 also includes an extension 94d which carries a pintle 94e on which the roll of caps 12 is supported. The strip of caps from roll 12 is threaded through the horizontally disposed eyelet 94f in bracket portion 94a and is directed between bifurcated portion 94c of bracket 94 through slot 71b in the reduced end section 71a.

As heretofore observed, the friction rim 93 of roller 90 is free to roll over the strip of caps 12 during rearward movement of the anvil head 84 as pawl 92 rides over ratchet teeth 91. However, upon forward inertia movement of anvil head 84, pawl 92 is latched with respect to ratchet teeth 91 and locks rim 93 of roller 90 so that the friction engaged strip of caps is fed forwardly to replace previously exploded caps in the position between face 85 and anvil head 84.

When the delayed action bomb is dropped or thrown forwardly the dashpot mechanism including dashpot 75, disc-like piston 74, cylindrical member 80, anvil head 84, rod 88 and friction roller 90 all move forward by the force of the impact. The dashpot head 75 strikes the inside surface of the nose 72 under the action of such impact and forces the confined body of air in the cylindrical portion 73 of the hollow nose 72 into a condition of compression by advancement of disc-like piston 74 along hollow cylindrical portion 73. The compressed air is forced through port 76 and forces ball valve 77 away from the seat 76a as represented in Fig. 30. The compressed air is forced through central longitudinally extending port 82 and through the transverse port 83 and around the loosely fitting anvil head 84 to a position between surface 85 and anvil head 84 where the compressed air prevents the establishment of a partial vacuum due to the inertia of the parts of the mechanism which is thrown forward by impact due to dropping or throwing of the bomb.

When the compressed air is no longer forced through port 76, spring 78 closes ball valve 77 against seat 76a. Spring 87 tends to slam the anvil head 84 back against firing surface 85, but is prevented from doing so because of the partial vacuum created inside the cylindrical section 73 as the unit 75-80-84 tends to move rearwardly. The metering valve 95 can be adjusted to allow a greater or lesser amount of atmospheric pressure from the outside of the bomb to enter the partial vacuum within the container formed by walls 72, 74 and 75. This gradual elimination

of the partial vacuum will hasten the rearward movement of dashpot unit 75—80—84.

When the dashpot unit moves forward, the excess air forced through ball valve 77 fills in between walls 84 and 85. This action compensates for a possible momentary partial vacuum between walls 84 and 85. While the compressed air balances out with the attempted vacuum between walls 84 and 85, should the balance ever be more towards a vacuum or compression, vent 96 would instantaneously nullify any attempt at non-conformance with atmospheric pressure. The entire bomb from the right side of washer 74 to the tip of tail 70, for all practical purposes, houses atmospheric pressure. Immediately upon impact, compressed air on the left side of washer 74 is forced through ball valve 77. As soon as ball valve 77 closes and spring 87 forces the unit rearwardly, a partial vacuum is formed within container 72—74—75. However, due to leakage of atmospheric pressure at pre-set metering valve 95, ball valve 77 and washer 74, spring 87 gradually pulls the unit rearwardly until washer 74 reaches slotted sections 72a, 72b, 72c and 72d. As soon as the left side of washer 74 exposes the partial vacuum to the slots, atmospheric pressure rushes in container 73 and eliminates the vacuum. With atmospheric pressure throughout the bomb, there is nothing to prevent spring 87 from slamming the dashpot unit the remaining distance against firing surface 85.

During the rearward movement pawl 92 rides over ratchet teeth 91 and friction surface 93 of the roller rolls over the strip of caps. However, the next forward movement of the inertia unit results in the feeding of the succeeding cap into the next succeeding firing position. The metering valve 95 is used to lengthen or shorten the delayed action of the bomb. The strip of caps as the caps are consumed feeds out through the restricted aperture 96 in one side of the cylindrical section 71.

I have described my invention in certain preferred embodiments and commercial forms, but I realize that modifications may be made in the detail of construction and arrangement of parts of the devices of my invention. Accordingly, I desire that it be understood that no limitations are imposed upon my invention other than may be imposed by the scope of the appended claims.

What I claim as new and desire to secure by Letter Patent of the United States is as follows:

1. A toy device simulating a bomb, comprising a substantially cylindrical hollow body structure terminating in a rounded nose, guide tail fins carried by said body structure, a rounded anvil head corresponding in contour with the rounded nose streamlined with respect to the front of said body structure and movably mounted in said body structure and movable under impact at the front of said body structure to establish impact contact with the rounded nose of said body structure, a magazine explosive cap roll housed within said body structure and journaled transversely thereof, a strip of explosive caps carried by said roll, said body structure being apertured for the feeding of said roll of explosive caps from said magazine roll of explosive caps to a location in which said caps are disposed in a firing position between said streamlined anvil head and the rounded nose of said body structure.

2. A device simulating a toy bomb, comprising a substantially cylindrical hollow body portion having a rounded anvil head detachably mounted

on one end thereof and being screw-threaded on the other end, a tail piece having guide fins thereon screw-threaded onto the screw-threaded end of the cylindrical body portion, a streamlined displaceable member adjacent said rounded anvil head and a strip of explosive caps disposed in a magazine roll within said substantially cylindrical hollow body structure, said strip being fed through an apertured portion of said rounded anvil head to an exploding position between said anvil head and said streamlined displaceable member.

3. A device simulating a toy bomb, comprising a substantially cylindrical hollow body structure having an anvil head on one end and being screw-threaded on the other end, said substantially cylindrical body structure being apertured adjacent one side thereof, a strip of explosive caps carried by a magazine roll located in said substantially hollow cylindrical body structure, said strip being fed through the apertured side of said body structure to a position for exploding the caps therein over said anvil head, a streamlined displaceable member disposed adjacent said anvil head and arranged to effect an explosive operation under conditions of impact of the toy bomb against an objective and a screw-threaded tail piece removably connected with the screw-threads on the end of said body structure.

4. In a device simulating a toy bomb, a substantially cylindrical hollow plastic body structure having a rounded anvil member secured to one end and a screw-threaded tail piece detachably secured to the other end, a strip of explosive caps carried by a magazine roll located in said body structure, said strip extending through a slot in said anvil head and over the rounded anvil head and a member movably mounted with respect to said anvil head and normally spring biased to provide a gap adjacent said rounded anvil head for the passage of the strip of explosive caps from said magazine roll of caps within said body structure through said gap and over said rounded anvil head for effecting an explosive operation when said member is impacted against said rounded anvil head.

5. In a device simulating a toy bomb, a substantially cylindrical hollow plastic body structure having an anvil member secured to one end and a screw-threaded tail piece detachably secured to the other end, a strip of explosive caps carried by a magazine roll located in said body structure, said strip extending through a slot therein over said anvil head, a streamlined displaceable member yieldably connected with said anvil head and normally spring biased to provide a gap between said anvil head and said displaceable member for the passage of a strip of explosive caps from said magazine roll of caps within said body structure for effecting successive explosive operations when said streamlined displaceable member is forced against said anvil head and manually actuated means disposed in one side of said body structure for engaging the strip of caps from said magazine roll of caps and threading the strip of caps between said anvil head and said displaceable member for successive explosive operations on the caps in said strip.

6. In a device simulating a toy bomb, a substantially cylindrical hollow plastic body structure having an anvil member secured to one end and a screw-threaded tail piece detachably secured to the other end, a strip of explosive caps carried by a magazine roll located in said body

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structure, said strip extending through a slot therein over said anvil head, a displaceable member yieldably connected with said anvil head and normally spring biased to provide a gap adjacent said anvil head for the passage of the strip of explosive caps from said magazine roll of caps within said body structure for effecting successive explosive operations when said displaceable member is forced against said anvil head by impact and a finger actuated friction wheel journaled in said body structure and projecting beyond one side thereof and extending into said body structure for frictionally engaging the strip of caps extending from said magazine roll of caps for moving said strip to a position intermediate said member and said anvil head for successive explosive operations.

7. A device simulating a bomb, comprising a substantially cylindrical hollow body structure having guide tail fins on one end and a rounded anvil head on the other end, a displaceable member having a rounded contour conforming with the contour of said rounded anvil head and disposed adjacent said anvil head, means for guiding said member with respect to said rounded anvil head and normally yieldably maintaining said member in a position spaced from said rounded anvil head, a magazine roll of explosive caps formed in a strip and housed within said body structure, said strip extending through said rounded anvil head eccentrically of the axis of said head to a position over said anvil head and in a position between said anvil head and said member whereby a firing operation is effected as said member is forced against the explosive cap strip extending over said anvil head and means for automatically feeding the strip of explosive caps to present a fresh explosive cap in a position between said anvil head and said member after each successive firing operation.

8. A device simulating a bomb, comprising a substantially cylindrical hollow body structure having guide tail fins on one end and a rounded anvil head on the other end, a displaceable member having a rounded contour conforming with the contour of said rounded anvil head and disposed adjacent said anvil head, means for guiding said member with respect to said anvil head and normally yieldably maintaining said member in a position spaced from said anvil head, a magazine roll of explosive caps formed in a strip and housed within said body structure, said strip extending through said rounded anvil head to a position over said anvil head and in a position between said anvil head and said member whereby a firing operation is effected as said member is forced against the explosive cap strip extending over said rounded anvil head and a ratchet operated friction wheel journaled within said body structure and engageable with the explosive strip of caps and movable with the displacement of said member for frictionally advancing said strip of explosive caps to a position presenting a replacement explosive cap between said rounded anvil head and said member subsequent to each firing operation.

9. A device simulating a bomb, comprising a substantially cylindrical hollow body structure having guide tail fins on one end and an anvil head on the other end, a displaceable member disposed adjacent said anvil head, means for guiding said member with respect to said anvil head and normally yieldably maintaining said member in a position spaced from said anvil head, a magazine roll of explosive caps formed

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in a strip and housed within said body structure, said strip extending through said body structure to a position between said anvil head and said member whereby a firing operation is effected as said member is forced by impact with a target surface against the explosive cap strip extending over said anvil head and a spring actuated dog movable in timed relation with the forward displacement of said member for engaging the strip of explosive caps and advancing said strip between said anvil head and said member for effecting successive explosive operations of said device.

10. A device simulating a bomb, comprising a substantially hollow body structure, an anvil head connected with said body structure, a strip of explosive caps arranged in a magazine roll within said body structure, said strip extending forwardly through a slot in said anvil head to a firing position over said anvil head, a member displaceably mounted adjacent the front of said anvil head, spring means for normally biasing said member to a position spaced from said anvil head for the passage of the strip of explosive caps between said anvil head and said member and a dog connected with said member and engageable with the strip of explosive caps for successively feeding said strip of explosive caps between said member and said anvil head for positioning successive explosive caps in firing position after each explosive operation.

11. A device simulating a bomb, comprising a substantially hollow body structure, an anvil head of rounded contour connected with said body structure, a magazine roll journaled within said substantially hollow body structure, a strip of explosive caps carried by said magazine roll within said body structure, said strip extending forwardly through a slot in said anvil head and extending over the rounded surface of said head to a firing position over said anvil head, a member displaceably mounted adjacent the front of said anvil head, a frame member connected with said member and extending through said anvil head to a position within said substantially hollow body structure, spring means for normally urging said member to a position spaced from said anvil head for the passage of the strip of explosive caps between said anvil head and said member, and ratchet operated means carried by said frame structure and engageable with the strip of explosive caps for feeding successive explosive caps from the magazine roll after each explosive operation to a position between said member and said anvil head.

12. A device simulating a bomb, comprising a substantially hollow body structure, an anvil head connected with said body structure, a strip of explosive caps arranged in a magazine roll within said body structure, said strip extending forwardly through a slot in said anvil head to a firing position over said anvil head, a displaceable member mounted adjacent the front of said anvil head, spring means for normally urging said displaceable member to a position spaced from said anvil head for the passage of the strip of explosive caps between said anvil head and said displaceable member, a frame structure disposed within said hollow body structure and connected with said displaceable member, a ratchet operated friction wheel journaled within said anvil head and engageable with the strip of explosive caps being fed from said magazine roll of caps and a pawl carried by said frame structure and engageable with said ratchet operated friction wheel for automatically advancing

said ratchet operated friction wheel concurrently with the forward movement of said displaceable member after each firing operation for feeding replacement explosive caps to a position between said anvil head and said displaceable member after each firing operation.

13. A device simulating a bomb, comprising a substantially hollow body structure, a rounded anvil head connected with said body structure, a strip of explosive caps arranged in a magazine roll within said body structure, said strip extending forwardly through a slot in said rounded anvil head to a firing position over said rounded anvil head, a displaceable member having a rounded contour conforming with the contour of said rounded anvil head and mounted adjacent the front of said anvil head and movable forward and backward with respect thereto, a frame structure extending through said anvil head and connected with said displaceable member, a lever pivotally mounted within said anvil head and connected with said frame structure, and a pawl carried by said lever and engageable with the strip of explosive caps for advancing said strip of explosive caps on each forward movement of said displaceable member for feeding successive explosive caps to a firing position between said rounded anvil head and said displaceable member subsequent to each firing operation.

14. A toy device simulating a bomb comprising a substantially cylindrical hollow body structure terminating in a rounded nose, guide tail fins connected with the rear of said body structure, a transverse wall adjacent the rear of said body structure, said wall having a central slot therein and a bearing surface on each side thereof, a rolled strip of explosive caps housed within the slot within said transverse wall and extendible in a forward direction therefrom and passing through a slot formed in said rounded nose in a position displaced from the central axis thereof and extendible around the surface of the rounded nose, said nose being apertured on opposite sides of the central axis thereof, a pair of rods extending slidably through the apertures on each side of the central axis of the nose of said body structure, a pawl connected with each of said rods within the hollow body structure, means located in said hollow body structure immediately behind said nose for engaging the strip of explosive caps for advancing said strip through the slot in the said nose, means connected with the aforesaid means and engageable by said pawl for effecting the feed of the explosive strip of caps through the slot in the nose of said body structure, spring means normally urging each of said rods to an ejected position through the apertures in said rounded nose, an anvil head corresponding in contour with the rounded nose of said body structure, said anvil head being supported at spaced positions on the extremities of said rods whereby said anvil head when striking an obstruction coacts with the rounded nose of said

body structure for exploding the cap in said strip of caps by impact between the said rounded nose of said body structure and the interior surface of said anvil head.

15. A toy device simulating a bomb as set forth in claim 1 in which said anvil head is movably mounted in said body structure by means of a pair of spaced rods extending from the rear of said anvil head and extending through the rounded nose of said hollow body structure, a coil spring disposed between the interior end of each of said rods and spaced points interiorly of said hollow body structure and operating to normally eject said anvil head to a position in which the rear of said anvil head is spaced from the rounded nose of said body structure, means connected with the interior ends of said rods for engaging the said roll of explosive caps for advancing the roll of caps through the aperture in said rounded nose subsequent to each firing operation accompanied by a compression of said coil springs and during the period while said coil springs are ejecting said rods to a position in which said anvil head is spaced from the rounded nose of said body structure.

16. A toy device simulating a bomb as set forth in claim 1 in which said anvil head is movably mounted in said body structure by means of a pair of rods symmetrically mounted on opposite sides of the central axis of said cylindrical body structure, said rods extending through apertures in the rounded nose of the body structure and terminating in a position within said hollow body structure, a frame member terminating in a pair of transverse flanges aligned with the rear ends of said rods, coil springs mounted in said body structure and aligned with the axes of said rods for normally ejecting said rods through the rounded nose of said body structure, pawls carried by said frame, and means operated by said pawls for feeding said roll of explosive caps through the apertured rounded nose of said body structure to a firing position between said anvil head and the said rounded nose.

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