

No. 747,716.

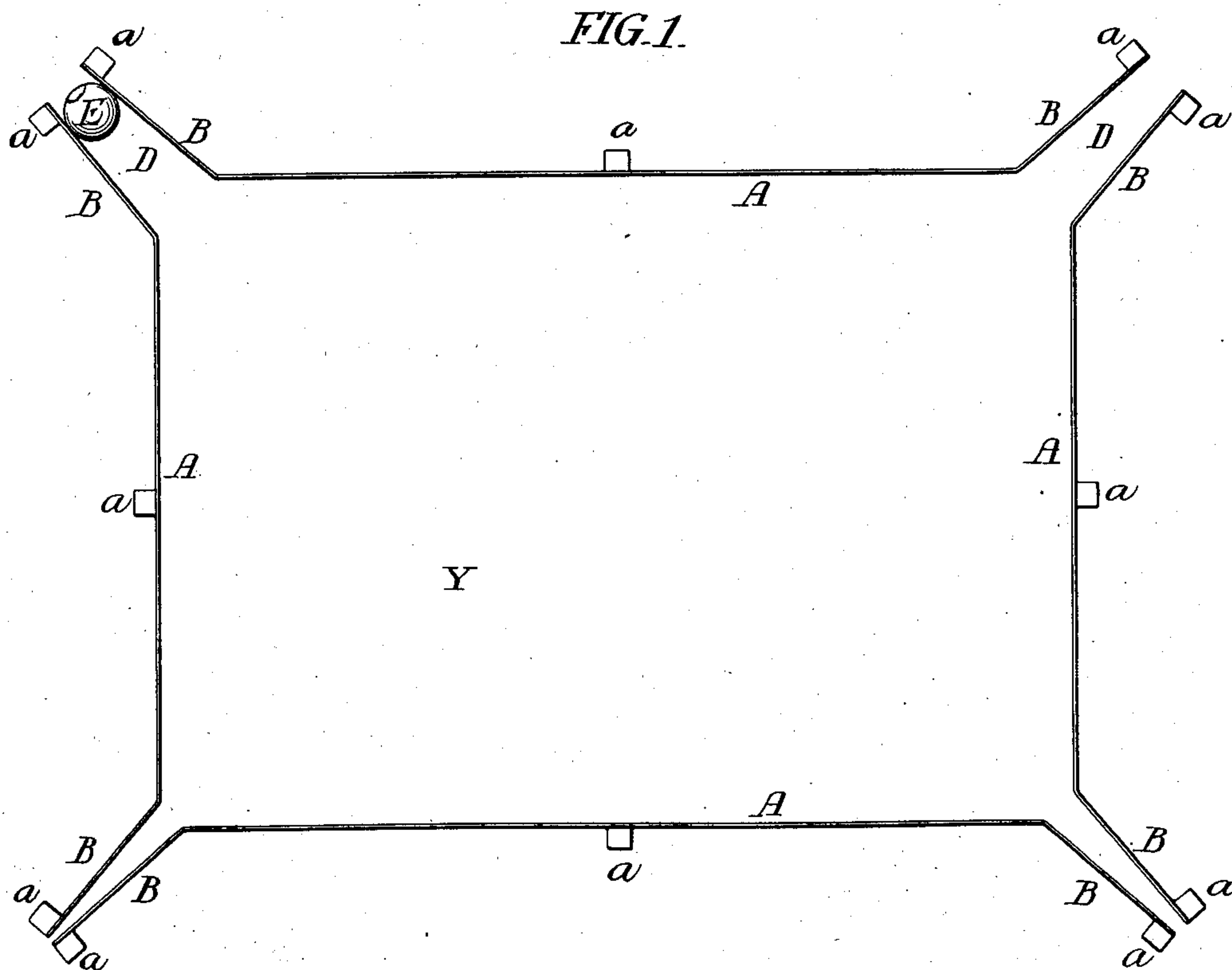
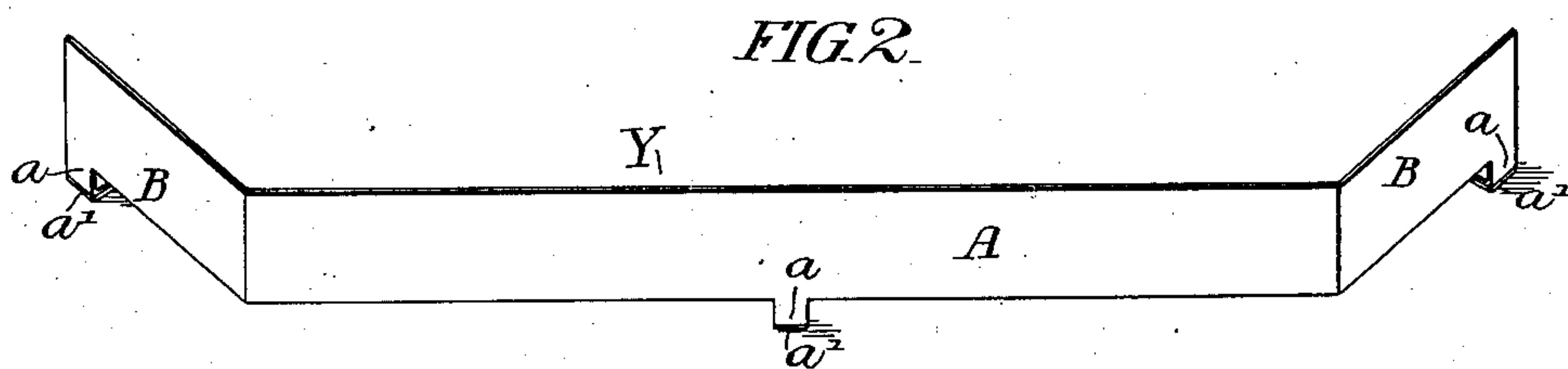
PATENTED DEC. 22, 1903.

W. S. HOW.  
GAME APPARATUS.

APPLICATION FILED MAR. 4, 1903.

NO MODEL.

7 SHEETS—SHEET 1.



Witnesses:-

Hamilton D. Turner  
Norman C. Metcalf

Inventor:-

Woodbury, Storer & How,

by his Attorneys:

*How & How*

No. 747,716.

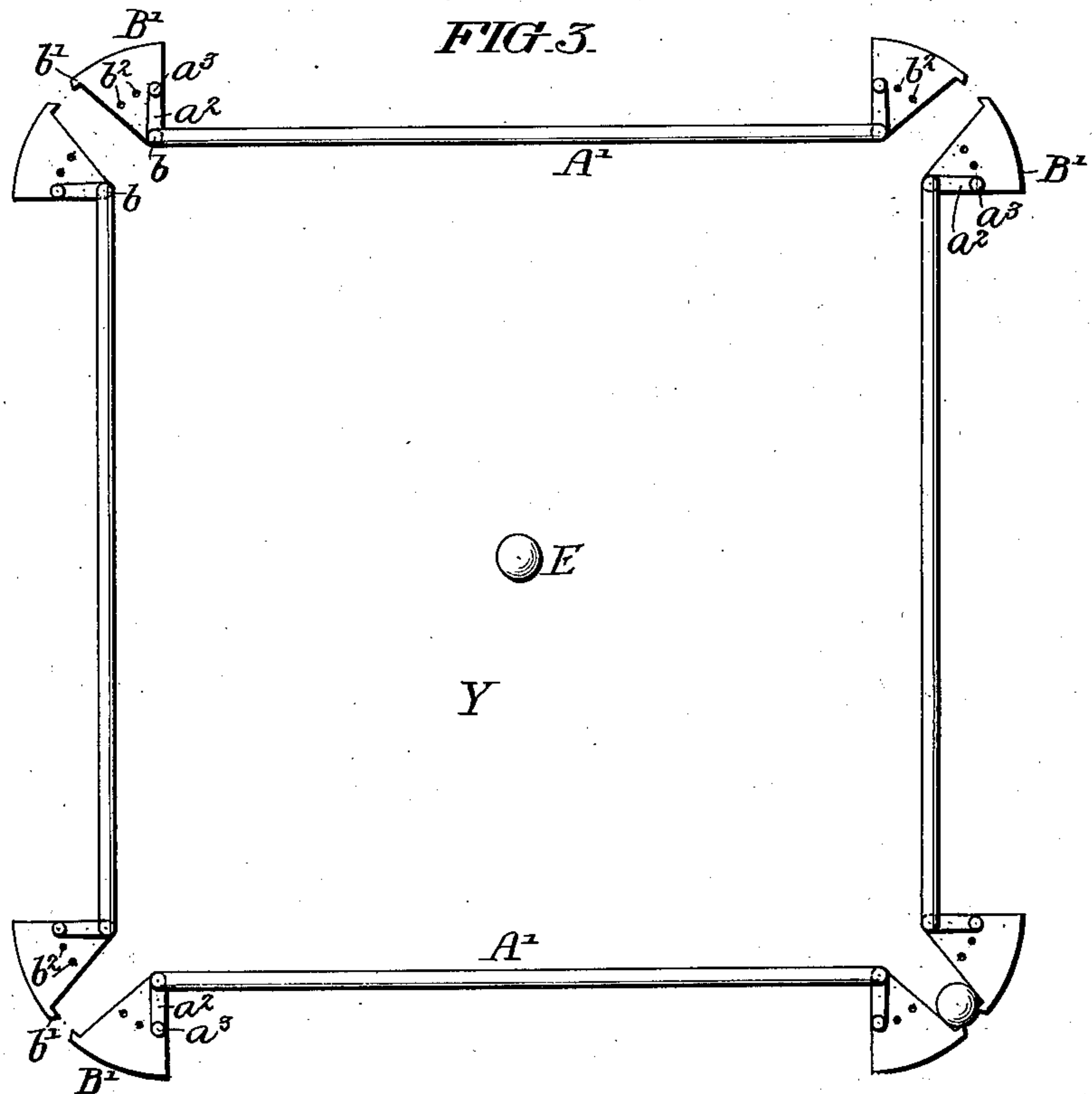
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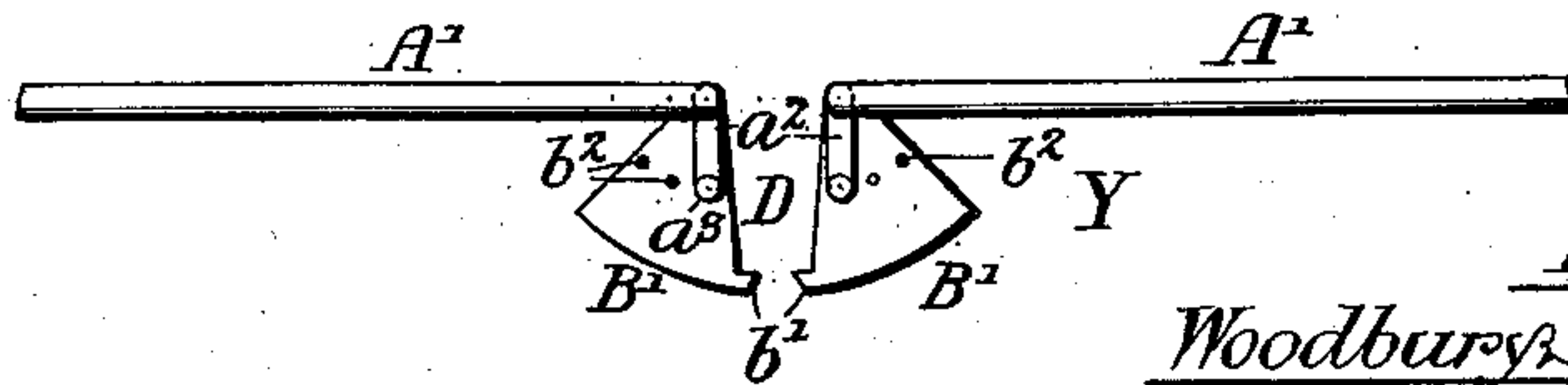
APPLICATION FILED MAR. 4, 1903.

NO MODEL.

7 SHEETS—SHEET 2.



*FIG. 7.*



Witnesses:

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Herman E. Metcalf

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Howson & Howson

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7 SHEETS—SHEET 3.

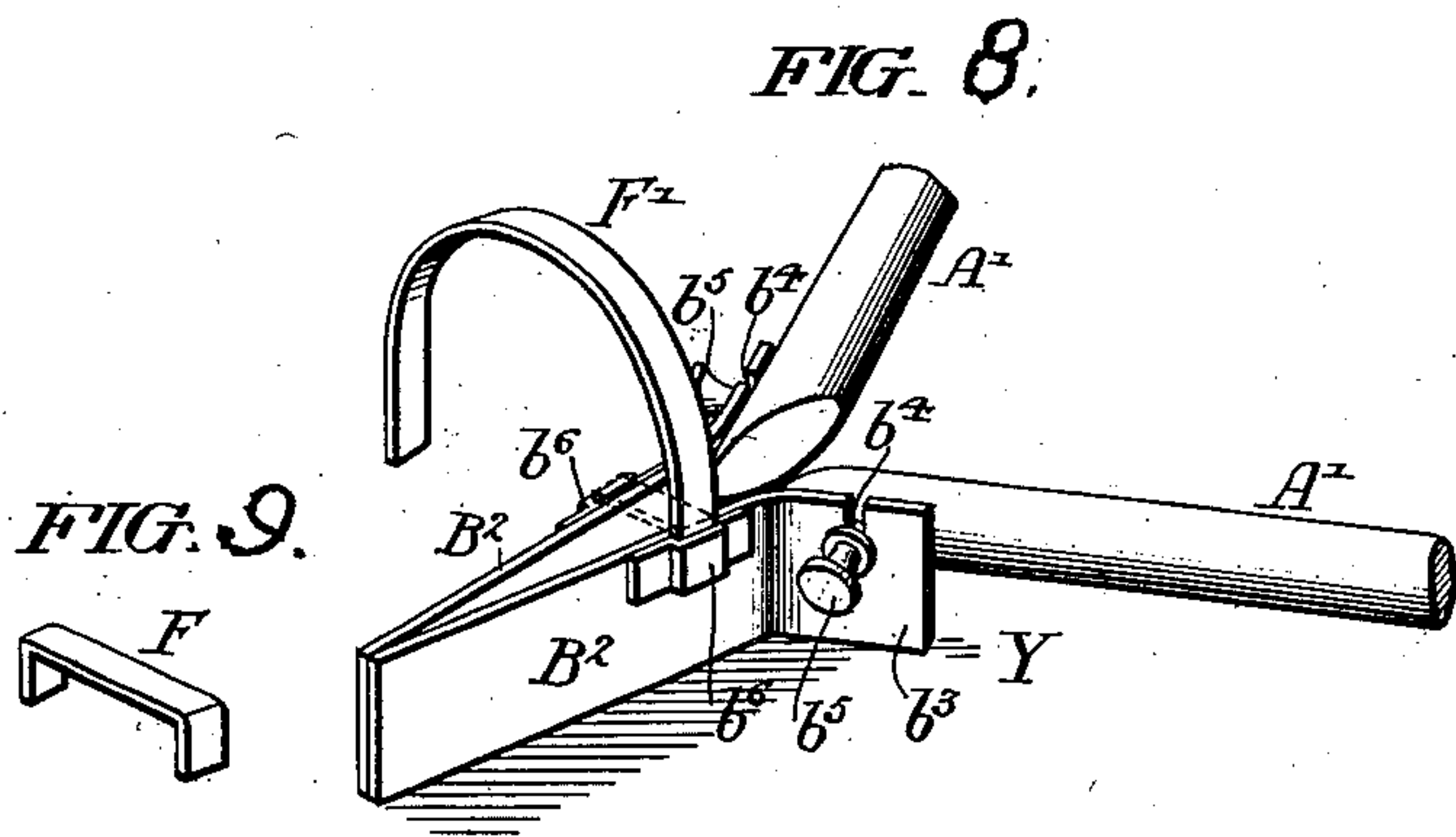
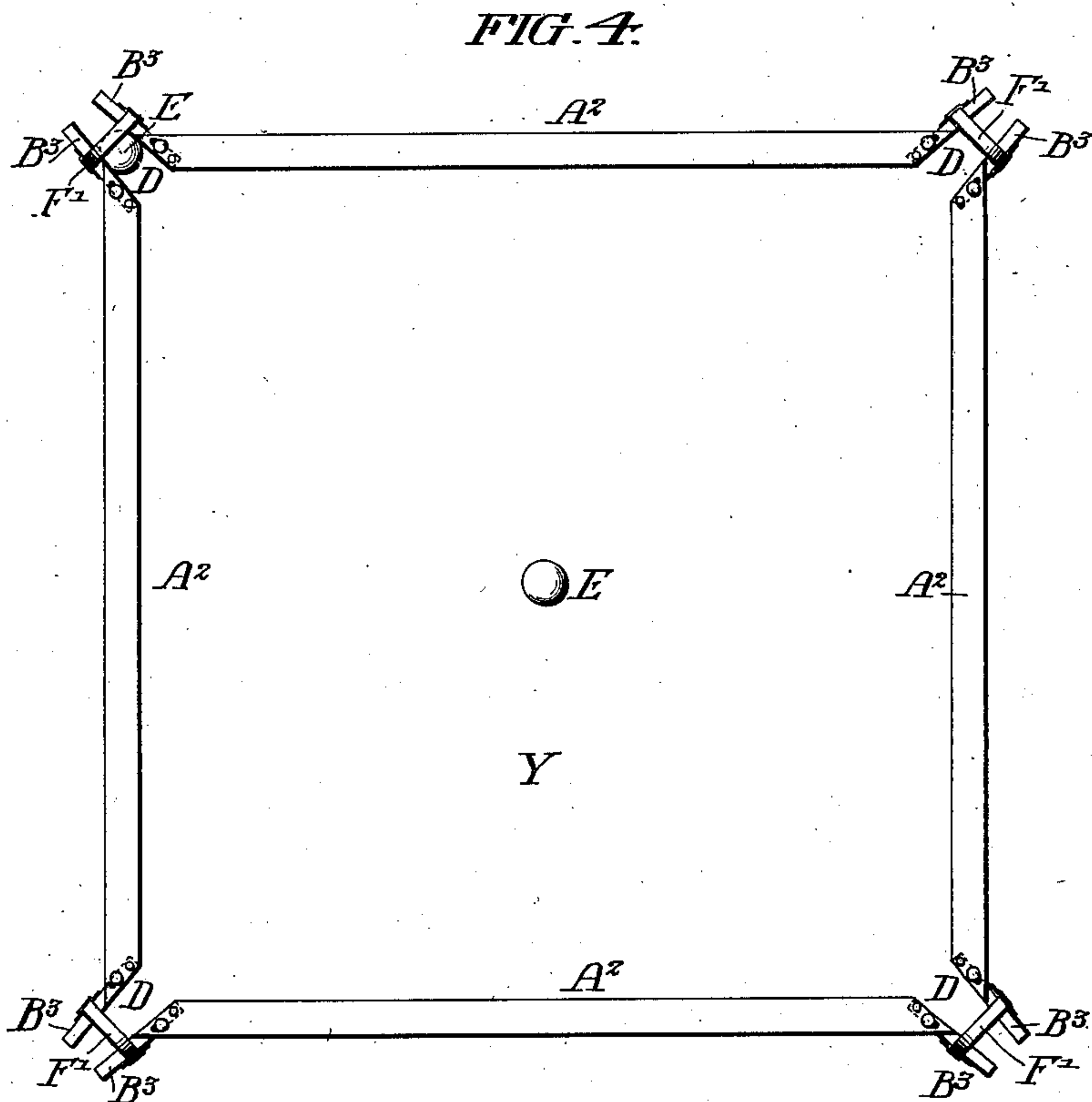
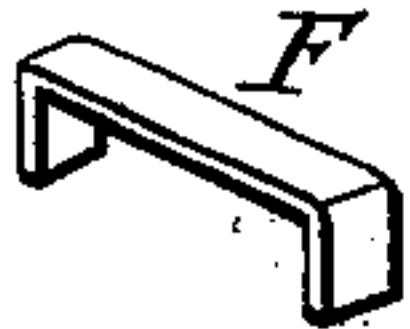


FIG. 9.



Witnesses:-

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Herman E. Metcalf

Inventor:-

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7 SHEETS—SHEET 4.

FIG. 5.

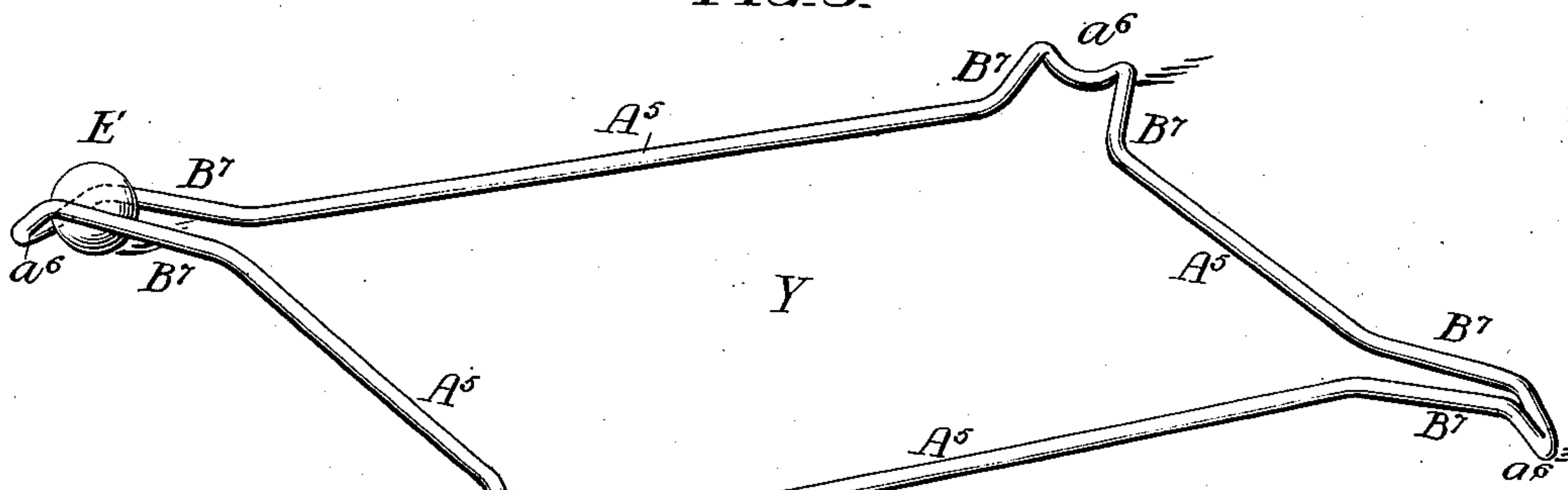


FIG. 13.

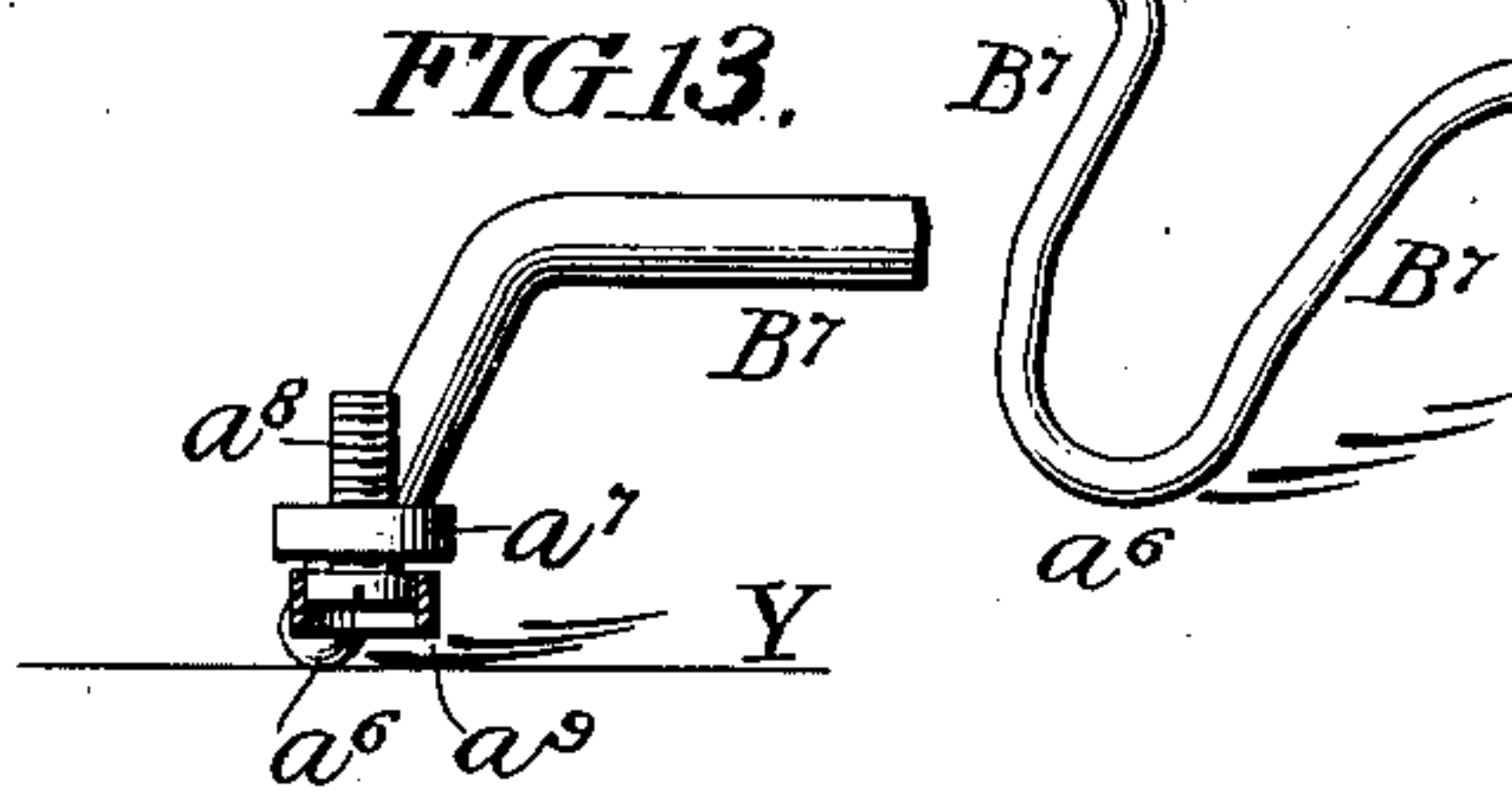


FIG. 12.

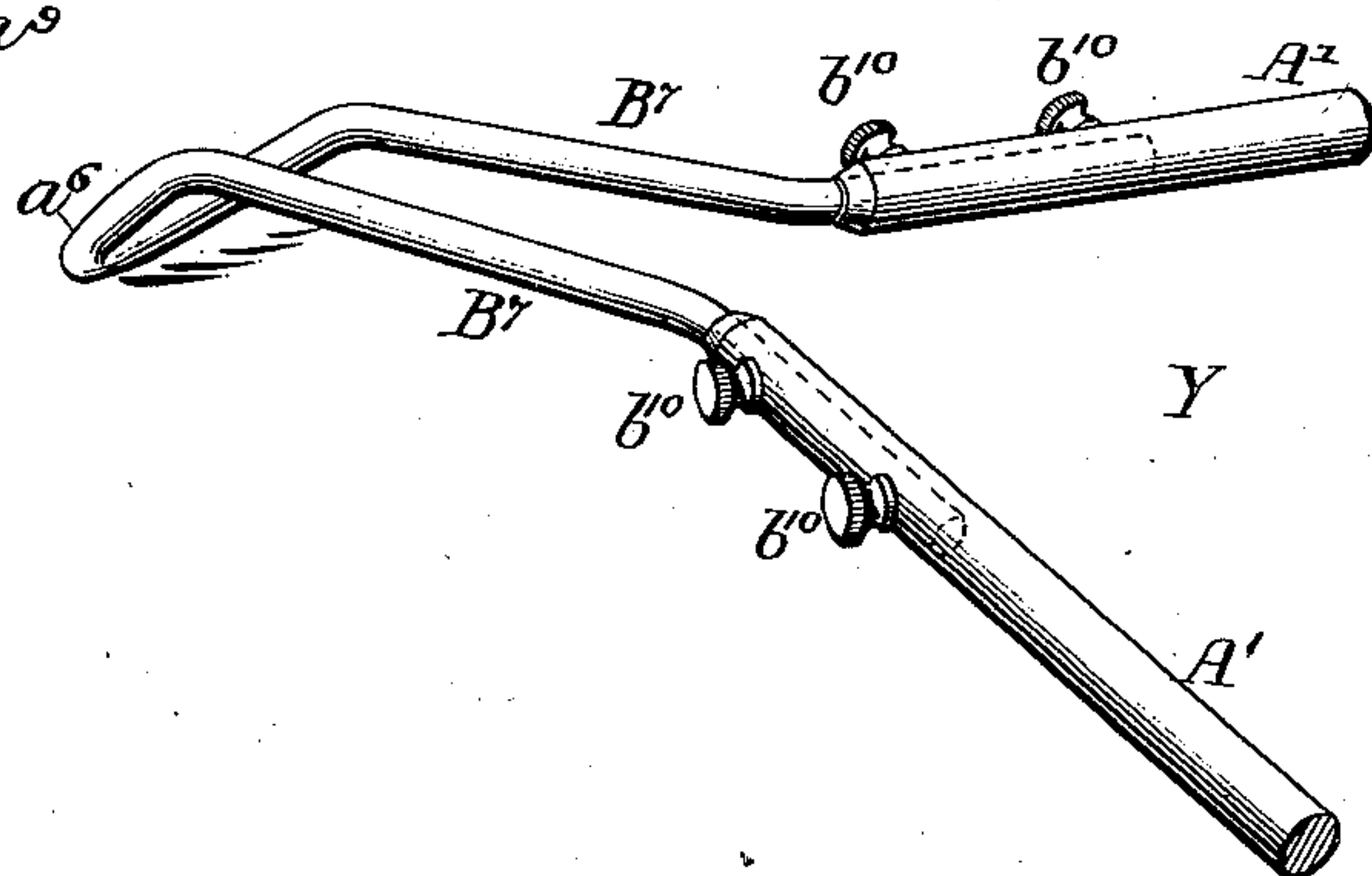
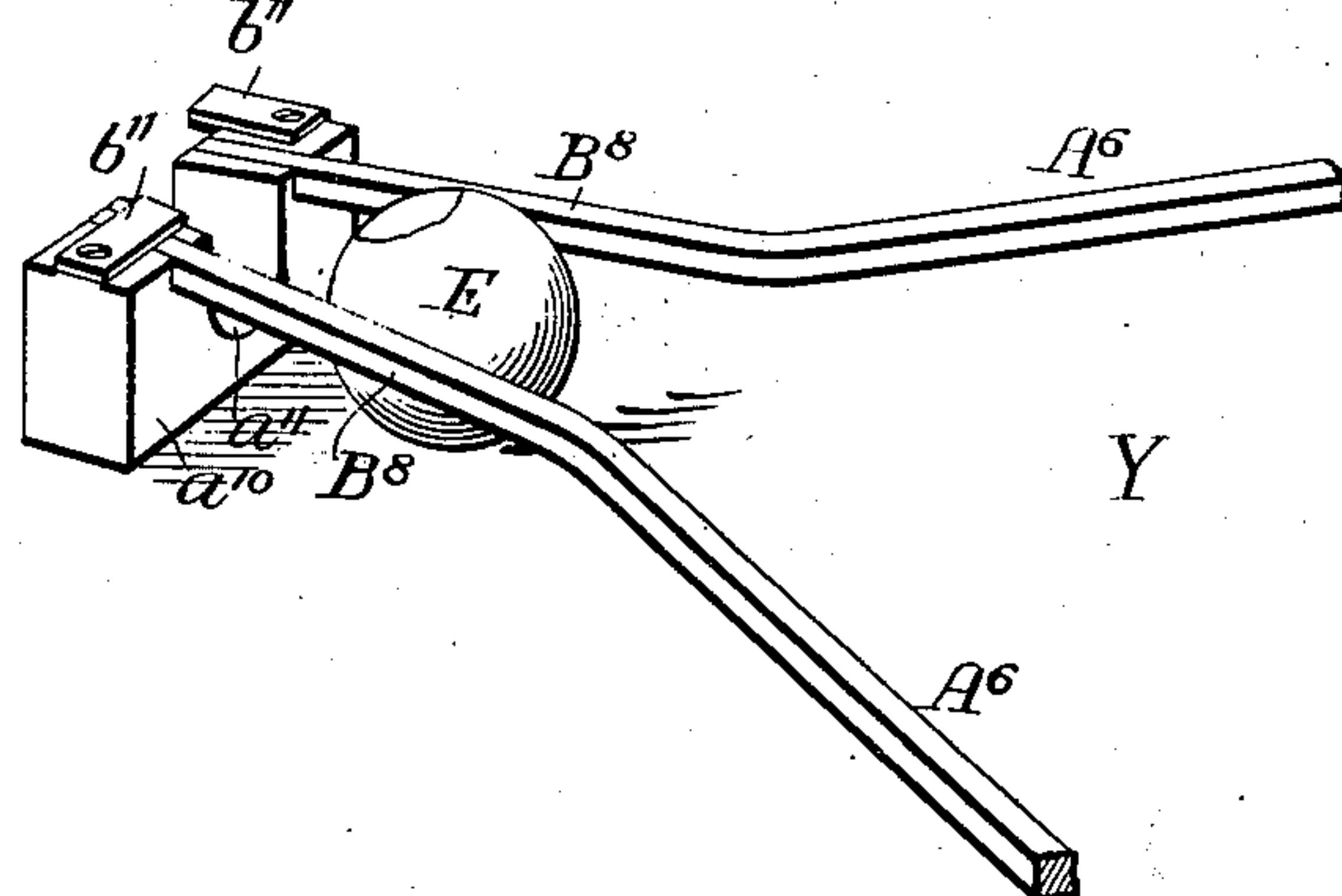


FIG. 14.



Witnesses:

Kamilton D. Turner  
Herman E. Metier

Woodbury, Storck & How,  
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Howe & How

No. 747,716.

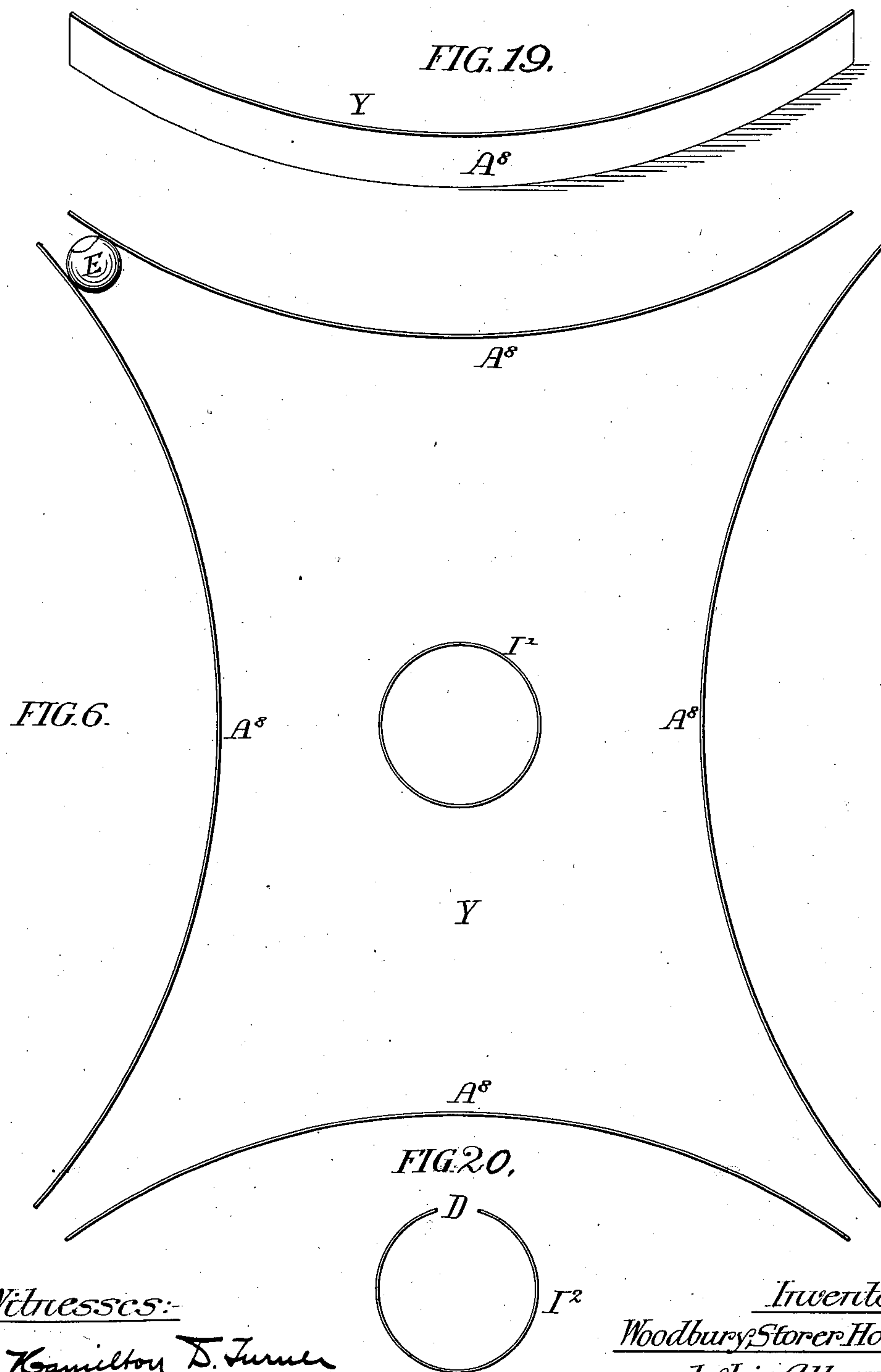
PATENTED DEC. 22, 1903.

W. S. HOW.  
GAME APPARATUS.

APPLICATION FILED MAR. 4, 1903.

NO MODEL.

7 SHEETS—SHEET 5.



Witnesses:-

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No. 747,716.

PATENTED DEC. 22, 1903.

W. S. HOW.  
GAME APPARATUS.

APPLICATION FILED MAR. 4, 1903.

NO MODEL.

7 SHEETS—SHEET 6.

FIG. 11.

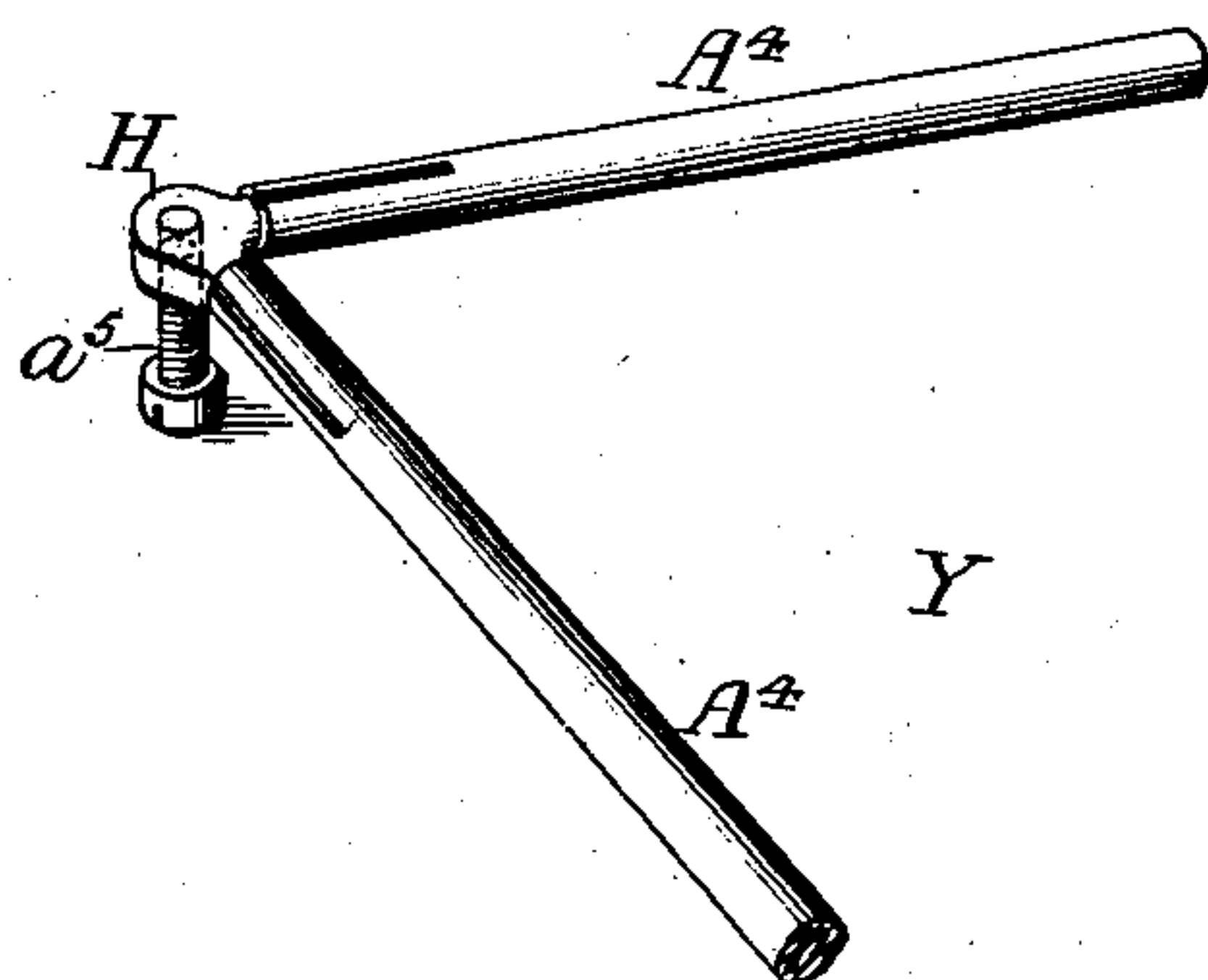
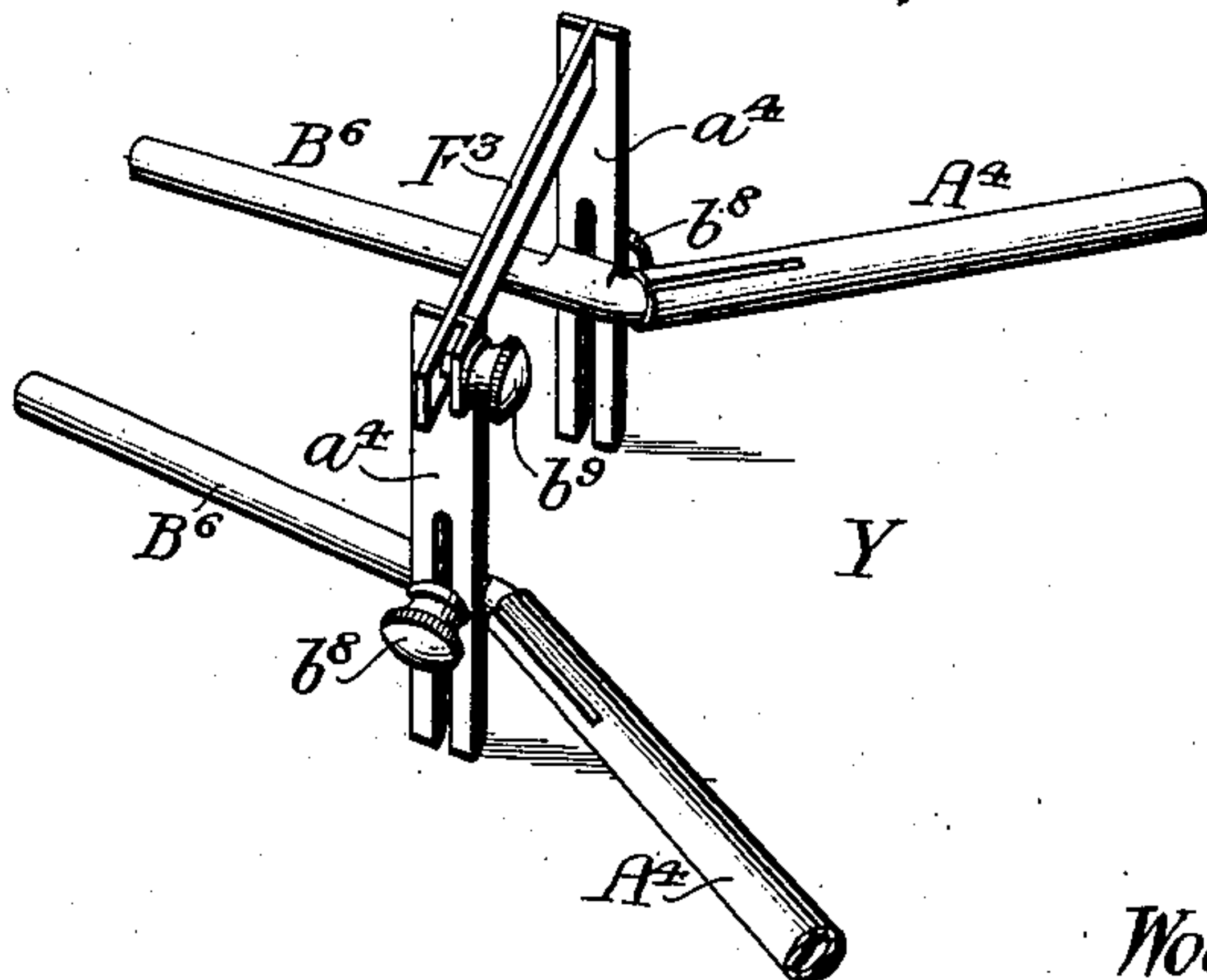


FIG. 10.



Witnesses:-

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Norman E. Metcalf

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No. 747,716.

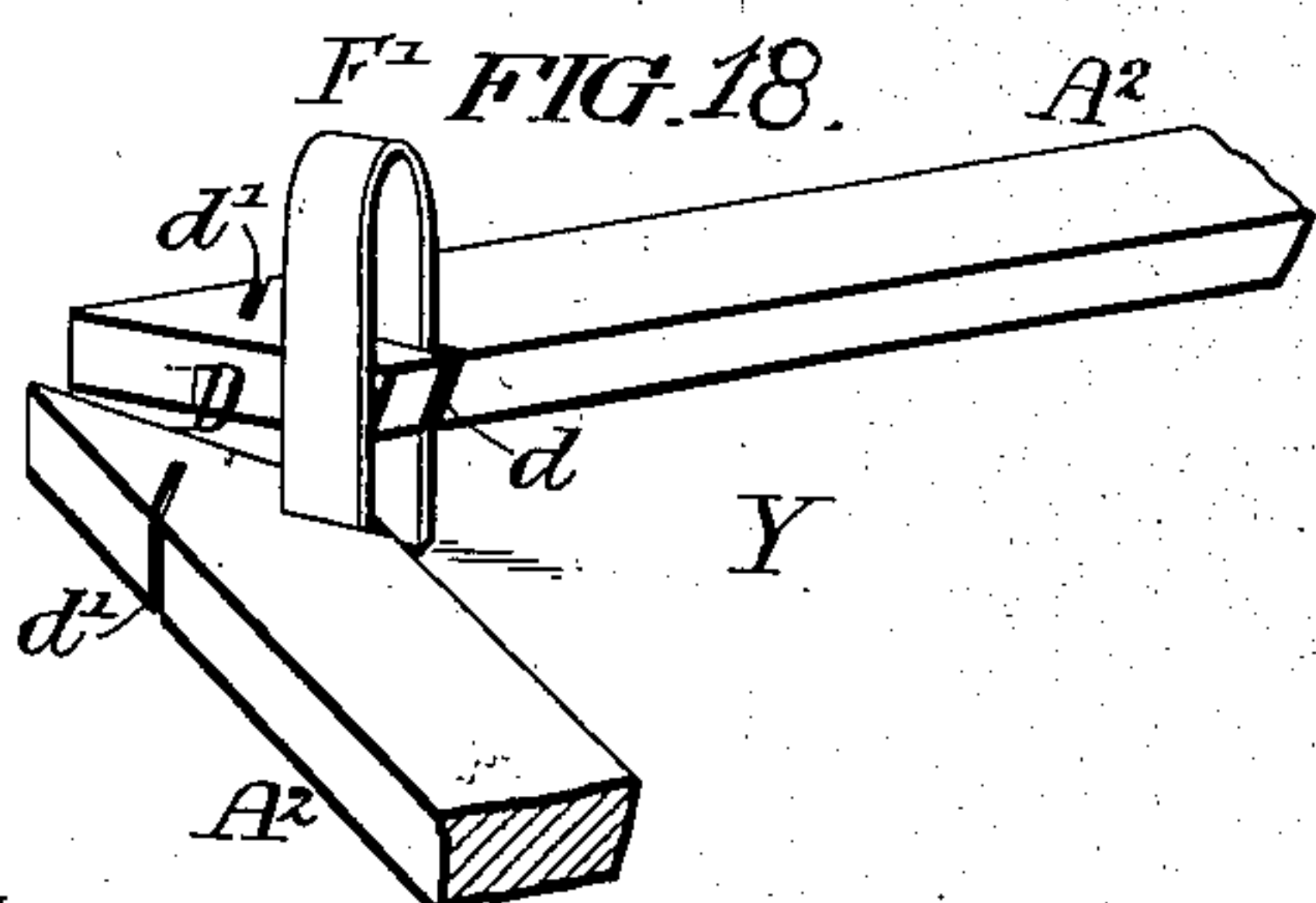
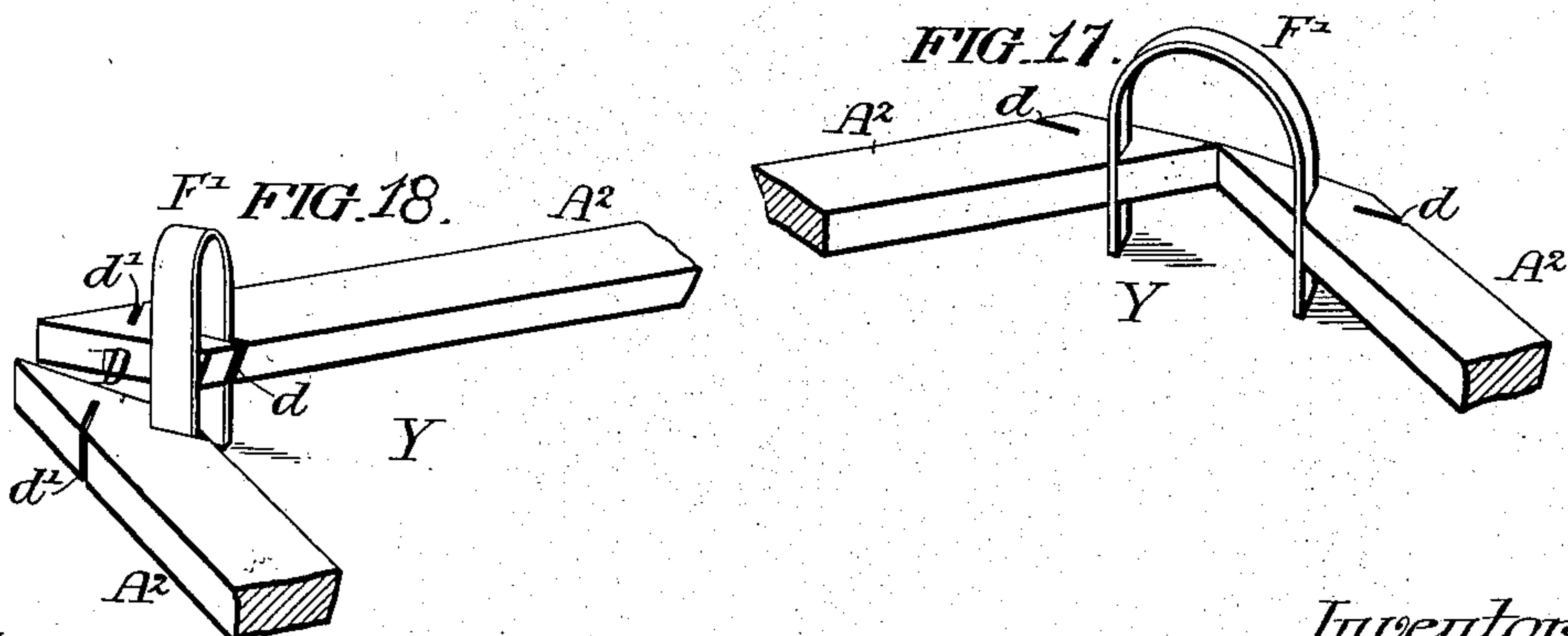
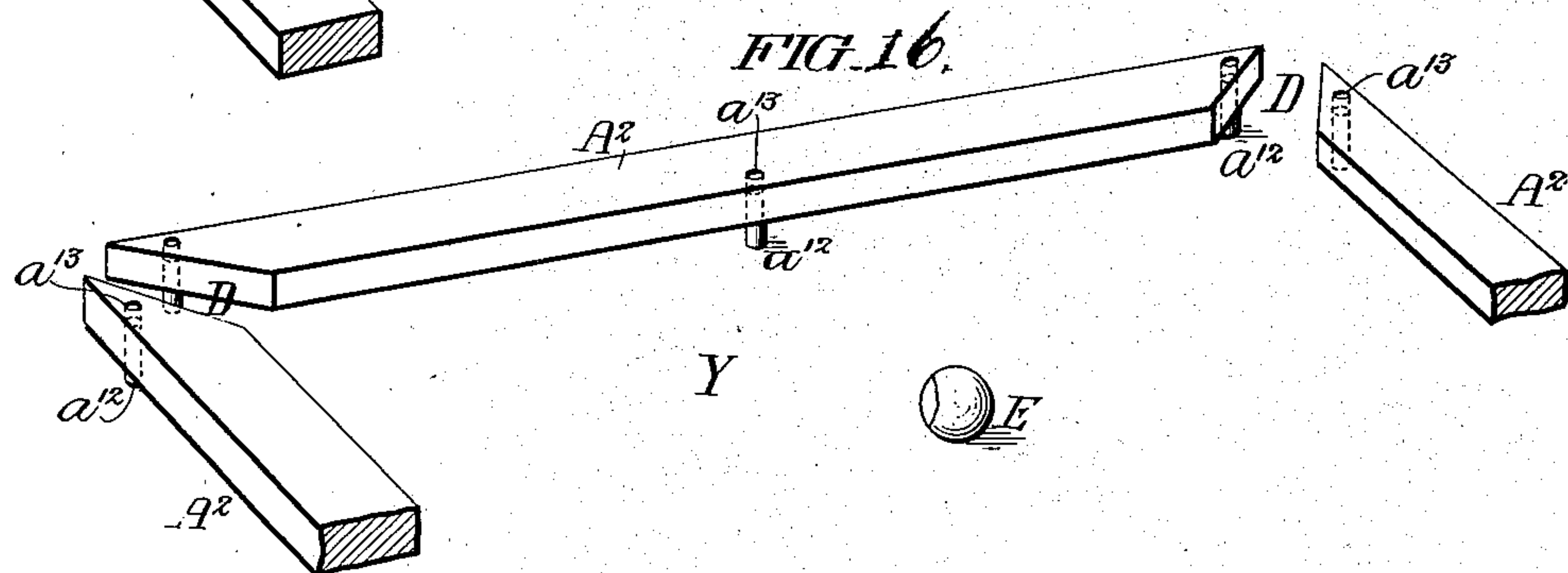
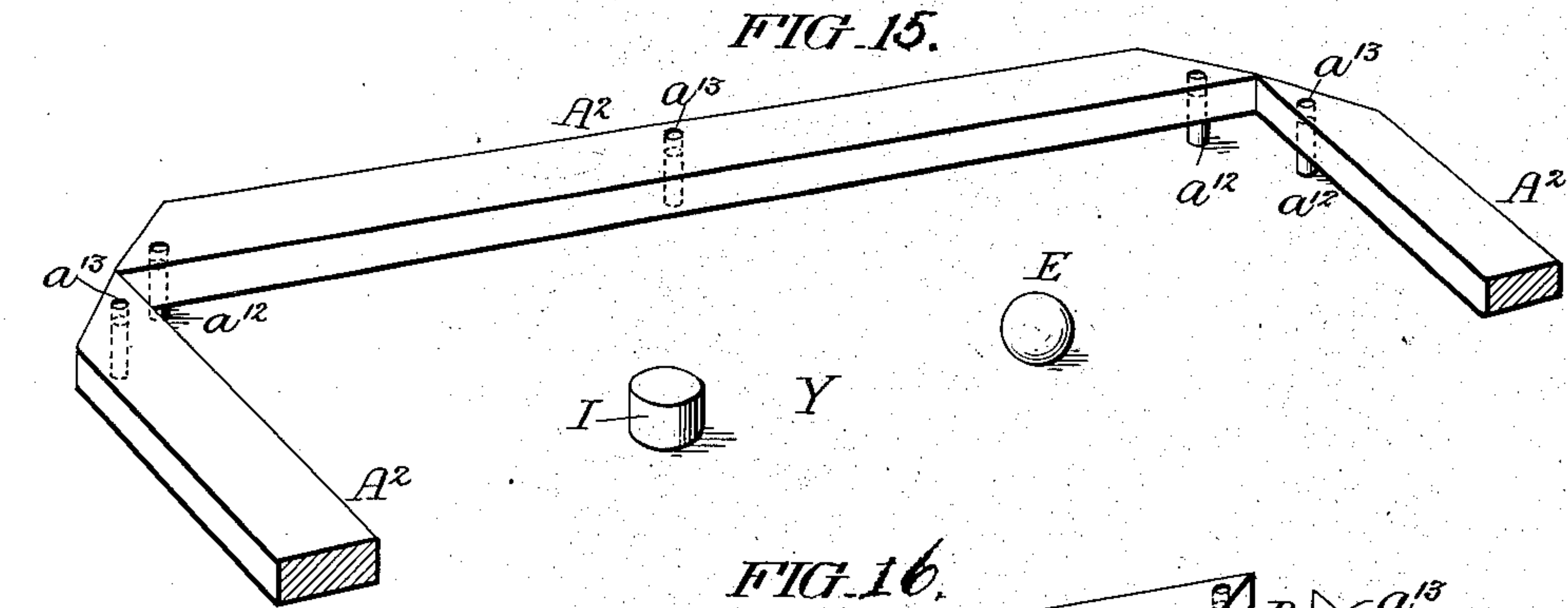
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GAME APPARATUS.

APPLICATION FILED MAR. 4, 1903.

NO MODEL.

7 SHEETS—SHEET 7.



Witnesses:-

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Herman E. Mettius

Inventor:-

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Howson & Howson



# UNITED STATES PATENT OFFICE.

WOODBURY STORER HOW, OF PHILADELPHIA, PENNSYLVANIA.

## GAME APPARATUS.

SPECIFICATION forming part of Letters Patent No. 747,716, dated December 22, 1903.

Application filed March 4, 1903. Serial No. 146,120. (No model.)

*To all whom it may concern:*

Be it known that I, WOODBURY STORER HOW, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Game Apparatus, of which the following is a specification.

My invention relates to game apparatus of a class akin to billiards, but adapted for either home, hall, street, or field use and providing simple, cheap, safe, and convenient appliances for playing the games.

Aside from the wide range of playing-surface permitted my invention is distinguished from other apparatus of the class with which I am familiar in that it contemplates the use of light and resilient balls in connection with dead-walled rails or other bodies which oppose the movement of said balls or inclose the playing-field and which retain in most cases their position by reason of their preponderance of weight and without the necessity of otherwise securing them in position.

The invention also comprises details in the construction and combination of these dead-walled rails or other resisting bodies.

Preliminary to a detailed description with reference to the annexed drawings it may be pertinent to observe that modern invention has produced for hand-to-hand or racket play hollow balls which are thin and very light and which because of these characteristics are quite resilient. These balls because of such resiliency and levity are by me specially designated by the original term "bols" to distinguish them as surface projectiles from hollow or solid and comparatively heavy and less elastic balls, and as a comprehensive term for the playing-field with its surrounding walls I prefer to use the term "bolyard." The preferred bols are made of celluloid or xylonite; but they may also be made of vulcanized rubber, papier-mâché, glass, or other material which will preserve the form of the bol and prevent deformation of the same under the force of impact against the walls of the bolyard or against another bol or object.

In the accompanying drawings, Figure 1 is a plan view of a bolyard constructed in accordance with my invention. Fig. 2 is a perspective view of one of the wall-sections of the same. Figs. 3, 4, 5, and 6 are similar views illustrating other forms of bolyard em-

bodimenting my invention, and Figs. 7 to 20 are views illustrating various features of construction of the different forms of bolyard.

In the drawings like letters of reference indicate similar parts or features in all of the views.

The playing-surface, whether level or inclined, as a pavement, field, floor, table, or board, is represented by the letter Y, which will also indicate such surface whether covered with paper, cloth, rubber, or other material.

In Figs. 1 and 2, A represents a strip of metal or other suitable material having angularly-bent ends B B and downwardly-projecting legs or feet  $\alpha$ , which rest upon the playing-surface. This strip is of such bulk and weight in respect to the weight of the bol E that the forcible projection of the latter against the strip or against either of the wings of the same will be so resisted by the preponderance of the strip and by its frictional hold upon the playing-surface that any displacement or distortion of said strip will be effectually prevented. The strip thus constitutes a dead-walled resisting-body, and consequently the reaction is due to the elasticity or resilience of the bol or projectile and not to any elasticity in the resisting-body. To further increase the frictional resistance to such displacement, soft-rubber cushions or pads  $\alpha'$  may be provided on the under sides of the supporting legs or feet  $\alpha$ . In Fig. 1 are shown four of these winged strips A, disposed to form the walls of what I term the "bolyard." The wings B of the strips A are at such an angle to said strips that when the latter are disposed so as to form the four sides of a quadrangle, as shown in Fig. 1, ports or alleys D with converging walls will be formed at each corner of said quadrangle, which ports may admit the projected bol, but because of the converging wing-walls will prevent its exit and will retain it on the playing-surface Y in place for return play. The various wall-sections A may be so disposed as to permit or prevent the entrance of the bol into the ports, so that in the latter case a closed or carom bolyard will be formed, both of the described dispositions of the wall-sections being illustrated in Fig. 1.

Billiard games of the carom, carom and



pocket, or pool-pocket kinds are all well known and their rules are familiar to the players. In my closed or ported bolyard similar games may be played under like rules.

5 In Fig. 3 I have shown a bolyard consisting of dead-wall rail-sections  $A'$ , round in cross-section and provided at each end with a lateral extension  $a^2$ , to which is pivoted at  $b$  a segmental wing  $B'$ , one wall of which terminates in a projecting lug  $b'$ . A stop-pin  $a^3$  passes through the outer end of the lateral extension  $a^2$  and engages any one of a series of openings  $b^2$ , formed in the wings  $B'$  in order to effect the relative wing adjustments to vary the character of the ports, so as to form either a closed or ported bolyard, and the same construction can be adopted for the formation of ports in the middle of each rail-section or at other locations thereon, as shown, for instance, in Fig. 7. The projecting lugs  $b'$  at the outer ends of the segments  $B'$  serve, in addition to the converging walls of the ports, to prevent the escape of the bol therefrom, or when the segments  $B'$  are adjusted so as to form ports with parallel side walls these projecting lugs  $b'$  may serve as the sole means for preventing the escape of the bol from the port. When the swinging wings  $B'$  are used, the rails  $A'$  may be brought together to form a closed bolyard, the wings  $B'$  in this case swinging beyond the position assumed by them when a ported bolyard is formed.

In Fig. 8 is shown a modified structure in which the round rail-section  $A'$  is provided at the ends with sheet-metal wings  $B^2$ , which have angular extensions  $b^3$ , slotted, as at  $b^4$ , so as to provide for vertical adjustment of the rail-sections  $A'$ , said sections being secured in position after adjustment by means of suitable flanged thumb-screws  $b^5$ . These wings  $B^2$  are also provided with sockets  $b^6$  to receive the ends of a clip-coupler, such as shown at  $F$  in Fig. 9, when a closed bolyard is to be formed, or an arched coupler  $F'$ , such as shown in Fig. 8, when an open-ported bolyard is desired.

In Fig. 4 I have illustrated an open-ported bolyard formed of thin flat rail-sections  $A^2$ , composed of wood or other suitable material and presenting dead-walls to the impact of the bol, these rail-sections  $A^2$  having beveled ends secured to wings  $B^3$  thick enough to provide proper support for the rail-sections and deep enough to sustain said rail-sections at a proper height above the playing-surface  $Y$ . The wings  $B^3$  are provided with sockets  $b^6$  to receive either a clip-coupler  $F$  or an arch-coupler  $F'$ , according as it is desired to produce either a closed or carom bolyard or an open-ported bolyard. With this construction of rail-section, having wings adjustable to positions parallel with each other, a bolyard completely closed at each corner may be readily produced.

65 In Fig. 10 I have shown dead-wall tubular rail-sections  $A^4$ , telescoped upon bent-rod

wings  $B^6$ , which by means of the shouldered thumb-screws  $b^8$  are vertically fixable in the slotted props  $a^4$ . In the upper end of one of these props is fixed one end of a coupler-bar  $F^8$ , the other end portion of which can slide through the upper end of the other prop  $a^4$ , but can be secured thereto by means of a thumb-screw  $b^9$ , in order to form a ported or carom bolyard, as desired. By slotting the ends of the rails  $A^4$ , as shown, a certain amount of resiliency is imparted thereto, which causes them to bind snugly upon the bent-rod wings  $B^6$ .

Fig. 11 illustrates a dead-wall tubular rail-section  $A^4$ , telescoped on an elbow-block  $H$ , which receives a vertical screw-prop  $a^5$ , thus providing for a dead-wall carom bolyard, which may be readily assembled or disassembled at will.

In the construction shown in Fig. 12 dead-wall rail-sections  $A'$  are socketed at the ends, so as to slip onto the bent ends of a dual wing-loop  $B^7$ , downwardly bent at its outer portion, so as to form a bow  $a^6$ , which serves as a prop to maintain the level of the impact-walls of the rail-sections  $A'$ , thumb-screws  $b^{10}$  serving to secure the socketed ends of said rail-sections  $A'$  to the bent ends of the loop  $B^7$ .

In Fig. 13 I have illustrated the bow  $a^6$  of the loop  $B^7$  as provided with a threaded lug  $a^7$  to receive a screw-prop  $a^8$ , the head of this prop having a short section of rubber tube  $a^9$  secured to it in order to provide additional surface friction and also to prevent the marring of a polished surface upon which the bolyard may be set up.

In Fig. 5 I have illustrated an open-ported bolyard, having port-forming loops  $B^7$  at each corner, which loops are formed in one piece with the dead-wall elevated rails  $A^5$ .

In Fig. 14 are shown dead-wall square rail-sections  $A^6$ , formed with integral wings  $B^8$ , which are seated in the slots in the top of the duplex prop  $a^{10}$ , the latter having pivoted turnbuckles  $b^{11}$  to retain the ends of the wings in place thereon and a central recess  $a^{11}$  in order to permit the cue to strike a bol located in the port between the wings  $B^8$ .

In Fig. 15 the dead-wall sections  $A^2$  are similar to those shown in Fig. 4; but they are used in a reverse position—that is to say, with their beveled ends facing outwardly, these walls meeting at the corners, so as to form a carom bolyard, the rails being supported upon legs or feet consisting of pins  $a^{12}$ , adapted to openings  $a^{13}$  in the rails and adjustable vertically therein, so as to vary the height of the rails above the playing-surface  $Y$ . By reversing the rails, as shown in Fig. 16, a ported bolyard may be produced, and when it is desired to secure the rails together at the corners the same may be slotted, as shown at  $d$  and  $d'$ , Figs. 17 and 18, for the reception of an arched coupling-bar  $F'$ , said bar being adapted to the slots  $d'$ , as shown in Fig. 17, when it is desired to produce a closed



bolyard and to the slots  $d$ , as shown in Fig. 18, when it is desired to produce a ported bolyard.

Fig. 6 shows a bolyard consisting of four segmental strips  $A^8$  of sheet metal or other material, of proper dimensions, disposed so as to form a ported bolyard, and it will be evident that by placing these strips closely together, so as to bring them into contact at the corners, a closed or carom bolyard may be formed. These strips may be supported upon lugs or props and vertically adjustable in the same manner as other forms of rail or inclosure which I have shown.

In Fig. 15 I have illustrated, in addition to the bol  $E$ , a sliding cylindrical block  $I$ , placed in a bolyard on one of its flat faces and intended to serve as an additional carom-surface for the bol. This block may be of such preponderance as compared with the bol that it will not be displaced by contact of the latter therewith, or it may be lighter, being in the form of a ring or cup of elastic or inelastic material, if desired, and mounted so as to be either easy or difficult of displacement. In Fig. 6 I have illustrated in place of this sliding block a ring  $I'$ , composed of sheet metal or other material bent into proper form and centrally located in the bolyard, this ring serving to deflect a bol striking the same at any angle of impact. By separating the ends of the strip of metal, as shown in Fig. 20, a ported segmental bolyard  $I^2$ , supplementary to the main bolyard, will be produced, and, if desired, a plurality of the devices  $I$ ,  $I'$ , or  $I^2$  may be employed.

The various forms of bolyard which I have illustrated indicate some of the embodiments of my invention which I have reduced to practice; but I wish it to be understood that I do not limit myself to the particular illustrations shown, as it will be manifest that many other forms of bolyard within the scope of my invention can be readily produced by those skilled in the art. In the playing of some games a completely-inclosed bolyard may not be necessary, in which case only one, two, or more of the rail-sections may be employed.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. Game apparatus comprising a light, hollow, and resilient-surface projectile and a dead-walled body or boundary superposed upon the playing-surface, substantially as specified.

2. Game apparatus comprising a light, hollow, and resilient-surface projectile and a dead-walled body or boundary forming a ported inclosure superposed upon the playing-surface, substantially as specified.

3. Game apparatus comprising a light, hollow and resilient-surface projectile, and a metallic body or boundary superposed upon

the playing-surface and opposing a dead-walled resistance to said projectile, substantially as specified.

4. Game apparatus comprising a light, hollow, and resilient-surface projectile, and a dead-walled resisting body or boundary superposed upon and elevated above the playing surface, substantially as specified.

5. Game apparatus comprising a light, hollow, and resilient-surface projectile, and a dead-walled resisting body or boundary superposed upon and adjustably supported above the playing-surface, substantially as specified.

6. Game apparatus comprising a light, hollow and resilient-surface projectile, and a dead-walled resisting body or boundary superposed upon the playing-surface, and having its portions in contact with said playing-surface constructed to increase its frictional hold thereupon, substantially as specified.

7. Game apparatus comprising a light, hollow, hard-surfaced and resilient-surface projectile, and a dead-walled resisting body or boundary superposed upon the playing-surface, substantially as specified.

8. Game apparatus comprising a light, hollow and resilient-surface projectile, and a plurality of dead-walled resisting bodies superposed upon the playing-surface and so disposed as to form a ported inclosure, with means for varying the size of said ports and for positively securing the parts in their different positions, substantially as specified.

9. Game apparatus comprising a light, hollow and resilient-surface projectile, and a plurality of resisting bodies superposed upon the playing-surface in combination with means for positively retaining said resisting bodies in position to form either a closed or ported inclosure, substantially as specified.

10. Game apparatus comprising a light, hollow and resilient-surface projectile, and a plurality of dead-walled resisting bodies superposed upon the playing-surface and disposed thereon so as to form an inclosure for the projectile, and one or more dead-walled resisting bodies for the projectile disposed within said inclosure, substantially as specified.

11. Game apparatus comprising a light, hollow and resilient-surface projectile, and a plurality of dead-walled resisting bodies superposed upon the playing-surface and forming an inclosure for said projectile, and an open-ended and dead-walled inclosure within said main inclosure, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WOODBURY STORER HOW.

Witnesses:

F. E. BECHTOLD,  
JOS. H. KLEIN.

It is hereby certified that in Letters Patent No. 747,716, granted December 22, 1903, upon the application of Woodbury Storer How, of Philadelphia, Pennsylvania, for an improvement in "Game Apparatus," errors appear in the printed specification requiring correction, as follows: On page 3, in lines 52, 57, 62, 68, 73, 79, 86, 91, 99, 106, and 114, the hyphen between the words "resilient" and "surface" should be stricken out; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 23d day of February, A. D., 1904.

[SEAL.]

F. I. ALLEN,  
*Commissioner of Patents.*