

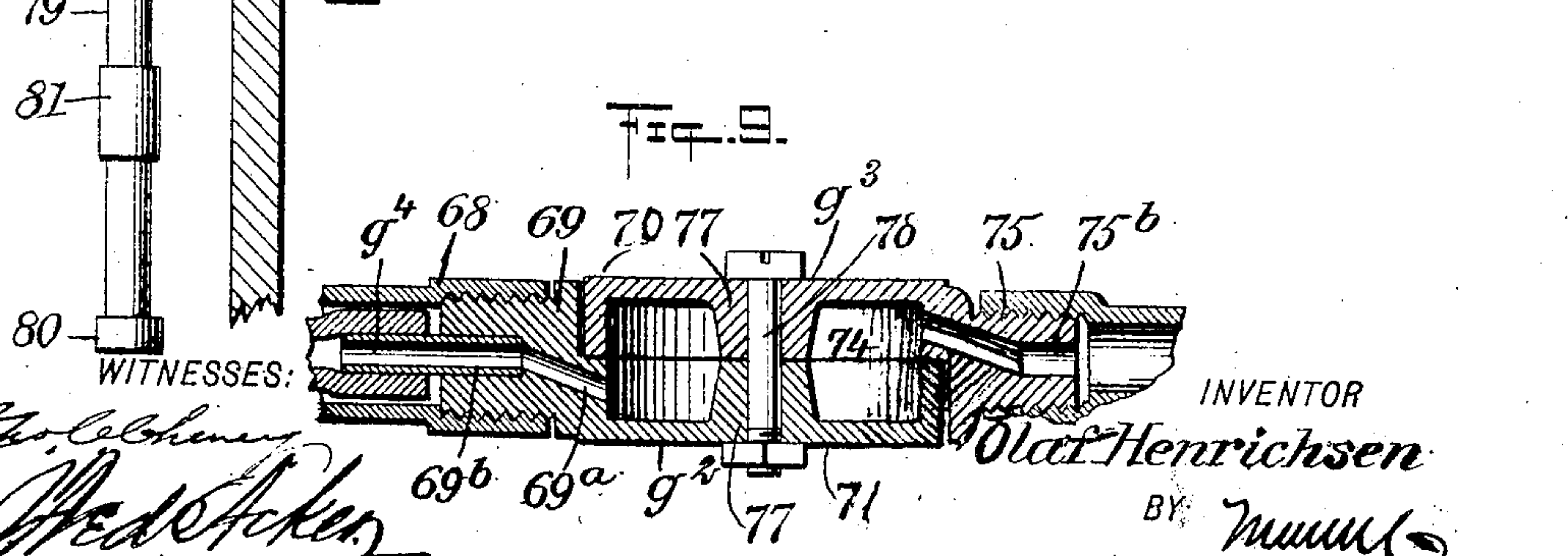
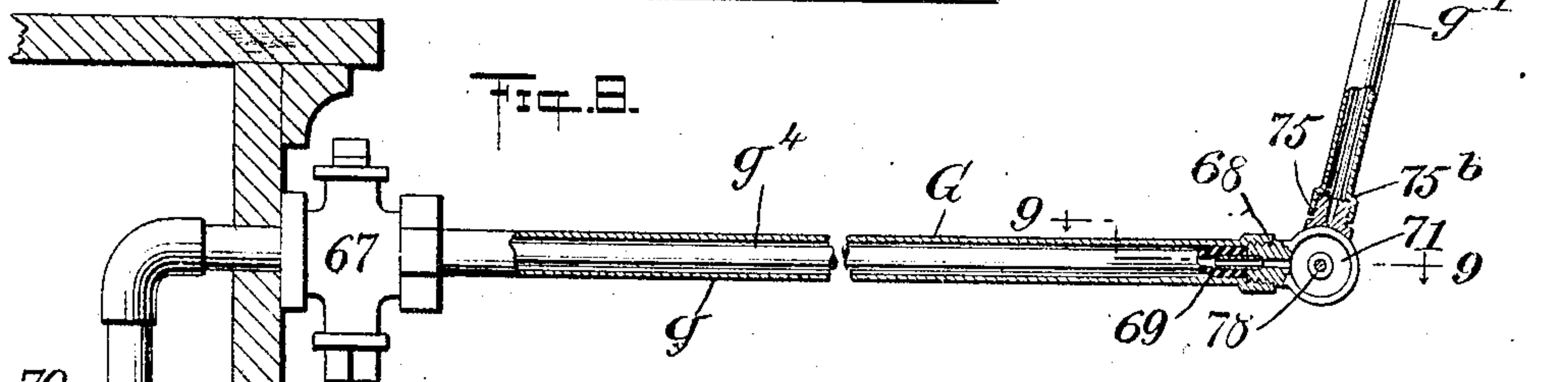
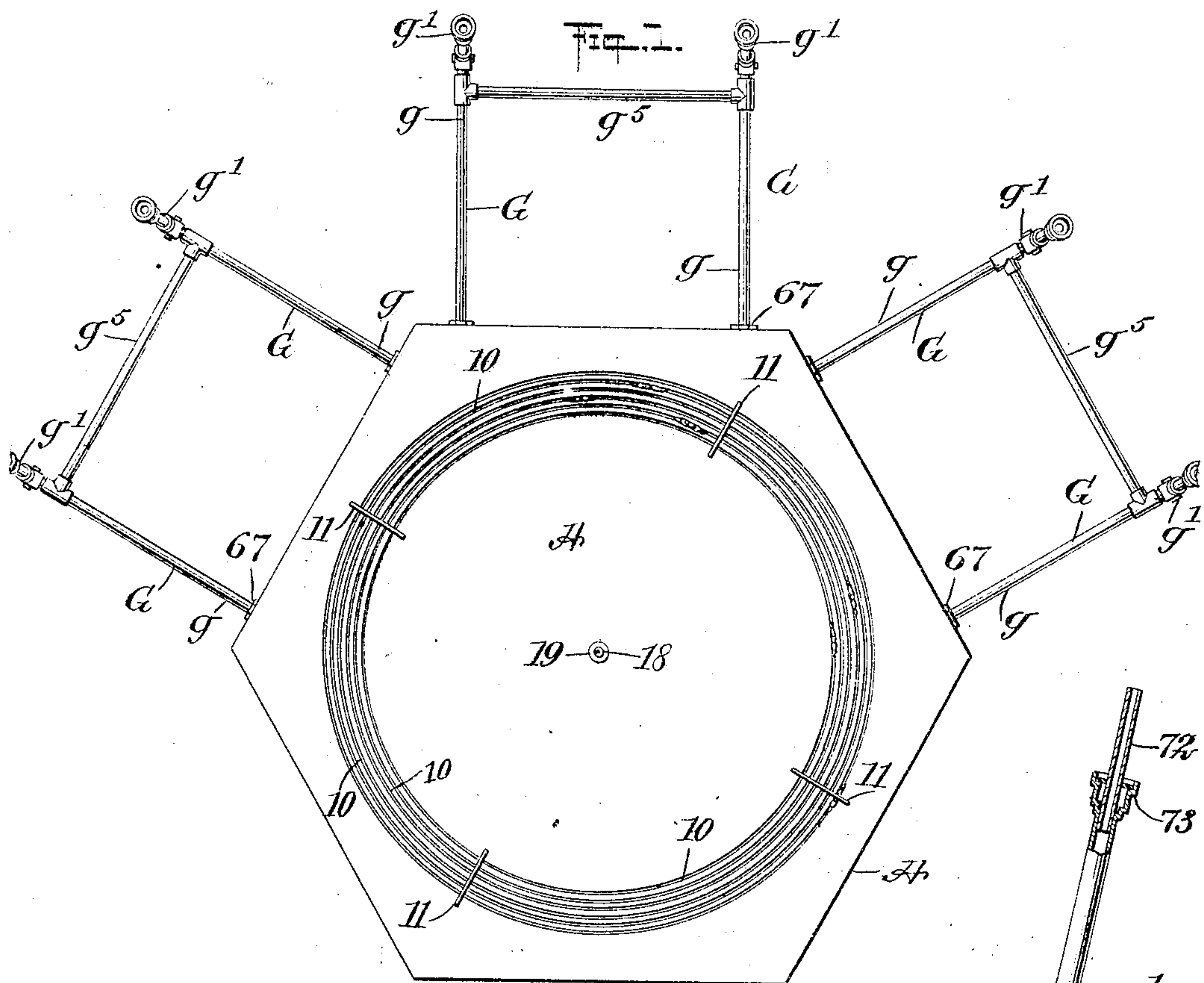
No. 835,424.

PATENTED NOV. 6, 1906.

O. HENRICHSEN.
AMUSEMENT DEVICE.

APPLICATION FILED DEC. 22, 1905.

8 SHEETS—SHEET 1



WITNESSES:
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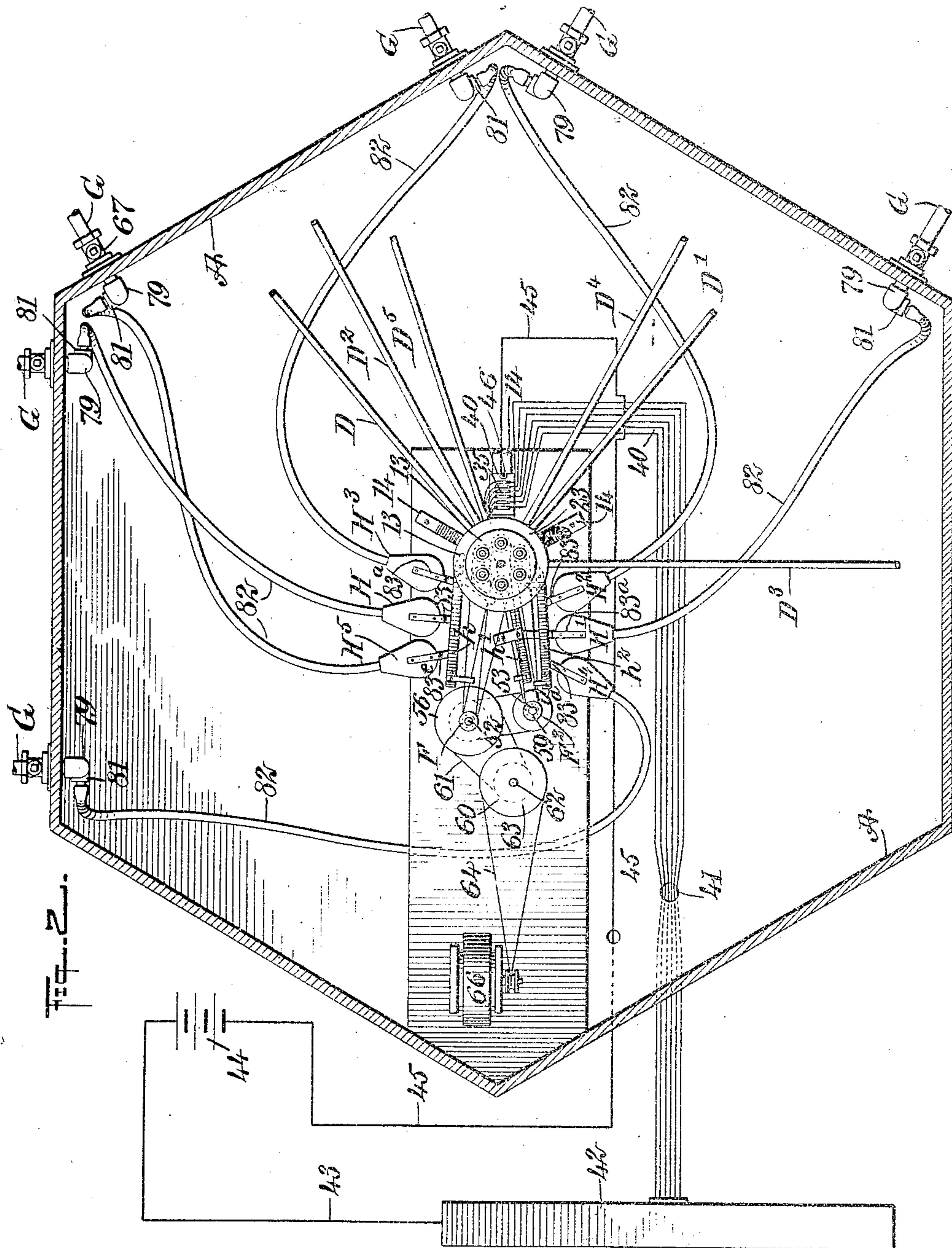
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6 SHEETS—SHEET 2.



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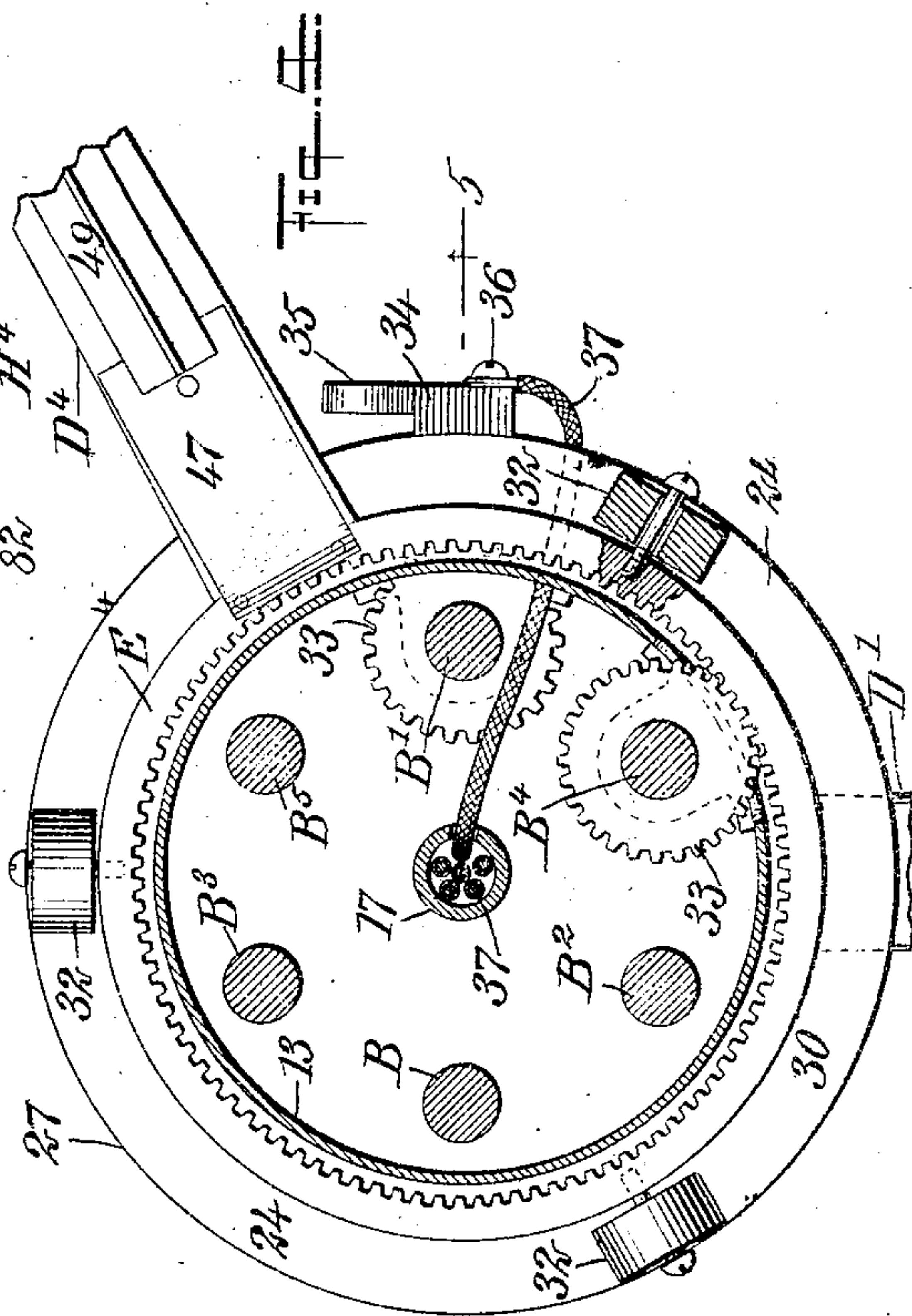
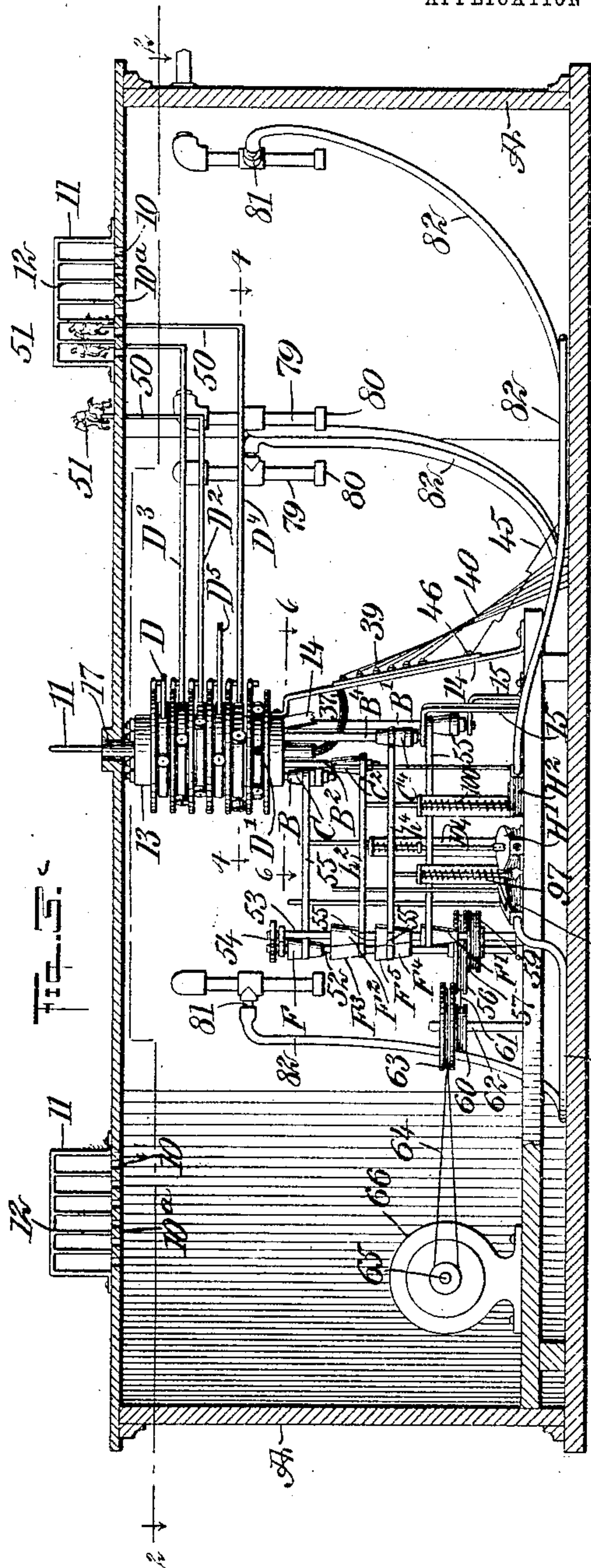
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APPLICATION FILED DEC. 22, 1905.

6 SHEETS—SHEET 3.



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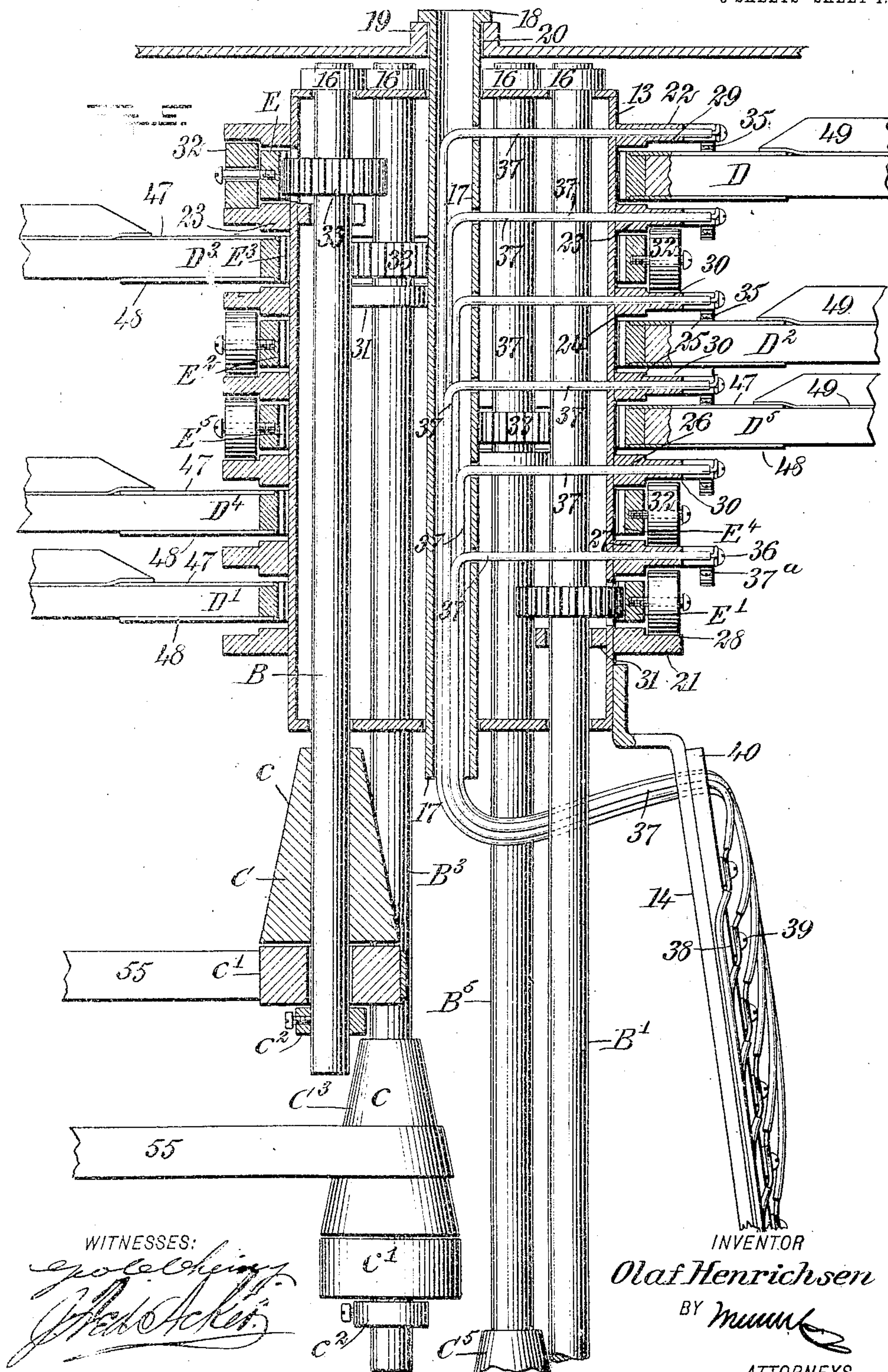
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No. 835,424.

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6 SHEETS—SHEET 4.



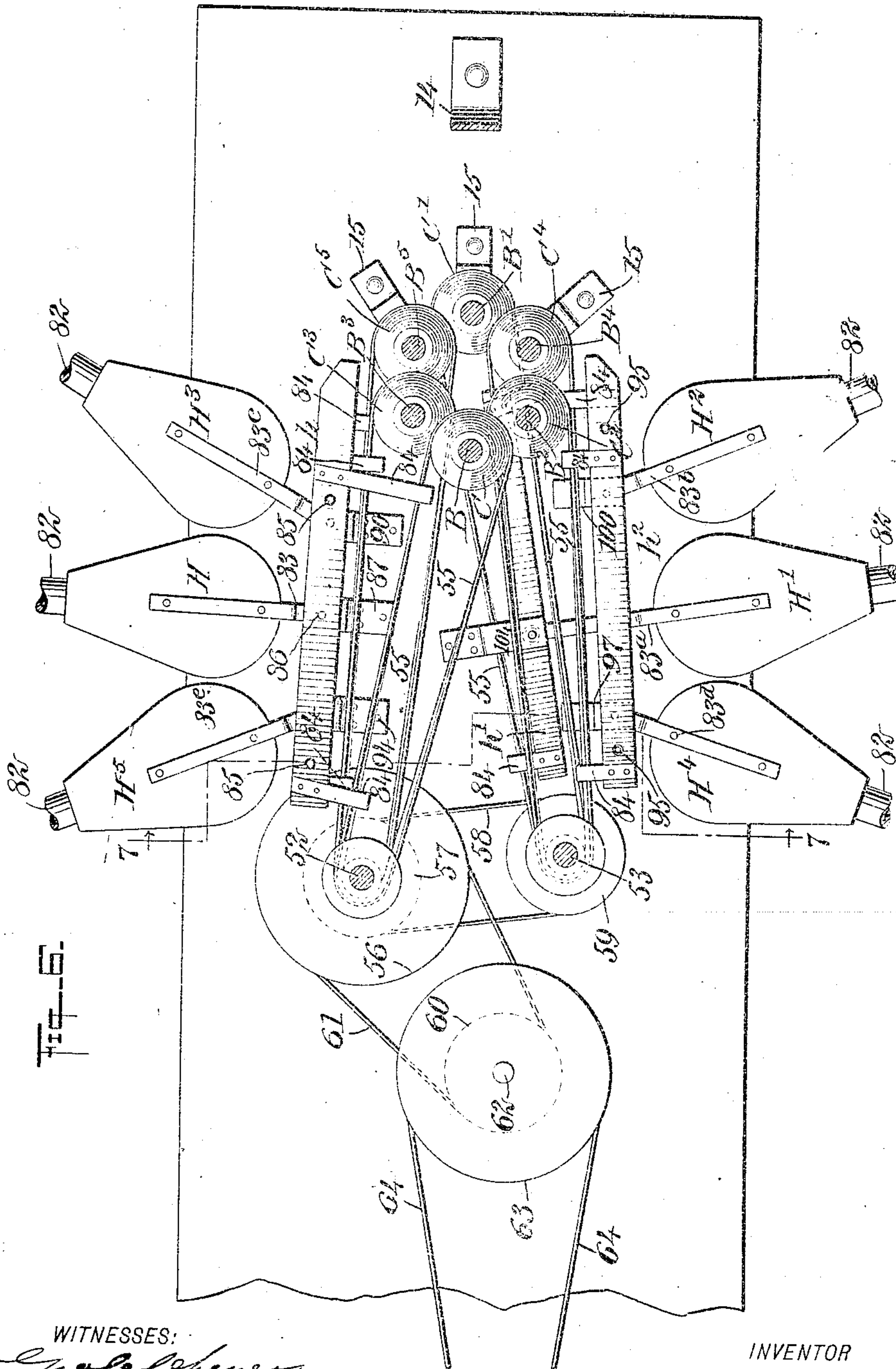
No. 835,424.

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APPLICATION FILED DEC. 22, 1905.

6 SHEETS—SHEET 5.



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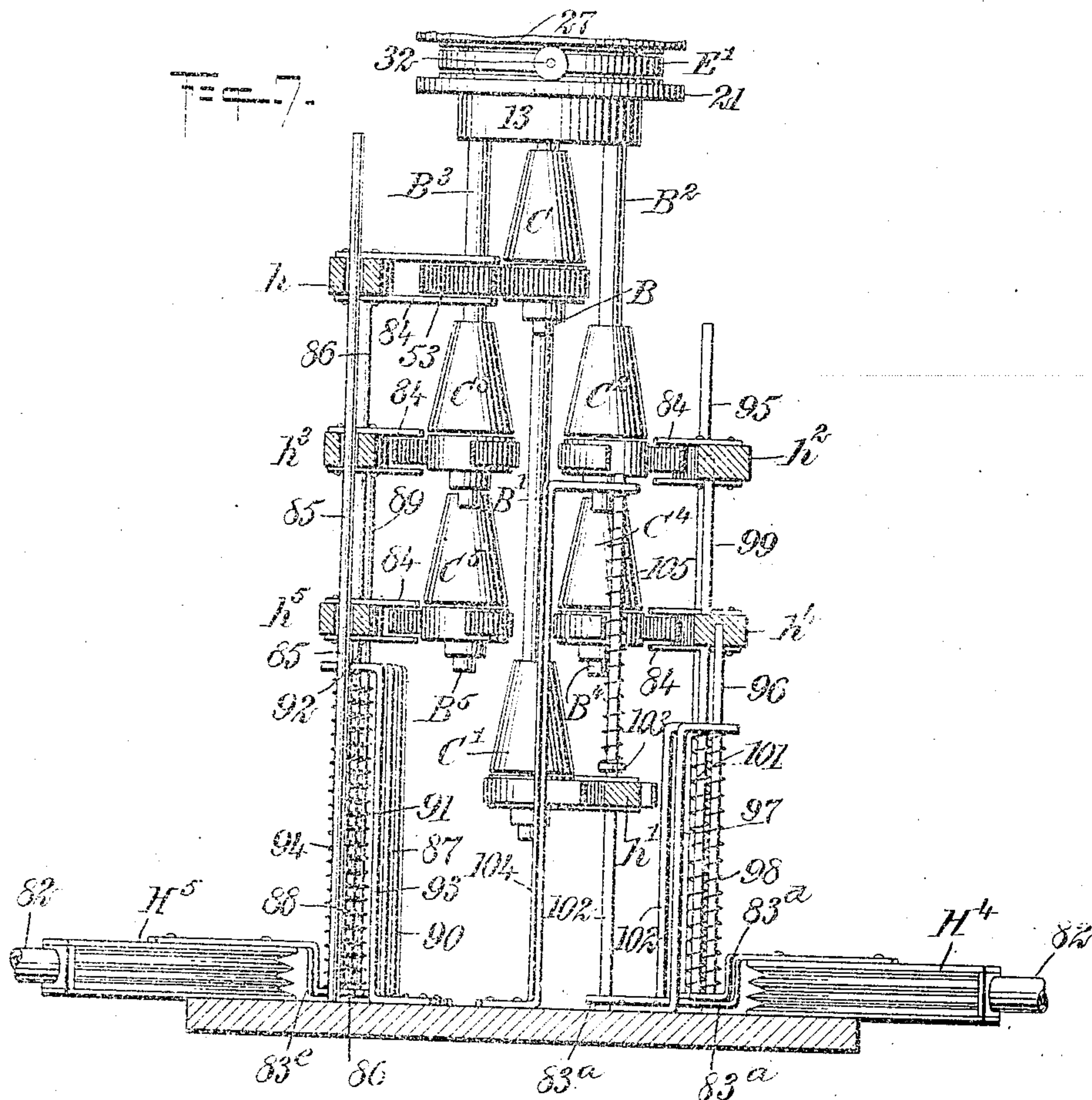
PATENTED NOV. 6, 1906.

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8 SHEETS—SHEET 8



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UNITED STATES PATENT OFFICE.

OLAF HENRICHSEN, OF NEW YORK, N. Y.

AMUSEMENT DEVICE.

No. 835,424.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed December 22, 1905. Serial No. 292,939.

To all whom it may concern:

Be it known that I, OLAF HENRICHSEN, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Amusement Device, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a device which will represent a miniature race-course and horses, automobiles, bicycles or men racing thereon, and, further, to so construct the device that the objects will be capable of independent action and so that the speed of the objects will be under the complete control of the operators, since the game can be played by one or more persons.

Another purpose of the invention is to provide means whereby the objects are set and kept in motion by reason of blasts of air acting upon shifting mechanisms, which shifting mechanisms in turn act to start or stop the driving mechanisms for the respective objects by connecting said mechanisms with a suitable motor or disconnecting them therefrom.

Another purpose of the invention is to provide an individual blowpipe for each object and to so arrange the driving mechanisms for each object that they will not be set in motion until the operators blow into the pipes and whereby the objects will continue in motion at greater or less speed as the operator continues to blow with more or less force and stopping when the operator ceases blowing. Therefore while the operators find amusement in striving to force their respective objects ahead they are at the same time unconsciously developing their lungs by reason of the effort required.

A further purpose of the invention is to provide means for automatically causing each object upon completing the circuit of the curve, for example, to operate an indicator to display a dial suitably marked to indicate place or the number of circuits made, or both.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the device drawn

upon a small scale. Fig. 2 is a sectional plan view drawn upon a larger scale, the section being taken practically on the line 2 2 of Fig. 3. Fig. 3 is a vertical section through the casing, showing the mechanism therein in side elevation. Fig. 4 is a horizontal section taken practically on the line 4 4 of Fig. 3. Fig. 5 is an enlarged vertical section through the central portion of the machine, the section being taken practically on the line 5 5 of Fig. 4. Fig. 6 is an enlarged horizontal section taken practically on the line 6 6 of Fig. 3. Fig. 7 is an enlarged vertical section taken practically on the line 7 7 of Fig. 6. Fig. 8 is a detail sectional side elevation of one of the blowpipes drawn upon an enlarged scale, and Fig. 9 is a horizontal section through the blowpipe taken substantially on the line 9 9 of Fig. 8.

A represents the casing of the machine, which may be of any desired shape. Preferably, however, the casing is polygonal in plan view, ordinarily hexagonal, as shown, so as to accommodate a large number of people as players without one interfering with the other. In the top of the said casing a series of concentric slots is produced. These slots may be of any desired number, in the drawings six being shown, and the slots are spanned at intervals by posts 11, which are in the form of arches and are so located as to quarter the circles of the slots. Each post is provided with downwardly-extending members 12, which support the material 10^a, separating the slots 10 from each other, as is shown best in Fig. 3.

At the center of the casing and within the casing a circular hollow drum 13 is located, being supported by suitable legs 14, secured at the bottom portion of said casing A, and a series of shafts corresponding in number to the number of slots 10 in the top of the casing is mounted to turn in the said drum 13, as is shown best in Figs. 5 and 7. These shafts are circularly arranged, as is illustrated in Fig. 4, being as near as possible to the side portions of the drum, and these shafts are designated, respectively, as B, B', B², B³, B⁴, and B⁵. All of said shafts extend below the bottom of the drum 13, and for convenience the various shafts are of different lengths. The shafts at their lower ends are mounted to turn in suitable brackets 15, as is shown in Fig. 3, and at their upper ends the shafts are provided with collars 16 above the upper portion

of the said drum 13, as is shown in Figs. 2 and 5.

A tube 17 is passed centrally through the drum 13, extending beyond both ends of the drum, and the said tube is preferably open at top and bottom; but the top may be closed, if desired. At the upper end of the said tube 17 a flange 18 is formed, which rests upon a collar 19, formed around an opening 20 at the center of the top of the casing A and at the center of the series of circular slots 10, as is illustrated in Fig. 1.

Each shaft B, B', B², B³, B⁴, and B⁵ is provided with a pulley. The pulley on the shaft B is designated as C, and the pulleys on the other shafts are designated, respectively, as C', C², C³, C⁴, and C⁵. The pulleys of the series named are arranged, preferably, as shown in Fig. 7, wherein the pulley C is the uppermost pulley, the pulley C' the lowermost one, and the pulleys C² and C³ are in substantially horizontal alinement and are below the uppermost pulley C, while the pulleys C⁴ and C⁵ are also in horizontal alinement and are below the pulleys C³ and C² and above the lowermost pulley C'. This arrangement of the pulleys has been found the most convenient for driving purposes.

Each of the series above mentioned consists of a conical upper section c, the narrower portion of the section being its upper portion, and a lower cylindrical section c'. The upper section c of each pulley in the series C is secured upon the respective shaft in the series of B to which it belongs, while the lower sections c' of said pulleys are loosely mounted on their respective shafts and are held in position by suitable collars c², secured to said shafts, as is clearly shown in Fig. 5. The drum 13 is provided with a lower annular exteriorly-located flange 21, an upper corresponding flange 22, and intermediate flanges of like character, designated, respectively, as 23, 24, 25, 26, and 27.

The lower flange 21 is provided with an upper peripherally-depressed track-surface 28, and the uppermost flange 22 is provided with a corresponding track-surface 29 upon its under face, while the intermediate flanges secured to the said drum are provided with corresponding track-surfaces 30 upon both of their faces.

An internally-toothed gear-wheel is provided for each of the shafts in the series of B, and the said gear-wheels, which are designated, respectively, as E, E', E², E³, E⁴, and E⁵, correspond in position to the order of the shafts in the series of B. Each of the internally-toothed gear-wheels of the series of E is provided with friction-rollers 32, usually three in number, which engage the track-surfaces 30 of the aforesaid flanges above and below them, as is clearly shown in Fig. 5. Each shaft of the series of B is provided with an attached pinion 33, and the pinions 33 on

the said shafts are made to mesh with the teeth of the gear-wheels in the series of E corresponding to their respective shafts. For example, the gear-wheel E meshes with a pinion on the shaft B, and the gear-wheel E' meshes with the pinion on the shaft B', and so on.

Each of the flanges at one side of the drum 13 is provided with an attached block 34 of insulating material, the blocks being in vertical alinement, and each block is provided with an attached spring-lip 35 more or less curved, as is shown in Fig. 4. These spring-lips are secured to the blocks 34 by screws 37^a, which are passed up from below and meet binding-screws 36, passed through the blocks from their outer faces. Each binding-screw 36 clamps the end of a wire 37, which wires are passed through suitable apertures in the tube 17 and down through said tube, as is shown in Fig. 5. The wires 37 are connected to metal bridge-plates 38 by suitable binding-screws 39, as is shown in Figs. 2 and 5, which binding-screws are made to enter a strip of insulating material 40, secured to one of the legs 14 for the drum 13. A corresponding number of wires 40 are carried from the said plates 38 out usually through an opening 41 in the bottom of the casing A and to proper electrical connection with an indicator 42 of any approved type. (Shown in Fig. 2.) A wire 43 is carried from the indicator to a battery 44 or other source of electrical supply, and another wire 45 is carried through the said battery and has contact with the leg 14 of the drum 13, which carries the other wires 40, said contact being made through the medium of a binding post or screw 46, which is in direct engagement with the said leg, thus electrifying the metal drum 13 and the metal parts carried thereby. This circuit is closed at predetermined periods in a manner to be hereinafter described.

Each internally-toothed gear of the series of E is provided with an attached horizontal arm, and these arms are respectively designated as D, D', D², D³, D⁴, and D⁵, the arm D being attached to the gear E, the arm D' to the gear E', and so on through the series. These arms of the series of D are preferably provided with a wooden body of suitable length or a length sufficient to extend beneath the slots 10 in the top of the casing, and the said arms are strengthened at the top and bottom by attached metal plates 47 and 48, which metal plates are also secured to the aforesaid internally-toothed gears of the series of E. The arms of the series of D are also preferably further strengthened by angle-irons 49, extending along their upper faces, which irons 49 are attached in any desirable manner to the top plates 47. The lower plates 48 of the arms of the series of D act as contact-plates as well as strengthening and attaching plates, since when the gears of

the series of E are revolved and the arms are brought over the metal lips or fingers 35, connected with the wires 37, and said plates 48 by contact with said springs serve to complete an electric circuit and operate the indicator, each arm acting independently of the other, and the indicator will indicate only the position for an individual arm when that individual arm is brought in engagement with the finger or lip 35 provided for it. Thus, for example, when any one arm has made a complete circuit or a complete revolution at a predetermined point in that revolution the indicator will be operated by that arm. It may be here remarked that suitable bearings 31 are provided for sundry of the shafts of the series of B between their ends.

Each arm of the series of D is provided with an upwardly-extending member 50 at its outer end, and these extensions 50 from the arms of the series of D pass loosely up, each through a slot 10 in the top of the casing A, as is shown in Fig. 3, and an object or a dummy of any description is attached in any suitable manner to the upper ends of said extensions 50, as is also shown in Fig. 3.

Two upright posts or spindles 52 and 53 are located opposite the pulleys of the series of C, the said posts or spindles being mounted to turn on the bottom portion of the casing A, and the said posts or spindles are mounted to turn at their upper ends in a suitably-braced cross bar or plate 54.

Three cone-pulleys are mounted to turn on the spindle 52, and a like number of smaller pulleys are mounted to turn on the spindle 53. These cone-pulleys have their wider ends uppermost, occupying a reverse position to the position of the cone-pulleys on the series of pulleys C. The cone-pulleys on the spindles 52 and 53 are designated, respectively, as F, F', F², F³, F⁴, and F⁵, the pulley F being opposite the pulley C and the pulley F' opposite the pulley C', and so on through the series in like order. Corresponding pulleys of the series C and of F are each connected by a belt 55, and normally these belts run upon the loose lower sections c' of the pulleys of the series of C and at the lower or tapered ends of the pulleys of the series of F, and at such time the pulleys of the series of F may revolve, but will have no action whatsoever on the shafts of the series of B operating the arms of the series of D.

Each belt 55 is provided with an independent shifting device, to be hereinafter described, and such shifting devices in action serve to force the belts up from the loose sections c' of the pulleys of the series of C onto the fixed sections c of the same series, and the more closely the belts approach the upper or reduced ends of the pulleys of the series of C and the upper or larger end portions of the pulleys of the series of F the faster will the shafts of the series of B be re-

volved, and consequently the faster will the objects or dummies be moved when operated from said shafts.

It will be understood that each set of pulleys of the series of C and of the series of F operates independently.

An ordinary pulley 56 of predetermined diameter is secured to the spindle 52, and this pulley is provided with a smaller pulley 57, attached to its under face. A belt 58 is passed around the smaller pulley 57 and around the pulley 59 on the spindle 53, which pulley 59 is of the same diameter as the pulley 57. A belt 61 is passed over the larger pulley 56 on the spindle 52 and over a pulley 60 of the same size as the pulleys 57 and 59, which pulley 60 is mounted to turn upon the upright post 62. At the top of the same pulley 60 a larger pulley 63 is secured, which larger pulley is of the same diameter as the large pulley 56 on the spindle 52. A belt 64 is passed around the pulley 63 and over a driving-pulley 65 on a motor 66 of any suitable description, as is illustrated in Fig. 3. Thus it will be observed that both of the spindles 52 and 53 are turned at the same rate of speed, and, as heretofore stated, when the belts 55 are in their lower or normal positions the shafts of the series of B will not revolve, even though the pulleys on the spindles 52 and 53 are in operation.

An individual blowpipe G is provided for use in connection with each object or dummy. These blowpipes are best shown in Figs. 1, 8, and 9. Each blowpipe is made in two sections—a fixed section *g* and an outer hinged section *g'*. The inner sections *g* of the blowpipes are secured by suitable couplings 67 to the outside of the casing, preferably two at each side thereof, as is illustrated in Fig. 1, and the fixed sections of each pair of blowpipes are usually connected by a brace-rod *g²*. The fixed section *g* of a blowpipe is usually provided with an interiorly-threaded sleeve 68 at its outer end, and the joint which connects the two sections of a blowpipe is what may be termed a "lap-ball" joint. The preferred construction of this joint is particularly shown in Figs. 8 and 9, wherein it will be observed that the joint is made in two mating sections *g²* and *g³*. The section *g²* of the joint consists of a circular peripherally-flanged body 70, provided with an exteriorly-threaded sleeve-collar 69, integral with its flange and extending beyond the edge of said flange a predetermined distance, and in said collar at its outer end a metal pipe 69^b is fitted, extending into the fixed section *g*. The said collar member 69 is screwed into the sleeve 68 of the said section *g*, being provided with a channel 69^a, leading from the pipe 69^b into the flanged portion of the body 70. The section *g³* of the joint is substantially the counterpart of the section *g²*, only it is adapted to be reversely placed and

consists of a circular flanged body-section 71, having an exteriorly-threaded collar 75 integral with its flange, which collar is at the opposite side of the body 71 to that occupied by the collar on the body 70. This collar 75 is integral with the flange of the body 71 and extends beyond the flange of the body 71 in a direction the reverse of the extension of the collar 69; beyond the flange of the body 70, and the collar 75 is provided with an angular bore 75^a, that extends from its outer end into that portion of the body 71 surrounded by the said flange.

The collar 75 is screwed into a sleeve 75^b on the lower end of the pivoted section *g'* of the blowpipe, and in assembling the sections *g*² and *g*³ of the joint the flanges of the body members 70 and 71 are brought together, and a suitable bolt 78 is passed through abutting tubular bosses 77, which extend inward from said body members 70 and 71. In this manner a chamber 74 is formed in communication with both sections *g* and *g'* of the blowpipe. A detachable mouthpiece 72 is passed into the outer end of the blowpipe and through an apertured elastic diaphragm 73 in said end, whereby no one player uses a mouthpiece previously used by another. A rubber tube *g*¹ is slipped over the metal tube 69^b and is conducted through the fixed section of the blowpipe into the interior of the casing A, where it is received in a downwardly-extending extension 79 of the blowpipe, as is shown in Figs. 2 and 8, one of said extensions being provided for each blowpipe. These extensions 79 act as receptacles for any spittle that may be carried into the blowpipe with the air from the lungs of a player, and said extensions are readily emptied.

Each extension 79 of a respective blowpipe is provided with a removable cap 80 at its lower end and with a coupling 81 between its ends, and a length of hose 82 is attached to each coupling in an air-tight manner at one end, and the opposite end of each of said hose is connected with a separate bellows, one of these bellows being employed for use in connection with the driving-belt of each shaft of the series of B. These bellows are preferably arranged three at each side of the casing, within the same, being secured in a suitable manner to the bottom portion of the casing, as is shown in Fig. 6, and are designated H, H', H², H³, H⁴, and H⁵, the bellows H being used in connection with the driving-belt for the shaft B, and the bellows H' being used in connection with the driving-belt of the shaft H', and so through the series.

A shifting-bar is employed in connection with each driving-belt of the shafts of the series B, and each of said shifting-bars is operated through the medium of one of the aforesaid bellows. These shifting-bars are designated, respectively, *h*, *h'*, *h*², *h*³, *h*⁴, and

*h*⁵. The shifting-bar *h* is operated from the bellows H and operates upon the driving-belt for the shaft B. The shifting-bar *h'* is operated by the bellows H', and the shifting-bar *h*² is operated by the bellows H² and operates upon the driving-belt for the shaft B², and so on throughout the series.

The arrangement of the shifting-bars corresponds to the arrangement of the bellows—namely, three at each side of the machine, one practically above the other. At one side of the machine the shifting-bars *h*, *h*³, and *h*⁵ are located, one immediately above the other, and each of the shifting-bars is provided with series of fingers 84, adapted to extend above and below the driving-belt it is adapted to operate.

It may be here remarked that each bellows has a foot attached to its upper face at its inner end, which feet are carried downward and then horizontally in the direction of the central longitudinal portion of the casing. These feet are designated as follows: 83 for the bellows H, 83^a for the bellows H', 83^b for the bellows H², 83^d for the bellows H⁴, and 83^e for the bellows H⁵.

Two vertical guide-rods 85 are provided for the aforesaid series of shifting-bars *h*, *h*³, and *h*⁵, the said bars having free sliding movement on said guide-rods. The shifting-bar *h* is operated through the medium of an attached rod 86, which is passed loosely down through the shifting-bars below it, and the rod 86 terminates in a head at its lower end and is passed through an angular head of a guide-bracket 87 to an engagement at its lower end with the foot 83 of the bellows H, and a spring 88 is coiled around the said rod 86 between the lower enlargement of the rod and the head of the guide-bracket 87, as is shown in Fig. 7.

A rod 89 is attached to the next lower shifting-bar *h*³, and this rod passes loosely through the lowest shifting-bar *h*⁵ and through the horizontal head of a vertical bracket 90, secured to the bottom of the casing. This rod 89 has an enlargement at its lower end, and a spring 91 is coiled around said rod, having bearing against the head of the bracket and against the enlargement of the rod, and the lower end of this rod 86 bears upon the foot 83^a of the bellows H'. A rod 92 is attached to the lowest shifting-bar *h*⁵, and this rod passes through the horizontal head of a vertical bracket 93, likewise secured to the bottom of the casing. The lower end of the rod 92, which is enlarged, has bearing upon the foot 83^e of the lowest bellows H⁵, and a spring 94 is coiled around this rod 92, bearing against its enlargement and against the head of the bracket 93.

When a bellows is inflated, it lifts the rod engaging with the foot of that bellows and causes the shifting-bar connected with the rod to be elevated also, and thus the belt

which it operates is carried up more or less, according to the degree of inflation of the bellows toward the top of the pulley of the series C, over which the belt is carried. As soon as the supply of air to the bellows is stopped the spring on the rod lifted will act to return the shifting-bar to its lower or normal position and will carry the belt which it operated down to the loose section c' of the pulley over which the belt is passed, thus stopping the movement of the object operated by the rotation of the shaft of the series B, to which the pulley of the series C belonged.

The shifting-bars at the opposite side of the device, as is most clearly shown in Fig. 7, are the shifting-bar h^2 for the driving-belt for the pulley C^2 and the shifting-bar h^4 for the driving-belt of the pulley C^4 , and these two shifting-bars are located one immediately above the other and have free movement on the same guide-rods 95, as is also indicated in Fig. 6.

A lifting-rod 96 is attached to the lower shifting-bar h^4 , and this lifting-rod 96 passes through the horizontal head of a guide-bracket 97, secured to the bottom of the device. This lifting-bar is also provided with an enlargement at its lower end, which enlarged lower end rests upon the foot 83^a of the bellows H^4 , and a spring 98 is coiled around the said lifting-bar 96 between the head of the bracket and its bottom enlargement. A second lifting-rod 99 is attached to the upper shifting-bar h^2 , and this rod 99 passes loosely through the shifting-bar h^4 and through the horizontal head of a bracket 100, also secured to the bottom of the device. This rod 99 is likewise enlarged at its lower end and is surrounded between such enlargement and the head of the bracket 100 with a coil-spring 101. The lower end of the lifting-rod 99 is made to rest upon the foot 83^b of the bellows H^2 . The shifting-bar h' for the belt of the lowermost pulley C' in the series of C is located below the shifting-rod h^4 and nearer the opposite side of the structure than the bars h^2 and h^4 , as is shown in both Figs. 6 and 7. This lower shifting-bar h' is secured to a lift-rod 102, the lower end of which lift-rod has engagement with the foot or tongue 83^a of the bellows H' , and the said lift-rod 102 extends some distance up above the shifting-bar h' , and just above the said shifting-bar the rod 102 is provided with a collar 103. The upper end of the lift-rod 102 passes loosely through the horizontal upper end of a bracket 104, secured also to the bottom of the device, and a spring 105 is coiled around this lift-bar between the collar 103 and the head of the said bracket 104. The springs 98 101 105 serve when required to carry their respective shifting-bars downward to their normal lower positions.

In the operation of the device as many

players can be accommodated as there are blowpipes G, and the rapidity of the movement of the various objects or dummies assigned to each blowpipe is controlled by the power exerted by the lungs of the person blowing into said pipe. Thus if the motor is started and a person blows into one of the blowpipes G the bellows connected with that particular blowpipe will be inflated, and the shifting-bar operated by said bellows will be raised proportionately, and the driving-belt controlled by the said shifting-bar and which practically controls the movement of the object assigned to that blowpipe will be also proportionately raised, and the shaft carrying the two-piece pulleys and operated by the belt will be turned with greater or less rapidity, according to the distance the belt is carried up to the contracted portion of the said pulley. Thus it will be observed that if two or more players are engaged each player independently operates the object assigned to him, as each object is independent in its operation, and the question as to which of them can drive his object quickest ahead is entirely dependent upon the strength of the lungs of the players. Therefore while the play is in progress the lungs of the players are exercised and correspondingly developed. When a player ceases blowing, the bellows connected with his blowpipe will collapse, and the belt controlled by the shifting-bar operated from that bellows will be drawn down to its normal position, which operation has been heretofore fully stated.

It may be here explained that the driving-belts are preferably made of an elastic material. The bellows and parts directly associated therewith may be properly considered pneumatics and will be hereinafter so designated.

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

1. In an amusement device, a shaft, an arm provided with a dummy, means carried by the shaft for rotating the arm, and belt-connected, reversely-placed cone driving-pulleys for the shaft.

2. In an amusement device, a shaft, an arm adapted to carry a dummy, a driving connection between the said shaft and the said arm, a cone-pulley secured on said shaft, a drive-shaft, a cone-pulley on the drive-shaft, having a reverse position to that of the pulley on the arm-carrying shaft, a belt connection between the pulleys, and a shifting device for the belt, whereby to increase or decrease the revolution of the arm-carrying shaft by a rise and fall of the belt upon the pulleys.

3. In an amusement device, a shaft, an arm adapted to carry a dummy, a driving connection between the said shaft and the said arm, a cone-pulley secured on the said

shaft, a loose pulley mounted on the said shaft at the base of the cone-pulley, a drive-shaft, a cone-pulley secured upon the drive-shaft, having a reverse position to that of the pulley on the arm-carrying shaft, a belt adapted to travel upon the said pulleys, a shifter for the said belt, and means for pneumatically operating the shifter.

4. In an amusement device, a shaft, an arm adapted to carry a dummy, a driving connection between the shaft and the arm, a cone-pulley secured upon the shaft, having its contracted end facing the arm, a loose pulley at the base of the cone-pulley, a motor-operated drive-shaft, a cone-pulley secured to the said drive-shaft, having its base opposite the contracted end of the pulley on the arm-carrying shaft, a belt connection between the pulleys, a shifter for the belt, and means for pneumatically operating the shifter.

5. In an amusement device, a shaft, an arm provided with a dummy, means carried by the shaft for rotating the arm, reversely-placed driving cone-pulleys for the shaft, a belt connecting the pulleys, and devices for pneumatically shifting the belt upon the pulleys.

6. In an amusement device, a shaft, an arm adapted to carry a dummy, means carried by the shaft for rotating the arm, reversely-placed cone driving-pulleys for the shaft, a shifter for the belt, a bellows controlling the movement of the shifter, a blowpipe and a tubular connection between the blowpipe and bellows.

7. In an amusement device, an arm provided with a dummy, means carried by the shaft for rotating the arm, reversely-placed cone driving-pulleys for the shaft, a belt connecting the pulleys, a shifter for the said belt, a bellows connected with the said shifter to raise the same, the said shifter being spring-controlled in its opposite or return movement, a blowpipe, and a tubular connection between the said blowpipe and the bellows.

8. In an amusement device, a shaft, an arm adapted to carry a dummy, operatively connected with the said shaft, reversely-placed cone driving-pulleys for the said shaft, one of said pulleys being provided with a loose section at its base, a belt connecting the pulleys, the pulley in two sections being located on the said shaft, the conical section being fixed, a motor-controlled drive-shaft for the other pulley, a shifter for the belt, a pneumatic controlling the shifter, and a blowpipe controlling the pneumatic.

9. In an amusement device, a shaft, an arm adapted to carry a dummy, an operative connection between the said arm and the said shaft, a motor-controlled driving-shaft, a sectional cone-pulley located on the arm-carrying shaft, the base-section of which pulley is

loosely mounted on the tapering section fixed to the shaft, a second cone-pulley fixed to the drive-shaft, having a position the reverse of that of the pulley on the arm-carrying shaft, a belt connection between the said pulleys, a shifter for the belt, a pneumatic arranged to raise the said shifter, tension devices for the return of the shifter when the pneumatic is deflated, a blowpipe having a fixed and an adjustable section, and a tubular connection between the blowpipe and the pneumatic.

10. In an amusement device, a shaft, an arm adapted to carry a dummy, and means for rotating the said arm from the said shaft and pneumatic means for stopping and starting the said shaft.

11. In an amusement device, a casing having a circular slot in one of its faces, a shaft mounted to revolve in the said casing, an arm having a member extending out through the said slot, which member is adapted to support a dummy, a driving connection between the shaft and the said arm whereby to rotate the latter, a motor-controlled drive-shaft, a cone-pulley located on said drive-shaft, a cone-pulley fixed to the arm-carrying shaft, and a loose pulley on said shaft at the base of the cone-pulley, a belt connecting the said pulleys, a shifter for the said belt, a bellows having a foot upon which a member of the said shifter rests, a blowpipe located without the casing and extending within the same, and a tubular connection between the said blowpipe and the bellows.

12. In an amusement device, a casing having a circular slot in one of its faces, a drum fixed within the said casing, a shaft mounted to turn in the said drum, an arm having a member extending up through the slot in the casing to support a dummy, the inner end of the arm being adapted to turn around the said drum, a driving connection between the said shaft and the inner end portion of the said arm, the said arm being provided with a contact-plate, a contact-finger supported by the said drum and adapted in one position of the arm to engage the contact-plate thereon, an electric circuit in which is included the drum and the said contact-finger, whereby to operate the indicator when the contact-plate on the arm engages with the contact-finger on the drum, which contact happens at a predetermined period in the revolution of the arm.

13. In an amusement device, a shaft, an arm adapted to carry a dummy, means for rotating the said arm from the said shaft, reversely-placed cone driving-pulleys for the said shaft, a belt connecting the pulleys, a shifter for the belt, a pneumatic for the shifter, a blowpipe located without the casing and extending within the same, a connection between the blowpipe and the pneumatic and an indicator in circuit connection

with the said arm, and means for making and breaking the said circuit at periods in the revolution of the said arm.

14. In an amusement device, a casing having a series of circular openings in one of its faces, means for supporting the material between the openings, a metal drum supported within said casing, a series of independent shafts mounted to turn in said casing, an internally-toothed gear for each shaft, mounted to turn upon the exterior portion of the drum, driving-pinions on the said shafts which mesh with the teeth on the said gear, an arm extending from each of said gears, having a member which extends out through a slot in the casing, the outer ends of the arms being adapted to support dummies, a fixed cone-pulley located on each of said shafts, and a loose pulley also located on each shaft at the base of the cone-pulley thereon, drive-shafts, a motor, connections between the motor and the drive-shafts, whereby they both turn at the same speed, cone-pulleys located on the drive-shafts, the cone-pulley on one or the other of the drive-shafts being adapted for connection with a pulley on the arm-carrying shafts, the pulleys on the drive-shafts being reversely placed to the pulleys on the said arm-carrying shafts, belts connecting opposing cone-pulleys, shifting devices for said belts, and means for pneumatically operating the shifting devices.

15. In an amusement device, a casing having a series of circular openings in one of its faces, means for supporting the material between the openings, a metal drum supported within the said casing, a series of independent shafts mounted to turn in the said casing, an internally-toothed gear for each shaft, mounted to turn upon the exterior portion of the drum, driving-pinions on the said shafts, which mesh with the teeth of the said gear, an arm extending from each of the said gears, having a member which extends out through a slot in the casing, the outer ends of the arms being adapted to support dummies, a fixed cone-pulley located on each of the said shafts, and a loose pulley also located on each shaft at the base of the cone-pulley thereon, drive-shafts, a motor, connections between the motor and the drive-shafts, whereby they both turn at the same speed, cone-pulleys located on the drive-shafts, a cone-pulley on one or the other of the drive-shafts being adapted for connection with a pulley on the arm-carrying shafts, the pulleys on the drive-shafts being reversely placed to the pulleys on the said arm-carrying shafts, belts connecting opposing cone-pulleys, an independent shifter for each belt, an independent bellows in operative connection with each shifter to raise and lower the same, blowpipes located at the exterior of the casing, corresponding in number

to the number of bellows, and tubular connections between individual blowpipes and individual bellows.

16. In an amusement device, a casing having a series of circular openings in one of its faces, means for supporting the material between the openings, a metal drum supported within the said casing, a series of independent shafts mounted to turn in the said casing, an internally-toothed gear for each shaft, mounted to turn upon the exterior portion of the drum, driving-pinions on the said shafts, which mesh with the teeth of the said gear, an arm extending from each of the said gears, having a member which extends out through a slot in the casing, the outer ends of the arms being adapted to support dummies, a fixed cone-pulley located on each of the said shafts, and a loose pulley also located on each shaft at the base of the cone-pulley thereon, drive-shafts, a motor, connections between the motor and the drive-shafts, whereby they both turn at the same speed, cone-pulleys located on the drive-shafts, a cone-pulley on one or the other of the drive-shafts being adapted for connection with a pulley on the arm-carrying shafts, the pulleys on the drive-shafts being reversely placed to the pulleys on the said arm-carrying shafts, belts connecting opposing cone-pulleys, an independent shifter for each belt, an independent bellows in operative connection with each shifter to raise and lower the same, blowpipes located at the exterior of the casing, corresponding in number to the number of bellows, tubular connections between individual blowpipes and individual bellows, contact-fingers insulated from and carried by the said drum, the contact-fingers corresponding in number to the number of arms and being arranged one above the other, contact-plates on the said arms for engagement with the said fingers, an indicator, a source of electric supply in circuit connection with the said indicator and with the said arm and with the said fingers, whereby when an arm passes a finger the circuit is closed and the indicator operated.

17. In an amusement device, the combination with a casing having a series of circular openings in one of its faces, posts located at intervals along the said openings, which posts serve to support the material between the openings, a drum supported within the said casing, the said drum being provided with a series of independent shafts mounted to turn in the said drum, a pinion upon each shaft, extending out through the drum, internally-toothed gear-wheels mounted to revolve between the track-supports, provided with roller-bearings for engagement with the track-supports, an arm attached to each of the internally-toothed gears, each arm being provided with a section which extends up

through one of the said slots in the casing, the upper ends of the arms being adapted to carry dummies, a cone-pulley secured to each of said shafts, and a pulley loosely mounted
5 on each of said shafts at the base of the cone-pulley, motor-controlled drive-shafts running at the same rate of speed, and cone-pulleys secured to the said drive-shafts, the cone-pulleys on a drive-shaft being reversely
10 placed to the cone-pulleys on the arm-carrying shafts, the said cone-pulleys being arranged in pairs, and a driving-belt for each pair of cone-pulleys, a shifter for each belt, a pneumatic for operating each shifter, and

blowpipes supported in the casing, connected with one of the said pneumatics. 15

18. In an amusement device, a shaft, an arm provided with a dummy, means carried by the shaft for rotating the arm, a motor for rotating the shaft, and a pneumatic for controlling said means. 20

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

OLAF HENRICISEN.

Witnesses:

FRED. ACKER,

JNO. M. RITTER.