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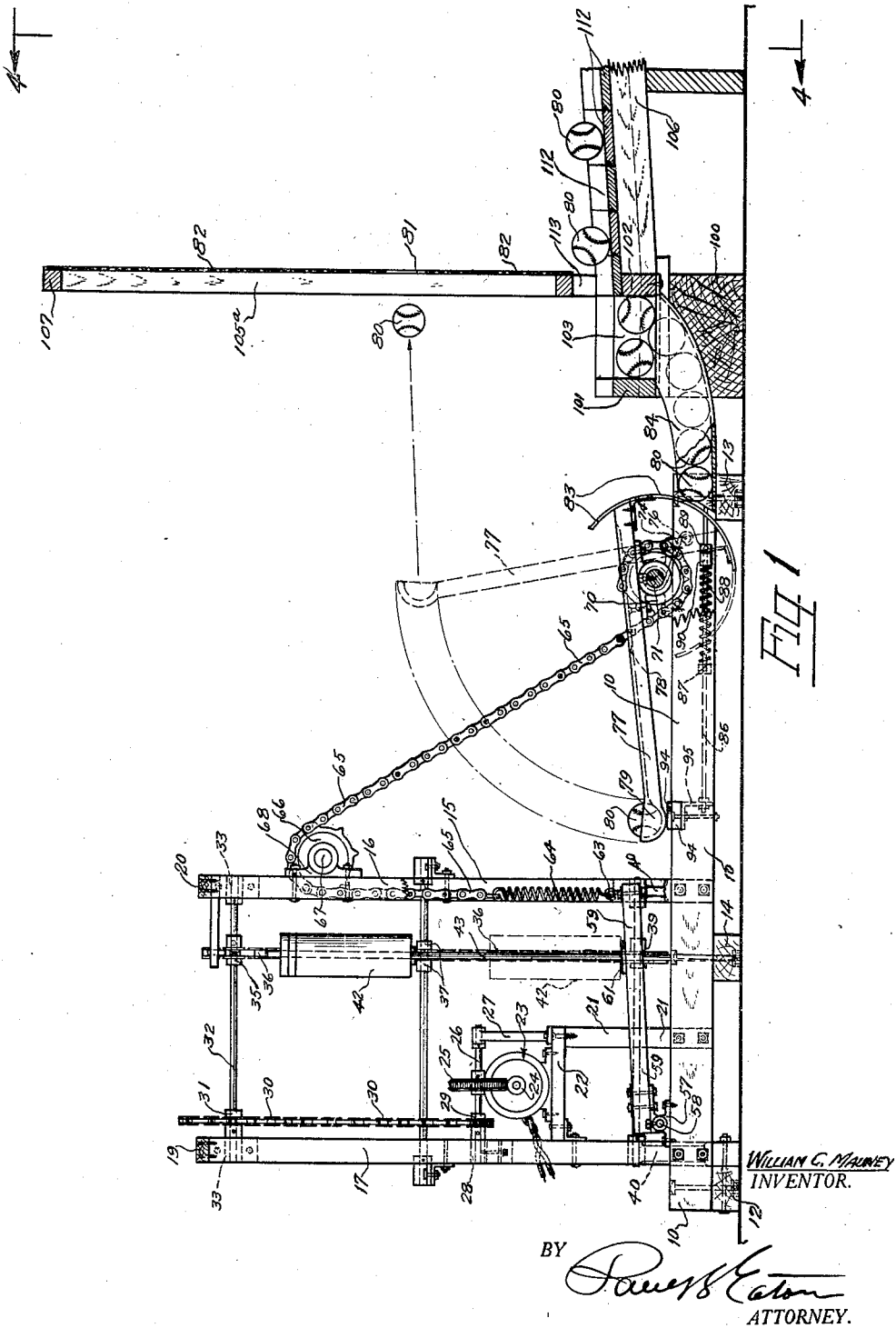
W. C. MAUNEY

1,825,882

BALL THROWING MACHINE

Filed May 31, 1930

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

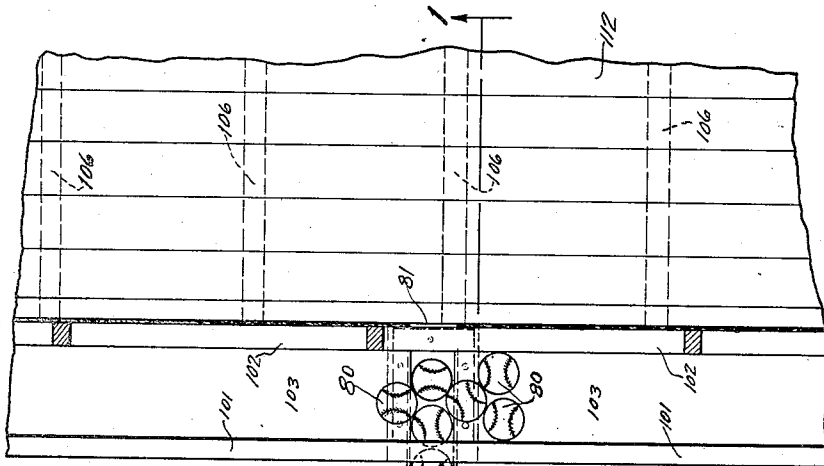
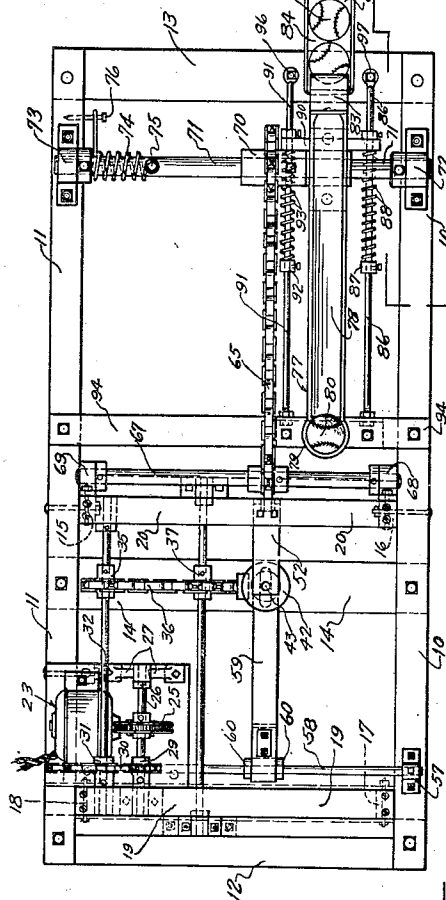


Fig. 2

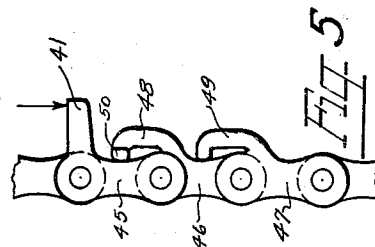


Fig. 5

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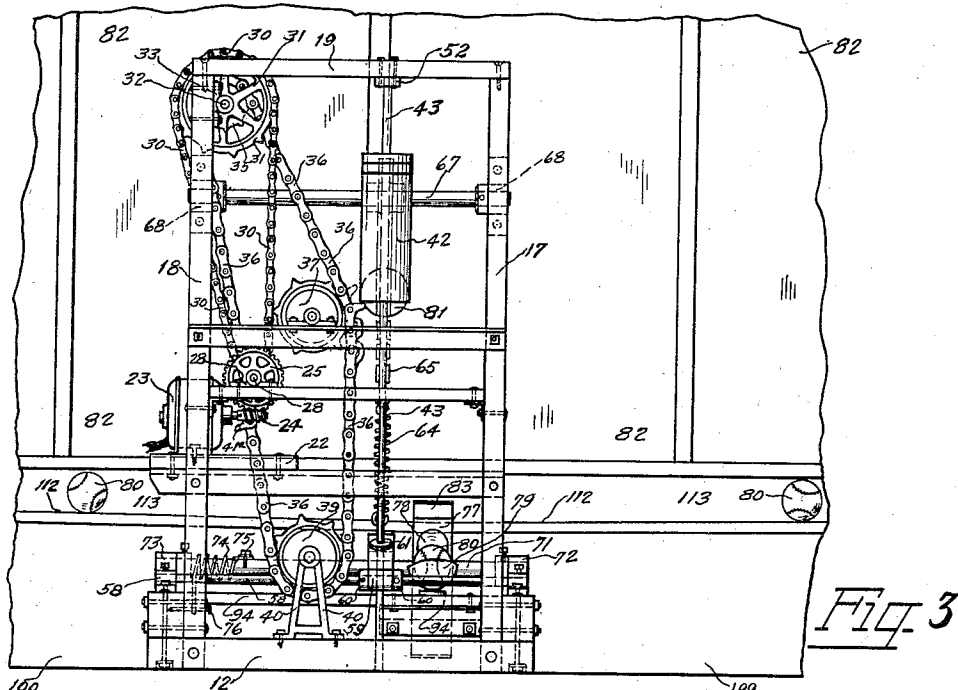
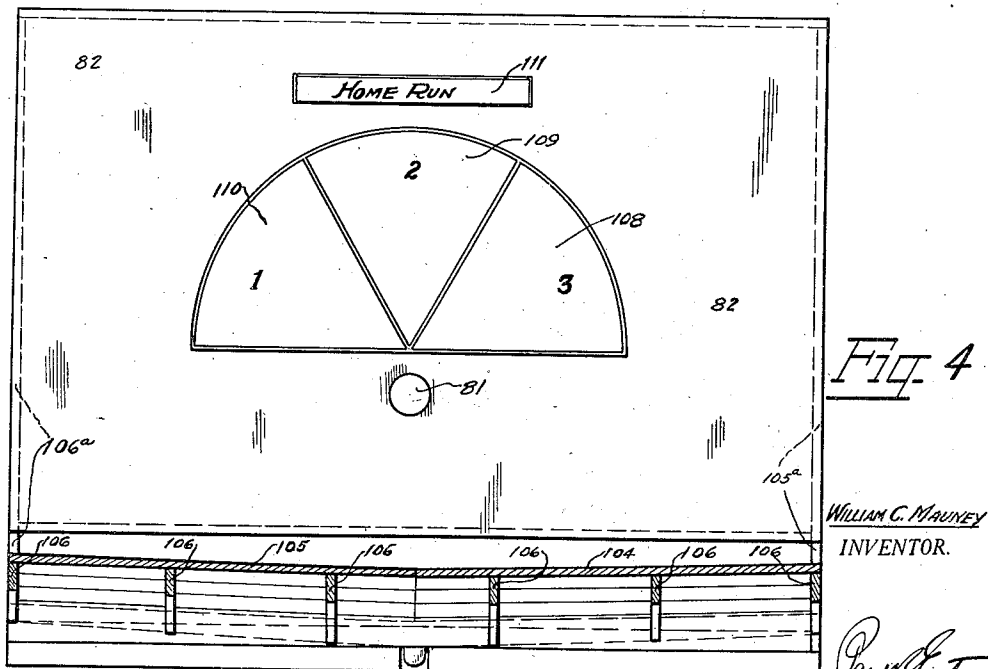
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3 Sheets-Sheet 3



UNITED STATES PATENT OFFICE

WILLIAM CLYDE MAUNEY, OF GASTONIA, NORTH CAROLINA

BALL-THROWING MACHINE

Application filed May 31, 1930. Serial No. 458,065.

This invention relates to a machine for throwing balls and more especially to a machine having a throwing arm adapted to be operated by the falling of a weight to operate the throwing arm with means for raising said weight after the same has fallen and means for releasing said weight to cause the same to fall again to operate the throwing arm to throw a ball through a hole or to a point where it is adapted to be struck by a player to knock the ball against a canvas for the purpose of playing a base ball game indoors.

Another object of my invention is to provide a base ball throwing machine having means for throwing the ball and means for regulating the velocity of the thrown ball together with means for returning the ball to the throwing means, and automatic means for feeding one ball at a time back onto the arm to a position where said ball can be thrown.

Some of the objects of my invention having been stated other objects will appear as the description proceeds when taken in the connection with the accompanying drawings, in which—

Figure 1 is a side elevation with parts broken away for sake of clearness;

Figure 2 is a plan view of my device;

Figure 3 is an end view taken from the left hand end of Figure 1;

Figure 4 is a view taken along the line 4—4 in Figure 1;

Figure 5 is an enlarged detail view of a portion of the chain for operating the weight means.

Referring more specifically to the drawings the numerals 10 and 11 indicate the lower side frame members of my machine while the numerals 12 and 13 indicate the end frame members of said device. A center cross piece 14 is also provided. Projecting upwardly from the bottom frame members are the uprights 15, 16, 17 and 18. The top of these posts are secured together by cross pieces 19 and 20.

Secured on the short upright 21 and to the post 18 is a table 22 on which an electric motor 23 is mounted which motor has the worm

24 thereon which meshes with a gear 25 which is mounted on shaft 26, which shaft is mounted in the upright 27 and in the bearing 28, and on the shaft 26 is a sprocket 29 and mounted on this sprocket is a sprocket chain 30 which also is mounted on sprocket 31 which is fixed on shaft 32 which is rotatably mounted in suitable bearings 33 which are secured on posts 15 and 18. A sprocket 35 is also mounted on shaft 32 and on this sprocket is mounted the sprocket chain 36 which passes over an idler sprocket 37 and also over an idler sprocket 39 mounted in suitable supports 40 at each end thereof, and this chain has a projection 41 thereon which is adapted to engage a weight 42 which is slidably mounted on rod 43 to raise the same and immediately below the projection 41 which is integral with link 45 of chain 36 the links 46 and 47 have the projections 48 and 49 integral therewith to stiffen the chain to keep the same from bending when the projection 41 engages the weight to lift the same upwardly on the rod 43. The link 47 being thick will cause the end 49 to engage the link 46 but the link 46 being thin, then the end of the projection 48 must be spread outwardly as at 50 to prevent the same from going between the portions of the link 45. The rod 43 is supported at its top portion by means of the brace 52 and the lower end thereof is mounted in collars such as 57 is the shaft 58 and on said shaft 58 is a loosely mounted lever 59 which is held in position by means of collars 60 on each side thereof, and this lever 59 projects outwardly and is penetrated by the vertically disposed rod 43 and a shock absorbing member 61 is placed on the upper end of this arm 59 against which the weight 42 is adapted to fall to force said arm downwardly at the free end thereof. Mounted in the free end of said arm 59 is an eye 63 to which is secured a tension spring 64 and to the upper end of this tension spring is secured a flexible member such as a sprocket chain 65 which passes over sprocket wheel 66 which is mounted on shaft 67, said shaft being mounted in the bearing portions 68 and 69. This chain 65 after passing over

the sprocket wheel 66 is secured at its end on sprocket 70 on shaft 71, said shaft 71 being rotatable in bearings 72 and 73, and a torsion spring 74 is secured as at 75 on said shaft and the other end of said torsion spring is secured as at 76 so as to cause said shaft 71 to normally assume the position shown in full lines in Figure 1. Fixedly secured on the shaft 71 is the arm 77 which has a channel 78 therein, and the rounded concave end portion 79, in which a ball 80 is adapted to rest to be thrown through the hole 81 in the screen 82 which will presently be described. This arm 77 has the arcuate shield 83 on the end thereof which serves normally to prevent the ball from trough 84 from rolling any further than shown in Figure 1. The rod 86 is secured in the frame work and has a collar 87 thereon and a compression spring 88 with the collar 89 secured at the other end thereof, immediately behind the collar 89 is secured the cross piece 90 which runs over to a similar shaft 91 which is parallel to the shaft 86, said shaft 91 also having a collar 92 thereon and a compression spring 93 which is similar to the compression spring 88. The purpose of this being that when the short end of lever 77 strikes against this that it will limit its movement and by adjusting the position of the collars and cross piece 90 the length of throw of said arm can be adjusted.

Transversely disposed between the members 10 and 11 is a member 94 against which the free end of lever 77 is adapted to rest in normal position as shown in Figure 1, and secured to the lower face of this member 94 is an angle iron 95 in which one end of rods 86 and 91 are secured, the other ends of said rods being secured to the member 13 as at 96 and 97.

The trough 84 which has been described as resting on the member 13 also rests on the member 100 and curves upwardly and on either side thereof are the members 101 and 102 forming a trough 103 therebetween, and the ends of this trough are closed in any suitable manner and are slightly inclined toward the center the bottom members being indicated by the reference characters 104 and 105, and being supported by members 106. The screen 82 is supported by means of the up-rights 105a and 106a with the top member 107, and on the right hand side of the screen 82 as appears in Figure 1, and which more fully appears in Figure 4 and above the hole 81 is the diagram composed of sections 108, 109, 110 and 111 to indicate the score made when a ball is struck by the person playing the game and hits against any one of these sections. The ball after hitting against the canvas or screen 82 falls downwardly on a floor 112 which is supported by means of the members 106 and rolls through a slot 113 into the trough 103 and down through the chute 84 ready to be picked up one at a time by the

guard 83 and lever 77. It being apparent that lever 77 will pick up only one ball at a time when it is raised to the dotted line position as shown in Figure 1.

The chain 36 also has the projection 41a thereon and the associated links which are not shown in the drawings are identical to those shown in Figure 5, the purpose of this being that when the weight is lifted by the lug 41 and is allowed to fall that the travel of the chain will be such, and the projection 41a will be so located on the chain as to reach a point just beneath the weight in its lower most position to touch the weight and raise it up to allow it to fall again to pitch another ball, this operation being continued so long as the machine is in operation.

It is evident that when the arm 77 is in the dotted line position shown in Figure 1 that the shield 83 will be lowered and allow one ball to slide over the same and into the channel 78 and roll into the rounded concave portion 79, and as soon as this occurs the torsion spring 74 will move the arm 77 back to the full line position shown in Figure 1, so it is seen that the feeding of the balls 80 to the pitching arm is automatic and one at a time.

In the drawings and specification I have set forth a preferred embodiment of my invention, and although specific terms are employed they are used in a generic and descriptive sense only, and not for purposes of limitation, the scope of the invention being set forth in the appended claims.

I claim:

1. A base ball thrower having a pitching arm, means for operating said pitching arm intermittently by the falling of a weight and means for raising said weight intermittently.
2. In a base ball throwing machine, a pitching arm, a flexible member secured to said pitching arm and being adapted to be wound therearound when the pitching arm is in normal position, a framework, a sprocket wheel mounted in said framework, said flexible member being adapted to be led over said sprocket wheel, a pivoted lever member to which the other end of said sprocket chain is adapted to be connected, a weight member adapted to rest on said pivoted member in normal position, and means for raising said weight member to allow the same to fall and strike against said pivoted member to operate said pitching arm.
3. In a base ball throwing machine, a pitching arm having a concave portion in the free end thereof, a channel extending along the upper edge of the pitching arm, a guard member at the end of said pitching arm, means for intermittently operating said pitching arm, a passageway adapted to lead balls to the end of said pitching arm having said guard member thereon, said pitching arm and guard member being adapted to allow one ball at a time to pass into said chan-

nel on said pitching arm and to roll into the concave end portion while said pitching arm is assuming a normal position.

4. In a base ball throwing machine, a frame work, a transversely disposed shaft mounted in said framework, a pitching arm mounted on said shaft, a flexible member wound around said shaft, a pivoted member secured in said framework, connections between said flexible member and said pivoted member, a weight member mounted for vertical movement in said framework, means for elevating said weight member, means for releasing said weight member to allow the same to fall to strike said pivoted member to operate said shaft and said pitching arm.

In testimony whereof I affix my signature.
WILLIAM CLYDE MAUNEY.

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