O. G. LYON.

INFLATER AND TESTER FOR TOY BALLOONS.

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1,321,833. Patented Nov. 18, 1919.

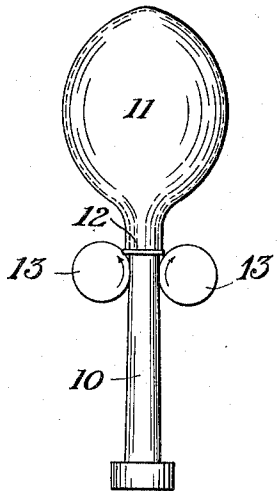


Fig 1

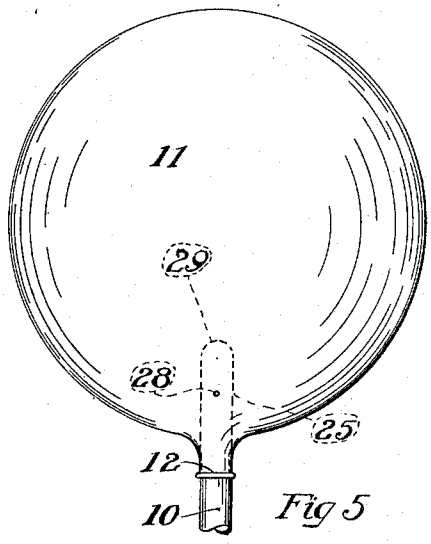


Fig 5



Fig 2

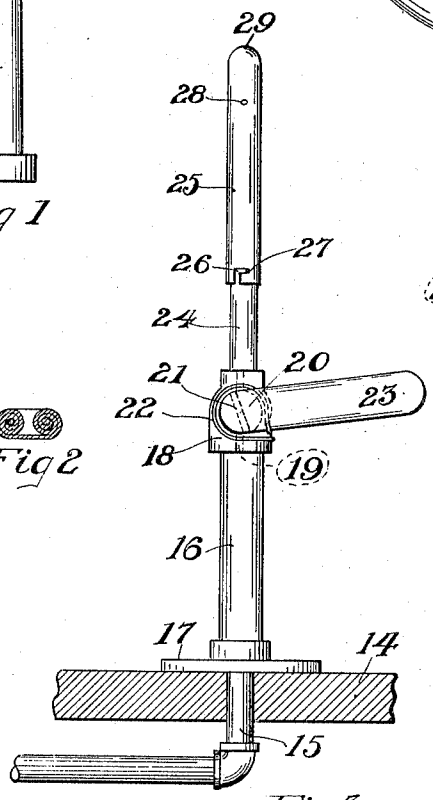


Fig 3

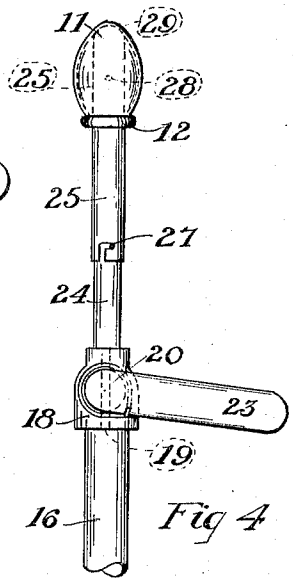


Fig 4

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UNITED STATES PATENT OFFICE.

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INFLATER AND TESTER FOR TOY BALLOONS.

1,321,833. Specification of Letters Patent. Patented Nov. 18, 1919.

Application filed September 11, 1917. Serial No. 190,795.

To all whom it may concern:

Be it known that I, OSSIAN G. LYON, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Inflaters and Testers for Toy Balloons, of which the following is a specification.

This invention relates to certain new and useful improvements in inflaters and testers for toy balloons.

The primary object of the invention is the provision of a device adapted for easily and quickly receiving and inflating a toy balloon or a similar rubber structure whereby the strength thereof may be assured before offering the same for sale.

A further object of the invention is the provision of an inflating means for rubber articles such as toy balloons the structure being such as to insure the proper mounting of the rubber article upon the inflater prior to the commencement of the inflating operation.

A still further object is to provide a device for receiving a rolled up balloon for readily unrolling the same to a position adapted for the reception of air, the inflation taking place after the rubber article has been partially unrolled.

In the drawing forming a part of this application like numerals refer to corresponding parts throughout the several views.

Figure 1 is an elevational view showing a rubber balloon carried by a form upon which the same is constructed.

Fig. 2 is a radial sectional view of a rolled up balloon after being removed from the form.

Fig. 3 is a side elevational view of the present device mounted upon a table, the latter being shown in section.

Fig. 4 is a side elevation of a portion of the device with the balloon positioned therein and partially unrolled, and,

Fig. 5 is a side elevation of a portion of the inflating nipple with the balloon mounted thereon fully inflated.

It will first be understood that the rubber articles designed to be inflated and tested by the present device are ordinarily manufactured upon a mandrel or form such as illustrated in Fig. 1 of the drawing, the article being formed by dipping the enlarged end of the mandrel successively in melted rubber, the article so formed being illustrated at 11 and provided with a rolled over edge or bead 12 at its open mouth. A device is ordinarily arranged for removing the balloon from the form which includes rollers 13, all of which being of the usual structure, it is unnecessary to further describe herein. When the rubber balloon 11 has been removed from the mandrel by means of the rollers 13 it assumes the form of a roll as shown in section by Fig. 2.

The present device may be mounted whenever desired upon a table 14 having a compressed air pipe 15 vertically extending therethrough. A casing 16 is mounted upon the base 14 by means of a flange 17 and into which the upper end of the air line 15 is connected, it being noted that a valve casing 18 is arranged at the upper end of the main casing 16. A feed pipe 24 at the upper end of the valve casing 18 is adapted to communicate with the casing 16 through an air conduit 19, a turn valve 20 being journaled in the valve casing 18 having a connecting port 21 therethrough. A spring 22 normally maintains the port 21 out of alinement with the opposite end portions of the conduit 19 with the valve closed while a hand lever 23 is provided for the valve 20 for opening the valve when desired thereby admitting the air from the line pipe 15 to the feed 24.

An outlet nipple 25 is removably positioned upon the feed pipe 24 having a bayonet slot 26 at its lower end for the reception of a pin 27 upon the feed pipe 24, one or more air outlets 28 being provided in the nipple 25 at a point slightly removed from the hemispherical free end 29 thereof.

It will be understood that in the operation of the device, the rolled balloon 11 is placed upon the nipple end 29 and forced downwardly thereover during the unfolding operation until the bead 12 thereof passes below the air outlet or perforation 28 and whereupon the lever 23 being depressed, air under pressure enters the balloon 11 causing the same to further unroll as well as become inflated by the entering air.

The balloon 11 having been arranged upon the nipple 25 by hand as illustrated in Fig. 4, the admission of the air to the balloon inflates and further uncurls the balloon until the latter is entirely unrolled and assumes the proper size for being stamped and packed as illustrated in Fig. 5. The positioning of the air outlet perforations 28 at

a distance from the nipple end 29 instead of at the end of the nipple prevents the inflation until a portion of the balloon has been uncurled sufficiently to afford proper strength as well as giving an even tension upon the entire wall of the balloon and all of which renders the completed article more perfect. When the balloon has been inflated sufficiently for the purpose of testing, the nipple 25 with the balloon 11 thereon may be readily detached from the feed pipe 24 and the air prevented from escaping in any desired manner so that the balloon may then be stamped, painted, or ornamented as may be desirable in finishing the article.

What I claim as new is:—

1. A testing inflater comprising an air feed pipe, and a nipple having a bayonet slot connection therewith provided with a hemispherical closed free end and having an air outlet perforation spaced from the said closed end thereof.

2. A device of the class described comprising a casing, air feeding means for the casing, a controlling valve carried by the casing, and a detachable nipple closed at one end in communication with the said valve and having an air outlet perforation.

3. An inflating means comprising an air valve, a feed pipe carried by the valve, a pin upon said pipe, and a nipple having a bayonet slot adapted for the reception of the said pin and provided with an outlet perforation spaced from the free end of the nipple.

4. An inflater for rubber articles comprising a mounting casing, an air pipe connected with the said casing, a controlling valve upon the casing, and an article receiving nipple detachably connected to the said valve and having an air outlet intermediate its ends, the free end of said nipple being hemispherical and adapted for the unfolding reception of a rubber article.

5. An inflating device for rubber balloons comprising a feed pipe, an air controlling valve for the said pipe, and a tubular nipple detachably carried by the said pipe and having a hemispherical free end adapted for the unfolding reception of a balloon, said nipple having an air outlet perforation spaced from the free end thereof adapted for admitting air into the balloon when inserted upon the nipple to a point beneath said perforation.

6. A device of the class described comprising a casing, air feeding means for the casing, a controlling valve carried by the casing, and a nipple closed at one end in communication with said valve and having an air outlet perforation spaced from said closed end.

In testimony whereof I affix my signature.

OSSIAN G. LYON.