Nov. 25, 1924. 1,516,488

F. H. BANBURY

MACHINE FOR TREATING RUBBER AND OTHER HEAVY PLASTIC MATERIAL

Filed Feb. 23, 1922 2 Sheets-Sheet 1

Fig. 1.

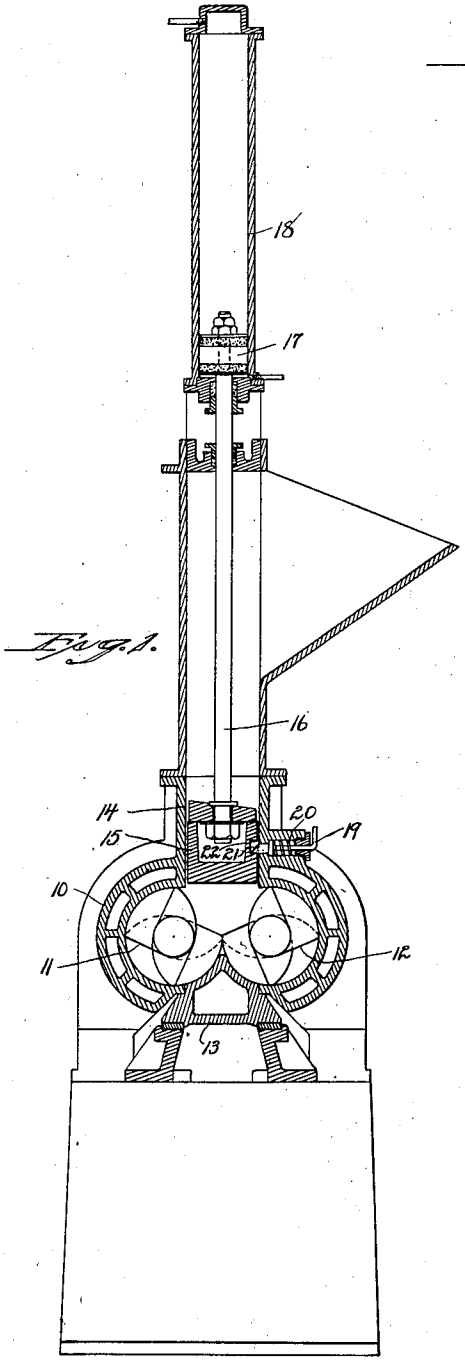


Fig. 2.

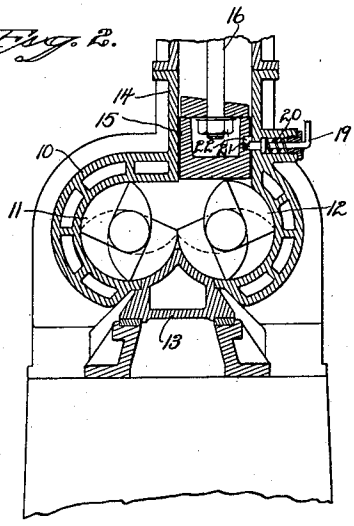
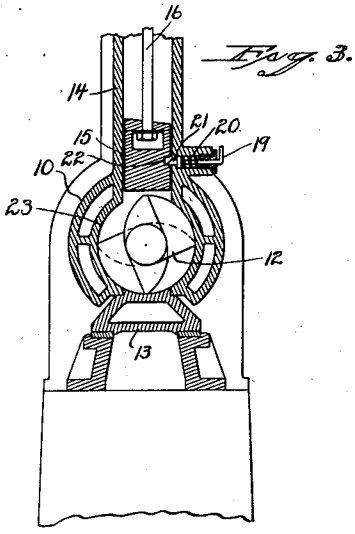


Fig. 3.



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Fig. 6.

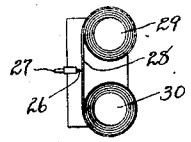


Fig. 4.

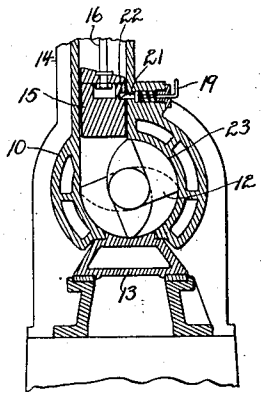
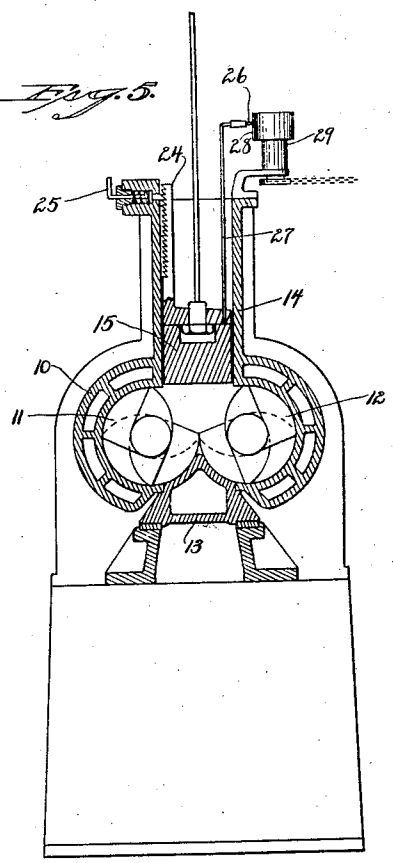


Fig. 5.



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UNITED STATES PATENT OFFICE.

FERNLEY H. BANBURY, OF ANSONIA, CONNECTICUT, ASSIGNOR TO BIRMINGHAM IRON FOUNDRY, OF DERBY, CONNECTICUT, A CORPORATION.

MACHINE FOR TREATING RUBBER AND OTHER HEAVY PLASTIC MATERIAL.

Application filed February 23, 1922. Serial No. 538,741.

To all whom it may concern:

Be it known that I, FERNLEY H. BANBURY, a citizen of the United States, residing at Ansonia, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Machines for Treating Rubber and Other Heavy Plastic Material; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Fig. 1 a sectional view of a machine for treating rubber and other heavy plastic material, showing one form of my invention.

Fig. 2, Fig. 3 and Fig. 4 sectional views illustrating modified forms of casings.

Fig. 5 a sectional view illustrating another means for restricting the upward movement of the closure, and means for recording the movement of the closure.

Fig. 6 is a plan view of the recording device.

This invention relates to improvement in machines for treating rubber and other heavy plastic material, and particularly to devices of the type shown and described in Letters-Patent of the United States, No. 1,200,070, dated October 3, 1916, and which included a casing with one or more rotors located therein, the casing being formed with a neck and a closure located in the said neck and adapted to hold the material in position to be acted upon by the rotors. In some sizes of machines, it is desirable to limit the upward movement of the closure, or, in other words, to lock it in its operative position, and one object of this invention is to provide means for holding the closure in its operating position. Although means are provided for locking the closure, a certain amount of play is permitted, and it is desirable to record this play, or vertical movement, of the closure; and another object of this invention is to provide means for recording the movement of the closure, and the invention consists in the construction as will be hereinafter described and particularly recited in the claims.

As shown in Fig. 1 of the drawings, I employ a casing 10, which, in this case, is a double cylinder in which rotors 11 and 12 are mounted. The casing is provided at the bottom with a suitable door 13. The casing is also provided with a neck 14, in which is located a closure 15. As shown in this figure, the closure is provided with an upwardly-projecting rod 16, extending into connection with a head 17 in a cylinder 18, the head being adapted to be operated by air or liquid to raise the closure. To prevent the closure from rising, I mount a latch 19 in the neck 14, with a spring 20 adapted to force the nose 21 of the latch into a recess 22, formed for it in one side of the closure.

Instead of having the neck arranged centrally of the casing, it may be arranged at one side thereof, as shown in Figure 2 of the drawings; and, instead of employing a double cylinder, I may employ a single cylinder 23, as shown in Figure 3 of the drawings; and, instead of arranging the neck of the single cylinder centrally over the rotor, it may be at one side thereof, as shown in Figure 4 of the drawings; or, instead of employing a spring-latch to directly engage with the closure, the closure may be formed with an upwardly-projecting rack 24, as shown in Figure 5 of the drawings, to coact with a spring-latch 25 mounted near the top of the neck, and, to record the vertical movement of the closure, I mount a pencil 26 at the top of a rod 27 mounted in the closure, and this pencil-point stands adjacent to a recording-sheet 28, which is drawn from a roll 29 into a roll 30, across the point of the pencil, so that the movement of the closure will be recorded on the sheet 28.

I claim:

1. In a machine of the class specified, the combination with a casing having a charging-opening in its top, of a rotor located in the said casing below the said opening, a closure for the said opening, and a latch for holding, with freedom for limited localized movement, the said closure in position to close the said opening.

2. In a machine of the class specified, the combination with a casing having a charging-opening in its top, of a rotor located in the said casing below the said opening, a movable closure for the said opening, and a recorder for registering the movement of the closure during the operation of the rotor.

3. In a machine of the class specified, the combination with a casing having a charging-opening in its top, of a rotor located in

the said casing below the said opening, a closure for the said opening, means for holding the said closure in its closed position, with freedom for limited localized movement therein, and a recorder for registering the said limited movement of the closure under the influence of the rotor.

4. In a machine of the class specified, the combination with a casing having a charging-opening in its top, of a rotor located in the said casing below the said opening, a closure for the said opening, and a spring-latch for holding, with freedom for limited localized movement, the said closure in position to close the said opening.

5. In a machine of the class specified, the combination with a casing having a charging-opening in its top, of two rotors located in the said casing below the said opening, a movable closure for the said opening, and a recorder for registering the movement of the closure during the operation of the rotors.

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

FERNLEY H. BANBURY.

Witnesses:

FREDERIC C. EARLE,

MALCOLM P. NICHOLS.