F. L. GIBSON.

VULCANIZER.

APPLICATION FILED OCT. 6, 1914.

1,155,909.

Patented Oct. 5, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

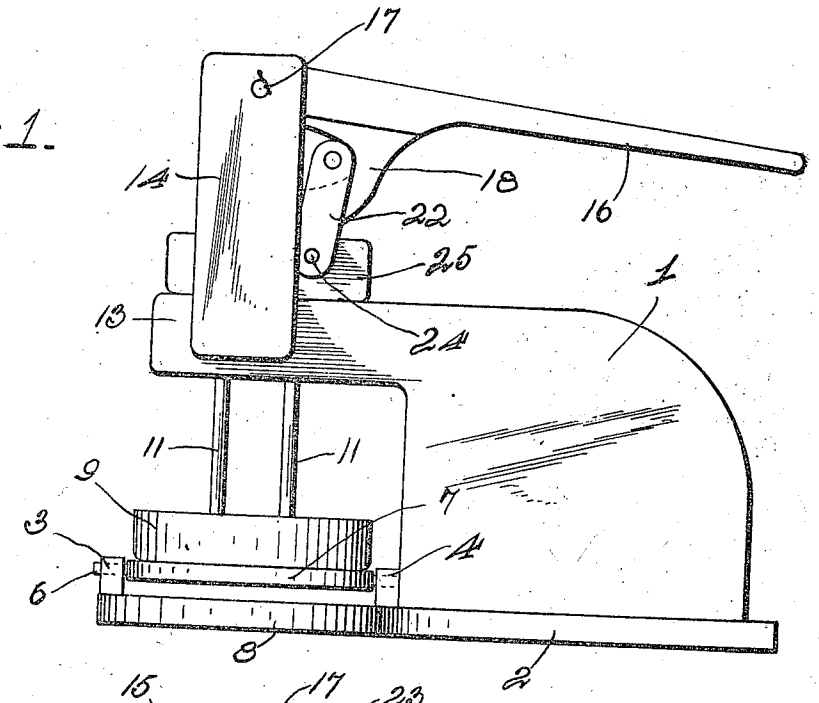
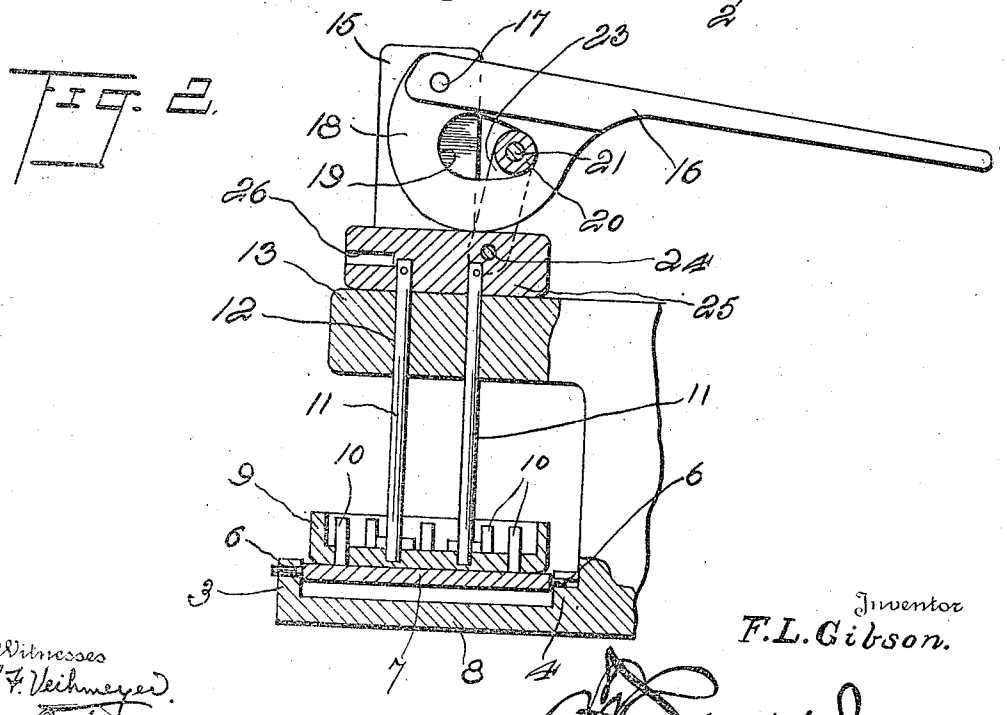


Fig. 2.



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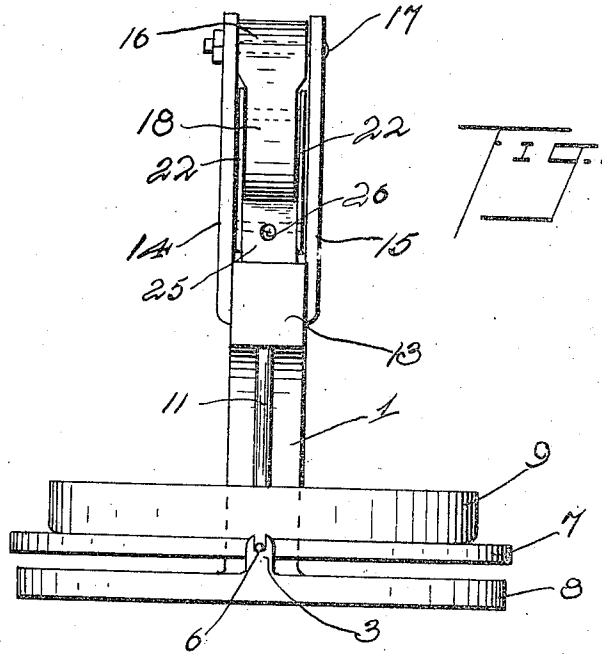


Fig. 3.

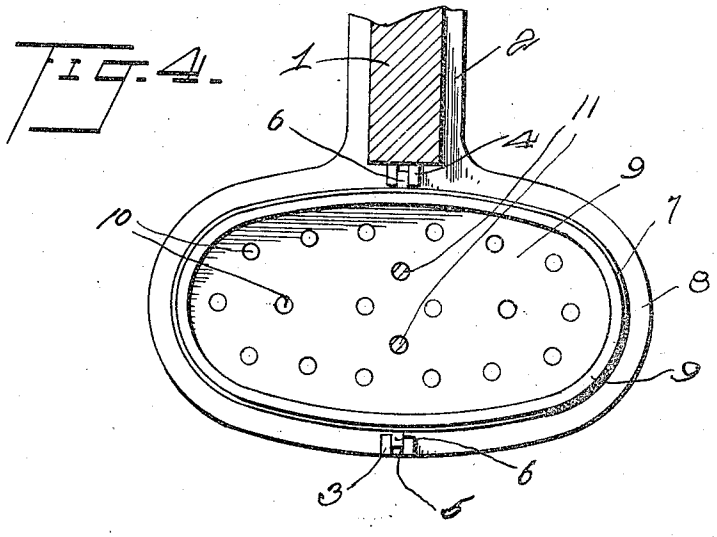


Fig. 4.

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UNITED STATES PATENT OFFICE.

FRANK L. GIBSON, OF PENDER, NEBRASKA.

VULCANIZER.

1,155,909. Specification of Letters Patent. Patented Oct. 5, 1915.

Application filed October 6, 1914. Serial No. 865,353.

To all whom it may concern:

Be it known that I, FRANK L. GIBSON, a citizen of the United States, residing at Pender, in the county of Thurston and State of Nebraska, have invented certain new and useful Improvements in Vulcanizers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to vulcanizers and the primary object of the invention is the provision of a device of this nature which has a vertically operable cup and a pivoted lever provided with a cam formed integral therewith for raising or lowering the vulcanizing cup.

Another object of this invention is the provision of a base board which is pivotally mounted upon the base plate of the vulcanizer so that it may move in opposite direction.

With the foregoing and other objects in view this invention consists in such novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters designate like or corresponding parts throughout the several views, and in which:—

Figure 1 is a side elevation of the improved vulcanizer. Fig. 2 is a central sectional view through the vulcanizer. Fig. 3 is a front view of the vulcanizer, and Fig. 4 is a cross sectional view showing the vulcanizing cup in plan.

Referring more particularly to the drawings, 1 designates the supporting structure of the vulcanizer which has a base 2 formed thereupon. The base 2 projects forwardly from the main body portion 1 of the vulcanizer and it has upstanding ears 3 and 4 formed thereupon, which ears are provided with recesses 5 formed therein. The recesses 5 which are formed in the ears 3 and 4 receive the pins 6, which are formed integrally with the sides of and substantially equi-distant of the ends of a plate 7. By seating the pins 6 in the slots or recesses 5 the plate 7 will be pivotally supported above the forwardly extending extension 8 which is formed on the base 2. The plate 7 which is provided for receiving a tire (not shown) or like article which is to be patched or vulcanized thereupon, has positioned directly thereabove a vulcanizing cup 9. The vulcanizing cup 9 has a plurality of vertical pins 10 formed therein and extending upwardly within the retaining portion of the same, for increasing the heating area of the cup, so that when any suitable type of volatile liquid is placed within the cup and ignited, the cup will be efficiently heated for vulcanizing or patching a tire.

The cup 9 has a pair of rods 11 secured thereto which rods extend upwardly therefrom and are slidably seated in openings 12 which extend through the forwardly extending arm 13. The arm 13 is formed upon the supporting structure 1 of the vulcanizer and it has secured to its sides and extending upwardly therefrom plates 14 and 15. The plates 14 and 15 are positioned upon opposite sides of the forwardly extending arm 13 as is clearly shown in Fig. 3 of the drawings, and they have pivotally mounted therebetween a lever 16. The lever 16 is pivotally mounted upon a pin 17, which extends through the plates 14 and 15 adjacent the upper ends of the same. The lever 16 has a cam 18 formed upon the lower side edge of its pivoted end. The cam 18 is provided with a cam shaped opening 19 formed therein, in which is seated a roller 20. The roller 20 is rotatably mounted upon a pin 21. The pin 21 is carried by arms 22 and 23, which depend therefrom and are pivotally connected as at 24 to the head block 25 of the vulcanizing cup structure. The head 25 has bores 26 extending horizontally thereinto from the ends of the same.

In the operation of the improved vulcanizer heretofore described: When it is desired to vulcanize or patch an inner tube (not shown) the cup 9 is filled with kerosene oil, gasolene, or analogous volatile liquid and the same is ignited, which thoroughly heats the cup 9. The tire is then placed upon the pivoted plate 7 and the lever 16 is operated for forcing the head 9 downwardly and into engagement with the tire. The heat passed off by the heated cup 9 will properly vulcanize the tire. The cup 9 is raised from engagement with the upper surface of the plate 8 by the upward movement of the lever 16, which moves the head 25 through the connection between the cam 18 and the head through the medium of the

arms 22 and 23. The roller 20 which rides within the cam shaped opening 19 is provided for relieving the friction contingent with the operation of the lever 16. In pressing the lever 16 downwardly, the outer surface or periphery of the cam 18 rides upon the upper surface of the head 25 and forces the head 25 and the cup 9 which is connected thereto through the medium of the rods 11 downwardly.

From the foregoing description taken in connection with the accompanying drawings the advantages of the construction and of the method of operation of the improved vulcanizer will be readily apparent to those skilled in the art to which this invention appertains and, while in the foregoing description, the principle of the operation of this invention has been described together with various features of construction, it is to be understood that certain minor features of construction, combination and arrangement of parts may be altered to suit practical conditions provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:—

1. In a vulcanizer, a supporting structure having a base formed integrally therewith and extending forwardly therefrom, upstanding ears formed upon said base, said ears being provided with recesses formed in their upper ends, a plate having pins formed integrally therewith, said pins being seated in said recesses for pivotally supporting said plate upon said forwardly extending section of said base, and a vulcanizing cup positioned upon said pivoted plate for movement into or out of engagement with said plate.

2. In a vulcanizer, a supporting structure having a base, said base extending forwardly of said supporting structure, upstanding ears formed integral with said base, said ears being provided with facial recesses formed in their upper sides, a plate, pins formed integral with the sides of said plate, said pins being mounted in said recesses for pivotally supporting said plate, a vulcanizing cup positioned above said pivoted plate, a plurality of rods connected to said vulcanizing cup and extending vertically therefrom, a head, said rods being rigidly connected to said head and means for raising or lowering said head for raising or lowering said vulcanizing cup into or out of engagement with said pivoted plate.

3. In a vulcanizer, a supporting structure, a base formed integral with said supporting structure and extending forwardly therefrom, upstanding ears formed upon said base, said ears being provided with facial recesses formed in their upper sides, a plate, pins formed integral with said plate, said pins being seated in said facial recesses for pivotally supporting said plate above said forwardly extending base, a vulcanizing cup having a plurality of pins formed integrally therewith and extending upwardly thereinto, a pair of vertical rods detachably connected to said cup, an arm formed upon said supporting structure and slidably supporting said vertically extending rods, a head rigidly connected to the upper end of said rod and positioned upon the upper side of said arm, upstanding plates connected to said arm, a lever pivotally carried by said plates and means associated with said lever for engagement with said head for moving it upwardly or downwardly for raising or lowering said vulcanizing cup into or out of engagement with said pivoted plate.

4. In a vulcanizer, a supporting structure, a base formed integral with said supporting structure and extending forwardly therefrom, upstanding ears formed upon said base, said ears being provided with facial recesses formed in their upper sides, a plate, pins formed integral with said plate, said pins being seated in said recesses for pivotally supporting said plate above said forwardly extending base, a transversely extending arm formed integrally with said supporting structure, said arm being provided with openings extending vertically therethrough, rods slidably seated in said openings, a vulcanizing cup detachably connected to the lower ends of said rods, a plurality of pins extending upwardly into said vulcanizing cup for increasing the heating area thereof, a head rigidly connected to the upper ends of said rod and positioned upon the upper side of said transversely extending arm, vertical plates connected to said arm, a lever pivotally connected to said vertical plates, a cam formed integrally with said lever and provided with a cam shaped opening extending therethrough, said cam shaped opening having a roller seated therein, said roller being rotatably mounted upon a pin, arms supporting said pin, said arms being pivotally connected to said head, for raising said head and said vulcanizing cup upon upward movement of said lever, the periphery of said cam engaging the upper surface of said head for forcing said head and said vulcanizing cup downwardly upon downward movement of said lever.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK L. GIBSON.

Witnesses:
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F. R. SMITH.