W. S. RUNNELS.

RADIATOR COVER.

APPLICATION FILED MAR. 18, 1921.

1,422,306. Patented July 11, 1922.

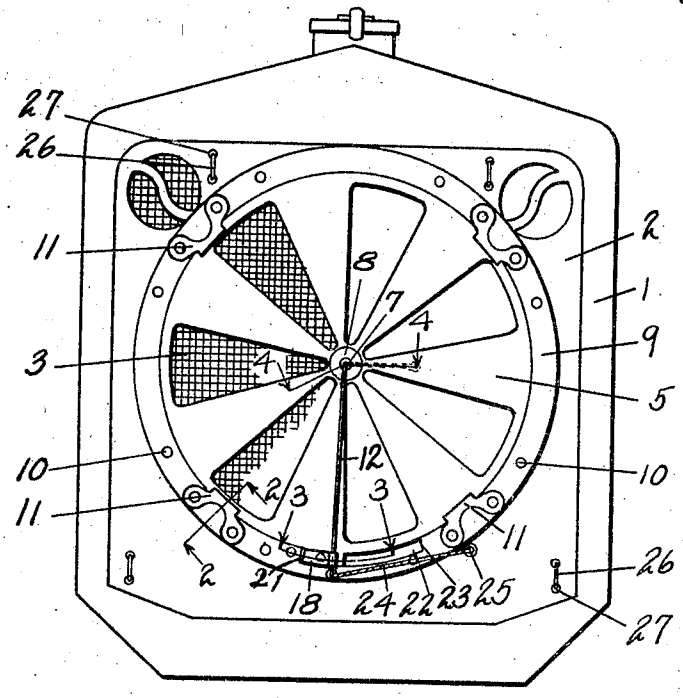


FIG. I.

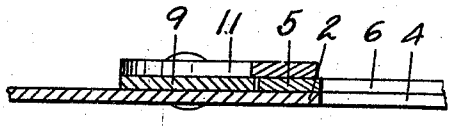


FIG. II.

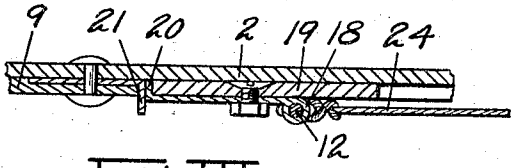


FIG. III.

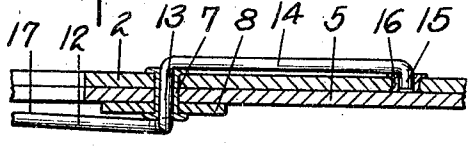


FIG. IV.

INVENTOR.
Walter S. Runnels
BY Chappell & Earl
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WALTER S. RUNNELS, OF KALAMAZOO, MICHIGAN.

RADIATOR COVER.

1,422,306. Specification of Letters Patent. **Patented July 11, 1922.**

Application filed March 18, 1921. Serial No. 453,240.

To all whom it may concern:

Be it known that I, WALTER S. RUNNELS, a citizen of the United States, residing at the city and county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Radiator Covers, of which the following is a specification.

This invention relates to improvements in radiator covers.

The main objects of this invention are:

First, to provide an improved radiator cover which may be quickly applied to radiators of different types or makes and opened or closed from the seat.

Second, to provide an improved radiator cover which may be made of fibre board, thereby rendering it noiseless, and also one which is economical to produce and durable in use.

Further objects, and objects relating to structural details, will definitely appear from the detailed descriptions to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Fig. I is a front view of a radiator having my improved cover mounted thereon, parts being shown conventionally.

Fig. II is an enlarged detail section on a line corresponding to line 2—2 of Fig. I.

Fig. III is an enlarged detail section on a line corresponding to line 3—3 of Fig. I.

Fig. IV is an enlarged detail section on a line corresponding to line 4—4 of Fig. I.

In the drawing similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, 1 represents the radiator of a motor vehicle. My improved radiator cover comprises a cover plate 2 of suitable dimensions and shape to cover the core 3 of the radiator. This plate 2 is formed of fibre board and has shutter openings 4 therein, preferably of triangular shape and disposed radially, as illustrated.

I provide a circular shutter 5 having radially disposed triangular openings 6 adapted to be brought into register with the openings 4. This shutter is mounted upon the cover plate by means of a tubular eyelet-like pivot 7, there being a washer 8 on the outerside of the shutter,—see Fig. IV.

A ring 9 is secured to the face of the cover plate by means of the rivets 10 to embrace the shutter. On this ring are clips 11 disposed to overlap the shutter as shown, thereby effectively supporting the edge of the shutter. These clips and the ring are also preferably formed of fibre board. The shutter is held normally in its closed position by means of the spring 12 having an offset 13 therein engaged in the pivot 7. The inner arm 14 of the spring has a laterally turned end 15 engaging an eyelet 16 in the cover plate. The outer arm 17 of the spring is passed through an attaching clip 18 secured on the stop projection 19 of the shutter, as shown in Fig. III. This clip has a flange 20 overlapping the edge of the stop to coact with the stop 21 secured to the ring 9,—see Fig. III.

The stop projection swings in a slot 22, the end 23 of the slot serving to limit the closing movement of the shutter, the spring holding the shutter normally open against the stop 21.

The operating cable 24 is attached to the end of the arm 17 of the spring and carried through the eyelet 25 to some convenient position for operation. A pull on the cable will close the shutter, and when released the spring automatically opens it.

By this simple arrangement of parts I secure a radiator cover which is readily applied or mounted upon the radiator, the mounting being effected by means of the wires 26 passed through holes 27 in the cover plate and through the radiator.

The structure, when formed of fibre board suitably waterproofed, is very durable, and the few metal parts exposed are not such as are likely to rust or become discolored.

The cover plates may be made of different sizes and shapes, but one of the advantages in making them of fibre board is that they may be readily fitted to the radiator on which it is desired to use the same.

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

1. In a radiator cover, the combination of a cover plate having shutter openings therein, a circular shutter mounted on said cover plate by means of a tubular pivot and having openings therein adapted to be brought

into register with the openings of said cover plate, a ring mounted on said cover plate to embrace said shutter, clips on said ring projecting over the edge of said shutter, a stop member on said shutter, coacting stop members on said ring whereby the movement of said shutter is limited, a spring having an offset therein engaged in said shutter pivot, the inner arm of said spring being engaged with said cover plate and its outer arm being secured to said shutter whereby the shutter is held normally open, and means for closing said shutter attached to the outer arm of said spring.

2. In a radiator cover, the combination of a cover plate having shutter openings therein, a circular shutter mounted on said cover plate by means of a tubular pivot and having openings therein adapted to be brought into register with the openings of said cover plate, a stop member on said shutter, a spring having an offset therein engaged in said shutter pivot, the inner arm of said spring being engaged with said cover plate and its outer arm being secured to said shutter whereby the shutter is held normally open, and means for closing said shutter attached to the outer arm of said spring.

3. In a radiator cover, the combination of a cover plate having shutter openings therein, a circular shutter rotatably mounted on said cover plate and having openings therein adapted to be brought into register with the openings of said cover plate, a ring mounted on said cover plate to embrace said shutter, clips on said ring overlapping said shutter, a stop member on said shutter, coacting stop members on said ring whereby the movement of said shutter is limited, a spring for opening said shutter, and means for closing said shutter against the tension of said spring.

4. In a radiator cover, the combination of a circular cover plate having shutter openings therein, a shutter rotatably mounted on said cover plate and having openings therein adapted to be brought into register with the openings of said cover plate, a ring mounted on said cover plate to embrace said shutter, and clips mounted on said ring to project over the edge of said shutter.

5. In a radiator cover, the combination of a cover plate having a shutter opening therein, a circular shutter mounted on said cover plate by means of a tubular pivot and having openings therein adapted to be brought into register with the openings of said cover plate, and a spring having an offset therein engaged with said cover plate and its outer arm being secured to said shutter whereby the shutter is held normally open.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

WALTER S. RUNNELS. [L. S.]

Witnesses:

LUELLA G. GREENFIELD,

MARGARET L. GLASGOW.