

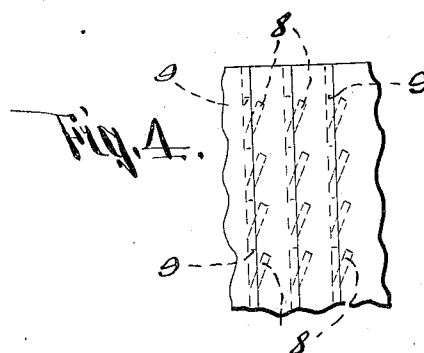
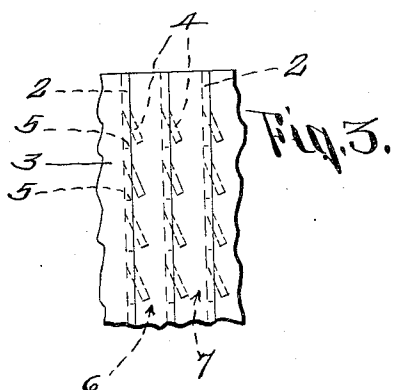
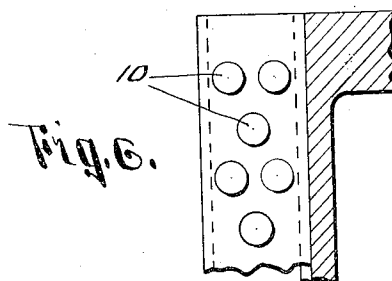
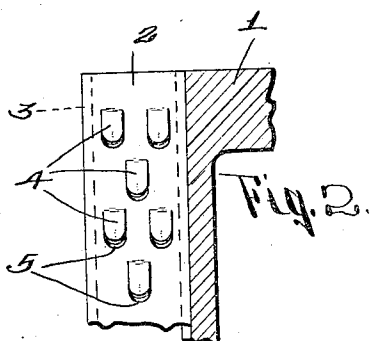
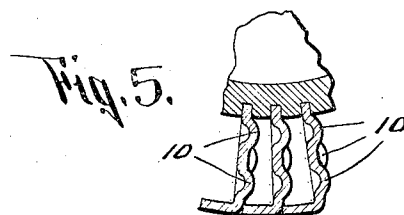
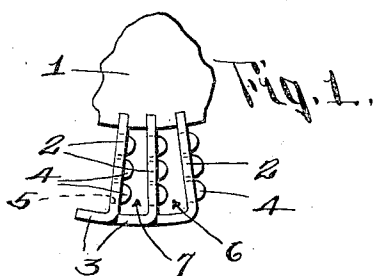
July 23, 1929.

R. MURPHY

1,721,870

CYLINDER CONSTRUCTION FOR AIR COOLED ENGINES

Filed Feb. 24, 1926



INVENTOR.
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UNITED STATES PATENT OFFICE.

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CYLINDER CONSTRUCTION FOR AIR-COOLED ENGINES.

Application filed February 24, 1926. Serial No. 90,390.

This invention relates to air cooled engines and particularly to means by which the cooling of the engine by an air current is greatly facilitated.

5 The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention reference is had to the accompanying drawings in which
10 like characters designate corresponding parts in all the views.

Figure 1 is a fragmentary plan view of the air cooled cylinder embodying my invention.

15 Figure 2 is a fragmentary vertical sectional view.

Figure 3 is a fragmentary side elevation of parts seen in Figure 1.

Figure 4 is a view similar to Figure 3 showing an inverted arrangement of the deflectors.

20 Figure 5 is a view similar to Figure 1 showing a modified form of my invention.

Figure 6 is a vertical sectional view similar to Figure 2 of the embodiment of my invention shown in Figure 5.

25 This engine construction comprises, generally, a cylinder provided with means forming lengthwise air passages, that is passages extending lengthwise of the cylinder including heat radiating flanges, the flanges being provided with projections or deflectors which
30 cause the air current to be deflected out of its otherwise straight course through the passages and take a tortuous path or to pass in a direction transversely of the lengthwise passages, these projections being arranged
35 lengthwise of the fins from top to bottom and staggered.

1 designates the cylinder, and the means for forming the lengthwise passages in addition
40 to the fins or lengthwise flanges.

2 comprises a jacket. The jacket is here shown as formed by angularly bent flanges 3 at the outer edges of the fins, each flange 3 projecting towards the fin 2. The jacket may
45 be formed in any suitable manner.

4 are the deflectors, here shown as struck from the flanges 2, which are usually of sheet metal attached to the cylinder in any well known manner. They are here shown as having
50 their inner margins embedded in the cylinder, the embedding being accomplished by casting the cylinder in a mold around the margins of the flanges extending in the mold.

Preferably the forming of the deflectors 4 also form passages or perforations 5 extending
55 through flanges so that the air deflected in the lateral direction can pass from one lengthwise air passage 6 to the other 7.

In Figures 1, 2 and 3 the deflectors are shown as inclined downwardly so as to deflect
60 the air from one side of any one air passage toward the other side thereof.

In Figure 4 these deflectors 8 are shown as arranged as inclining upwardly and laterally in order to scoop the air through the perforations 9 from one lengthwise air passage to the other. In Figures 5 and 6 the deflectors
65 are shown as projections or bosses 10. These bosses 10 are preferably round and serve to obstruct the air and deflect it in its passage
70 through the lengthwise air passage so that the air will absorb maximum heat from the flanges. The staggered arrangement of the deflectors 4, 8 or 10 as here shown is brought about by locating the deflectors in pairs and
75 locating a single deflector between the pairs out of line with the members of each pair as seen in Figures 2 or 6.

By my invention intimate contact between the air current and the flanges and the
80 jacket is brought about, which results in the absorption by the air of maximum heat from the heat radiating flanges or the jacket and hence in maximum cooling of the cylinder.

What I claim is:—

85 1. A cylinder construction for air cooled engines having means for forming air passages extending lengthwise of the cylinder including heat radiating fins extending
90 lengthwise of the cylinder the fins being formed with deflectors spaced apart at intervals lengthwise of the fins, the deflectors of each fin being arranged staggered.

2. A cylinder construction for air cooled internal combustion engines having means
95 for providing air passages extending lengthwise of the cylinder including heat radiating flanges, the flanges being flat strips provided with inclined deflectors struck therefrom and means at the outer edges of the flat strips for
100 forming a jacket.

In testimony whereof, I have hereunto signed my name, at Syracuse, in the county of Onondaga, and in the State of New York,
this 9th day of Feb., 1926.

RALPH MURPHY.