

No. 681,565.

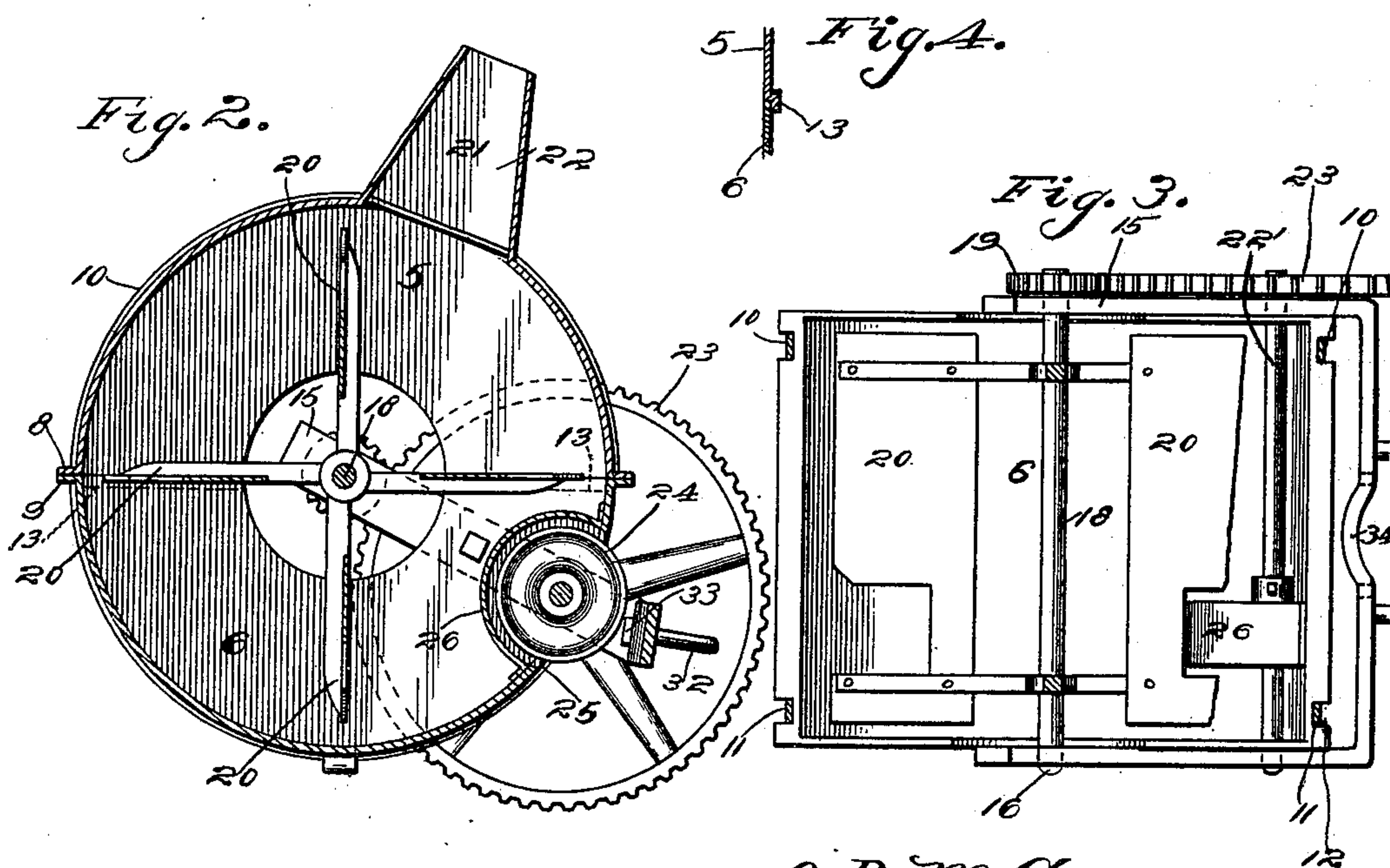
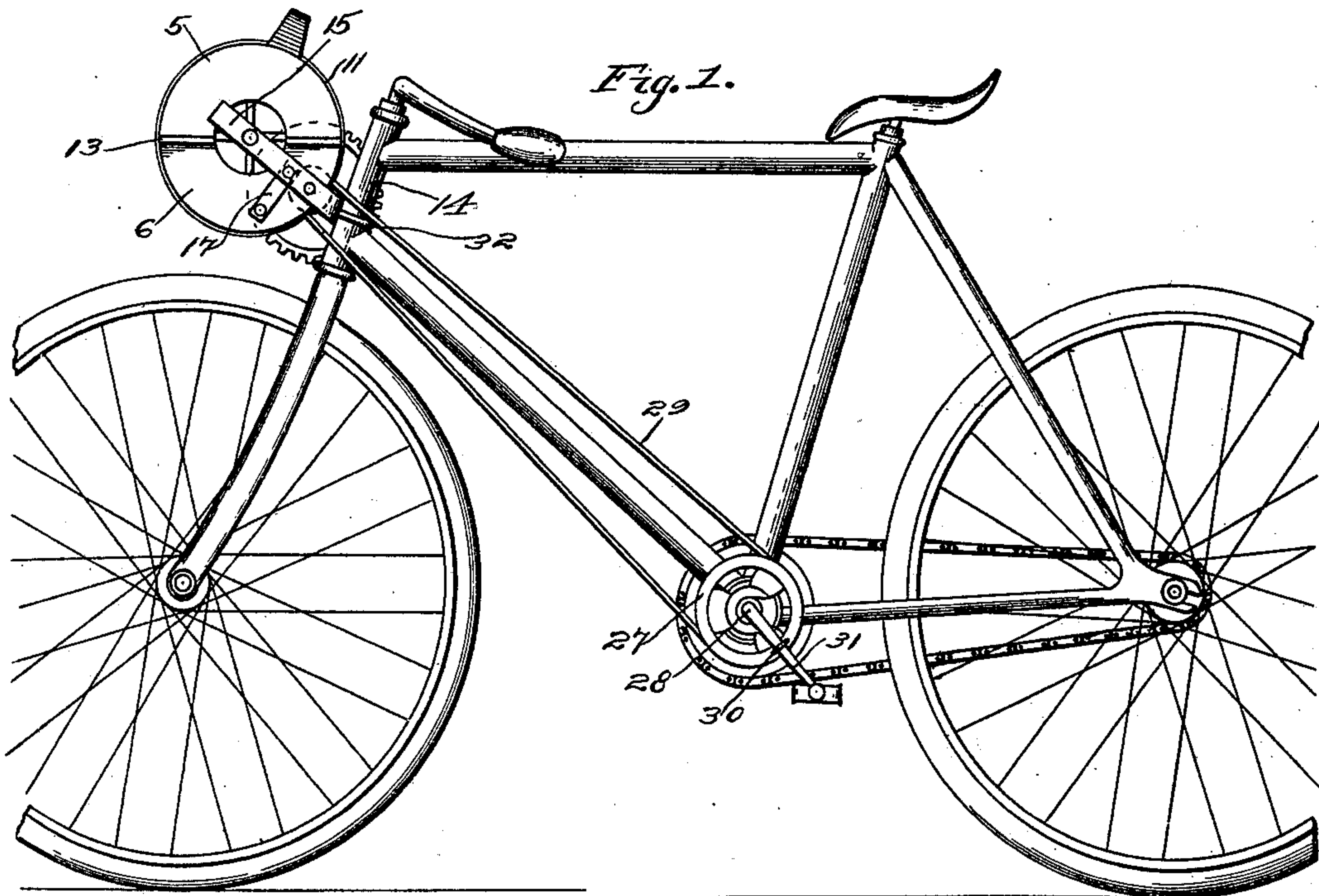
Patented Aug. 27, 1901.

O. B. McCUNE & C. MULL.

BICYCLE FAN.

(Application filed Feb. 15, 1901.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

ORLANDO B. McCUNE AND CHARLIE MULL, OF IOLA, KANSAS.

## BICYCLE-FAN.

SPECIFICATION forming part of Letters Patent No. 681,565, dated August 27, 1901.

Application filed February 15, 1901. Serial No. 47,498. (No model.)

*To all whom it may concern:*

Be it known that we, ORLANDO B. McCUNE and CHARLIE MULL, citizens of the United States, residing at Iola, in the county of Allen and State of Kansas, have invented a new and useful Bicycle-Fan, of which the following is a specification.

This invention relates to fans, and more particularly to fans for attachment to bicycles, the object of the invention being to provide a cheap, simple, and efficient construction adapted for attachment to the head of a bicycle and which will be operated from the crank-shaft to project a stream of air into the face of the rider, further objects and advantages of the invention being apparent from the following description.

In the drawings, forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation showing a bicycle with the present fan attached thereto. Fig. 2 is a section taken transversely of the apparatus at right angles to the axis thereof. Fig. 3 is a plan view of the apparatus with the upper half of the casing removed. Fig. 4 is a detail sectional view showing the structure of the engaged ends of the casing-sections.

Referring now to the drawings, the present apparatus comprises a cylindrical casing, including upper and lower sections 5 and 6, divided by a plane including the axis of the casing, the edges of the sections having flanges 8 and 9, which are adapted to abut when the sections are assembled, and to hold the sections together straps 10 and 11 are passed around the casing and through openings 12 in the flanges above referred to, the sections being also held against displacement longitudinally by means of flanges 13, formed at the ends of the upper section and which overlap the upper edges of the ends of the lower section. This casing contains the fan, and to hold it to the head 14 of a bicycle a yoke-shaped plate 15 is provided and is disposed with its web portion longitudinally of and parallel with the side of the casing and with its ends radially of the ends of the casing and projecting slightly beyond the centers thereof, these arms being held against the ends of the lower sections of the casing by rivets or in

any other suitable manner. Brace-plates 17 are also attached to the arms and ends of the lower section of the casing to more securely hold the arms thereto. The ends of the casing are open at their central portions, and a shaft 18 is passed longitudinally through the casing and projects through the openings of the ends thereof, the shaft being journaled in bearings in the arms of the plate 15, and at one end of the shaft and beyond the adjacent arm of plate 15 there is fixed a pinion 19 for a purpose that will be presently explained.

Upon the shaft 18 and within the casing there is fixed a fan including blades 20, and which fan is adapted to draw air through the open ends of the casing and discharge it through an opening 21 in the upper section of the casing, said upper section having a discharge-spout 22 leading from said opening for properly directing the stream of air. To rotate the shaft 18 and therewith the fan, a counter-shaft 22' is provided and is journaled in the ends of the lower section of the casing and adjacent to the side thereof, and on one end of the shaft is fixed a gear 23, which is engaged with the pinion on the fan-shaft 18. The shaft 22' has bearings also in the arms of the plate 15 and beyond which it extends, as shown. To rotate the counter-shaft 22' a pulley 24 is fixed thereon and operates in a slot 25 in the side of the lower section of the casing, and which pulley has a covering 26, disposed within the casing and secured to the wall thereof. A drive-pulley 27 is fixed upon the crank-shaft 28 of the bicycle, and engaged therewith and with the pulley 24 is a belt 29. To insure rotation of pulley 27 a loop or staple 30 is engaged over the adjacent crank 31 of the bicycle and is fastened to the face of the pulley.

To attach the plate 15 to the head of the bicycle, a loop 32 is passed around said head and has its ends threaded and engaged through holes in the web of the plate, beyond which are engaged nuts 33. In the web of plate 15 is a socket 34 to permit it to fit more snugly against the bicycle-head.

With this construction it will be seen that there is provided an extremely cheap and efficient device which may be readily applied and removed.

In practice modifications of the specific con-



struction shown may be made, and any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention, and it will be  
5 noted that the blades of the fan are cut away to permit them to escape the covering of the drive-pulley on the counter-shaft.

What is claimed is—

1. A fan attachment for bicycles comprising  
10 ing a casing including sections divided in a plane including the axis of the casing, straps engaged around the casing to hold the sections from separation, a supporting-bracket connected to one member of the casing, and  
15 a fan within the casing and having a drive-shaft journaled in the bracket, said casing having an air-outlet opening.

2. A fan attachment for bicycles comprising a casing, comprising separable sections  
20 divided longitudinally of the casing, a support embracing the casing and attached to a section thereof, a fan within the casing and having a shaft journaled in the support, flanges for holding the sections against dis-  
25 placement longitudinally, and straps passed around the casing to hold the sections against separation.

3. A fan attachment for bicycles comprising a casing having openings in its ends and  
30 a discharge-opening in its side, a yoke-plate disposed with its arms against the ends of the casing and secured thereto, a fan within the casing having a shaft passed through the openings of the ends of the casing and jour-  
35 naled in the arms of the yoke-plate, a coun-

ter-shaft passed through the casing, connections between the counter-shaft and fan-shaft for operating the latter, said counter-shaft having bearings in the arms of the yoke-plate, a drive-pulley carried by the counter-shaft, 40 and means for attaching the yoke-plate to the head of a bicycle.

4. A fan attachment for bicycles comprising a separable casing having openings in its ends and a discharge-opening in its side pro- 45 vided with a spout, a yoke-plate having its arms disposed against and attached to a section of the casing and projecting transversely of the openings of the ends of the casing, a fan-shaft journaled in the arms of the yoke- 50 plate and provided with a fan, a gear upon said shaft, a counter-shaft passed longitudinally through the casing and journaled in the arms of the yoke-plate, a gear upon the counter-shaft meshing with the gear on the 55 fan-shaft, a pulley on the counter-shaft for engagement of a driving-belt and projecting into the casing, and a covering for the inwardly-projecting portion of the pulley, the blades of the fan being cut away to escape the 60 pulley and its covering.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

ORLANDO B. McCUNE.  
CHARLIE MULL.

Witnesses:

B. F. DAWSON,  
R. C. WOOD.