

No. 619,816.

Patented Feb. 21, 1899.

H. G. WISE, JR.
UNICYCLE.

(Application filed Jan. 17, 1898.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 3.

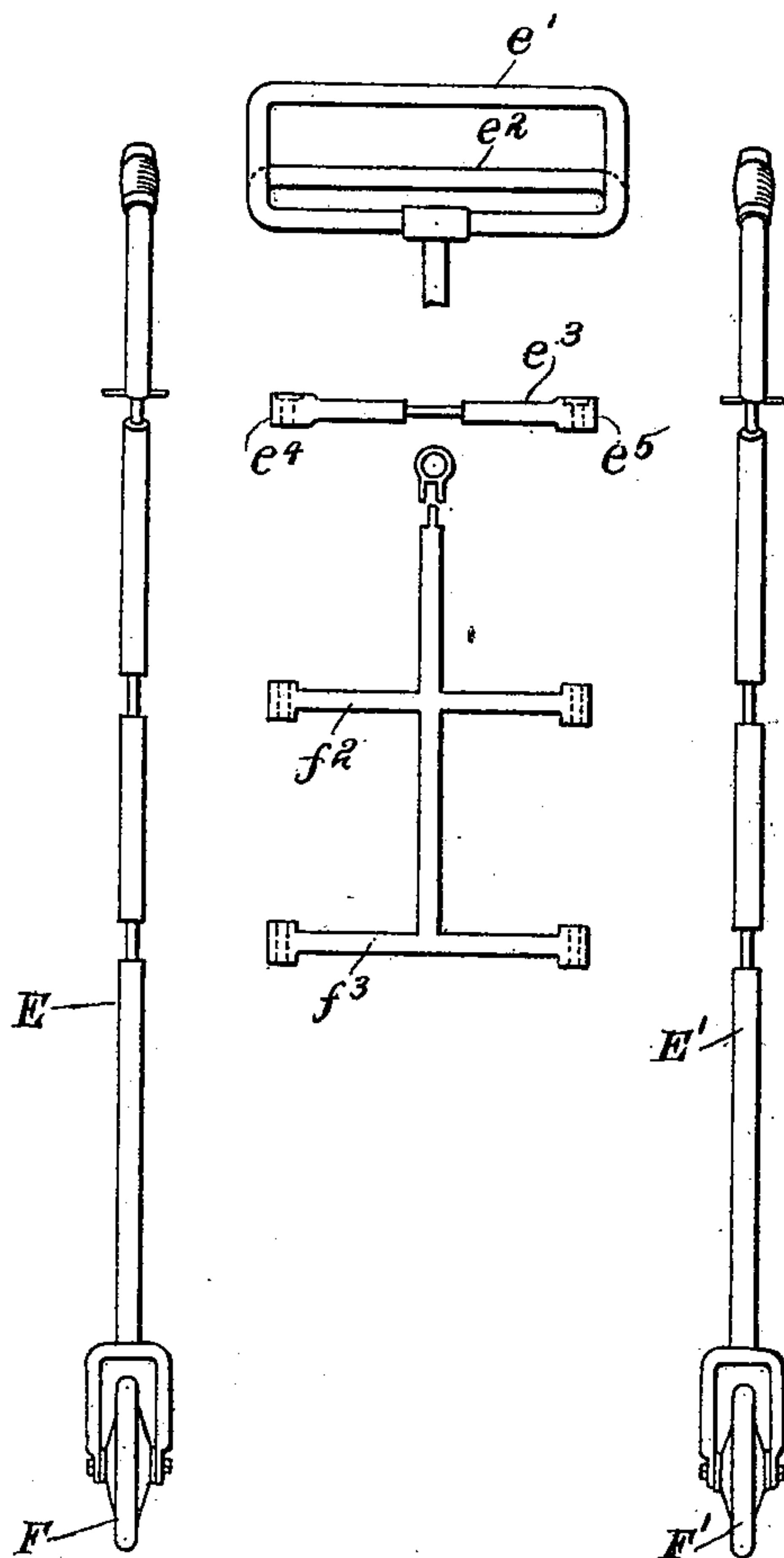


Fig. 4.

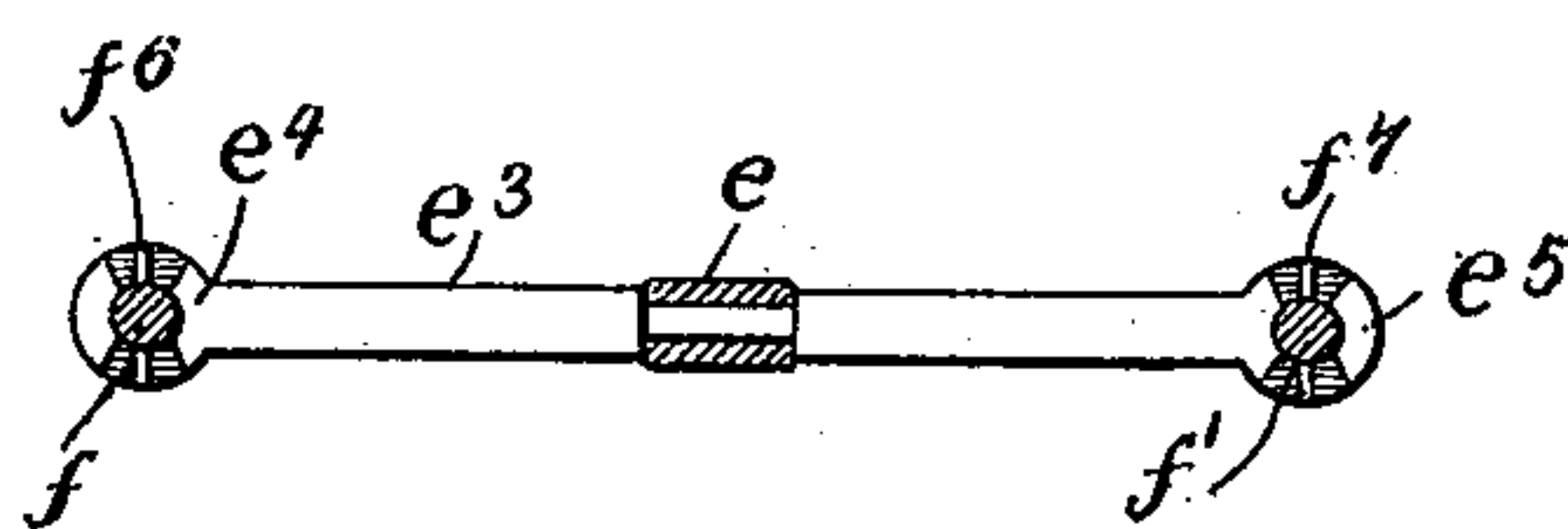
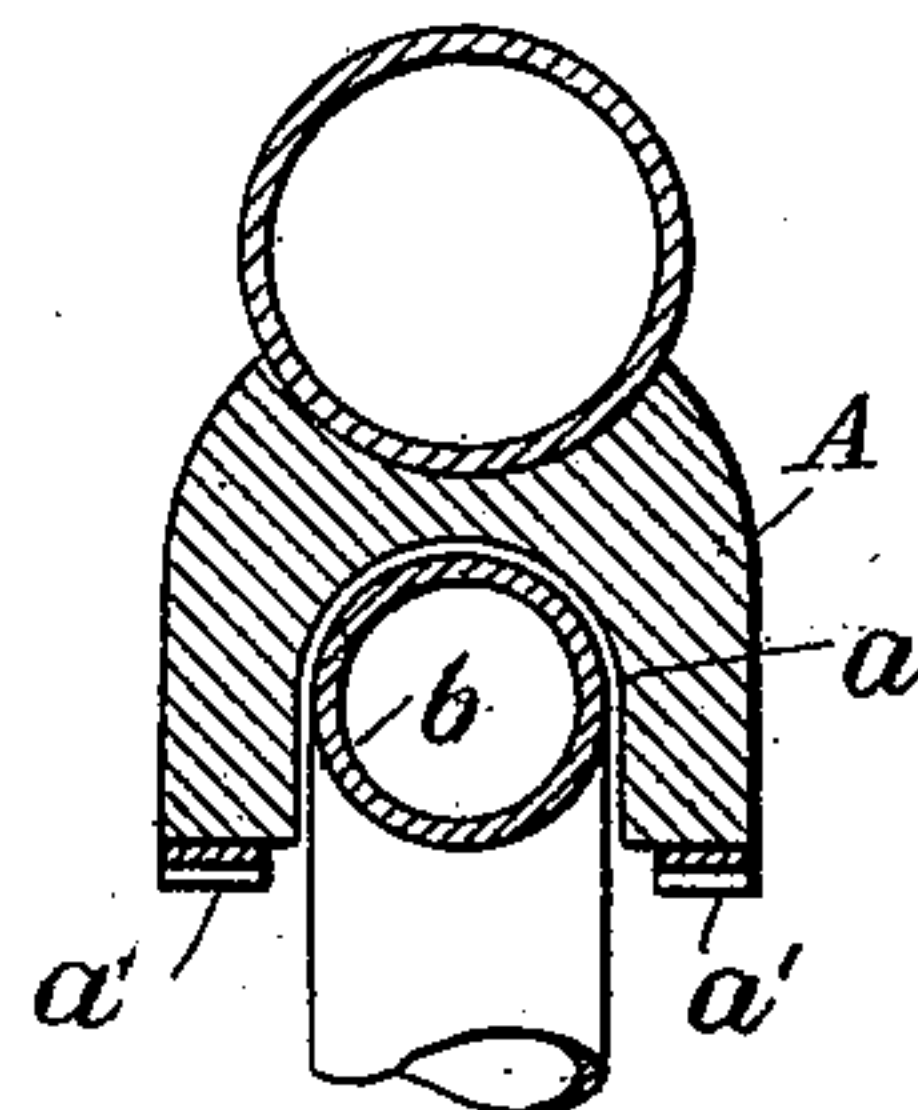


Fig. 5.



WITNESSES:

Geo. W. Naylor.
L. M. Fuller

INVENTOR

Henry G. Wise, Jr.

BY

Edgar Sales & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

HENRY GEORGE WISE, JR., OF NEW YORK, N. Y.

UNICYCLE.

SPECIFICATION forming part of Letters Patent No. 619,816, dated February 21, 1899.

Application filed January 17, 1898. Serial No. 666,927. (No model.)

To all whom it may concern:

Be it known that I, HENRY GEORGE WISE, Jr., a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Unicycles, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in unicycles; and it has for its object to provide a machine of this character which will be simple and economical in construction, and which reduces the danger both to the rider and the public to a minimum.

The invention consists of a unicycle constructed substantially as hereinafter described, and afterward defined in the annexed claim.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by the same letters of reference in each of the views, and in which—

Figure 1 is a view in elevation of my improved unicycle, a portion of the outer rim being broken away to show the construction. Fig. 2 is a central transverse section on the line 2 2 of Fig. 1 viewed from above. Fig. 3 is a view in elevation of the frame detached. Fig. 4 is a view of a detail somewhat enlarged, and Fig. 5 is a cross-section through the inner and outer rims.

In the drawings, A represents the outer rim of my improved unicycle, which is constructed of any suitable material giving the required strength and lightness and is provided with the usual pneumatic tire. The inner periphery of the rim A, which is preferably formed of steel to withstand the frictional wear, is provided with an annular groove or socket a , the sides of the rim forming said socket being supplied with gear-teeth a' , forming two parallel lines of gear-teeth extending around the entire inner periphery of said rim A.

The frame B is preferably constructed of steel and comprises a rim b , which is made somewhat smaller than the inner diameter of the groove a , so as to move freely therein.

This inner rim b describes an arc of about one hundred and eighty degrees, and consequently occupies only the lower half of the annular groove or socket a . The outer ends of the rim b are connected by the transverse brace-rod b' . At suitable points on the brace-rod b' are secured additional brace-rods $b^2 b^3$, which extend substantially vertically downward to the inner rim b . Suitable cross brace-rods b^4 and b^5 may be employed between the vertical brace-rods and the inner rim, the bracing being constructed so as to give the necessary strength and rigidity to the frame.

Upon either side of the vertical brace-rod b^3 is arranged a gear-wheel D, which are splined upon a shaft d , journaled in a socket through the vertical rod b^3 . The gear-wheels D mesh with the two lines of gear-teeth a' on the rim A. The usual pedals are secured to the shaft d , by which the gear-wheels D are rotated in the usual manner. In the upper end of the vertical rod b^3 is arranged the ordinary saddle, while in the upper end of the rod b^2 is revolubly mounted the supporting-standard e of the steering device E. Two V-shaped stop-bars $e' e^2$ are arranged integral with the upper end of the standard e and project at different angles therefrom, providing a space between them, in which space the handle-bars $f f'$ operate.

The handle-bars $f f'$ are formed of two rods of steel and extend forwardly and downwardly, so as to permit the steering-wheels F F', journaled in the lower ends thereof, to travel on the ground.

The handle-bars $f f'$ are provided with suitable brace-rods $f^2 f^3$ about midway of their length. These brace-rods $f^2 f^3$ are connected by a longitudinal supporting-rod f^4 , which lies between the handle-bars $f f'$ and extends parallel therewith. The upper end of the supporting-rod f^4 is connected by a knuckle-joint with a clip f^5 , which is secured about the frame at the junction of the braces $b' b^2$. A cross-rod e^3 is sleeved at its central point in the supporting-standard e . At each end of this cross-rod e^3 is provided a perforated annular ring $e^4 e^5$, through which the handle-bars $f f'$ are journaled. The upper faces of these annular rings $e^4 e^5$ are radially notched (see Fig. 4) to receive the lugs $f^6 f^7$, provided

upon the handle-bars $f f'$ for the purpose of limiting the rotation of the handle-bars in the cross-rod e^3 .

5 The rider propels the gear-wheels in the usual manner and rotates the outer rim, the inner rim sliding therein and by reason of its own weight and that of the rider maintains substantially a horizontal position, as will be readily understood. While being propelled
10 in a straight line the steering-wheels must be elevated to clear them from the ground by pressing downwardly upon the handle-bars. When it is desired to guide the wheel, the steering-wheels are brought into contact with
15 the ground by pressing upwardly on the handle-bars, when by turning the said handle-bars to the right or left the wheel can be guided in the desired direction.

20 Having fully described my invention, I claim as new and desire to secure by Letters Patent—

In a unicycle, the combination with an outer rim and an inner rim engaging therewith, a frame and propelling mechanism carried

thereby, of a steering device consisting of 25 a supporting-standard secured upon said frame, stop-bars extending at different angles from said standard so as to provide a space between them, a cross-rod journaled in said standard provided at each end with a 30 perforated annular ring, a supporting-frame pivotally connected with the main frame, handle-bars journaled in said supporting-frame, the upper ends of which extend through the perforations in said annular rings, stop- 35 lugs arranged upon said handle-bars and engaging recesses formed in said annular rings, and steering-wheels journaled at the lower end of said handle-bars, substantially as and for the purpose set forth. 40

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 14th day of January, 1898.

HENRY GEORGE WISE, JR.

Witnesses:

L. M. MULLER,

A. C. McLoughlin.