

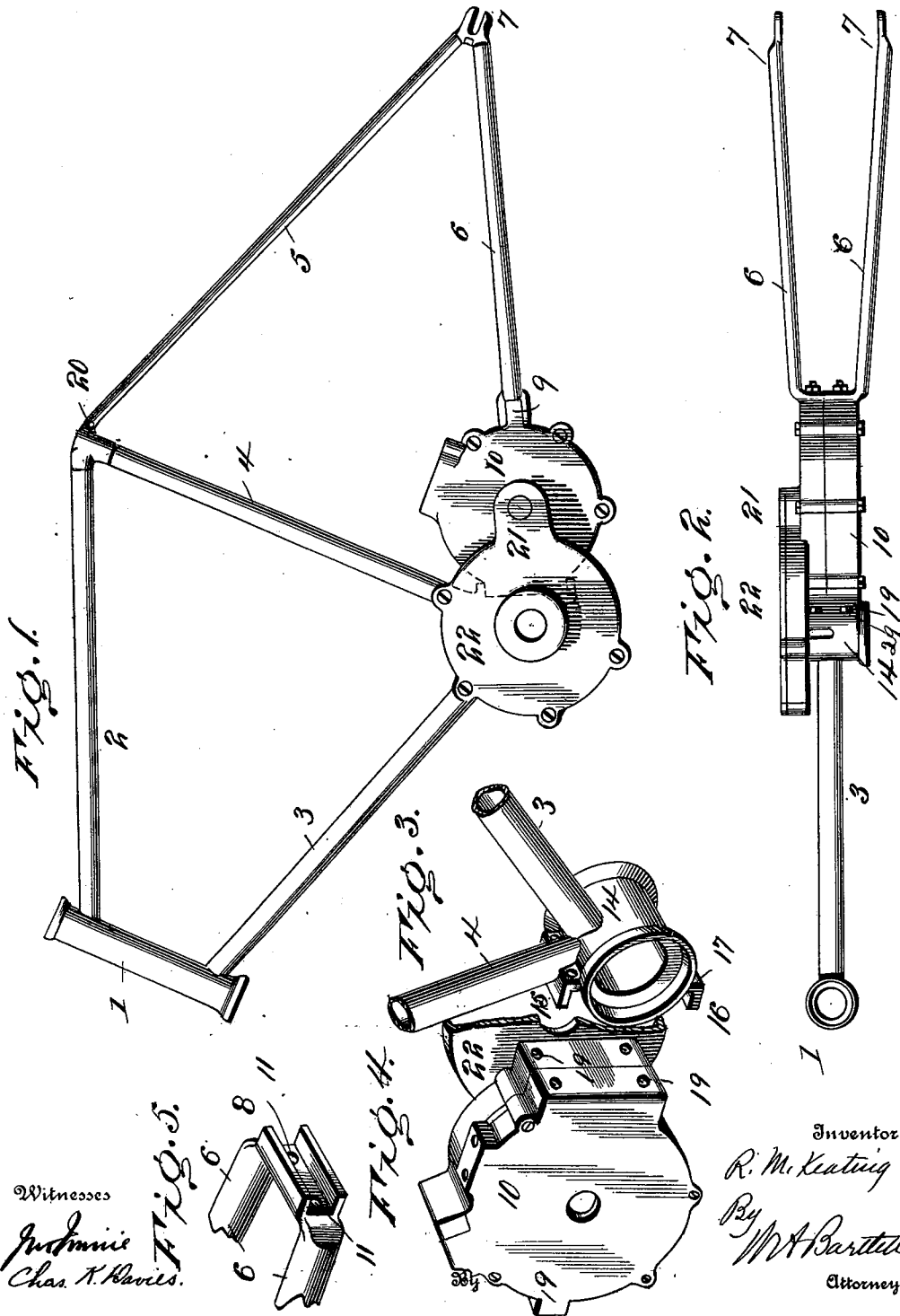
No. 675,391.

Patented June 4, 1901.

R. M. KEATING.
BICYCLE FRAME.

(Application filed Dec. 8, 1900.)

(No Model.)



Witnesses

Indamine
Chas. H. Davies.

Fig. 5.

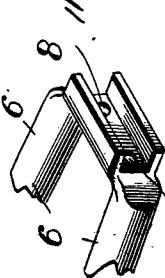


Fig. 4.

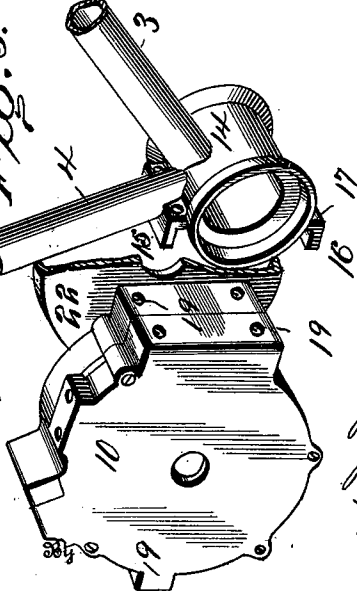


Fig. 3.

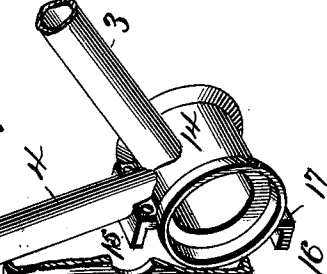
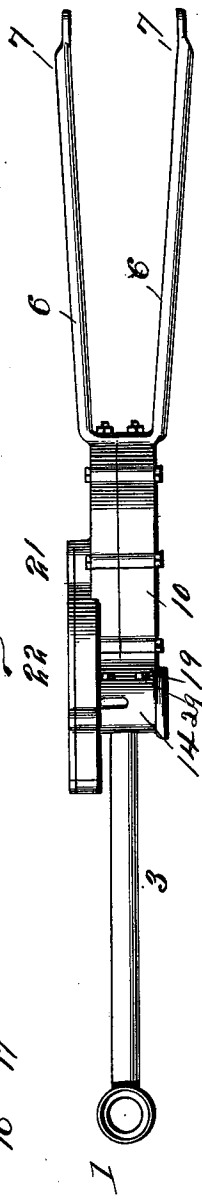


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROBERT M. KEATING, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR TO R. M. KEATING MOTOR COMPANY, OF PORTLAND, MAINE.

BICYCLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 675,391, dated June 4, 1901.

Application filed December 8, 1900. Serial No. 39,177. (No model.)

To all whom it may concern:

Be it known that I, ROBERT M. KEATING, residing at Middletown, in the State of Connecticut, have invented certain new and useful Improvements in Bicycle-Frames, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to bicycle-frames.

10 The object of the invention is to produce a frame for motor-bicycles which shall have the simplicity and strength of the well-known diamond frame and the capacity for compactly storing and retaining the engine in place, together with supports for the usual pedal-motor.

Figure 1 is a side elevation of the frame, engine-casing, and reduction-gear casing. Fig. 2 is a bottom plan of the same. Fig. 3 is a broken perspective of pedal-shaft hanger, showing its relation to the frame and engine-coupling. Fig. 4 is a perspective of engine-casing with gear-casing broken away. Fig. 5 is a perspective of bar-coupling.

25 The frame in the main consists of the front post 1, front top bar 2, front bottom bar 3, seat-post 4, and the rear top bars 5, arranged in their usual relation.

30 The rear lower bars 6 are shorter than usual, and while connecting with the wheel-forks 7 in usual manner are joined by a cross-bar 8 in rear of the seat-post 4.

35 The cross-bar 8 is in form of a U, having upper and lower and upright leaf. These leaves embrace a rectangular projection 9 on the engine-casing 10. Bolts having their heads inside the casing project through holes 11, so that the rear bars can be held to the casing by tightening these nuts.

40 The pedal bracket or shaft hanger 14 has levers 15 and 16 projecting in the rear of the seat-post and an upright leaf 17, which is perforated for the passage of bolts 29, which extend through holes 19 in the engine-casing.

45 The engine-casing thus forms an extension of the rear lower bars of the frame, but can be removed from the frame by removing the nuts from the retaining-bolts. The spring of the frame will generally permit the removal

and replacement of the engine-casing with 50 bolts in place in the casing. The rear bars are generally held to the seat-post by a bolt 20, which permits the rear part of frame to swing back from the seat-post. In solid frames there is usually sufficient elasticity in 55 the frame-bars to permit such coupling.

The driving-pinion of the engine is inclosed by the projection 21 of the gear-casing 22. The gear-casing 22 extends alongside the hanger 14, and the central opening in the gear- 60 casing corresponds with that in the pedal-shaft hanger. The pedal-shaft can then pass through the gear and casing, and connection from the gear is made to the pedal-shaft if desirable. The casing for the reduction-gear 65 thus becomes a link in the longitudinal construction of the frame and adds its strength thereto.

What I claim is—

1. A frame for motor-bicycles, having front 70 post, top and bottom bars, and seat-post connected to the pedal-bracket as described, the upper rear bars connected to the seat-post and wheel-forks, the lower rear bars connected to the wheel-forks and joined by a cross- 75 bar at the front, the pedal-bracket having a perforated upright leaf, and the engine-frame provided with bolts by which the engine is held to the pedal-bracket in front, and to the said cross-bar in the rear, substantially as de- 80 scribed.

2. The frame for motor-bicycles consisting essentially of the usual front and upper parts, the seat-post and lower front bar connected to the pedal-bracket, the engine-casing con- 85 nected to the pedal-bracket at the rear thereof, the rear lower bars connected to the engine-frame, and the gear-casing overlapping the engine-casing and centered alongside the pedal-bracket, so that the pedal-shaft can 90 pass through said casing and bracket, substantially as described.

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

ROBERT M. KEATING.

Witnesses:

W. A. BARTLETT,

HARVEY T. WINFIELD.