

G. W. BREED.
MOTOR CYCLE FRAME.
APPLICATION FILED OCT. 29, 1910.

1,015,418.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 1.

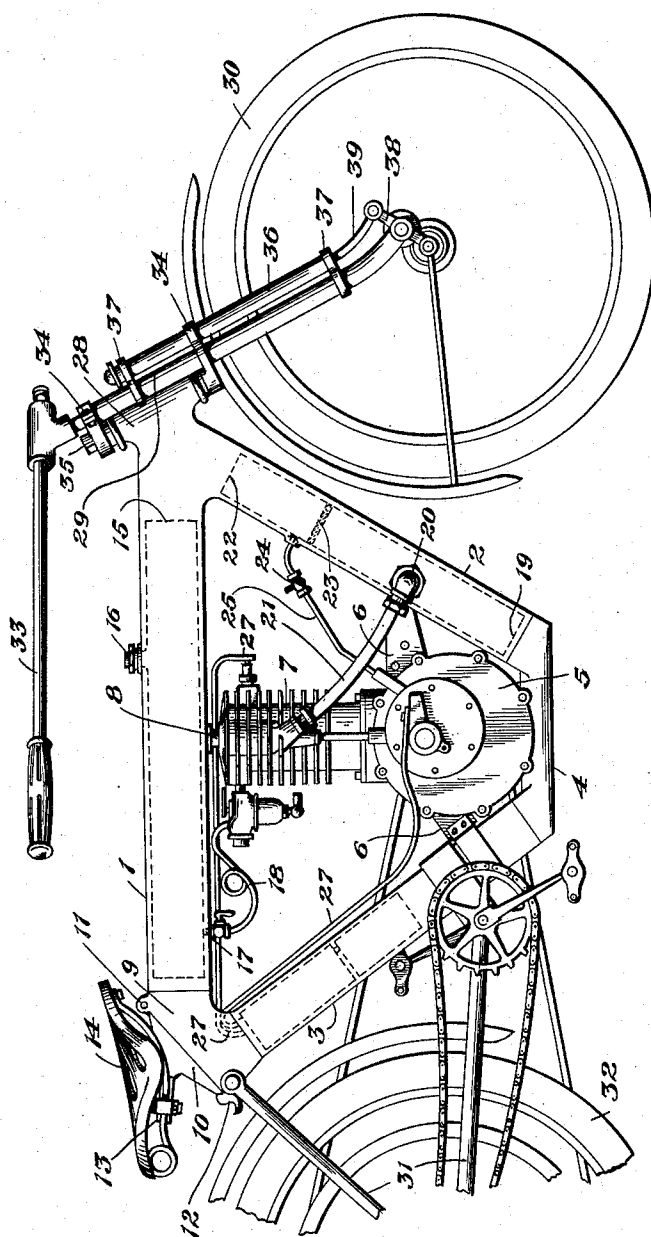


Fig. 1.

Witnesses

Chas. W. Stauffer
Q. M. Shannon.

Inventor

GEORGE W. BREED.

By

Bartholomew

Attorneys

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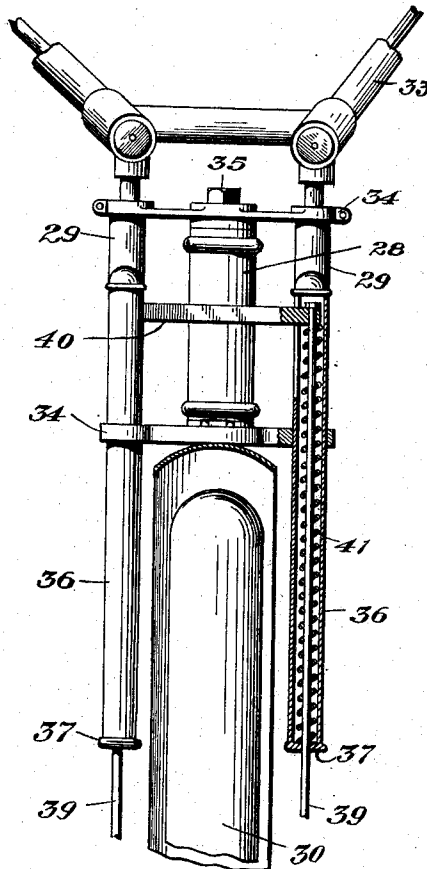


Fig. 2.

Witnesses

Chas. W. Stauffer
A. M. Shannon.

Inventor

GEORGE W. BREED.

By

Robert H. Carter

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE W. BREED, OF DETROIT, MICHIGAN, ASSIGNOR TO DETROIT MOTORCYCLE MFG. CO., OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

MOTOR-CYCLE FRAME.

1,015,418.

Specification of Letters Patent.

Patented Jan. 23, 1912.

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To all whom it may concern:

Be it known that I, GEORGE W. BREED, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Motor-Cycle Frames, of which the following is a specification, reference being had therein to the accompanying drawings.

10 In the construction of motor cycles it is desirable that the fuel reservoir and oil tank be protected, together with a battery and spark coil of the ignition system. It is also necessary to have a long wheel base to insure ease of riding.

15 This invention relates to motor cycles and to an arrangement of the frame whereby the fuel and oil tanks, the battery and spark coils are housed and whereby a very rigid frame is obtained which affords a long wheel base.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

25 Referring to the drawings, Figure 1 is a view in side elevation of a machine embodying features of the invention; and Fig. 2 is a view partly in elevation and partly in section of the steering forks and head of the machine.

30 In the drawings, a main substantially triangular frame is formed of an upper tubular member 1, a front tubular member 2 and a back tubular member 3 that are respectively united at their upper ends to the top bar and are connected at their convergent lower extremities by a suitable fitting 4. The crank case 5 of a motor is mounted within the fitting 4 and is braced by lugs 6 or the like securing it to the front and back bars. The cylinder 7 of the motor is stayed at its upper end by suitable connections 8 with the top bar. A hollow fitting 9 which connects the open back end of the tubes 1 and 3 is cut off obliquely to the upper tube and is closed by a cap 10 pivoted thereto at its upper end by a suitable connection 11 and secured when shut by a suitable latch bolt 12 or other preferred means. An extension 13 of the cap affords means for attachment of a bicycle saddle 14 of any conventional type.

35 A fuel reservoir 15 is removably secured in the upper tube 1 and may be filled through a nipple or cap indicated at 16. An

outlet nipple 17 passing through an aperture in the lower side of the tube 1 or at any other convenient point has pipe connections 18 with the carbureter on the motor.

40 A muffler 19 of any preferred form is placed in the lower portion of the tube 2 to discharge through the open lower end thereof and is removably held therein and connected by an elbow 20 and pipe 21 with the exhaust of the motor. An oil tank 22 is removably supported in the upper portion of the tube 2 over the muffler 19, a non-conducting or insulating sheet indicated at 23 being placed between the muffler and the tank and being proportioned and designed to allow the heat of the muffler to keep the lubricant at proper working temperature. An outlet cock 24 in the tube 2 connects the oil reservoir with a pipe 25 leading to the lubricating system of the engine.

45 Batteries of any preferred form are housed in the rear tube 3 together with a spark coil. The latter may be placed if desired in the upper tube 1 at the end of the reservoir 15. Electric conductors 27 lead from the spark coil and batteries through a suitable opening in the fitting 9 or tube 1 to the spark controlling means on the motor.

50 A main steering head 28 to which forward forks 29 of any preferred type are pivotally secured is formed on or made fast to the forward end of the tube 1. A steering wheel 30 is mounted on the forks. Rear fork members 31 extend from the rear tube 3 and support the frame on a drive wheel 32 which is operatively connected to the motor by any of the well known transmission mechanisms. Handle bars 33 control the front forks 29.

55 Any means for operating the spark and throttle devices may be used and the front forks and handle bars may also be arranged as desired. In the preferred form of construction as herein shown, the front forks are connected by parallel yokes 34 pivoted on a stud or pivot bolt 35 passing through the head 28. The forks are reinforced by auxiliary parallel members 36 secured by suitable brackets 37 in advance of the forks. A pair of rock arms 38 are pivoted between their ends to the lower extremities of the forks 29. Plunger rods 39 are pivoted to the other ends of the rock arms and are each reciprocable in the members 36, their upper ends being secured by a cross bar 40 play-

ing in longitudinal guide slots in the members 36. Springs 41 in compression between the lower ends of the members 36 and the cross bar 40 yieldingly support the plunger rods 39.

By this method of construction a main frame is obtained which is sufficiently rigid to afford a long wheel base. The fuel and lubricant tanks are housed in the frame thus not only protecting them from injury but also adding to the appearance of the machine whose lines are not broken and the sparking coil and batteries are likewise shielded from the weather. The saddle supporting cap is readily raised for inspection or repair of the parts. The position of the muffler directs the discharge away from the tires and away from the operator and the position of the oil tank keeps the oil at proper temperature.

Obviously other changes in the details of construction may be made without departing from the spirit of the invention and I do not wish to limit myself to any particular form or arrangement of parts.

I claim as my invention:

1. In a motor cycle, a substantially triangular frame of tubular members, a motor supported by the frame, a muffler connected to the motor and housed in a depending

member of the frame to discharge through the lower end thereof, an oil reservoir in the forward member over the muffler, a fuel tank in the upper member withdrawable through the rear end thereof, and a cap closing said end and forming a saddle support.

2. In a motor cycle, a substantially triangular main frame of tubular members, a cap for the open, united rear ends thereof, a motor on the frame, a muffler for the motor in the forward member discharging through the lower end thereof, an oil reservoir in the forward member above the muffler, a fuel tank in the upper member removable through the rear end thereof, and spark coil and battery removably secured in the rear members.

3. In a motor cycle, a frame of tubular members and a cap hinged to one corner thereof as a cover to the tube ends to give access thereto and forming a saddle support.

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

GEORGE W. BREED.

Witnesses:

OTTO F. BARTHEL,
C. R. STICKNEY.