

B. U. POTTER.
SUPPORTING STAND FOR THE REAR WHEELS OF MOTOR CYCLES.
APPLICATION FILED SEPT. 30, 1909.

1,006,125.

Patented Oct. 17, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

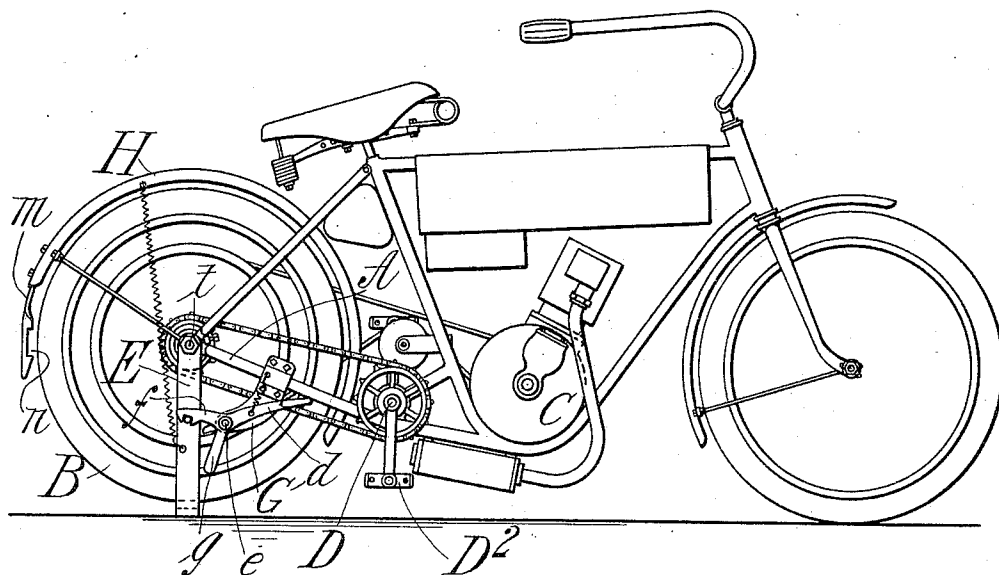
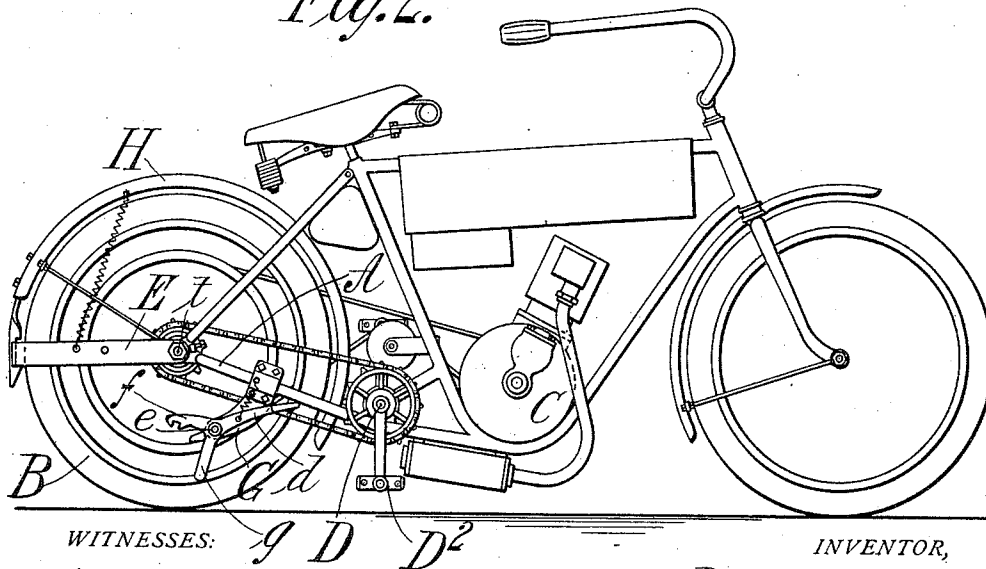


Fig. 2.



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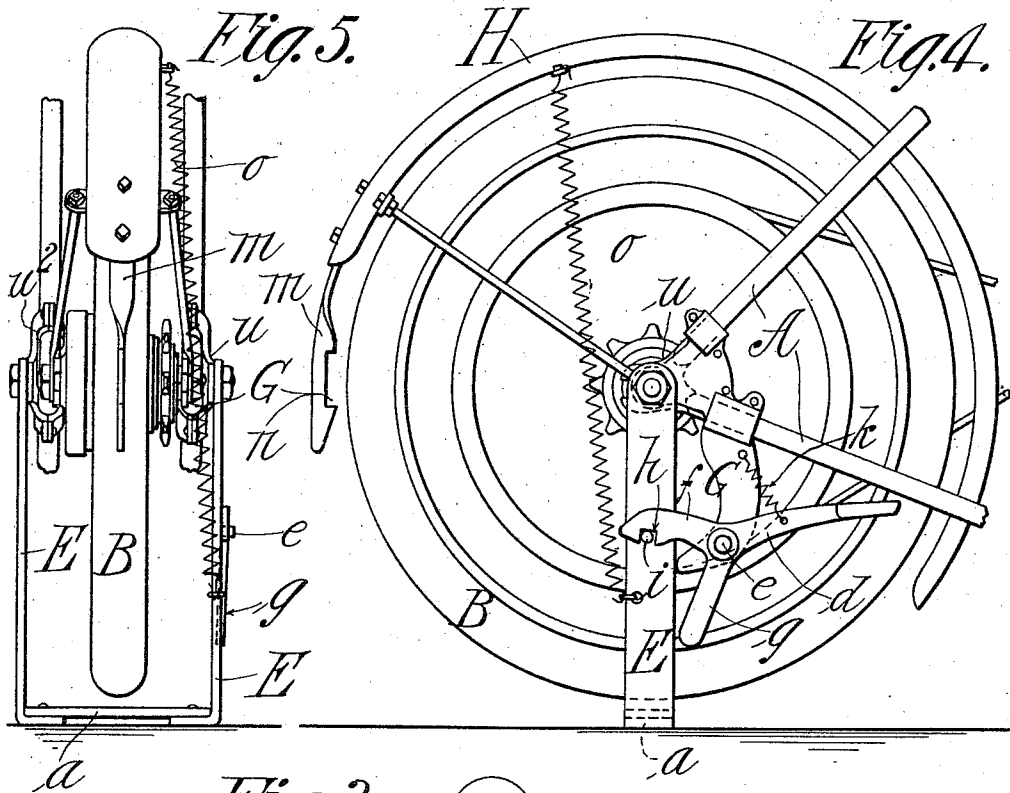
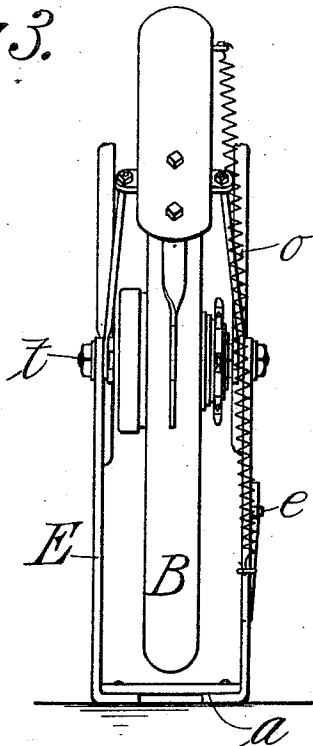


Fig. 3.



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UNITED STATES PATENT OFFICE.

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SUPPORTING-STAND FOR THE REAR WHEELS OF MOTOR-CYCLES.

1,006,125.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BERNARD U. POTTER, a citizen of the United States of America, and resident of Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Supporting-Stands for the Rear Wheels of Motor-Cycles, of which the following is a full, clear, and exact description.

This invention relates to an improved stand to be employed as an attachment for and to be carried by a motor cycle, at the rear portion of the machine, and to be available, when the stand is in an upright position as a jack for supporting the rear wheel of the machine,—which is the one propelled,—slightly above and clear from the ground so that the rider may mount the machine and by operating the pedals obtain the compression and conditions for running and the actual running of the motor while the machine remains stationary, he then being able by the foot actuation of devices comprised as a part of the novel appliances, to exert relatively between the machine and the stand a rearwardly forcing of the stand concurrently with the forward movement of the machine so that the wheel comes to bearing and receives traction on the ground; and in this manner the rider is not compelled either to run along on the ground offside the machine or laboriously pedal the same to acquire the running conditions in the motor.

In carrying out the invention I provide for pivotal connection at the rear portion of the machine frame a stand which when in an upright position slightly elevates the rear wheel clear of the ground, and a lever device carried on the machine adjacent said pivotally connected stand comprising a member to be foot operated, and a member for exerting a forcible engagement against the pivotally connected stand; and the device, moreover, preferably includes a catch or locking device for detachably holding the stand in its upright wheel elevating position which by the action of the foot operated lever may be released to leave the stand free to be upwardly and rearwardly swung under the force of the spring applied thereto and to be retained against shaking or rattling by the catch therefor.

The invention is described in conjunction with the accompanying drawings and is set forth in the claims.

In the drawings:—Figure 1 is a side ele-

vation of a motor cycle having my improved stand and conjunctive devices shown as carried thereon, the stand being represented as in its upright and rear wheel elevating position. Fig. 2 is a view similar to Fig. 1, but showing the stand in its rearwardly and upwardly swung position, and the rear wheel of the machine in tractional bearing on the ground; Fig. 3 is a rear view on a larger scale of Fig. 2; Fig. 4 is a side elevation of the rear portion of a motor cycle with the improved appliances thereon, the supporting bracket therefor being of a slightly modified construction as and for the purpose hereinafter set forth; Fig. 5 is a rear elevation of Fig. 4.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings,—A represents the rear portion of a motor cycle frame in which, as usual, the rear wheel B is mounted to be driven from the motor C in any of the usual manners, the machine comprising also, as usual, the crank shaft D and pedals D² together with chain and sprocket connections between the crank shaft and rear wheel.

E represents a supporting stand made in the form of a yoke or clevis with its opposite members standing upright and having its uniting portion *a* adapted to form a foot to rest on the ground. This stand is pivotally connected and supported on the machine frame coincident with or adjacent the line of the axis of the rear wheel; and its length is such that when in the upright positions shown in Figs. 1 and 3, the rear wheel is jacked up so that its tire is slightly above ground.

d f and *g* represent three members integrally formed as one lever and pivotally mounted at *e* on a bracket G which is clamped on one side of the machine frame forward of the location of the stand.

The lever member *d* is extended forwardly and with a slight upward inclination toward the crank shaft; the lever member *f* extends rearwardly in close relation to the side of the stand and is formed with a catch notch *h* to engage over an outwardly projecting stud *i* at one side of the stand between its top and bottom; and the other lever member *g* extends from adjacent the lever pivot *e* downwardly and rearwardly into proximity to the forward edge of one side member of the stand when the latter is in its upright position and has a slight inward inclination

as shown in Figs. 3 and 5 so that it has an engagement with the forward edge of the side member of the stand.

The spring *k* exerts a forcing action on the three membered lever for keeping the parts in the position shown in Figs. 1 and 4, that is with the catch notch of member *f* in engagement with the stud *i*, and the rear edge of the member *g* slightly forward of the adjacent side member of the stand so that about so soon as the lever is swung sufficiently far to release the member *f* from its engagement with the stud of the stand, the rear edge of member *g* will be brought to engagement with the front of the stand.

The mud guard H for the rear wheel formed as a part of or carried by the frame of the motor cycle, has a rearward and downward extension *m* constituted by a spring metal strip and having a catch shoulder *n* to engagement with which the bottom uniting member *a* of the stand may be brought when the latter is swung rearwardly and upwardly, as will automatically be done when the stand is released by the comparatively long spiral spring *o*, the upper end of which is attached to an upper part of the mud guard, while the lower end thereof has a connection at the rear of one side member of the stand.

When the machine is at rest, the stand will be swung and detachably locked in the upright position shown in Figs. 1 and 4, so that the rear wheel will be jacked up and the revolving of the pedals will cause the rotation of the rear wheel B, and through the connections which such wheel has with the motor, the turning of the motor shaft and a reciprocation of the motor piston so that the rider mounted on the jacked up machine may very quickly and easily start the motor without requiring the exertion heretofore necessary for the propulsion of the machine on the ground.

Now as soon as the motor has taken on its running operation, the rider by the heel of one foot, which may remain on the pedal, depresses the lever member *d*, to cause the release of the member *f* from its locking engagement with the stand and to then cause a forcible engagement by the lever member *g* in a rearward direction against the stand.

This rearward pressure of member *g* against the stand amounts substantially to a prying of the machine bodily forwardly, the stand for the instant remaining stationary while the rear wheel moves forwardly and downwardly onto the ground where it takes up its tractional action, and the machine driven by its motor proceeds on its way.

No heed need be taken of the stand, which is automatically moved to the position shown in Fig. 2, and retained by acquiring a snap catch engagement with the spring retaining device *n*.

The devices comprised in the present invention may be mounted at the rear portion of the motor cycle in various ways, two of which in the accompanying drawings are illustrated in Figs. 1, 2 and 3, the upper extremities of the yoke-shaped stand are pivotally hung on the rear wheel axle *t*, while the bracket G on which the three armed lever is pivotally mounted is clamped on one of the rods at the rear portion of the machine frame A.

As represented in Figs. 4 and 5, the bracket G is provided with a cheek *u* across and outside of the end of the rear wheel axle *t* to which one side member of the stand is pivotally secured, the other side member of the stand being similarly pivotally secured to another bracket *u*² clamped on the rear portion of the machine frame which likewise extends across and outside of the end of the rear wheel axle. By the latter manner of mounting the stand, it becomes possible whenever occasion may require, to remove the rear wheel without dismantling the stand.

I claim:—

1. The combination with the portion of a motor cycle frame adjacent the rear wheel of the machine and a supporting stand pivotally connected to the machine adjacent the center of the rear wheel, and adapted to have an upright position for supporting such wheel clear of the ground, of a lever mounted on the machine adjacent said pivotally connected stand comprising a member to be foot operated and a member for exerting a forcible engagement against the pivotally connected stand and a spring for swinging the stand from its upright to an approximately horizontal position.

2. The combination with the portion of a motor cycle frame adjacent the rear wheel of the machine, and a supporting stand pivotally connected to the machine adjacent the center of the rear wheel, and adapted to have an upright position for supporting such wheel clear of the ground, of means for detachably holding the stand in such upright position, and a lever mounted on the machine adjacent said pivotally connected stand comprising a member to be foot operated and a member for exerting a forcible engagement against the pivotally connected stand.

3. The combination with the portion of a motor cycle frame adjacent the rear wheel of the machine and a supporting stand pivotally connected to the machine adjacent the center of the rear wheel, and adapted to have an upright position for supporting such wheel clear of the ground and to be swung rearwardly from such upright to an approximately horizontal position, of a lever mounted on the machine adjacent said pivotally connected stand comprising a

member to be foot operated, another member adapted to have a detachable engagement with the stand, and still another member for exerting a forcible engagement

5 against the pivotally connected stand.

4. The combination with the portion of a motor cycle frame adjacent the rear wheel of the machine and a supporting stand pivotally connected to the machine adjacent the
10 center of the rear wheel, and adapted to have an upright position for supporting such wheel clear of the ground and to be swung rearwardly from such upright to a more or less nearly horizontal position, of a
15 device for detachably locking the stand in its upright position, a lever mounted on the machine adjacent said pivotally connected stand comprising a member to be foot operated and a member for exerting a forcible
20 engagement against the pivotally connected stand, and automatic means for moving the released stand rearwardly and upwardly.

5. The combination with the portion of a motor cycle frame adjacent the rear wheel
25 of the machine and a supporting stand pivotally connected to the machine adjacent the center of the rear wheel, and adapted to have an upright position for supporting such wheel clear of the ground and to be
30 swung rearwardly from such upright to a more or less nearly horizontal position, of a lever mounted on the machine adjacent said pivotally connected stand comprising a member to be foot operated, a member to
35 have a locking engagement with the stand, and a member for exerting a forcible engagement rearwardly against the stand, and automatic means for swinging the released stand rearwardly and upwardly.

40 6. The combination with the rear portion of a motor cycle frame and a supporting stand pivotally connected to the machine adjacent the center of the rear wheel, of a lever mounted on the machine forward of said

pivotally connected stand comprising a forwardly extending member to be foot operated, a rearwardly extended member to have an interlocking engagement with the stand, and a downwardly extending member to have a rearwardly forcing engagement with
45 the stand, a spring for imparting a rearwardly and upwardly swinging force to the stand, and a catch for retaining the stand in its rearwardly and upwardly swung position.
50 55

7. In a device of the character described, a yoke-shaped stand adapted to be pivotally supported on a motor cycle adjacent the center of the rear wheel thereof, and a bracket adapted to be secured on the rear portion of
60 the machine frame having pivotally mounted thereon a lever having a forwardly extending foot operated member, a rearwardly extending catch member and a downwardly extending stand forcing member.
65

8. The combination with the rear portion of a motor cycle frame and the rear wheel mud guard having a spring extension provided with an engagement shoulder, of a
70 yoke-shaped stand pivotally connected to the machine adjacent the center of the rear wheel having a sidewise projecting stud, a lever supported by the machine frame adjacent and forward of said stand comprising
75 a forwardly extending foot operated member, a rearwardly extending edgewise notched member for engagement with the said stud and a spring connected to said stand and to the mud guard for exerting a rearwardly and upwardly swinging force
80 upon the stand.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

BERNARD U. POTTER.

Witnesses:

G. R. DRISCOLL,
WM. S. BELLOWES.