W. L. CRAIG.

MOTOR CYCLE STAND.

APPLICATION FILED FEB. 10, 1919.

1,304,457.

Patented May 20, 1919.

2 SHEETS—SHEET 1.

Fig. 1.

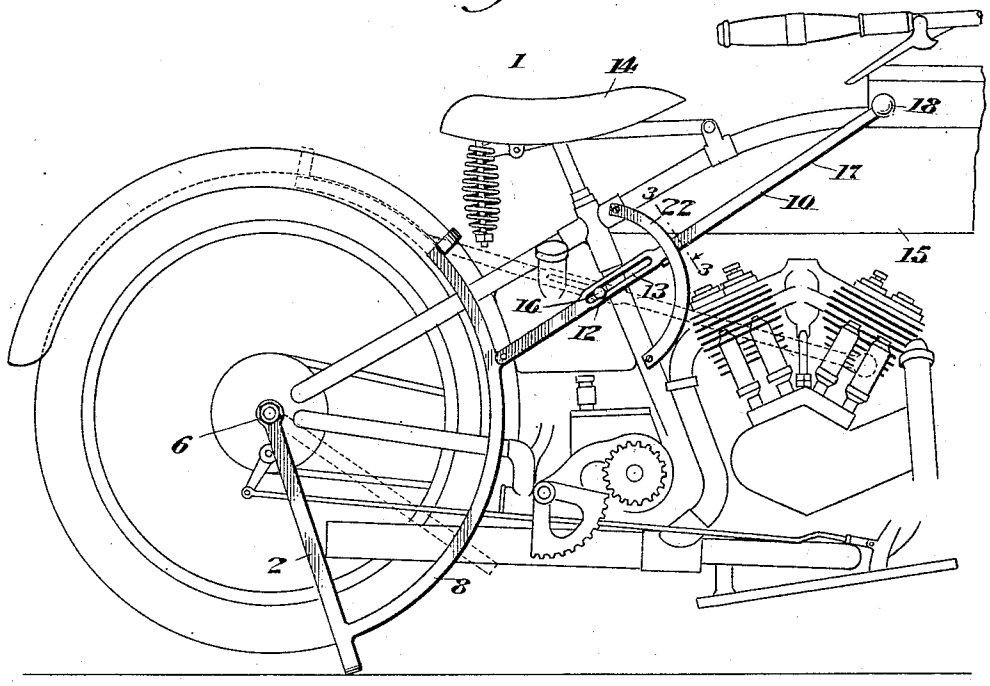
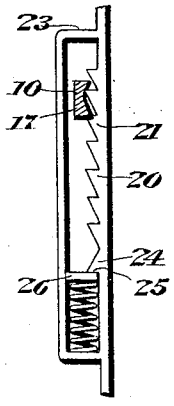


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 2.

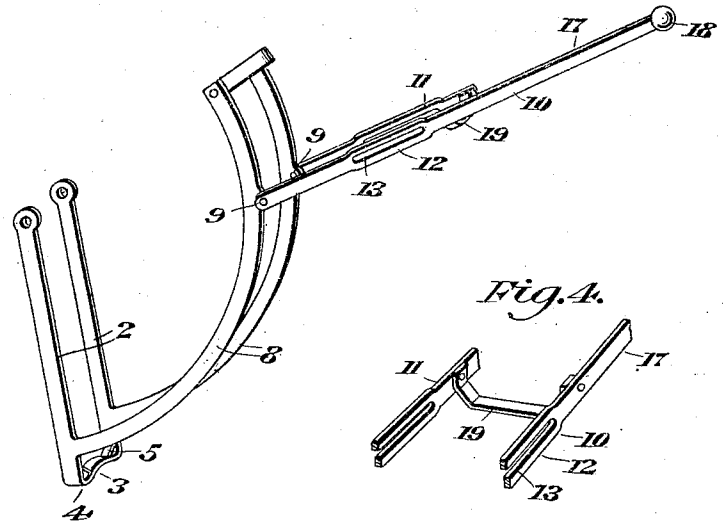


Fig. 4.

Fig. 5.

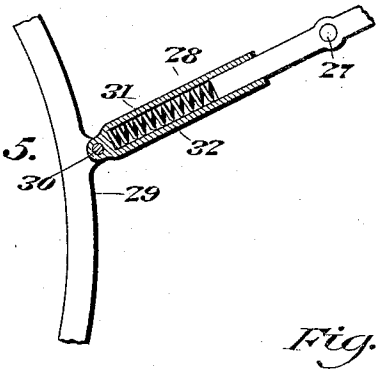


Fig. 7.

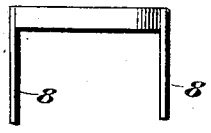
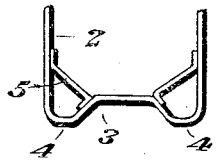


Fig. 6.



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UNITED STATES PATENT OFFICE.

WALTER L. CRAIG, OF WASHINGTON, DISTRICT OF COLUMBIA.

MOTOR-CYCLE STAND.

1,304,457. Specification of Letters Patent. Patented May 20, 1919.

Application filed February 10, 1919. Serial No. 276,076.

To all whom it may concern:

Be it known that I, WALTER L. CRAIG, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Motor-Cycle Stands, of which the following is a specification.

In the present construction of supporting stands for motorcycles, the stand is pivotally connected to the rear axle of the machine and is swung beneath the machine when in operative position, being held by a catch on the rear fender when in inoperative position. It is necessary for the motorist to leave his mount on the motor, and with his hand or foot unlatch the stand from its connection with the mud guard, to swing the same beneath the rear wheel and in so doing lift the rear portion of the machine. In a like manner the stand must be returned to its inoperative position when the machine is to be propelled. This requires a considerable amount of strength and physical exertion as well as the annoyance occasioned the motorist in dismounting to operate the stand.

It may therefore be considered the primary object of the present invention to provide a stand for motorcycles which may be brought to both operative and inoperative position by the motorist without necessitating him leaving his seat on the machine.

It is a further object of the invention to produce a stand for motorcycles which shall be of a comparatively simple construction, cheap to manufacture, easily operated from the seat of the machine to bring the same to either its operative or inoperative position, and which will be firmly supported in either of such positions.

It is a still further object of the invention to produce a stand for motor vehicles wherein the operating means is located conveniently to the rider of the machine and which is of such a construction as to insure the positive operation thereof, and further one which may be applied to any ordinary construction of motorcycles.

Other objects and advantages will present themselves as the nature of the invention is better understood, reference being had to the accompanying drawings, in which there is illustrated a simple and satisfactory embodiment of the invention reduced to practice and in which:

Figure 1 is a side elevation of a motorcycle provided with the improvement, the full lines indicating the operative position of parts and the dotted lines the inoperative position of parts.

Fig. 2 is a perspective view of the improvement detached.

Fig. 3 is a sectional view approximately on the line 3—3 of Fig. 1.

Fig. 4 is a detail perspective view illustrating the bracing means between the swinging arms of the device.

Fig. 5 is an elevation, partly in section illustrating a modification.

Fig. 6 is a view illustrating the bracing means for the foot of the stand.

Fig. 7 is a view illustrating the bracing means for the curved arms connected with the stand.

In the drawings the numeral 1 designates a conventional construction of motorcycles.

My improved stand proper is substantially similar to that ordinarily employed, the same comprising a substantially U-shaped member having parallel arms 2, that constitute the sides thereof and a connecting member for the arms which is in the nature of a foot and which is indicated by the numeral 3. The foot is centrally curved inwardly providing two separate substantially straight surfaces 4 which contact with the ground when the stand is brought to operative position. Between the foot portion 3 and the sides 2 of the stand angle brace members 5 are arranged. The arms or sides 2 of the stand have their outer ends provided with alining openings which receive therethrough the projecting ends of the axle 6 for the rear wheel 7 of the machine, whereby the stand is pivotally connected to the machine. Suitable nuts, of course, engage with the threaded projecting ends of the axle for retaining the stand thereon.

To the arms or sides 2 of the stand, near the foot 3 thereof are connected segmental plates 8. These plates straddle the rear wheel 7, so that one of them is arranged to each of the sides of the machine.

Loosely or hingedly connected to each of the curved or segmental plates 8, adjacent to the free ends of the said plates, as at 9, are angularly extending members 10 and 11 respectively, the said members being, of course, disposed to the opposite sides of the machine. The members 10 and 11 are in the nature of flat bars or plates and are each

provided with widened portions 12 having elongated slots 13 therethrough. Secured in any desired manner and at any desired point on the machine 1, preferably to the seat post 14 thereof below the gas tank 15, is a laterally extending shaft 16, and the ends of this shaft pass through the openings 13 in the widened portions 12 of the members 10 and 11.

The member 10 is longer than the member 11, the extending portion thereof providing a lever 17, and the outer end of the said lever is preferably provided with a headed knob 18.

The members 10 and 11, adjacent to the free end of the member 11, are connected by an arched brace 19, the brace being arranged in the space between the seat post 14, the gas tank 15 and the engine of the machine.

Secured on one side of the machine 1, at any suitable point, and in any desirable manner, is a rack 20. The toothed surface 21 of the rack is covered by an outer plate 22, the said plate being either integrally formed with or having angle ends 23 connected to the ends of the rack plate 20. The teeth 21 of the rack plate define straight shoulders and angle walls therebetween, the said angle walls being, for the major portion of the length of the teeth directed upwardly with respect to the rack, but one of the teeth, indicated for distinction by the numeral 24 has its straight shoulder disposed opposite the lower connecting element 23 for the guard 22 of the rack, this shoulder, for distinction being indicated by the numeral 25. Between the guard and the shoulder 25 is a spring influenced presser plate 26. The space between the guard 22 and the teeth of the rack 20 is sufficient to snugly receive therebetween the lever 17, and it will be apparent that when a downward pressure is exerted upon the lever 17 on the knob or handle 18 thereof, the members 10 and 11 will slide on the shaft 16 a predetermined distance, breaking the joint between the said members 10 and 11 and the segmental plates 8, which is indicated by the numeral 9, to bring the device to inoperative position as illustrated in the dotted lines in Fig. 1 of the drawings. In so doing the lever 17 contacts with the presser plate 26, and a slight lateral movement of the lever brings the same beneath the shoulder 25 of the tooth 24, the lever being held in such engagement by the influence of the spring presser plate 26. When the device is to be brought to operative position the lever is given an outward pull to bring the same between the guard 22 and the toothed surface 21 of the rack 20 and is drawn upward of the rack, a lateral movement in an inward direction causing the lever to engage with any of the shoulders provided by the teeth and thus arranging the stand 2 at any desired angle with respect to the wheel. In this manner the foot portion of the stand may be brought to contact with the ground surface without elevating the rear wall, and also in this manner the rear wall and the rear of the machine may be raised above the ground surface.

In some makes of motorcycles the space between the engine, the seat post and the gas tank is comparatively small, and is not sufficient to permit of any determined movement of the brace 19 in such space, and consequently will not permit of the desired longitudinal movement of the members 10 and 11. In such makes of machine these members are pivoted direct to a shaft or axle 27. This construction is illustrated in Fig. 5 of the drawings, and only one of the operating members is disclosed, the same being indicated by the numeral 28. One of the segmental members connected to the sides of the stand is particularly illustrated in the said figure and is indicated by the numeral 29. To this member is loosely or hingedly connected, as at 30 a socket 31 which receives therein the end of the member 28 and between the end of the said member 28 and the inner and closed end of the socket 31 is a pressure spring 32. This arrangement, it will be noted, obviates the necessity of the sliding movement of the member 28, the socket 31 at all times engaging the said member, and the spring 32 at all times exerting a pressure between the socket and the said member 28.

It is believed, from the foregoing description, when taken in connection with the drawings, that the simplicity of the construction and the advantages thereof will be readily apparent to those skilled in the art to which such inventions appertain and that a more detailed explanation will not be necessary.

Having thus described the invention, what is claimed as new, is:—

1. In combination with a motorcycle, of a substantially U-shaped stand pivotally secured to the rear axle thereof, said stand having its connecting portion centrally arched to provide two spaced contact surfaces, segmental members secured to the sides of the stand, members pivoted for sliding movement on the machine and hingedly connected to said segmental members, brace means between the pivoted members, a rack engaged by one of said members, said rack having an outer guard plate, a shoulder below the teeth of the rack, and a spring influenced presser plate below said shoulder.

2. In combination with a motorcycle, of a supporting stand for the rear wheel therefor including a U-shaped member straddling said rear wheel and pivotally connected to the axle thereof, segmental members con-

nected to the sides of the stand arranged concentric to the wheel and directed toward the front of the machine, members on the opposite sides of the machine hingedly secured to said segmental members, a brace connecting said last mentioned members, said members having elongated slots therethrough, a shaft secured to the machine passing through said slots, one of said members being extended to provide a lever and having its outer end formed with a knob head, a rack having a guard plate receiving the lever, and spring influenced means carried by the rack for engaging with the lever for retaining the same in engagement with one of the teeth of the rack.

In testimony whereof I affix my signature.

WALTER L. CRAIG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."