

(No Model.)

J. GARDNER & D. MARSHALL.  
MUD GUARD FOR CYCLES.

No. 505,290.

Patented Sept. 19, 1893.

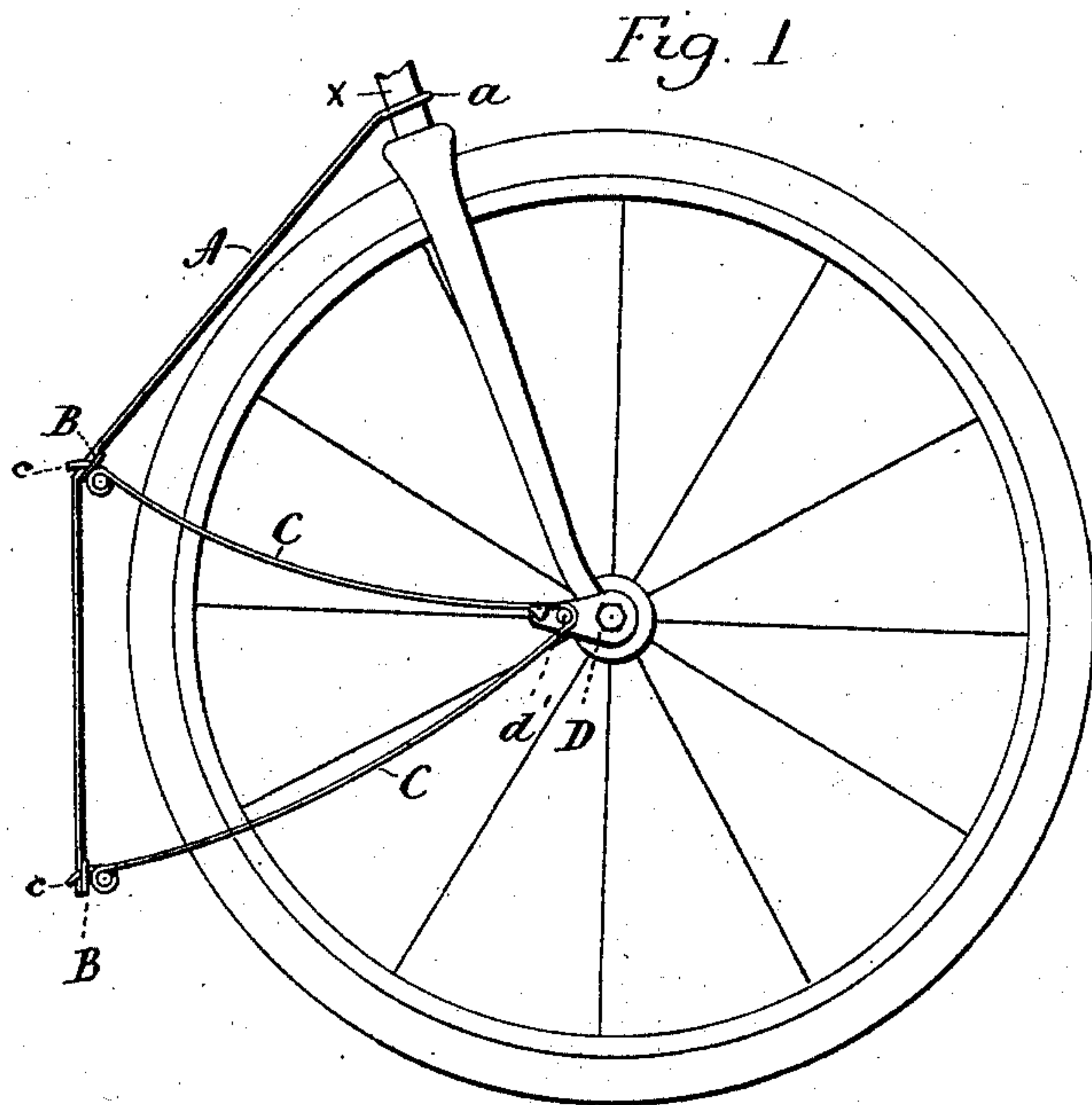


Fig. 3

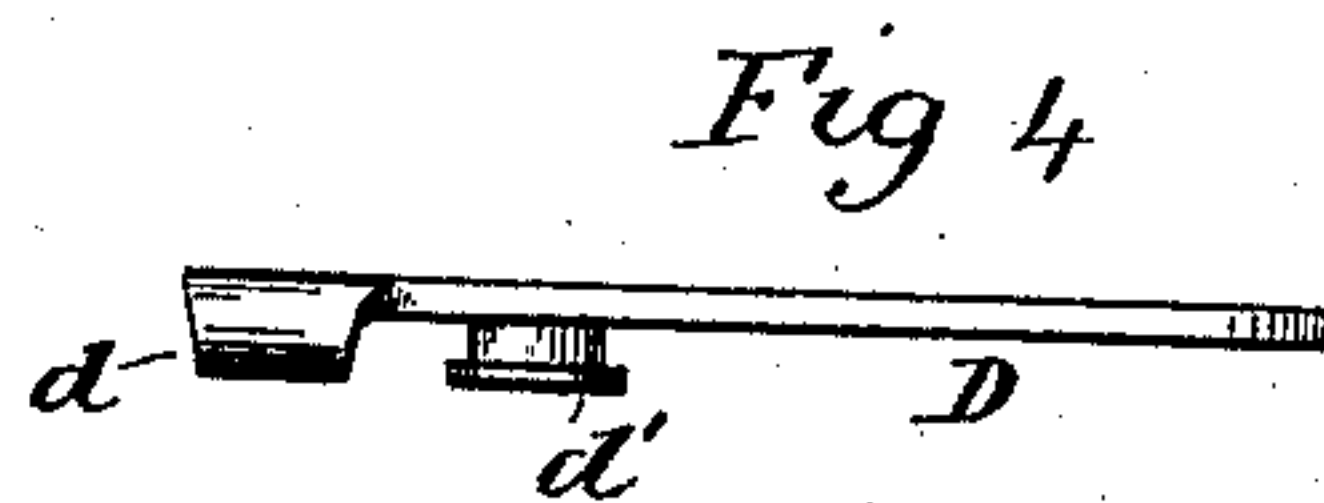
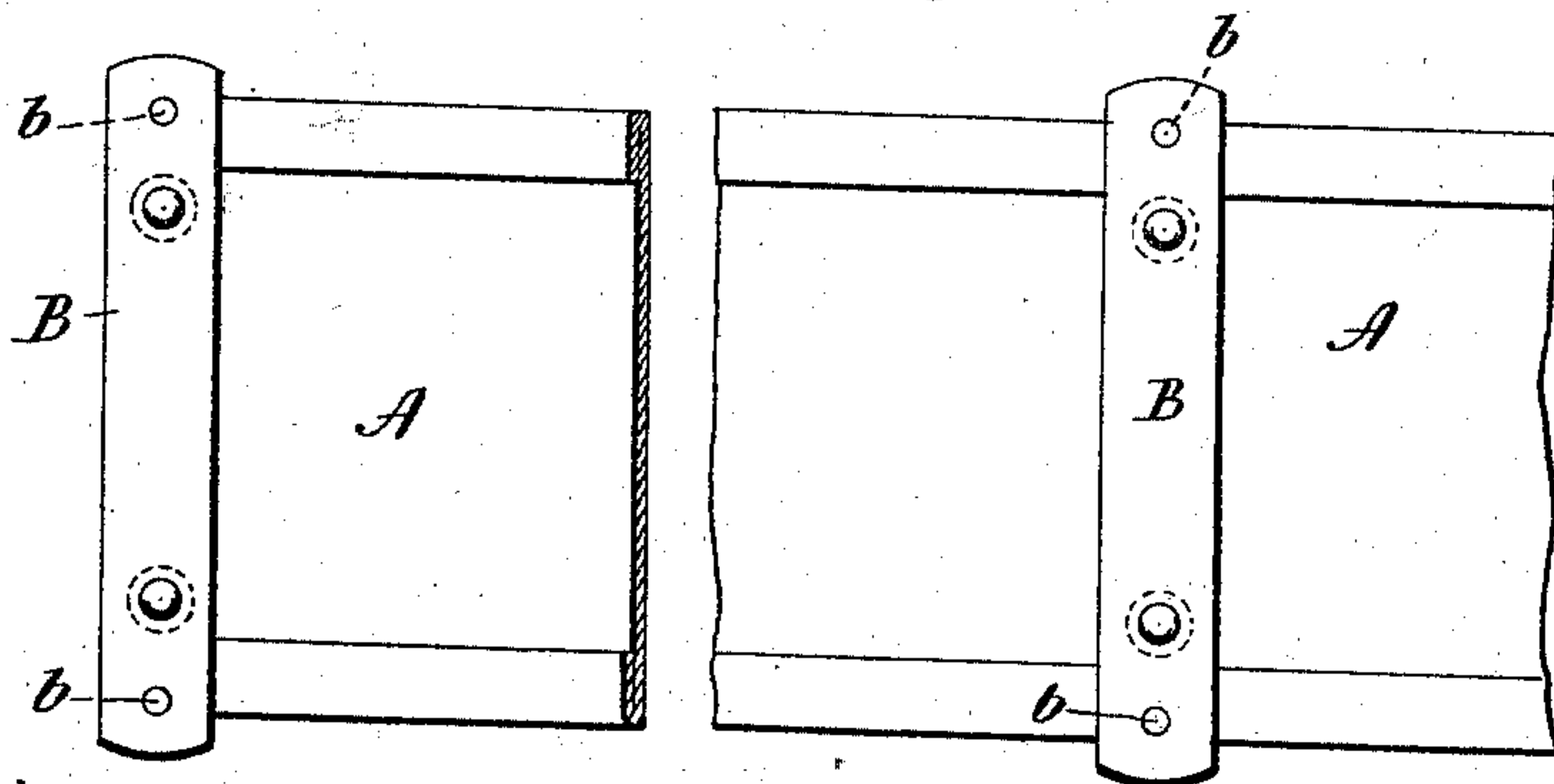


Fig. 2



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOHN GARDNER AND DALE MARSHALL, OF CHELTENHAM, ENGLAND,  
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## MUD-GUARD FOR CYCLES.

SPECIFICATION forming part of Letters Patent No. 505,290, dated September 19, 1893.

Application filed February 20, 1893. Serial No. 463,010. (No model.) Patented in England October 29, 1891, No. 18,651.

*To all whom it may concern:*

Be it known that we, JOHN GARDNER and DALE MARSHALL, subjects of the Queen of Great Britain, residing at Cheltenham, in the county of Gloucester, England, have invented a new and useful Improvement in Mud-Guards for Cycles, (for which we have obtained a patent in Great Britain, No. 18,651, bearing date the 29th of October, 1891,) of which the following is a specification.

Our invention relates to improvements in mud guards for cycles and it consists in making the guard of a strip of flexible material attached at one end to the frame of the machine, and stretched and supported at the other end, and at one end or more intermediate points, by spring stays, the object being to enable the guard to be readily removed from the machine and packed in a small compass when not required for use. We attain this end in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a broken view in side elevation of the steering wheel of a cycle showing the application of our improved guard. Fig. 2 is a broken view of the flexible guard. Fig. 3 is a broken view in side elevation of the spring stays, and Fig. 4 is a view in plan of one of the brackets adapted to support the said spring stays.

Similar parts are marked with like letters of reference throughout the several views.

The guard A consists of a strip of any suitable flexible waterproof material of a width suitable to the diameter of the tire of the wheel. This guard is attached at one end to the frame of the cycle by hooks or straps *a*, or by any other convenient device. Onto the other end of the guard A, and also at a point about midway in its length, are riveted or otherwise fixed metallic strips B having small holes *b, b*, at or near their ends to receive the ends of the spring supporting stays. The spring supporting stays C, C, of which two on each side of the wheel are usually found sufficient, are formed of spring steel wire. Each pair of stays C, C, on each side of the wheel is preferably formed out of one length of wire bent at or about the center of its length to

form two arms. These arms are approximately straight so that they have to be bent or sprung to allow their free ends *c, c*, to be engaged with the holes *b, b*, &c., in the strips B, B, on the guard A. Each pair of arms C, C, is attached to the frame X of the machine by means of a plate D adapted to be passed onto the axle of the wheel and to be locked to the frame X by means of the nut adapted to lock the axle thereto. These plates D, D, each carry a finger *d* and a stud or projection *d'* with which the length of wire forming the arms C, C, engages as shown by Fig. 3 of the accompanying drawings so that while each pair of stays can be readily detached therefrom, they are prevented from turning with respect to the said plates in an upward direction, thus allowing them to be bent or sprung in an upward direction to engage with the guard and so act to stretch it and keep it taut.

When the guard is applied to the rear wheel of a cycle one end of it is attached to the pedal-crank axle bracket, from whence it is carried to that part of the frame carrying the seat pillar to which it is attached by straps or hooks, and from this point it is stretched and supported by spring stays as hereinbefore described.

When the guard and stays are removed from the machine the guard can readily be rolled up into a small compass and carried in the pocket or wallet, and the spring stays can be carried inside the hollow handle bar, or in any part of the tubular frame work prepared to receive them.

We are aware that prior to the date of our invention mud-guards for cycles have been made of flexible material supported by stays and adapted to be detached from the stays and be either rolled up or removed from the machine, and we do not therefore claim such a combination broadly, but

What we do claim as our invention, and desire to secure by Letters Patent, is—

1. The combination in a mud-guard for cycle wheels, of a strip of flexible waterproof fabric adapted to be fixed to the frame of the cycle at one end, with spring stays detachably fixed to the fork or frame carrying the wheel



and adapted to stretch and support the strip of flexible waterproof fabric over the wheel, as set forth.

2. The combination in a mud-guard for cycle wheels, of the strip of flexible waterproof fabric A having one or more metallic strips B, B, fixed to it; of the spring stays C, C, detachably connected to plates D fixed to the fork or frame of the machine and having their free ends *c, c*, adapted to engage with holes *b, b*, in the strips B, B; the plates D D being constructed and adapted to have the stays C C applied to and removed from them at pleasure all substantially as set forth.

3. The spring stays C, C, each pair being formed out of one length of spring wire, in combination with a strip of flexible waterproof fabric forming a mud-guard substantially as shown and for the purpose specified.

4. A suspension mud-guard for cycles, consisting of an unrolled strip of flexible material, and attaching devices applied to its respective ends, and adapted to be applied to and removed from the vehicle at pleasure, substantially as described.

5. A suspension mud-guard for cycles, con-

sisting of an unrolled strip of flexible material, and attaching devices applied to its respective ends, and one of them being yielding to place the said strip under tension, and both of them being adapted for application to or removal from the vehicle at pleasure, substantially as described.

6. A suspension mud-guard for cycles, consisting of an unrolled strip of flexible material, and attaching devices applied to its respective ends, and one of them being made of spring wire and constructed to embrace a wheel of the vehicle, and to place the strip under tension, and both of them being adapted for application to and removal from the vehicle at pleasure, substantially as described.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

JOHN GARDNER.  
DALE MARSHALL.

Witnesses:

OLIVER J. WILLIAMS,  
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FRANK S. GALE,  
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