

1,237,762.

W. S. EASTERLY,
WHEELWRIGHT MACHINE.
APPLICATION FILED JAN. 17, 1916.

Patented Aug. 21, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

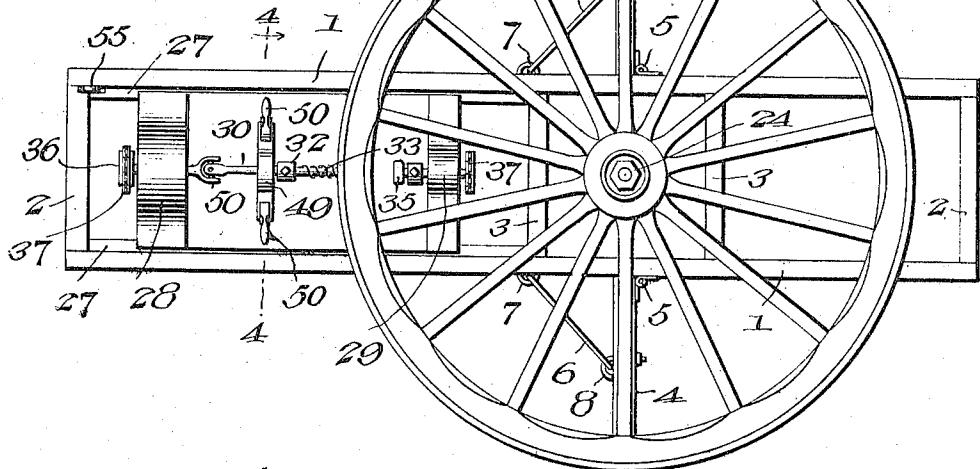
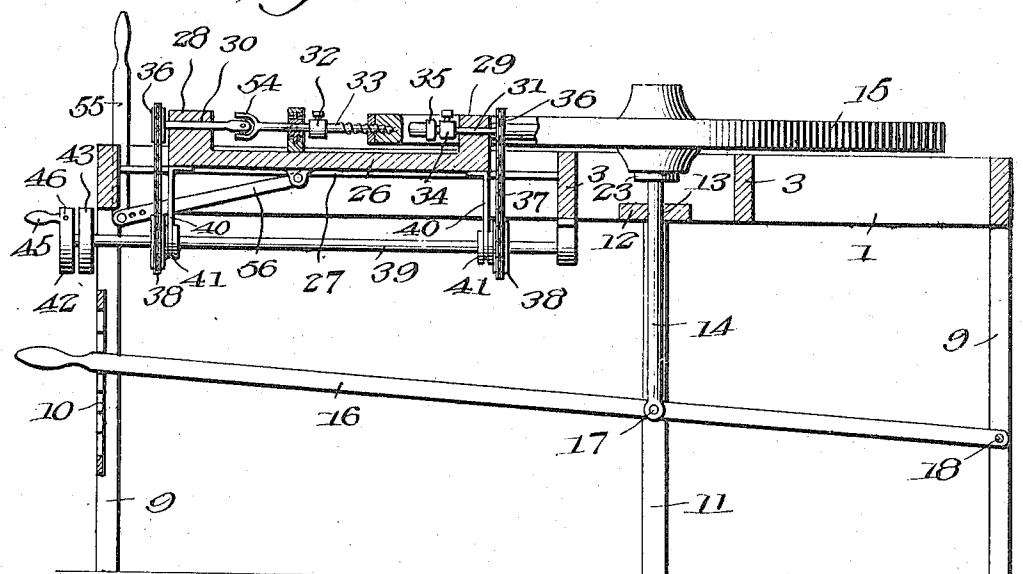


Fig. 2.



Witnesses

Hugh H. Ott.
P.M. Smith

By *Victor J. Evans*

LITERATURE

W.S. Easterly

Attorney

UNITED STATES PATENT OFFICE.

WILBERT S. EASTERLY, OF WALDRON, KANSAS.

WHEELWRIGHT-MACHINE.

1,237,762.

Specification of Letters Patent. Patented Aug. 21, 1917.

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To all whom it may concern:

Be it known that I, WILBERT S. EASTERLY, a citizen of the United States, residing at Waldron, in the county of Harper and State 5 of Kansas, have invented new and useful Improvements in Wheelwright-Machines, of which the following is a specification.

This invention relates to machines for the use of wheelwrights, blacksmiths and others, 10 the object in view being to produce a machine which will facilitate the various operations upon vehicle wheels including the original construction of the wheel, the repairing of the same, the application of new 15 spokes and tires to the felly and the boring of holes and placing of bolts and nuts to secure the parts together.

With the above and other objects in view, 20 the invention consists in the novel construction, combination and arrangement of parts, as herein described, illustrated and claimed.

In the accompanying drawings:—

Figure 1 is a plan view of a machine embodying the present invention.

25 Fig. 2 is a vertical longitudinal section through the same showing a wheel partly in elevation and partly in section.

Fig. 3 is an end elevation of the same showing the rack bars.

30 Fig. 4 is a vertical cross section on the line 4—4 of Fig. 1.

The main frame of the wheel stand is rectangular in plan comprising the parallel side bars 1, the end bars 2 connecting the same 35 and the intermediate cross bars 3, all of said parts being fastened together in rigid relation to each other.

Extending outwardly from the side bars 1 at about the center thereof are wings 4, the 40 latter being hinged at 5 to the side bars 1 in order that they may be folded inwardly against the side bars 1 for the sake of compactness and to enable the machine as a whole to be stored in a small space. Hooks 45 6 are employed to hold the wings 4 at right angles to the side bars 1, said hooks being shown as pivotally connected at 7 to the side bars 1 and movable into and out of engagement with eyes 8 on the wings 4.

50 The main frame is supported at a suitable elevation by means of legs 9 connected by cross braces 10 and the wings 4 are also supported by additional legs 11. A horizontal guide bar 12 extends across the ele- 55 vated frame and connects the side bars 1 thereof, said guide bar being formed with a

guide opening 13 in which is slidably mounted a vertical wheel supporting shaft 14 upon which the vehicle wheel is adapted to be rotatably mounted, said wheel being 60 indicated at 15. The lower extremity of the shaft or spindle is supported by a hand operated lever 16 to which the shaft 14 is shown as pivotally connected at 17. The lever 16 is hinged at one end as shown at 18 65 to the supporting legs at one end of the frame and the opposite end of said lever extends beyond the opposite end of the frame and between a pair of vertical rack bars 19 and 20 one of which is provided with shoulders or teeth 21 for supporting the end of the lever, the other rack bar being provided with shoulders or teeth 22 for holding the end of the lever depressed. The collar 23 on the shaft or spindle 14 forms a support on 70 which the hub of the wheel 15 rests. A nut 24 is threaded on the upper extremity of the shaft or spindle 14 so as to clamp the wheel 15 on said shaft and enable said wheel to be raised and lowered until the rim and felly 75 thereof are brought into the desired relation to the drill and socket wrench hereinafter described.

26 designates a bed plate which is slidable longitudinally of the horizontal main frame of the stand, said bed plate coöperating with guides 27. The bed plate is provided with an upstanding head stock 28 and a tail stock 29. A live spindle 30 is journaled in the head stock 28 and another live spindle 31 is journaled in the tail stock 29. The spindle 30 is provided with a chuck 32 adapted to receive a drill 33 while the live spindle 31 is provided with a chuck 34 adapted to receive a socket wrench 35. The spindles 30 and 31 85 are in alinement with each other and when the vehicle wheel 15 is in place, the felly and tire of the wheel lie between the said live spindles. Each of the spindles 30 and 31 has fast thereon a sprocket wheel 36 from 90 which a sprocket chain 37 extends downwardly around another sprocket wheel 38 on a rotary driving shaft 39 located below the bed plate 26 and journaled in bearings 95 on the frame, said driving shaft 39 being immovable longitudinally. The sprocket wheels 38 have a sliding and feathered engagement with the shaft 39 and are shifted longitudinally of said shaft in accordance 100 with the movement of the sliding bed plate 26, the sprocket wheels 38 being connected with the bed plate 26 by means of arms 105 110

40 carried by the bed plate and extending downwardly therefrom and engaging grooved collars or hubs 41 on the sprocket wheels 38. At its outer end the driving 5 shaft 39 is provided with fast and loose pulleys 42 and 43 respectively, to receive a driving belt 44, the outer pulley being also provided with a folding hand crank 45 pivotally connected thereto at 46, the hand crank 10 being used whenever found necessary and being merely an adjunct to the power transmitting belt 44.

The live spindle 30 passes through a journal box 47 which is pivotally mounted on a 15 vertical axis as shown at 48 in a movable bearing or support 49 which is slidable transversely of the bed plate 26. Means are provided for adjusting the bearing 49, the same being best illustrated in Fig. 4 and 20 comprising a pair of eccentric or cam levers 50 having connected thereto clamping bolts 51 which extend downwardly through slots 52 in the bed plate 26 and having on their lower ends heads 53 which engage the under 25 side of said bed plate. By loosening the cam levers 50, the bearing or support 49 may be shifted laterally to one side or the other of the center thereby correspondingly changing the angle of the live spindle 30. In this 30 way a hole may be drilled directly through the tire and felly on a true diametrical line of the vehicle wheel or the hole may be drilled at an angle to one side or the other of the diametrical line of the wheel. 35 When it is necessary to revolve the wheel, as is the case when boring holes in the tire and felly to receive the bolts, the lever 16 may be elevated or depressed and brought into engagement with the desired tooth of 40 the supporting rack bar 19. In case it is desired to clamp the wheel against rotation, blocks may be placed upon the main frame of the stand and the vehicle wheel drawn downward tightly thereon and so held by 45 moving the lever 16 into engagement with

the proper tooth of the rack bar 20. The machine as a whole is adapted to vehicle wheels of different sizes and will be found of great utility to wheelwrights, blacksmiths and mechanics in general.

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Having thus described my invention, I claim:

1. A wheel stand embodying a horizontal frame, a vertically adjustable wheel supporting shaft, a horizontally slidable bed plate, guiding means for said plate on said frame, a stock and live spindle carried by said bed plate, a driving shaft, sprocket wheels in said live spindle and driving shaft, the sprocket wheel on the driving shaft being feathered and slidable thereon, a sprocket chain passing around said sprocket wheels, and an arm on the bed plate engaging the sprocket wheel on the driving shaft to shift the last named sprocket wheel according to the movement of the bed plate.

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2. A wheel stand embodying a horizontal frame, a vertically adjustable wheel supporting shaft, a horizontally slidable bed plate, guiding means for said plate on said frame, a stock and live spindle carried by said bed plate, a driving shaft, sprocket wheels in said live spindle and driving shaft, the sprocket wheel on the driving shaft being feathered and slidable thereon, a sprocket chain passing around said sprocket wheels, an arm on the bed plate engaging the sprocket wheel on the driving shaft to shift the last named sprocket wheel according to the movement of the bed plate, a live spindle bearing adjustable transversely of the bed plate, a spindle journal box pivotally supported by said bearing, and means for adjusting and fastening said bearing.

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

WILBERT S. EASTERLY.

Witnesses:

JOHN W. VARREL,
NORA E. JOHNSON.

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