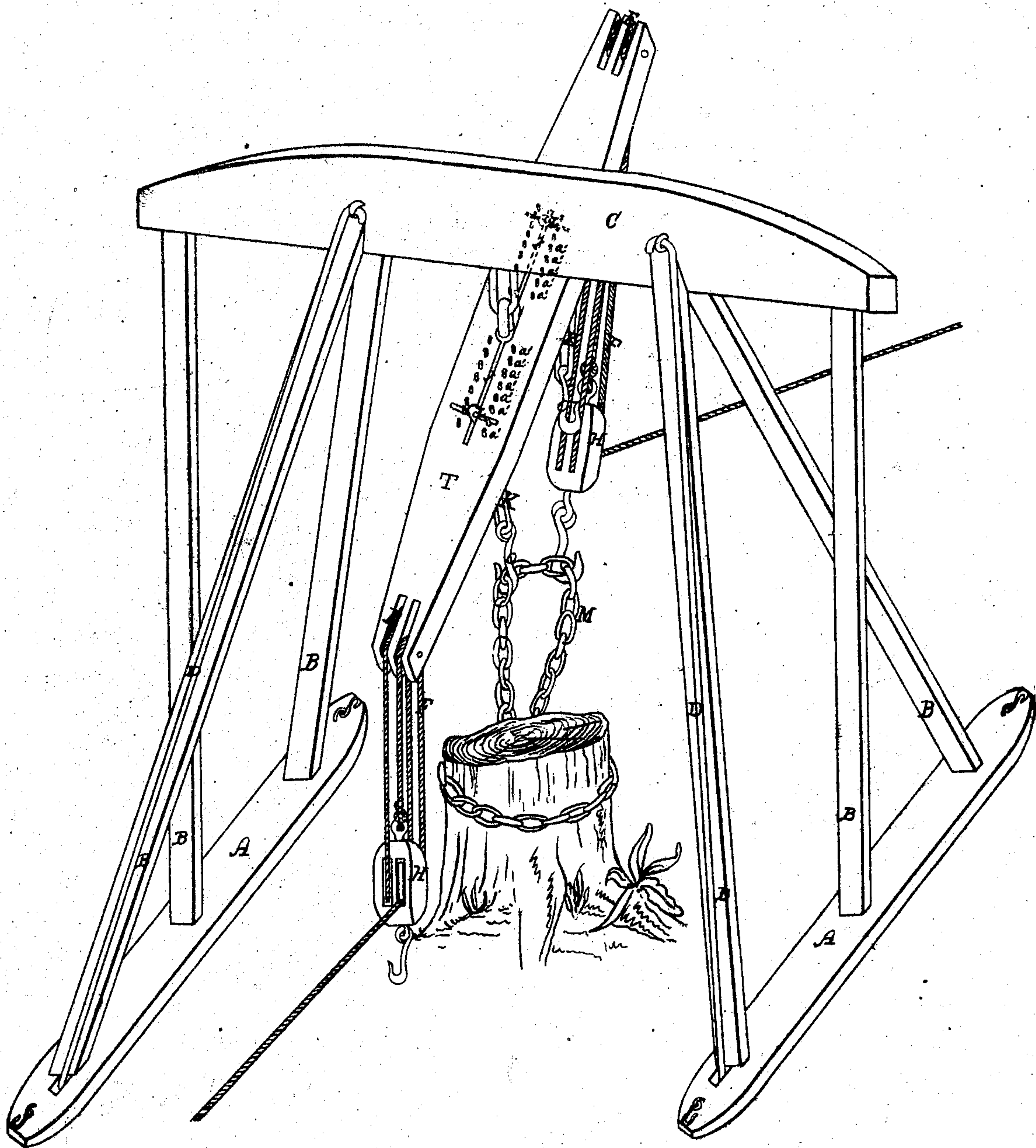


*C. E. Galligan,  
Stump-Extractor*

*No 75,894.*

*Patented Mar. 24. 1868.*



WITNESSES

*Geo. Rutland  
H. F. Eberts*

INVENTOR

*Chas. E. Galligan  
By his Attorney  
J. H. Sprague*



# United States Patent Office.

CHARLES E. GALLIGAN. OF PAW PAW, MICHIGAN.

*Letters Patent No. 75,894, dated March 24, 1868.*

## IMPROVEMENT IN STUMP-EXTRACTORS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO WHOM IT MAY CONCERN:

Be it known that I, CHARLES E. GALLIGAN, of Paw Paw, in the county of Van Buren, in the State of Michigan, have invented a new and useful Improvement in Stump-Extractors; and I do declare that the following is an accurate description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, being a part of this specification.

The drawing is a perspective view of my invention.

This invention is designed to increase the leverage and power to be used in extracting stumps, and is so fully and satisfactorily shown in the drawings that a more full description of the method of using it is unnecessary.

I will now, therefore, proceed to so describe my invention as to enable those skilled in the business to manufacture it.

In building my machine, I first prepare two runners or bearings A A, into which, by proper tenons and mortises, I place the standards B B B B B B, which support the cross-beam C. To hold the cross-beam firmly in place, I use upon each side the hooked rods D D. To the cross-beam C, I attach, by a suitable device, the lever T, which has at each end double sheaves E E. Through these sheaves I receive proper ropes F F, which are also reeved through double blocks H H. At I I are slotted openings through the lever T, through which pass the links K K. Through the links K K, and on top of the cross-beam C, I put the rods L L, which rest against and are held in place by the pins a' a' a' a' a' a', &c., for the purpose of expanding or contracting my power by lengthening or shortening the leverage. To the bottom of the links K K are attached strong grub-hooks O O.

In using my machine, I attach two teams to the runners A A, and haul the machine astride of the stump. Then I place the bull-chain M around the stump, and hook to it one of the grub-hooks O O. I then attach one of my teams to each of the ropes F F, fasten the hook attached to one of the blocks H H to the bull-chain M, and start up my team. When the machine is ready for operation, it stands, with all its appurtenances, as shown in the drawings. After one side of the machine has done its work, it holds all it has got, while the other side is brought into operation in the same manner.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement of the runners or bearings A A, the standards B B, &c., the cross-beam C, the hooked rods D D, the lever T, provided with the slotted openings I I, the double sheaves E E, the ropes F F, the double blocks H H, the links K K, the pins a' a', &c., and the grub-hooks O O, all arranged substantially as described, and for the purpose designed.

CHAS. E. GALLIGAN.

Witnesses:

JOHN LEWIS,

THOS. H. STEPHENSON