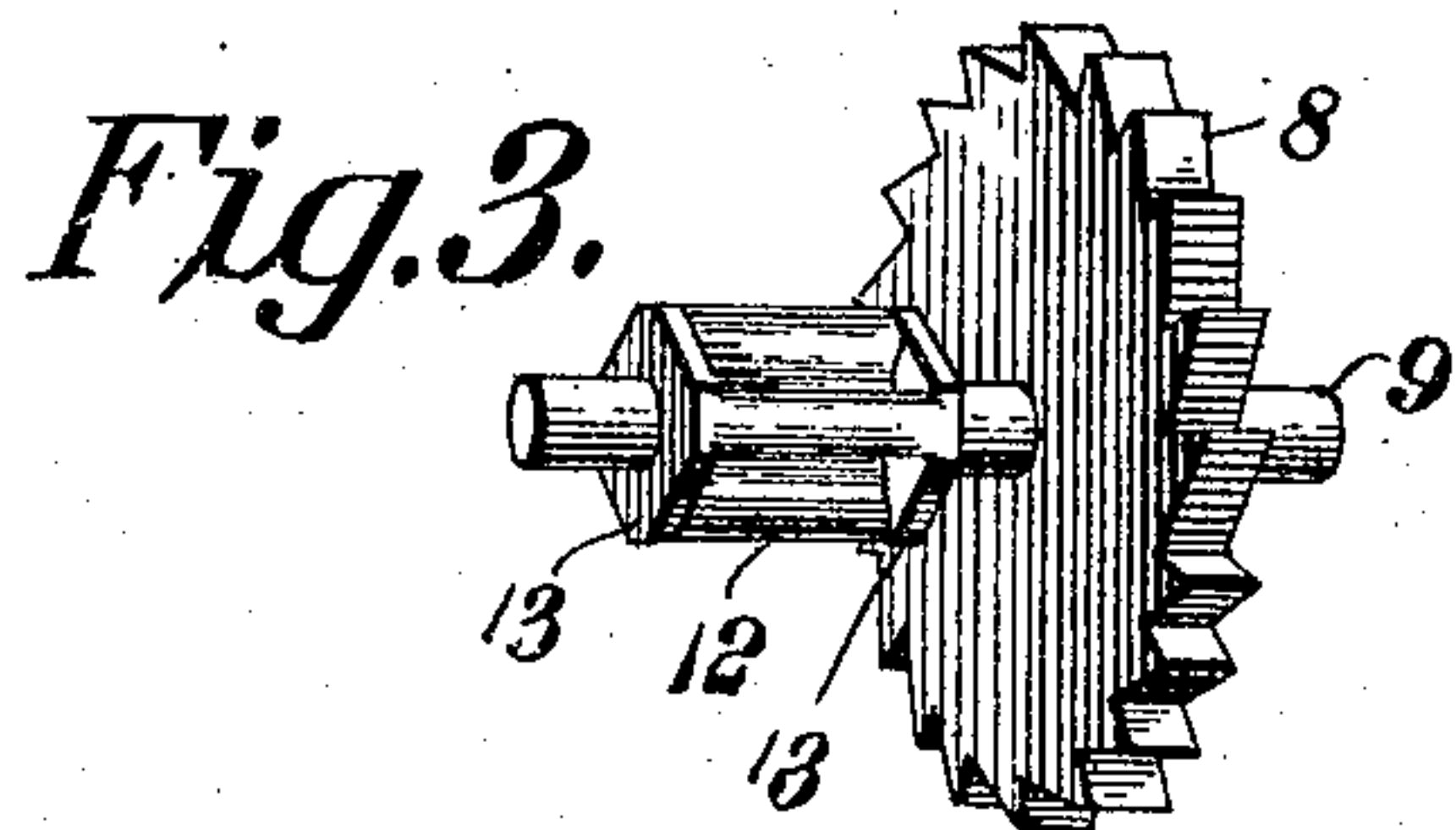
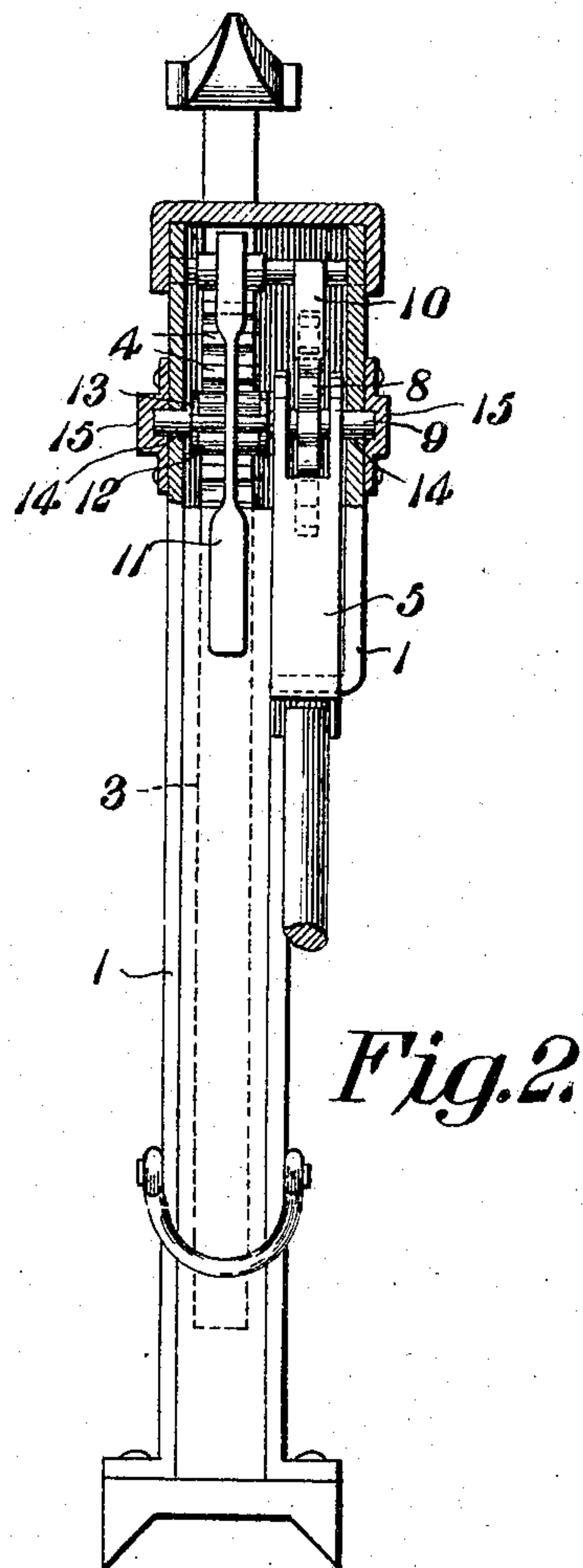
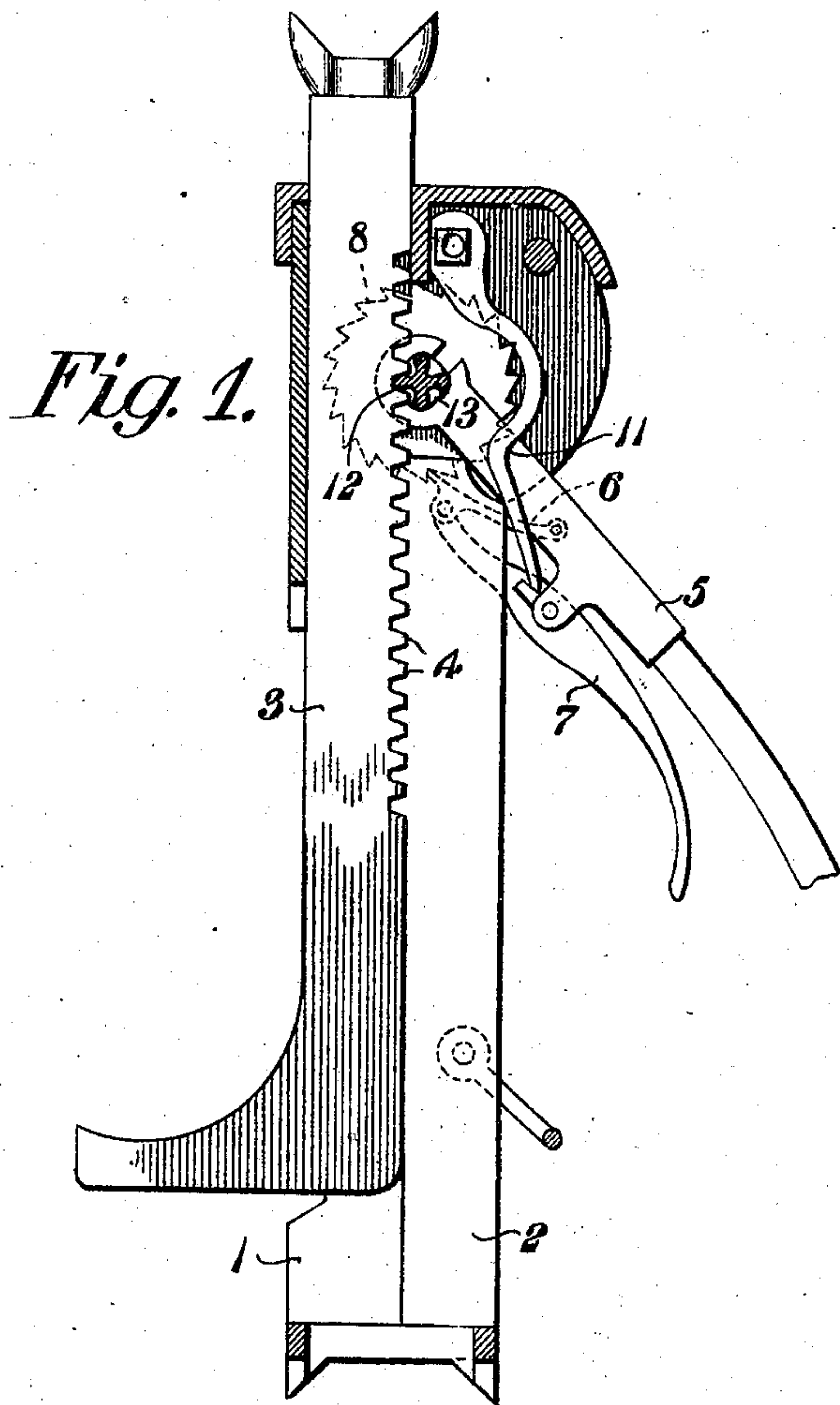


No. 858,716.

PATENTED JULY 2, 1907.

J. E. GILCHRIST.  
LOGGING JACK.  
APPLICATION FILED NOV. 26, 1906.



WITNESSES:  
*E. J. Stewart*  
*A. M. Rose*

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ATTORNEYS

# UNITED STATES PATENT OFFICE.

JOHN E. GILCHRIST, OF SOUTH BEND, WASHINGTON.

## LOGGING-JACK.

No. 858,716.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed November 26, 1906. Serial No. 345,156.

*To all whom it may concern:*

Be it known that I, JOHN E. GILCHRIST, a citizen of the United States, residing at South Bend, in the county of Pacific and State of Washington, have invented a new and useful Logging-Jack, of which the following is a specification.

This invention has relation to logging jacks and it consists in the novel construction and arrangement of its parts as hereinafter shown and described.

10 The logging jack herein shown and described is similar in many respects to the logging jack described and shown in my prior patent, granted March 17, 1896, No. 556,625, and in its general arrangement is also similar to the construction shown in the patent granted to Alexander M. Gilchrist, January 23, 1900, No. 641,951. My present invention, however, differs materially from those above referred to which differences will be hereinafter pointed out. In the aforesaid patents a transverse shaft is employed and a pinion is journaled upon  
15 said shaft. Said pinion meshes with the gear teeth of a lifting bar or crutch member and the said shaft is provided with a ratchet wheel which is operated by a handle and which in turn operates said crutch member through the said pinion and shaft. In my present device I form gear teeth directly upon the shaft and have  
20 the inner ends of the teeth located within the circumference of the shaft, consequently, I am enabled to have the teeth located much closer together transversely of the shaft and thereby gain greater leverage in the operation of the jack. In order to strengthen the teeth I provide end webs which connect the same together. Said webs are also integral with the shaft. Bearings are provided in the casing for the ends of the shaft and cover plates are attached to the outer side of the casing  
25 and which receive the extreme ends of the shaft.

In the accompanying drawing, Figure 1 is a vertical sectional view of the jack. Fig. 2 is an edge elevation of the same with parts in section, and Fig. 3 is a perspective view of the shaft, gear teeth and ratchet wheel.

30 The casing consists of the two side plates 1 which are separated by the filler bar 2. The lifting bar or crutch member 3 is arranged to move vertically between the said side plates 1, 1 and is provided at its rear edge with the gear teeth 4. The mechanism for raising and low-

45 ering the lifting bar may be of any suitable or desirable construction. I have, however, herein shown mechanism similar to that shown and described in the patents previously referred to. This mechanism, in brief, consists of an operating lever 5 upon which is mounted a pawl 6 said pawl being controlled in position by  
50 means of a controlling lever 7. The ratchet wheel 8 is mounted upon a shaft 9 and the stop pawl 10 is located between the upper ends of the plate 1 and is controlled by a hand lever 11 and engages the ratchet wheel 8.

The gear teeth 12 are formed upon the shaft 9 and the  
55 inner ends of said teeth are within the periphery of the said shaft. The outer end of the said teeth are connected together by the webs 13, 13. The ends of the shaft 9 are journaled in the perforations 14 provided in the side plates 1 and the caps 15 are attached to the  
60 outer faces of the side plates 1 and receive the extreme ends of the shaft 9. As the gear teeth 12, webs 13, 13 are integral with the shaft 9 a very durable structure is produced and at the same time the teeth 12 may be brought so close together transversely of the shaft as to  
65 afford maximum leverage for operating the lifting bar.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

A jack comprising a casing having openings, in opposite sides, a lifting bar mounted for movement within  
70 the casing and having teeth, a shaft journaled in the opening of the casing and having integral teeth, the inner ends of which are within the periphery of the shaft and the outer ends lying beyond the periphery of the shaft, and integral webs connecting the ends of the teeth and  
75 the shaft together, caps applied to the exterior of the casing over the openings thereof and having recesses forming bearings for the said shaft and retaining the same against longitudinal movement and a ratchet wheel mounted upon the shaft and being spaced from one of  
80 the webs thereof and from one of the sides of the casing whereby portions of the shaft are left exposed and an operating lever adapted to engage the said exposed portions of the shaft and carrying a pawl for engagement with the ratchet wheel.

85 In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN E. GILCHRIST.

Witnesses:

M. D. EGBERT,  
H. A. HILL.