

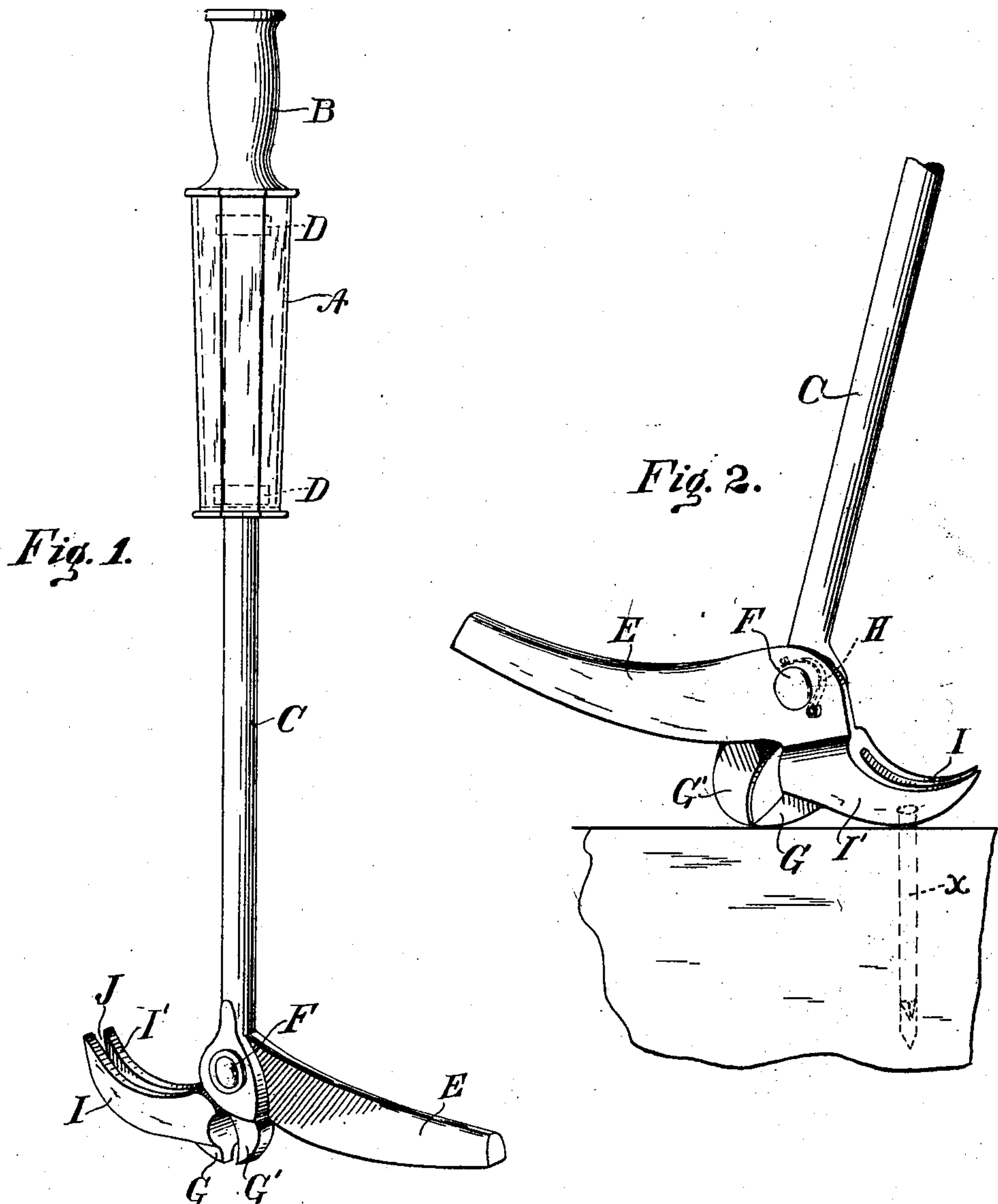
No. 754,202.

PATENTED MAR. 8, 1904.

J. H. DE GRANADA & R. KEENE.  
NAIL PULLER.

APPLICATION FILED JUNE 30, 1903.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JACQUES HENRIQUES DE GRANADA AND RICHARD KEENE, OF NEW YORK, N. Y.

## NAIL-PULLER.

SPECIFICATION forming part of Letters Patent No. 754,202, dated March 8, 1904.

Application filed June 30, 1903. Serial No. 163,681. (No model.)

*To all whom it may concern:*

Be it known that we, JACQUES HENRIQUES DE GRANADA, a subject of the Queen of the Netherlands, and RICHARD KEENE, a subject of the Emperor of Germany, both residing in the borough of Brooklyn, county of Kings, city and State of New York, have jointly invented certain new and useful Improvements in Nail-Pullers, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 illustrates a perspective view of the apparatus embodying the invention. Fig. 2 illustrates a perspective view of the apparatus embodying the invention in operation.

In nail-pullers as heretofore constructed the jaws which grip the nail for its extraction are necessarily narrow in order that they may be forced into the wood of the case or box by the stroke of the hammer or handle-head of the apparatus, and because of the narrowness of these jaws they are apt to slip away from contact with the shank of the nail as soon as they have passed above the level of the wood of the case in the act of withdrawing the nail, and thereupon it is difficult to reengage the jaws with the shank of the nail owing to their narrowness and the awkwardness of the position in which the puller is necessarily presented to the nail. Also these nail-pullers are quite apt to pull off the head or twist the nail, and when this occurs it is sometimes difficult to secure proper hold by the jaws upon the headless stem or wire of the nail.

The purpose of our invention is to obviate these objections and is as follows:

A is the usual tubular or socket part of the hammer or handle-head of the apparatus.

B is the handle part proper.

C is the shaft of the apparatus, having the enlarged head D, whereby it is retained within the socket or part A.

E is the movable member or arm of the apparatus, which is pivoted to the shaft C at F.

G' is the fixed jaw, which is integral with the shaft C.

G is the movable jaw, which is integral with the member or arm E.

H is a spring, usually constructed as a flat

spring, whereby the jaw G' is ordinarily maintained in an open position.

Our invention consists in forging or forming upon the member or arm E claws I and I', which may be substantially the same as the claws of an ordinary carpenter's hammer, having the usual opening J between them adapted to receive and grip upon the shank of the nail. These claws are curved substantially as shown and are preferably so formed that the jaw G projects beyond the point at which the claws connect with the member E, so that the part G may be readily made to penetrate the wood of the case or box.

X is the nail.

The operation is as follows: The jaws G and G' are engaged with the nail in the usual way, and the nail is started outwardly, also as usual. If the jaws retain their hold upon the nail sufficiently long, the nail will be entirely removed by them and there is no occasion for using our invention. If, however, the jaws slip from the nail, as they frequently do after it has been withdrawn, say, half an inch or more, or if the head of the nail is pulled off by the primary action of the jaws or the nail twisted, so that it is difficult to extract it, then the operator turning the instrument in his hands presents the claws of the apparatus to the nail, as shown in Fig. 2, and if the head is still upon the nail it will pass over the upper surface of the claws I and I', and the extraction will be a perfectly easy and simple matter. If, however, the head has been pulled off, then it may be necessary to force the claws against the headless shank of the nail and hold it there by the pressure of one hand, while the handle is operated by the other, in which event even a headless nail will be easily and effectively removed.

It will be observed that our nail-puller will engage with the headed or headless nail, as the case may be, very much more easily and quickly than heretofore, because the two prongs of the claws serve as a guide between which the nail can be more quickly and easily entered than between the narrow jaws proper G and G' of the apparatus. By actual test it has been found that the time consumed in the



opening of an ordinary commercial packing-case with an instrument embodying our invention as compared with the old form in which our extracting-claws are not present is  
5 very markedly reduced.

We do not limit ourselves to the details of construction, since it will be obvious to those who are familiar with this art that modifications may be made without departing from  
10 the essentials of the invention.

We claim—

1. A nail-puller embodying a shaft provided with a part adapted to slide thereon and act as a hammer, a fixed jaw on the end of the  
15 shaft, a part pivoted to the shaft adjacent to the fixed jaw and which is provided with claws on one end and a laterally-extending fulcrum-arm on the other end and a downwardly-projecting part extending beyond the plane of  
20 the claws and adapted to be driven into the material from which the nail is to be drawn.

2. As a new article of manufacture a jaw for a nail-puller provided with a hole whereby it may be pivoted to the shaft of a nail-puller and having claws at one end, a later-  
25 ally-extending fulcrum-arm opposite the claws and a part, as G, extending downwardly beyond the plane of the under surface of the jaw taken as a whole which immediately en-  
gages with the nail for the extraction thereof. 30

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JACQUES HENRIQUES DE GRANADA.

RICHARD KEENE.

Witnesses as to signature of Jacques Henriques de Granada:

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