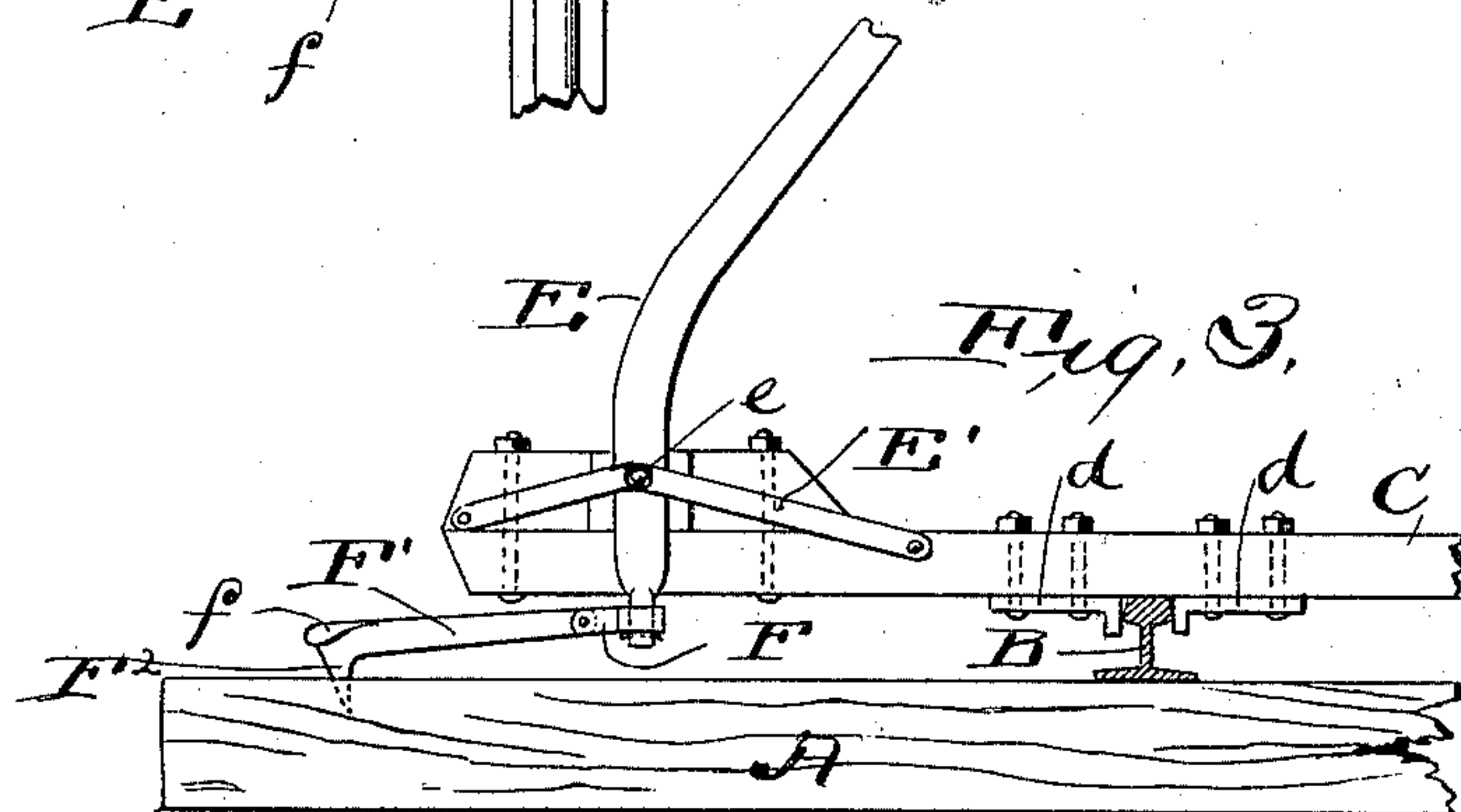
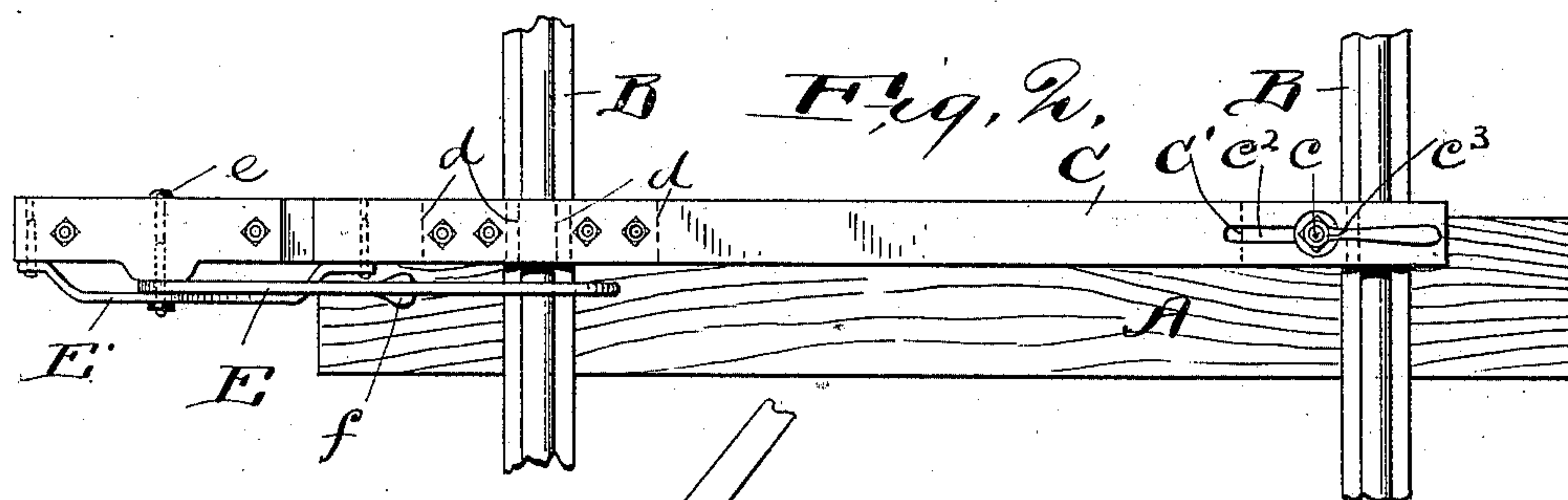
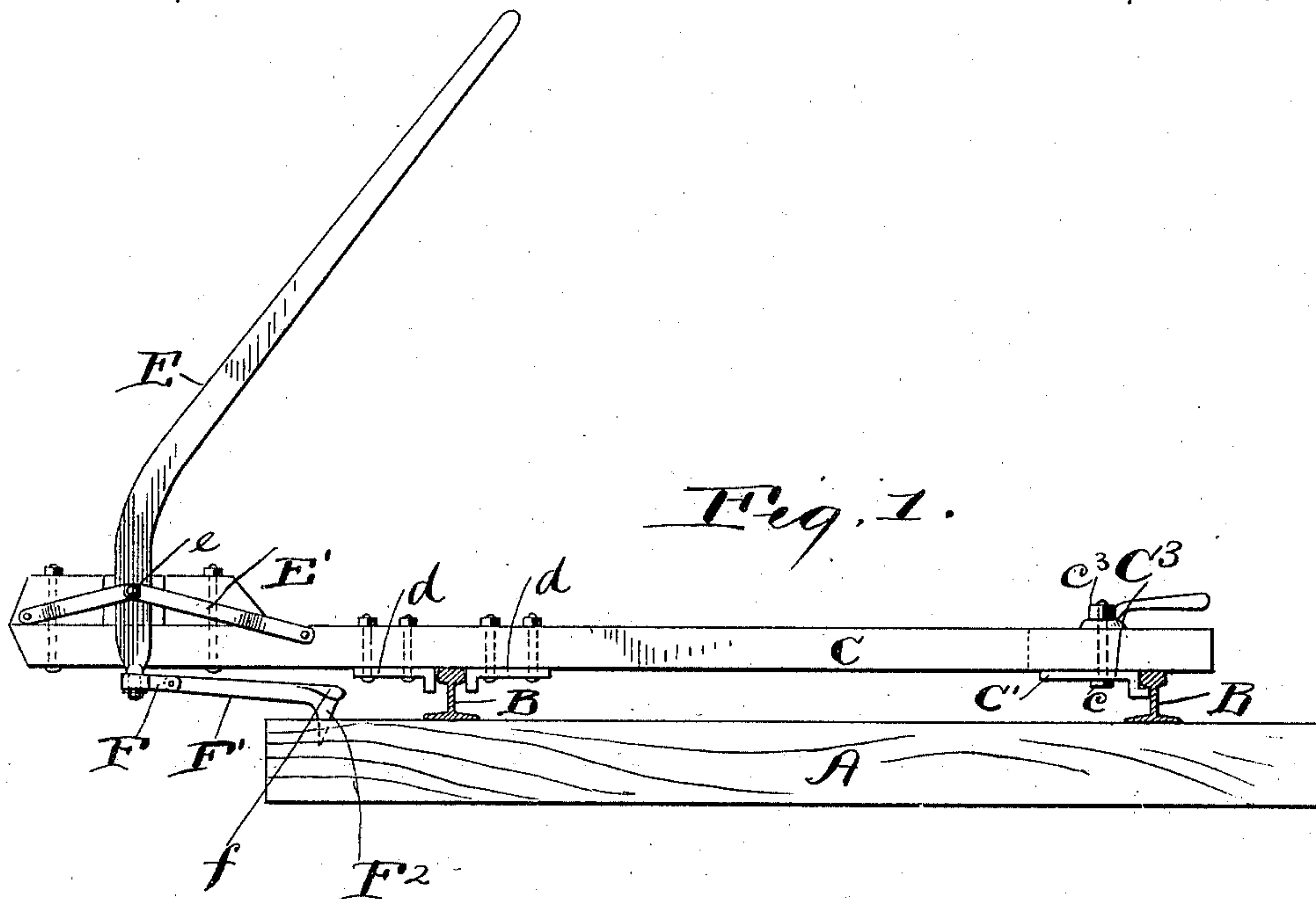


(No Model.)

G. W. SMITH.
RAILWAY TIE EXTRACTOR AND REPLACER.

No. 561,352.

Patented June 2, 1896.



Witnesses.
E. B. Gilchrist
Ellis E. Tilden

Inventor:
George W. Smith
By
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his Attorneys

UNITED STATES PATENT OFFICE.

GEORGE W. SMITH, OF NORTH MONROEVILLE, OHIO.

RAILWAY-TIE EXTRACTOR AND REPLACER.

SPECIFICATION forming part of Letters Patent No. 561,352, dated June 2, 1896.

Application filed March 2, 1896. Serial No. 581,436. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SMITH, of North Monroeville, Huron county, Ohio, have invented certain new and useful Improvements in Railway-Tie Extractors and Replacers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to tie extractors and replacers for railways; and it consists in the peculiar construction of the same, as will be hereinafter fully set forth and claimed.

Heretofore and before my invention it has been a matter of great labor and inconvenience to remove misplaced or old and worn-out ties from beneath the rails of a track, inasmuch as the ties become embedded in the earth or ballast and stick fast, and also because the space in which the work is to be accomplished is very limited.

In the drawings, Figure 1 is a view in side elevation illustrating my device when secured to the rails of a track and when placed and adjusted to remove a tie. Fig. 2 is a top plan view showing more clearly some of the details of construction of my device. Fig. 3 illustrates my device when adjusted so as to replace a tie.

In the drawings, A represents a railway-tie on which the rails B B rest.

C represents a clamp-bar, which is preferably formed of some suitable hard wood. To one end of the bar C is adjustably secured a clamping-lug C' by means of bolts c, which pass through a hole in the clamping-lug C' and through a slot c² in bar C and is secured in place by means of a clamping-nut c³.

The adjustable clamping-lug C' engages the rail of the track farthest from the lever and dog of the device.

d d are two lugs, of metal, which extend down from the clamping-bar C and are securely fastened or bolted thereto. These lugs d d straddle the rail nearest the lever and dog of the device and steady the clamp-bar and prevent it from shifting when the device is in operation.

E is a lever which is pivoted to the clamp-bar C by means of a bolt e, which passes through a strap E' and then through a hole in the lever and through or into the clamp-bar or a supplemental piece or block secured

thereto. At the lower end of the lever E a swiveled hinge-piece F is provided, to which is hinged a dog F', provided in turn with a sharp or pointed hook-nose F², the function of the dog F' being to engage the tie by being driven or forced into it, as shown in Figs. 1 and 3. A head f is provided above the hook-nose F² for the purpose of engaging a pinch-bar when it is desired to withdraw the dog from the tie.

As shown in Fig. 1, my device is especially adapted for removing ties from beneath the rails of a track and also, as shown in Fig. 3, for replacing ties beneath the rails, and it is operated as follows: The dog is made to engage the tie, as shown in Figs. 1 and 3, and the lever is swung in either direction, depending upon whether the tie is to be removed or replaced. The swivel-joint on the end of the lever and between it and the dog allows of the dog being swung around for the purpose of removing or replacing the tie, as shown in Figs. 1 and 3.

By my device the ties are easily removed or replaced, as desired, as great power is attained, owing to the great leverage, and by means of the simple construction the device is easily attached to or detached from the rails.

The slot C² allows of the clamp C' being adjusted to different gages of roads.

What I claim is—

1. A tie extracting and replacing device consisting of a clamp, adapted to be secured to the rail or rails of a track, a lever pivoted to said clamp and provided, at its lower end, with a swiveled dog for engaging the tie, substantially as and for the purpose shown and described.

2. A tie extracting and replacing device consisting of a clamping-bar adapted to extend across the track and engage both rails of the same, said bar being provided at one end with an adjustable rail-engaging clamp, and at the opposite end with a pivoted lever having at its lower end a dog for engaging the tie, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 21st day of February, 1896.

GEORGE W. SMITH.

Witnesses:

W. E. DONNELLY,
ELLA E. TILDEN.