

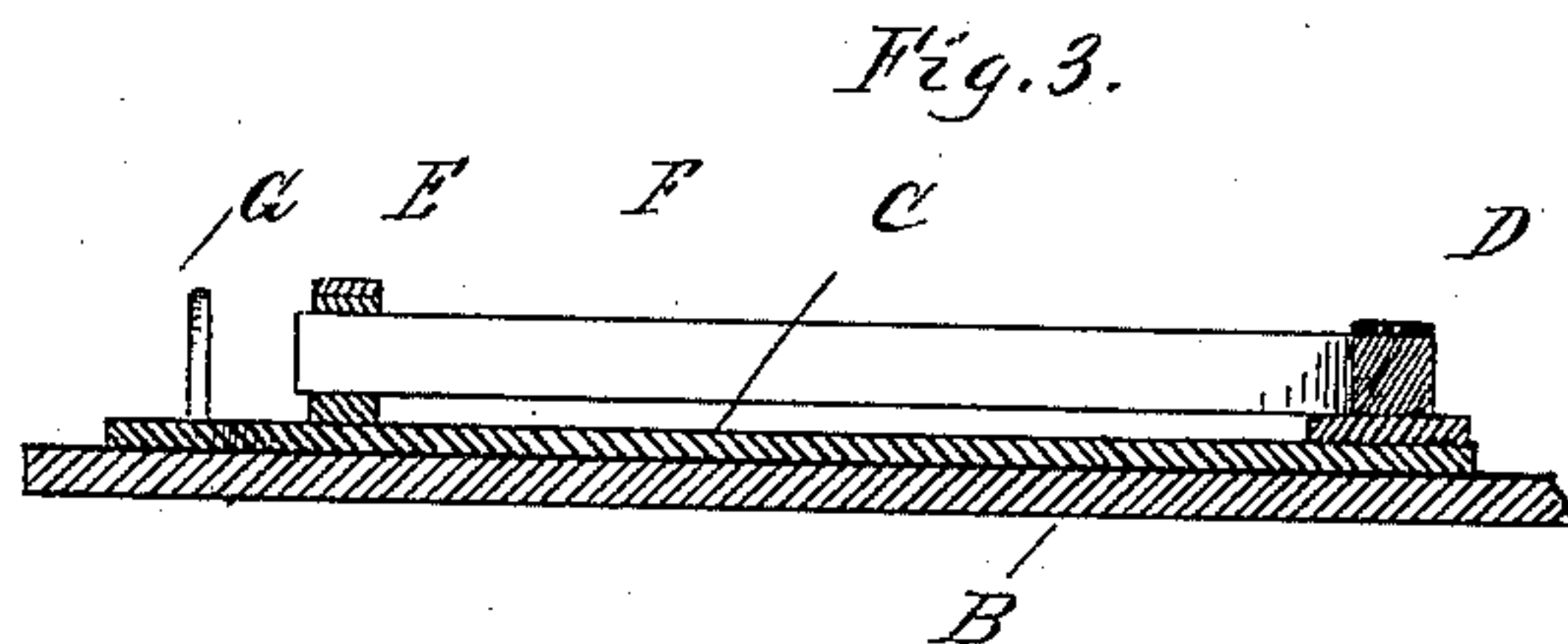
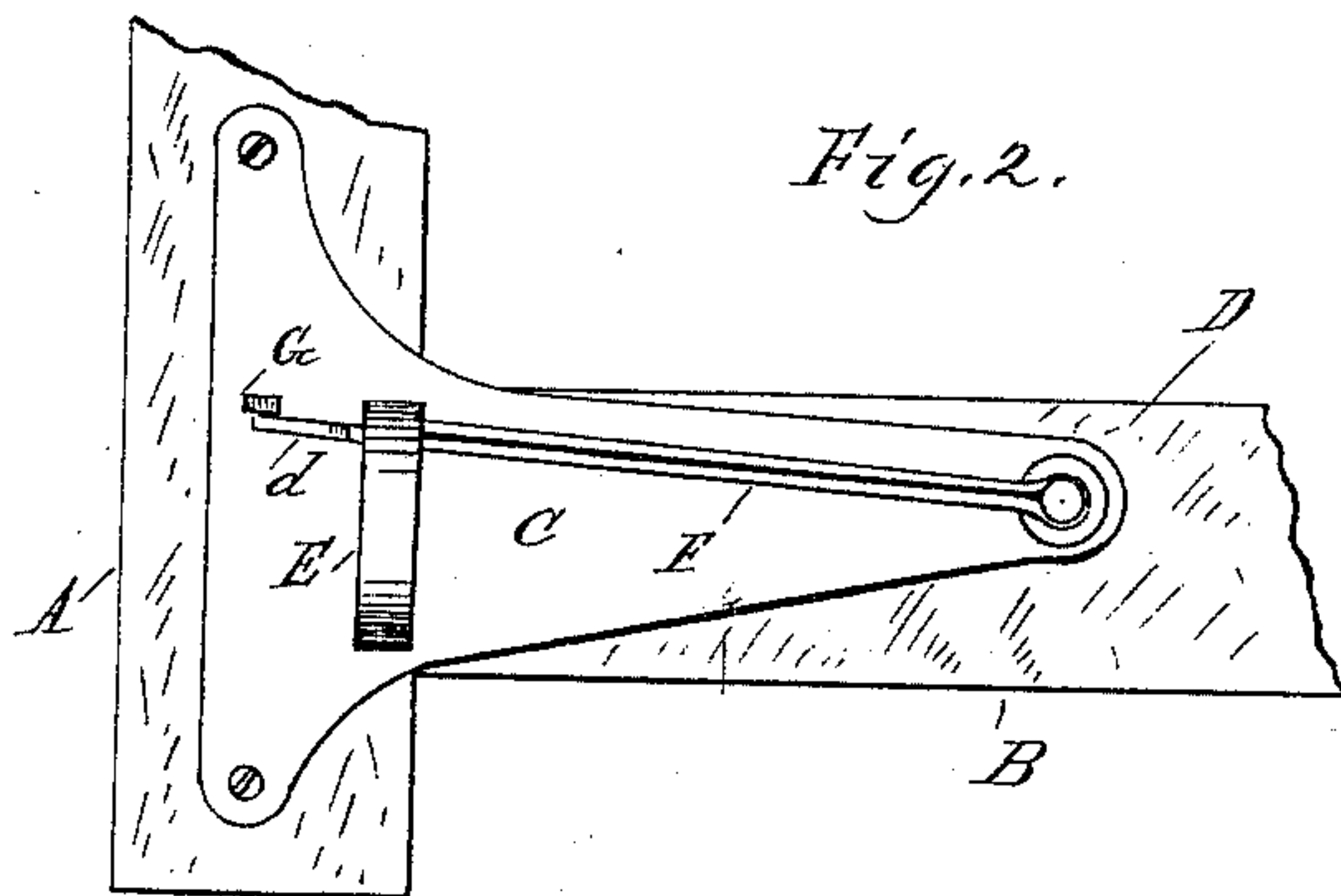
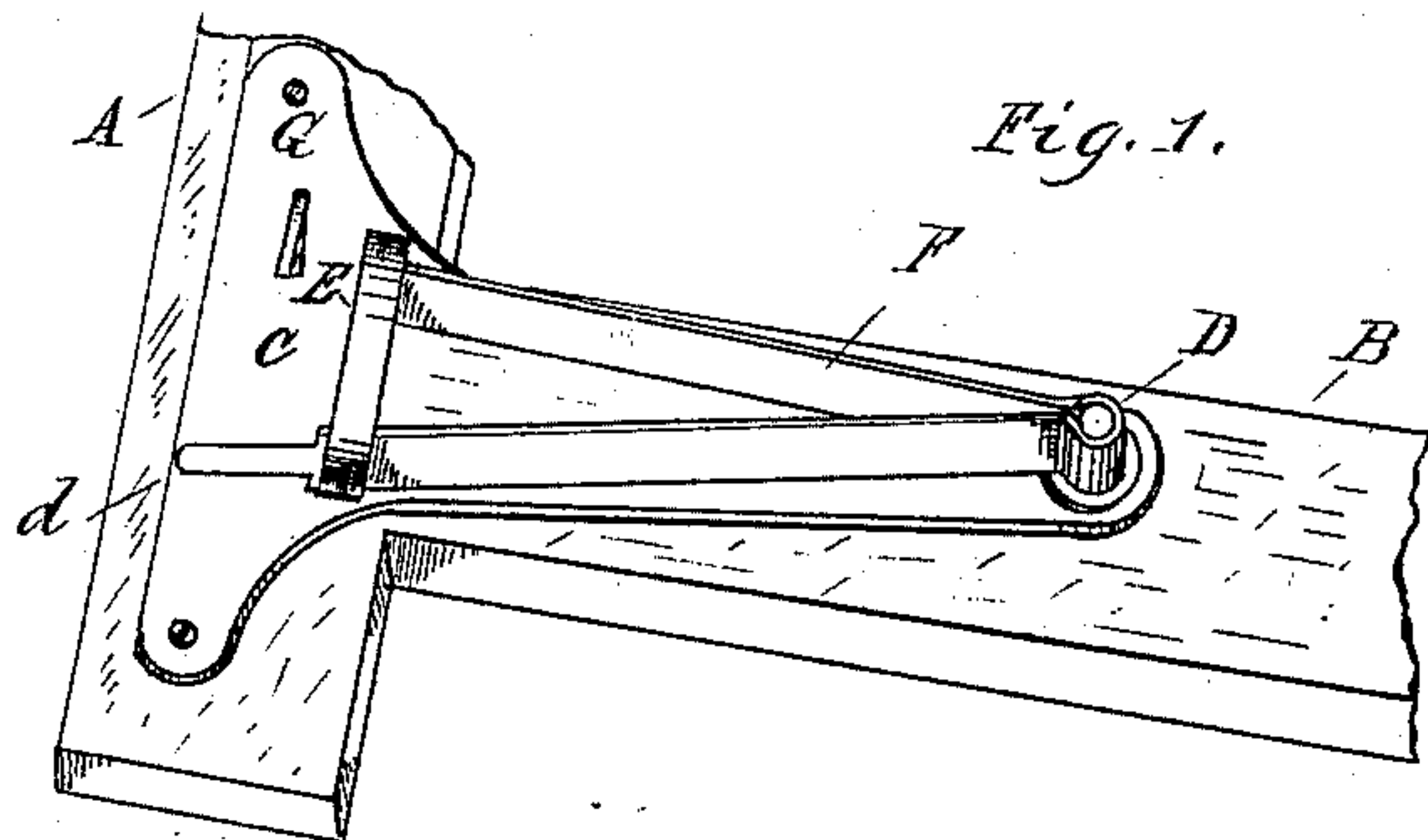
(No Model.)

D. P. FERGUSON.

SPRING TRACE HOOK.

No. 303,632.

Patented Aug. 19, 1884.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

DANIEL P. FERGUSON, OF JONESBOROUGH, GEORGIA.

## SPRING TRACE-HOOK.

SPECIFICATION forming part of Letters Patent No. 303,632, dated August 19, 1884.

Application filed May 14, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL P. FERGUSON, a citizen of the United States, residing at Jonesborough, in the county of Clayton and State of Georgia, have invented a new and useful Spring Trace-Hook, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to spring trace-hooks designed for use upon carriages and other light vehicles; and it has for its object to provide a device of this character which shall prevent all strain, and which will give to the movements of the horse in drawing the vehicle, and in this manner greatly reduce the work.

A further object of the invention is to provide a device of this character which shall be simple in its construction and operation—one that shall be thoroughly effective in operation.

With these ends in view the invention consists in the improved construction and combinations of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my invention, showing the same applied to a portion of a thill. Fig. 2 is a plan view of the same when the draft is applied, and Fig. 3 is a longitudinal vertical section.

In the accompanying drawings, in which like letters refer to corresponding parts in the several figures, A represents a portion of a thill, and B a portion of the cross-bar which connects the thills. Upon the upper side of the cross-bar B and the thill A is secured, by screws or equivalent fastening, a plate, which is preferably cast, and which is preferably of the shape of an acute angle, though it will be readily seen that other forms will be equally advantageous as far as the operation of the device is concerned. This plate is arranged at the junction of the thill and cross-bar, and covers the joint of the same, and in this manner serves to brace the parts. At the acute end of the plate C is provided an upwardly-projecting post, D.

E represents a bracket, which is cast integral with the plate C, and which is located near the forward end of the plate, said bracket being of substantially the form shown.

F represents a flat spring, which is mounted on the post D, the two arms of which extend

forwardly and bear against the inner sides of the bracket E. The shorter of these arms only extends as far as the bracket, while the other arm, *d*, projects a slight distance beyond the same, and is reduced at its end, as shown, in order that the trace may be readily placed thereon.

G represents a lug, which is cast integral with the plate C, and which limits the forward movement of the arm *d* of the spring F when draft is applied, and prevents the detachment of the trace.

The operation of the above-described improvement is as follows: The trace is placed upon the end of the spring *d*, and when draft is applied gives to the movement of the horse. In ascending hills, where the draft will be heavy, the spring is carried forward and bears against the lug G, and in this manner the forward movement of the arm *d* is prevented farther than said lug, thus preventing any liability of the said arm to be broken.

It will be seen from the above description that my device is simple in its construction, and that by its use a single-tree is dispensed with.

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

1. The combination, with a vehicle-thill, of a plate carrying a flat spring, one of the arms of which is extended to receive the trace, substantially as set forth.

2. The combination, with a vehicle-thill, of a flat spring mounted on a post of a suitable plate, and a bracket to limit the movement of said spring, as set forth.

3. The combination, with a vehicle-thill, of a plate secured thereto, said plate being provided with an upwardly-projecting post and bracket, a flat spring mounted on said post, one of the ends of said spring being longer than the other and reduced, and a lug secured to the forward end of said plate, substantially as set forth.

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

DANIEL P. FERGUSON.

Witnesses:

JAMES F. SPENCE,

GEO. D. STEWART.