

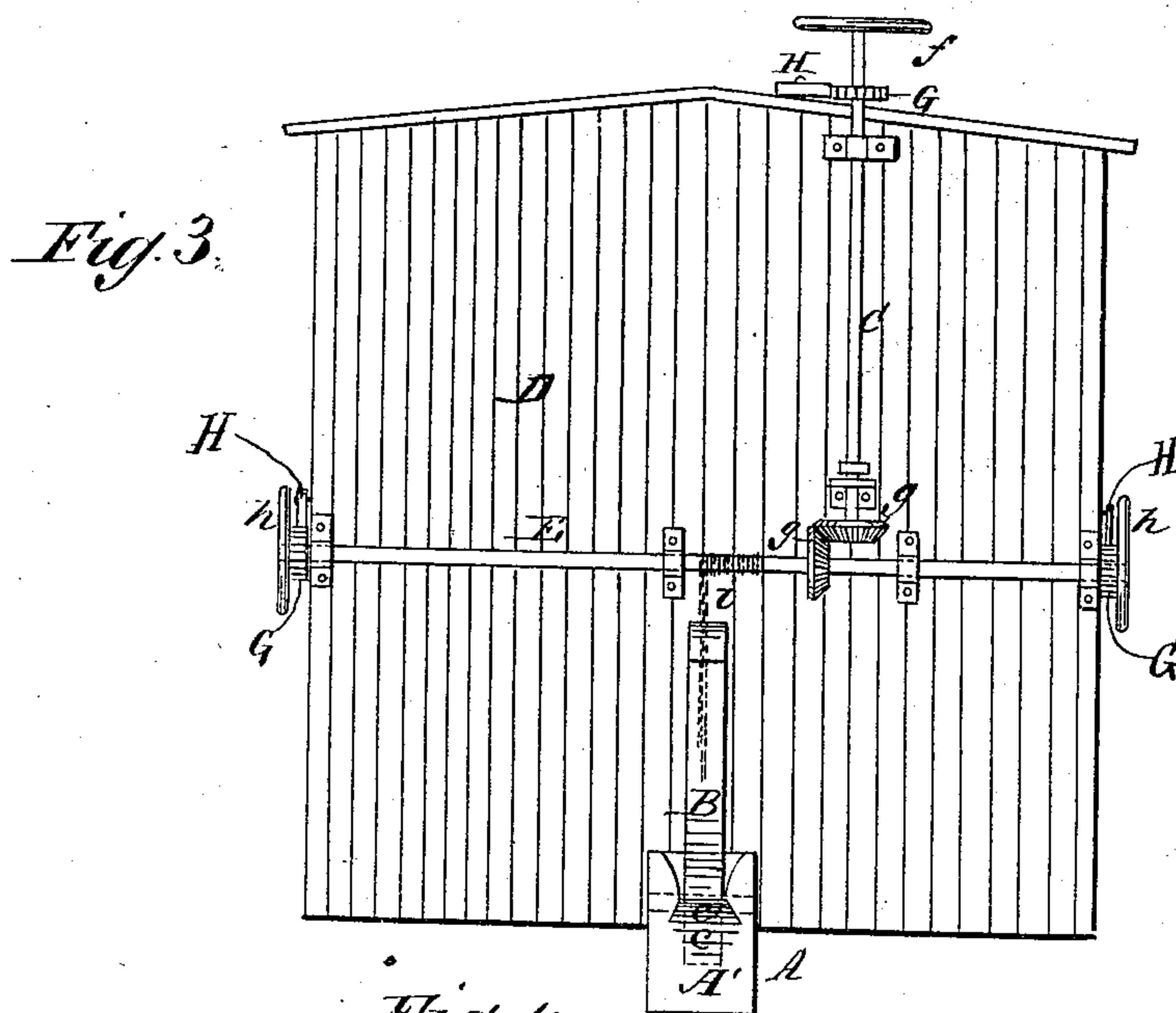
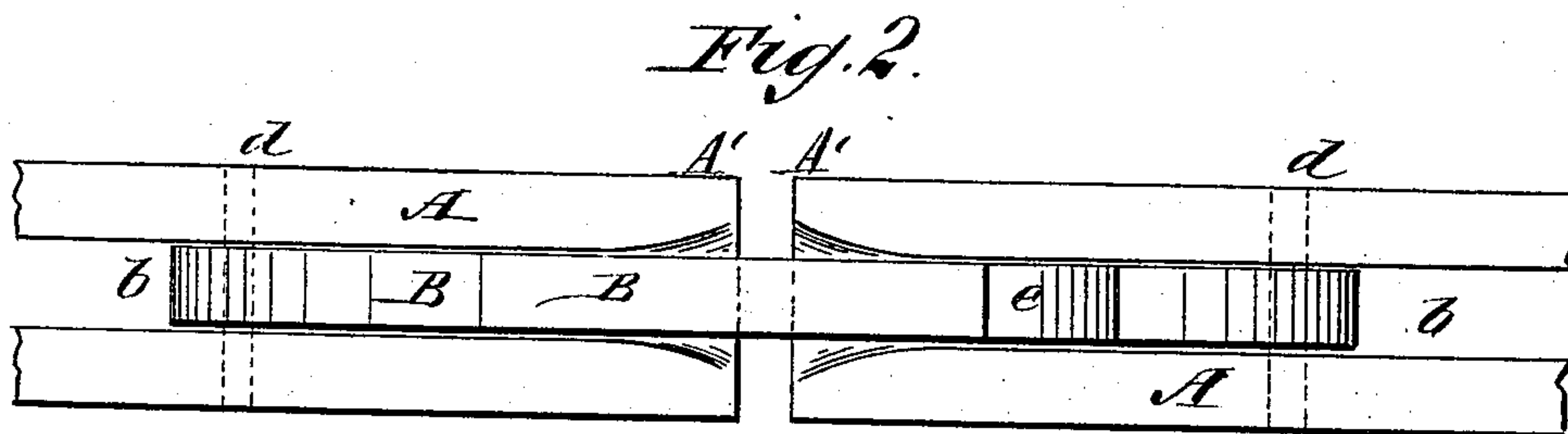
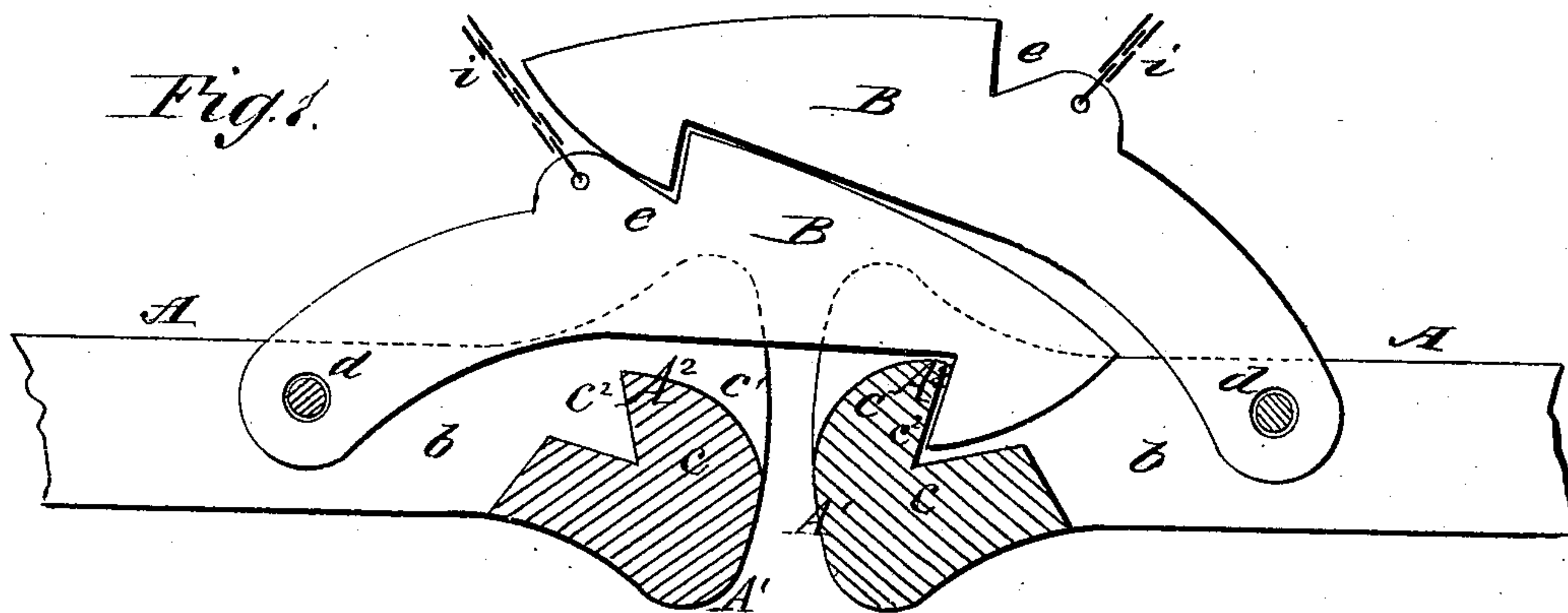
(Model.)

T. J. HILLIARD.

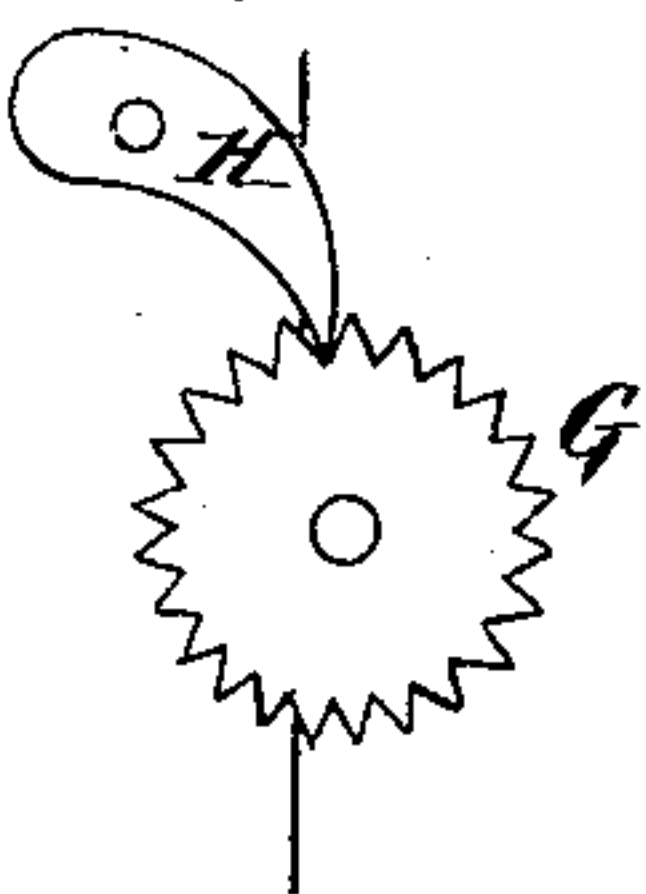
CAR COUPLING.

No. 255,984.

Patented Apr. 4, 1882.



*Fig. 4.*



WITNESSES:

Francis McArdle.  
C. Sedgwick

INVENTOR:

T. J. Hilliard  
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BY

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# UNITED STATES PATENT OFFICE.

THOMAS J. HILLIARD, OF CONWAY, ARKANSAS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 255,984, dated April 4, 1882.

Application filed January 16, 1882. (Model.)

*To all whom it may concern:*

Be it known that I, THOMAS JEFFERSON HILLIARD, of Conway, in the county of Faulkner and State of Arkansas, have invented new  
5 Improvements in Car-Couplings, of which the following is a full, clear, and exact description.

This invention relates to that class of car-couplings known as "hooked" couplings; and  
10 the nature of my invention consists mainly in the combination of gravitating grappling-hooks, draw-bars to which said hooks are pivoted, and hooked shoulders formed on the draw-bars, as will be hereinafter explained.  
15 My invention further consists in the combination of compound gravitating coupling-hooks of curved form and draw-bars to which said hooks are pivoted, having hook-shaped shoulders, as will be hereinafter explained.

20 My invention also consists in the combination of compound interchangeable gravitating hooks which are self-couplers for both high and low platforms or car-sills, hooking shoulders formed on the backs of the said hooks,  
25 draw-bars which serve as buffers, and hooks formed on these draw-bars, as will be hereinafter explained.

The following description of my invention, when taken in connection with the annexed  
30 drawings, will enable others skilled in the art to understand it.

In the annexed drawings, Figure 1 is a vertical longitudinal section through the buffer ends of two draw-bars having my compound  
35 gravitating hooks pivoted to them and coupled. Fig. 2 is a top view of the draw-bars and hooked couplers. Fig. 3 is an end elevation of a burden-car, showing means for uncoupling the hooks from the roof of the car-body and  
40 also from the sides thereof. Fig. 4 is a view of a pawl and ratchet-wheel used as parts of the uncoupling devices.

Similar letters of reference indicate corresponding parts in the several figures.

45 A A designate two draw-bars, which are vertically and longitudinally slotted, as indicated by the letter *b*. These bars are constructed with buffer-heads *A'* *A'*, having outwardly-flaring mouths for the purpose of readily receiving coupling-hooks when two cars come  
50 together, and allowing for the sucking or lat-

eral play of the cars while in motion. Each buffer-head consists of two side cheeks connected together at their front convex ends by a transverse bar, *c*, which is rounded, as shown  
55 in Fig. 1, beveled at *c'*, and shouldered at *c''*. I thus form a hook on the coupling end of each draw-bar, which hook I designate by the letters *A''*.

A short distance in rear of the buffer-head  
60 of each draw-bar *A*, I pivot by means of a transverse pin, *a*, a compound hook, *B*, consisting of a shank, *n*, on which an ear, *e*, is formed that is perforated to have attached to it a lifting-chain, *i*, a hook, *e'*, a curved sur-  
65 face, *e''*, and a beveled hook, *e'''*. The compound hook is curved, as shown in Fig. 1, and its front or free end has a hook on its lower side and on its back. I will here state that the free end of each coupling-hook is heavy enough to  
70 effect a coupling without the use of a spring. When the coupling-hooks are free they rest upon the upper sides of the hooked bars *c* of their respective draw-bars *A*. When two cars come together to effect a coupling one of the  
75 hooks will ride over the other, and the uppermost hook will engage with the lower hook, which latter will engage with the hook on the cross-bar *c* of the draw-bar to which said uppermost hook is pivoted. It will thus be seen  
80 that one hook engages with a draw-bar and the other hook engages with said hook. When a coupling is thus effected the hooks allow a free shackle motion without liability of casual uncoupling while the cars are on the track.  
85 An uncoupling is effected by first raising the topmost hook and then the hook which was below it.

For platform-coaches the chains *i* may be attached to the well-known hand-windlasses; 90 or, if desired, a horizontal windlass, *E*, may be used, having ratchet-wheels *G* and pawls *H*, whereby the hooks can be uncoupled without going between cars.

By means of bevel spur-wheels *g*, a vertical 95 shaft, *C*, and a hand-wheel, *f*, the uncoupling of the hooks can be effected by a person on the roofs of cars.

I am aware that it is not new to use spring-actuated interlocking hooks in car-couplers, 100 and therefore I do not broadly claim such devices as my invention.



What I do claim as new, and desire to secure by Letters Patent, is—

5 The curved gravitating coupling-hooks having pointed or double-beveled self-coupling hooked ends and hooked shoulders on their backs, in combination with beveled hooks formed on the free ends of the buffer-bars to

which said coupling-hooks are pivoted, substantially as described.

THOMAS J. HILLIARD.

Witnesses:

E. J. HAMILTON,  
E. W. LITTLE.