

(No Model.)

F. MILLER.  
CAR COUPLING.

No. 257,234.

Patented May 2, 1882.

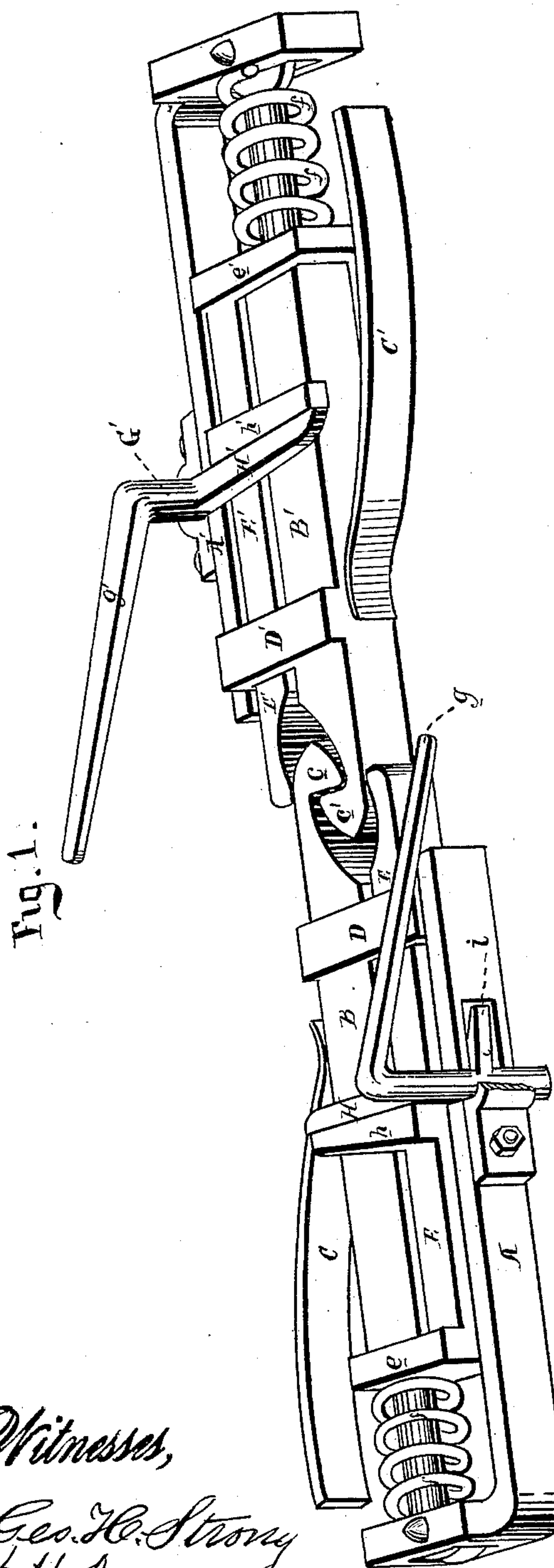


Fig. 1

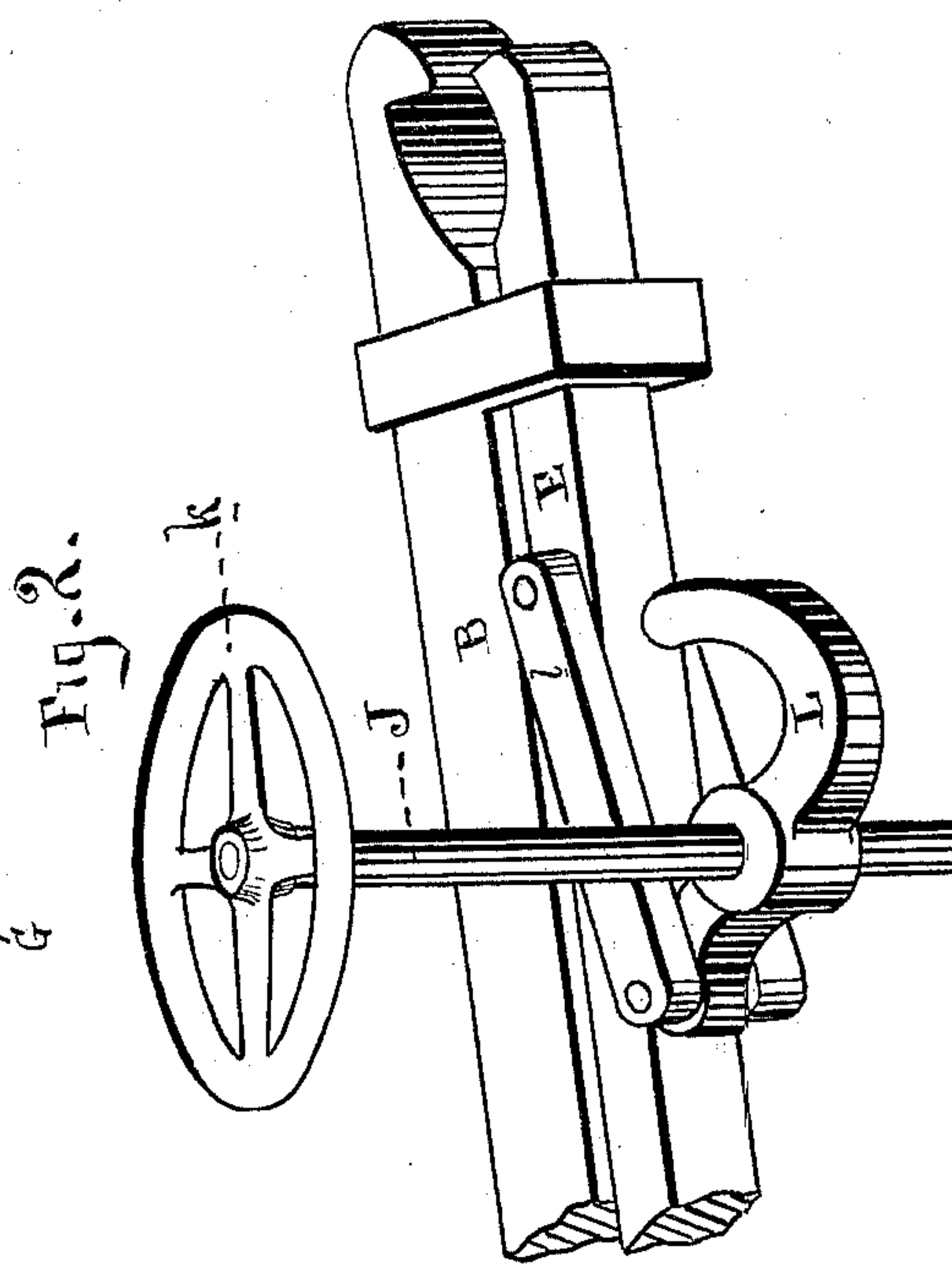


Fig. 2.

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# UNITED STATES PATENT OFFICE.

FRANK MILLER, OF OLEMA, CALIFORNIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 257,234, dated May 2, 1882.

Application filed March 7, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK MILLER, of Olema, county of Marin, State of California, have invented a Car-Coupling; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful car-coupling device; and it consists, in combination with two horizontal coupling-hooks adapted to meet each other and engage under the influence of springs which impinge upon the back of each, of peculiar sliding guards lying parallel with the horizontal hooks, which prevent said hooks from parting, and of a means for displacing said guards and throwing the coupling-hooks to one side to uncouple or release the cars, as will hereinafter be more particularly described, reference being made to the accompanying drawings, in which—

Figure 1 shows a perspective view of my car-coupling. Fig. 2 shows a modification.

Let A A' represent any suitable part or portion of the platforms of two meeting cars, or any suitable supporting links or stirrups by which the coupling devices or hooks of cars are usually sustained.

B B' represent the coupling-hooks. The rear ends of these are pivoted at the rear of the supports A A', and they are held in about a straight line by springs C C', which are attached to the supports and impinge against the backs of the hooks. These coupling-hooks have suitably beveled or rounded heads c c', with straight inner edges or shoulders adapted to abut against each other when engaged, and then hold together securely. The operation of these coupling-hooks is well known and will need only a brief description. When the cars come together, the coupling heads or bars being pivoted at their rear ends and their heads c c' being rounded or beveled, as shown, these latter slip past each other, and are caused to spring together to engage their straight inner edges by the impinging springs C C'. If there were nothing to protect or guard these hooks, they would easily slip apart, especially when turning a sharp curve. In order to provide for this I have the following: Upon the coupling-bars B B' are socket-guides D D', through which fit the bars E E', lying parallel with the coupling-bars upon the opposite side of each,

respectively. These have slightly beveled ends to allow the heads c c' to slip by them, and the inner faces of their ends may preferably be curved out.

The rear ends of the guard-bars E E' are provided with socket-guides e e', which fit around the rear of the coupling-bars B B', and are adapted to slide thereon. Springs f f', fitting around these bars B B' between the ends of the guards E E' and the frame, keep the guard-bars extended forward to about a line with the ends of the coupling-hooks. When the two hooks meet each presses upon the other and upon the other guards, and in endeavoring to enter the small space between the hook and guard each presses the other's guard back until the space is sufficiently wide to allow them to slip between each other and couple themselves. The springs f f' force the guards forward again, and thus the hooked ends are held together and cannot uncouple.

The guards E E', by being parallel with the coupling-bars and adapted to slide back and forward, will resist any side strain or pressure brought to bear upon them by the ends of the coupling-bars, as when the cars are turning a curve, and are therefore better adapted for the purpose than if they were made to slide sideways and hold the hooks in place by the power of their springs.

In order to uncouple the device I have vertical shafts G G' journaled in the sides of the supports A A', and having cranks g g' above within reach of the operator. Upon these shafts are side arms, H H', which extend over the guard-bars E E' and abut against lugs h h' upon said bars. Upon the shafts G G', lower down, are arms i i, which, when the shafts are not in operation, lie about parallel with the guard-bars. When the shafts G G' are turned by their cranks their arms H H', pressing against lugs h h', push back the guards E E', and at the same time their arms i i press against and push to one side said guards, and also the coupling-bars B B', which, swinging upon their pivots, move their hooked ends or heads c c' away from each other and release themselves. The guards E E' being pushed back allows them to do this. When the cranks are released the guards return and the device is again in a position to be recoupled.



Suitable spring buffer-plates, as in ordinary cases, will be employed, and all the usual connections of couplers of this class.

In Fig. 2 I show a modification or equivalent of the means for pushing back the guards and at the same time swinging the coupling hooks or bars apart, which may be readily applied to freight-cars on account of its simplicity. B here shows the coupling-bar, and E the sliding guard. J represents a shaft journaled in a suitable step below and extending upwardly by the end of a car and surmounted by a crank-wheel, *k*. Near the base of the shaft, and rigidly secured thereto, is an S-shaped cam-lever, L, one end of which is attached to a rod, *l*, the other end of which rod is attached to the sliding guard E. When the shaft is turned the lever L pulls the sliding guard back by one end, while its other end presses it and the pivoted hook-bar to one side.

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

1. In combination with the meeting horizontal coupling hooks or bars B B', pivoted at their rear ends and having hooked heads *c c'*, and the impinging springs C C', the horizontal sliding guard-bars E E', lying parallel with said coupling-bars B B' upon opposite sides of

each, respectively, and held forward in position by the springs *f f'*, substantially as and for the purpose herein described.

2. The combination and arrangement of the pivoted coupling hooks or bars B B', with their hooked heads *c c'*, and guide-sockets D D', springs C C', and guide-bars E E', with their guide-sockets *e e'* and springs *f f'*, substantially as herein described.

3. The meeting horizontal coupling hooks and bars B B', pivoted at their rear ends and having hooked heads *c c'*, and the impinging springs C C', in combination with the horizontal sliding guard-bars E E', lying parallel with said coupling-bars upon opposite sides of each, respectively, and held forward by springs *f f'*, and a means for uncoupling the coupling-bars, consisting of the vertical shafts G G', with their arms H H' impinging against lugs *h h'* upon the guard-bars, arms *i i*, and cranks *g g'*, or equivalent means, as shown, substantially as herein described.

In witness whereof I have hereunto set my hand.

FRANK MILLER.

Witnesses:

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