(No Model.) 2 Sheets—Sheet 1.

C. ROBERTS.

HAND CAR.

No. 429,962. Patented June 10, 1890.

Fig. 1

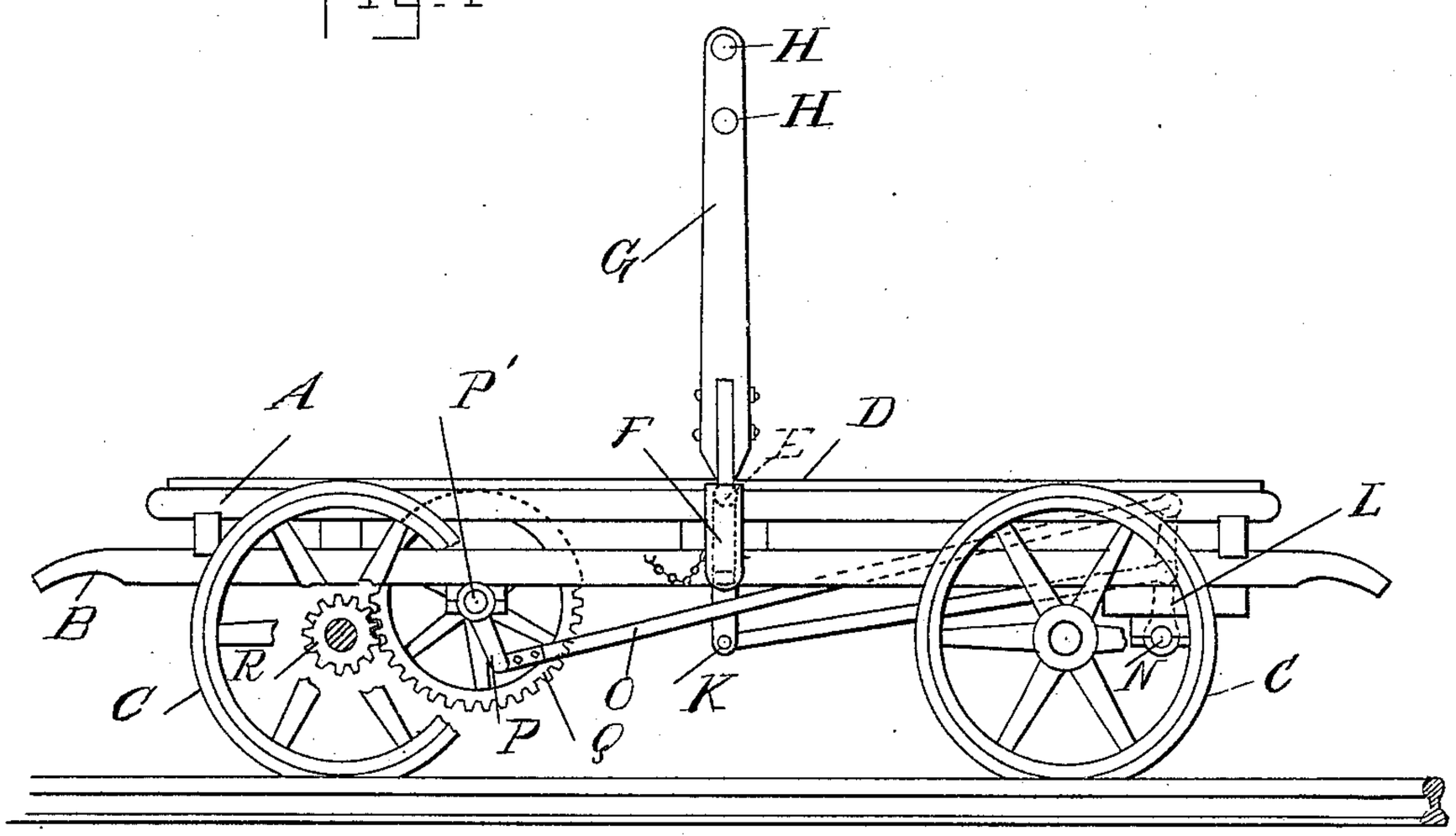
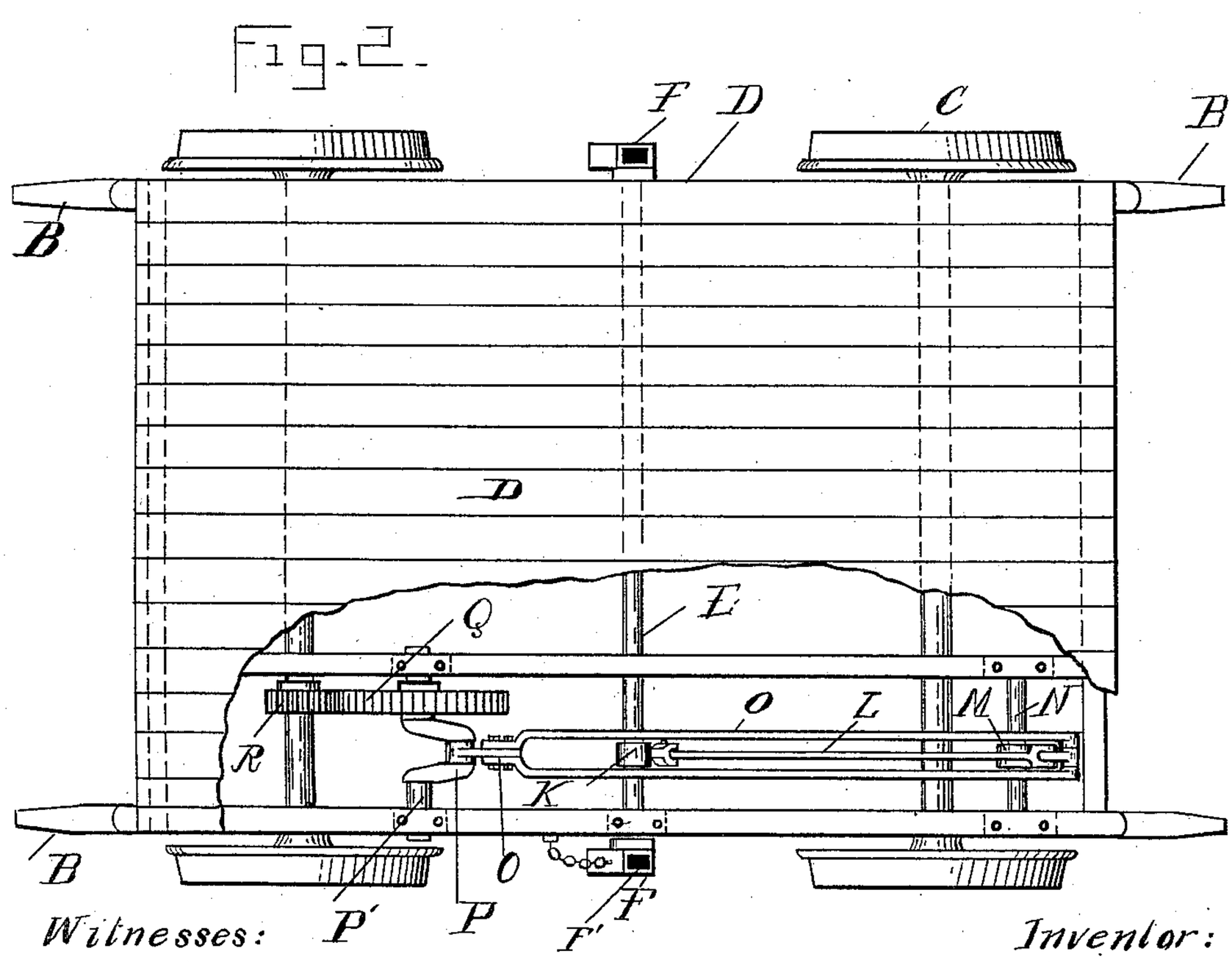


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

CYRUS ROBERTS, OF THREE RIVERS, MICHIGAN.

HAND-CAR.

SPECIFICATION forming part of Letters Patent No. 429,962, dated June 10, 1890.

Application filed March 17, 1890. Serial No. 344,185. (No model.)

To all whom it may concern:

Be it known that I, CYRUS ROBERTS, a citizen of the United States, residing at Three Rivers, in the county of St. Joseph and State of Michigan, have invented certain new and useful Improvements in Hand-Cars, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in railway hand-cars; and the invention consists in the peculiar construction and arrangement of the propelling mechanism whereby the car is adapted to be used for carrying ballast, ties, railroad-irons, &c., and permits of being loaded or unloaded conveniently, while in the present construction of cars such use is very much interfered with and restricted to the propelling mechanism, which occupies, generally, a portion of the platform of the car and requires openings through the platform, so that for many purposes of carrying material so-called "push-cars" have to be used, which have no propelling mechanism.

My improved propelling mechanism leaves the platform entirely intact, as it is entirely below the platform and has side levers which can be removed in loading or unloading the car, while at the same time the propelling mechanism is simple and efficient and especially adapted not to interfere with the convenience of the men propelling it, if the car is loaded; all as more fully hereinafter described, and shown in the accompanying drawings.

Figure 1 is a side elevation of my improved hand-car. Fig. 2 is a plan view thereof. Fig. 3 is a vertical central cross-section through the car on the axis of the drive-shaft.

A is the ordinary car-frame constructed with special regard for the proper support of the propelling mechanism.

B are the usual handles of the frame for removing the car from the track.

C are the car-wheels, and D is the platform of the car, all the parts being constructed in any known manner and forming no part of my invention. Directly below the platform and near the center of the car is journaled in suitable bearings the main drive-shaft E, which extends the whole width of the platform and projects to the sides thereof. To these projecting ends the cranks F are secured, which have the hollow sockets F′, in which the lower ends of the side levers G are removably secured in any suitable manner. These side levers have their upper ends rigidly connected by one or more handle-bars H H, arranged at suitable heights from the platform for the convenience of the men propelling the car. The manner of connecting these handle-bars and side levers is preferably, as shown in the drawings, where the handle-bars are intermediately connected between the side levers by the stay-bolts I and secured to the levers by the angle-braces J.

The drive-shaft has secured upon it, preferably near one side of the car, the crank K, which by means of a connecting-rod L is connected to a crank M, secured upon a counter-shaft N, which is journaled in suitable bearings on the under side of the car-frame. The crank is also connected a farther distance from its center by means of a connecting-rod O with a crank P on the shaft P′, journaled in suitable bearings on the under side of the car-frame near the opposite end of the car. This shaft carries the gear-wheel Q, which meshes with the pinion R upon one of the axles.

In practice, the parts being constructed and arranged as shown and described, it will be seen that by pushing and pulling upon the handle-bars the power is transmitted from the shaft E, crank K, and connecting-rod L to the crank M, which thereby moves in the segment of a circle back and forth. From there the motion is transmitted through the connecting-rod O to the crank P, which is compelled to travel in a circle, and thereby impart rotary motion through the gear-wheel Q and pinion R to the car-axle, all the parts being proportioned in the well-known manner to impart the desired degree of speed to the car. Should it be desired to load the car with ties or other bulky material, it will be seen that the side levers, which carry the handle-bars, can be readily detached by unfastening the side levers from the sockets in which they are secured and remove them, and the load can be readily transported and the propelling mechanism operated after the levers are put in place again without materi-

(No Model.)

C. ROBERTS.

CAR WHEEL.

No. 429,963. Patented June 10, 1890.

Fig. 1.

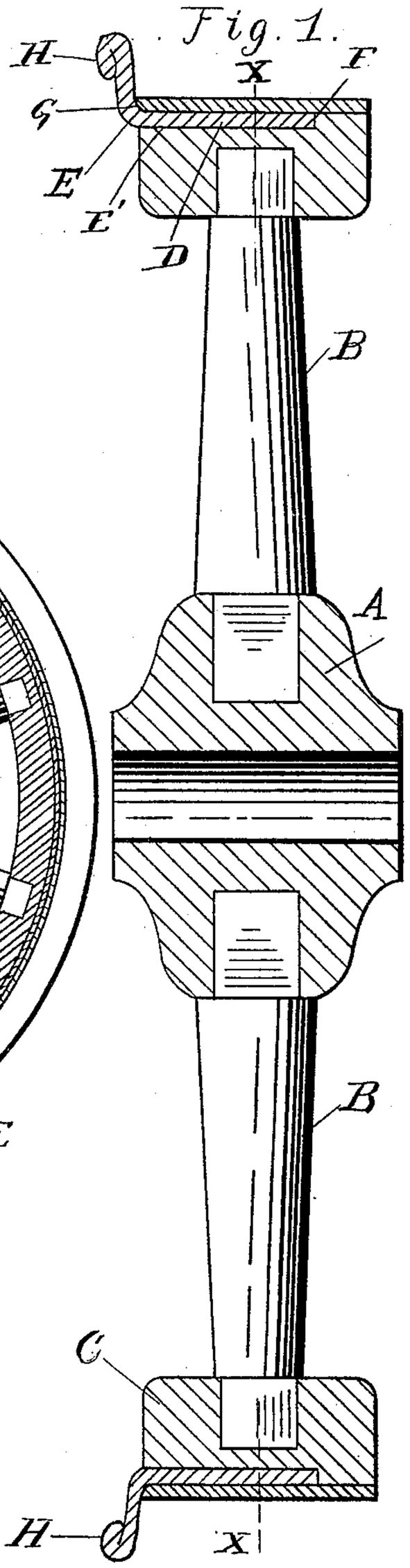
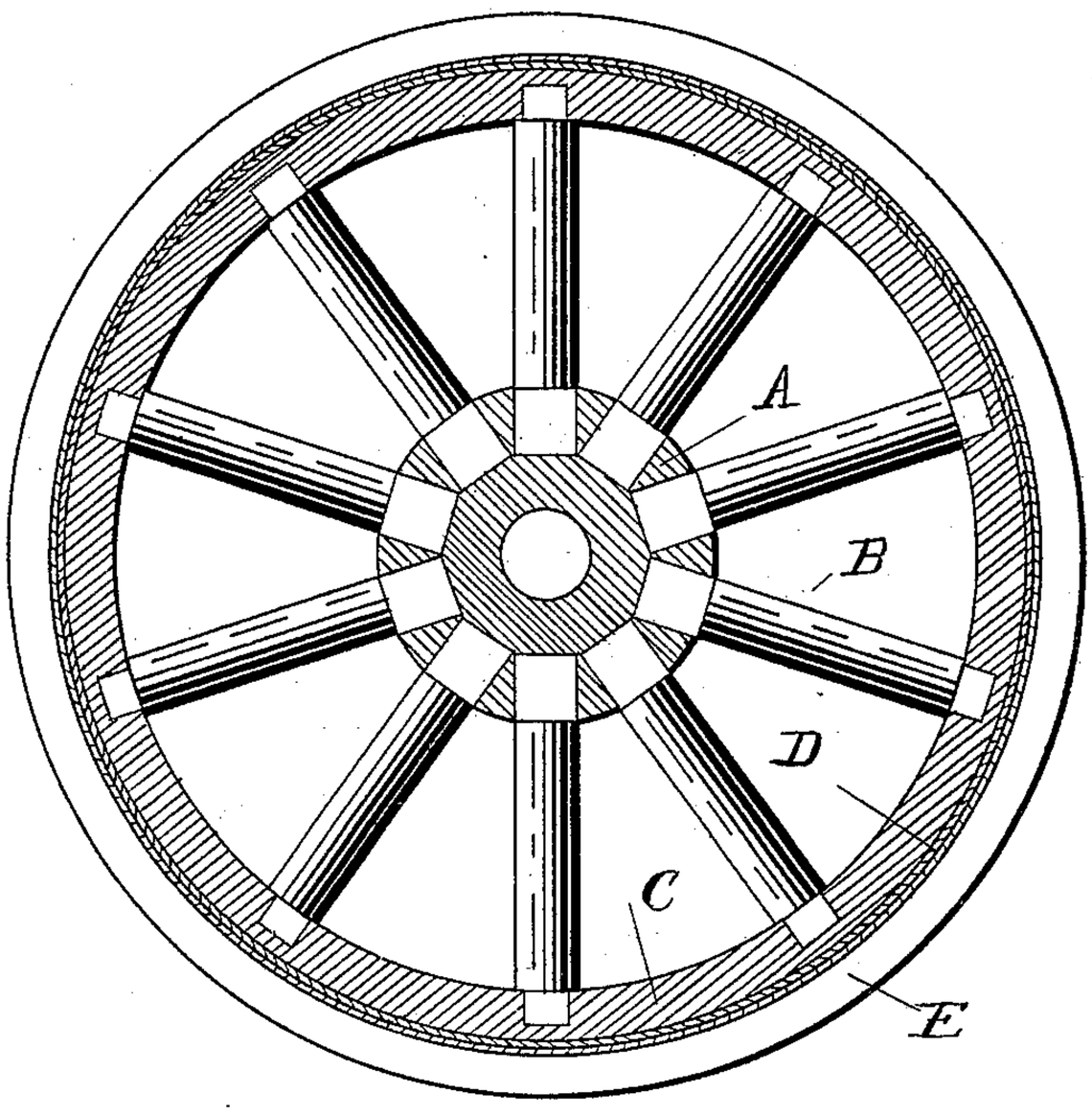


Fig. 2.



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