

No. 629,722.

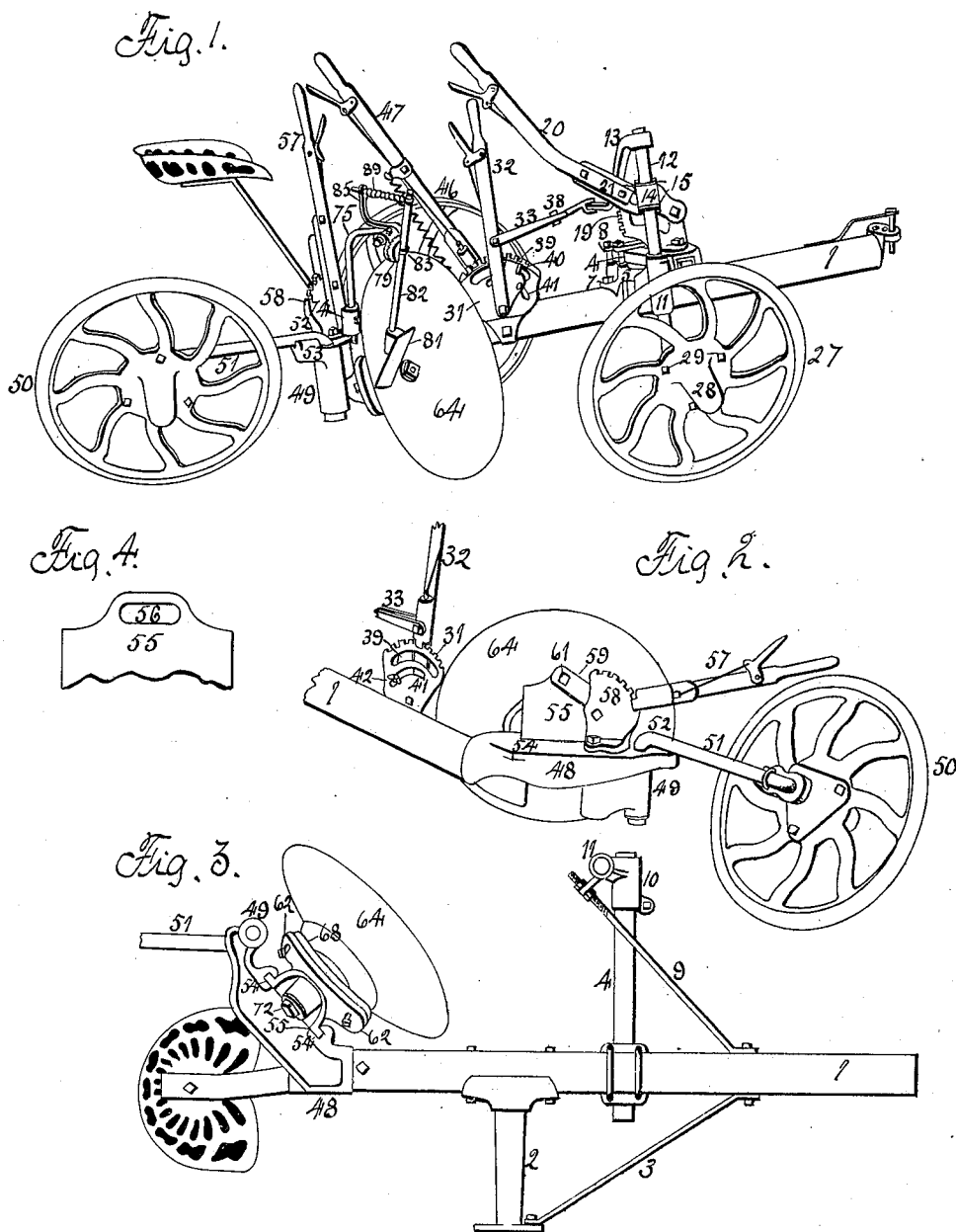
Patented July 25, 1899.

G. JERNBERG.  
WHEELED PLOW.

(Application filed Oct. 27, 1898.)

(No Model.)

4 Sheets—Sheet 1.



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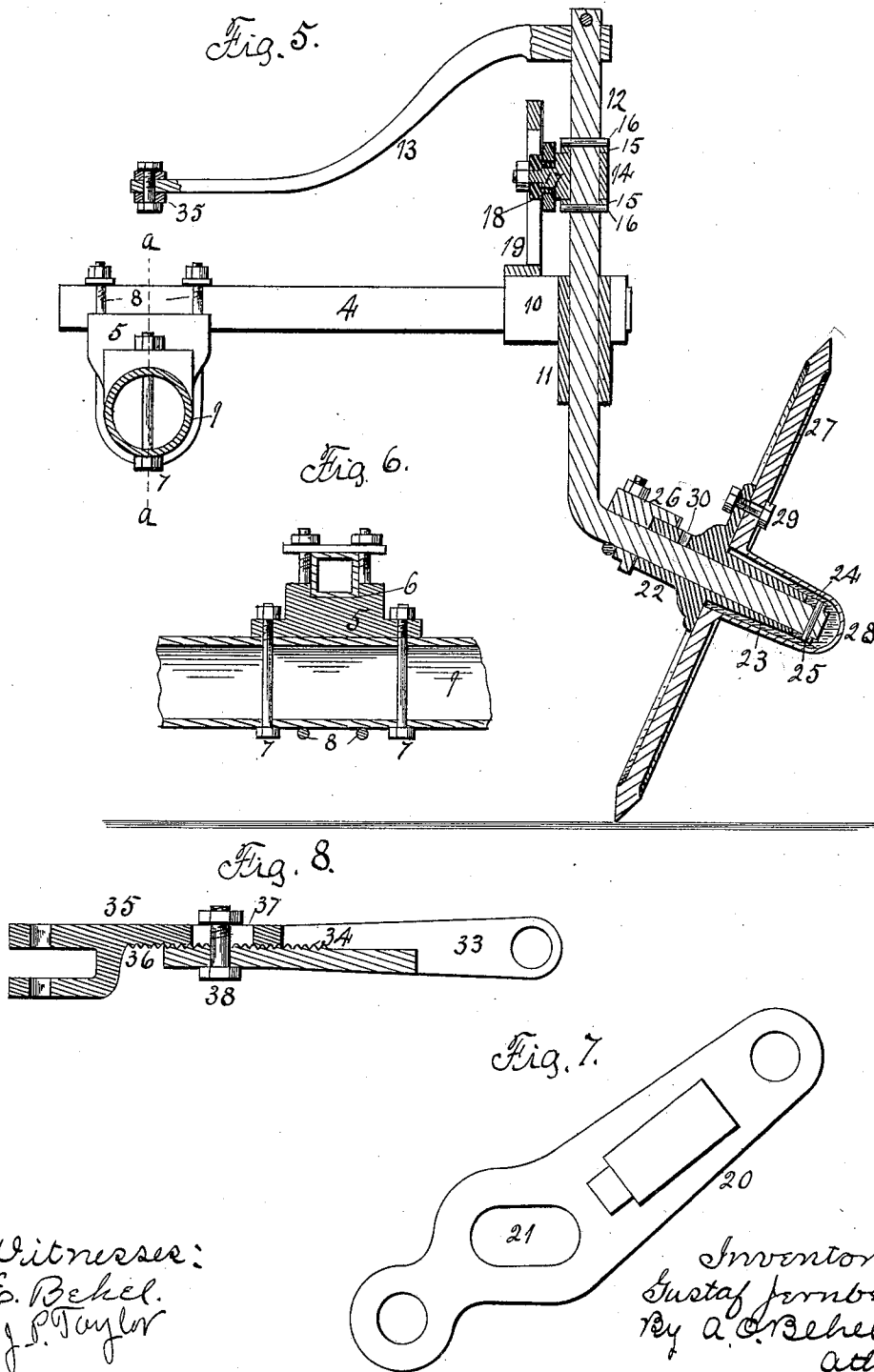
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Fig. 10.

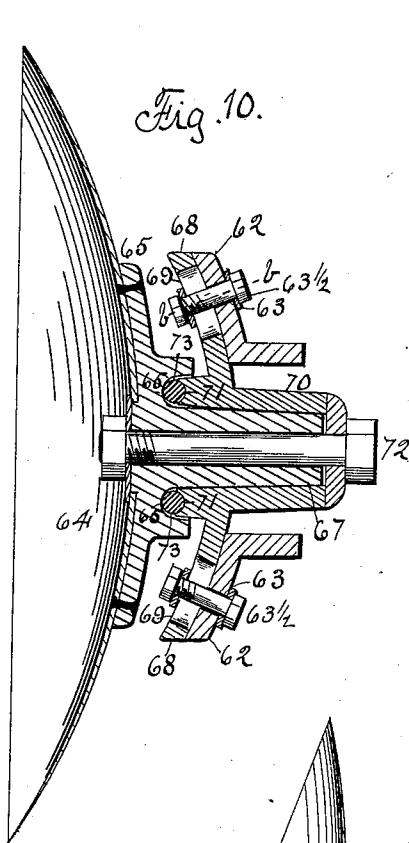


Fig. 9.

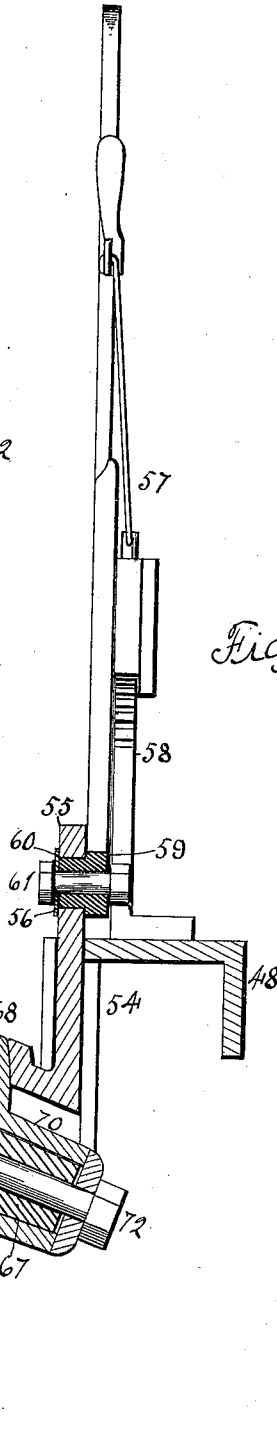
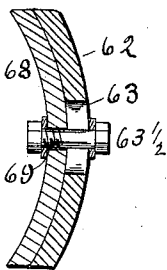


Fig. 11.



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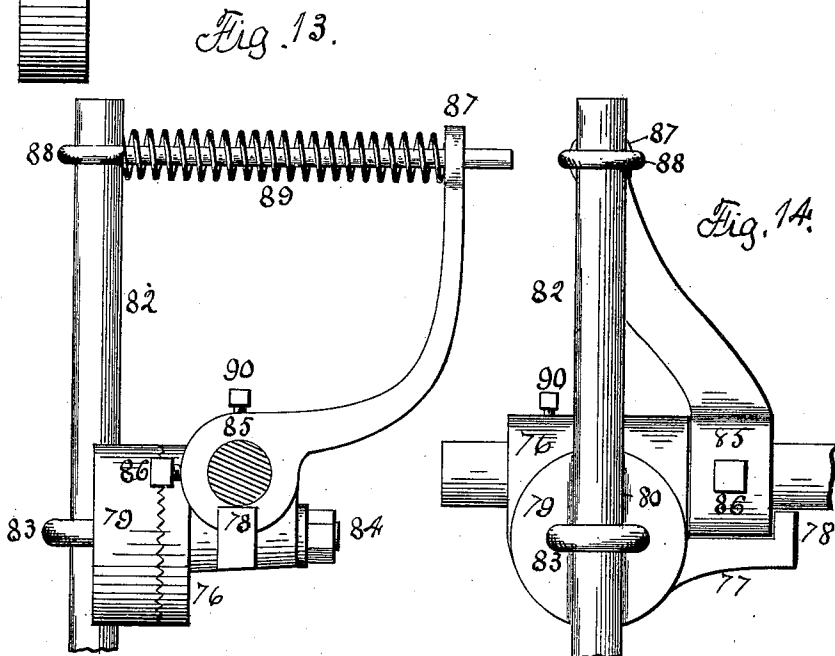
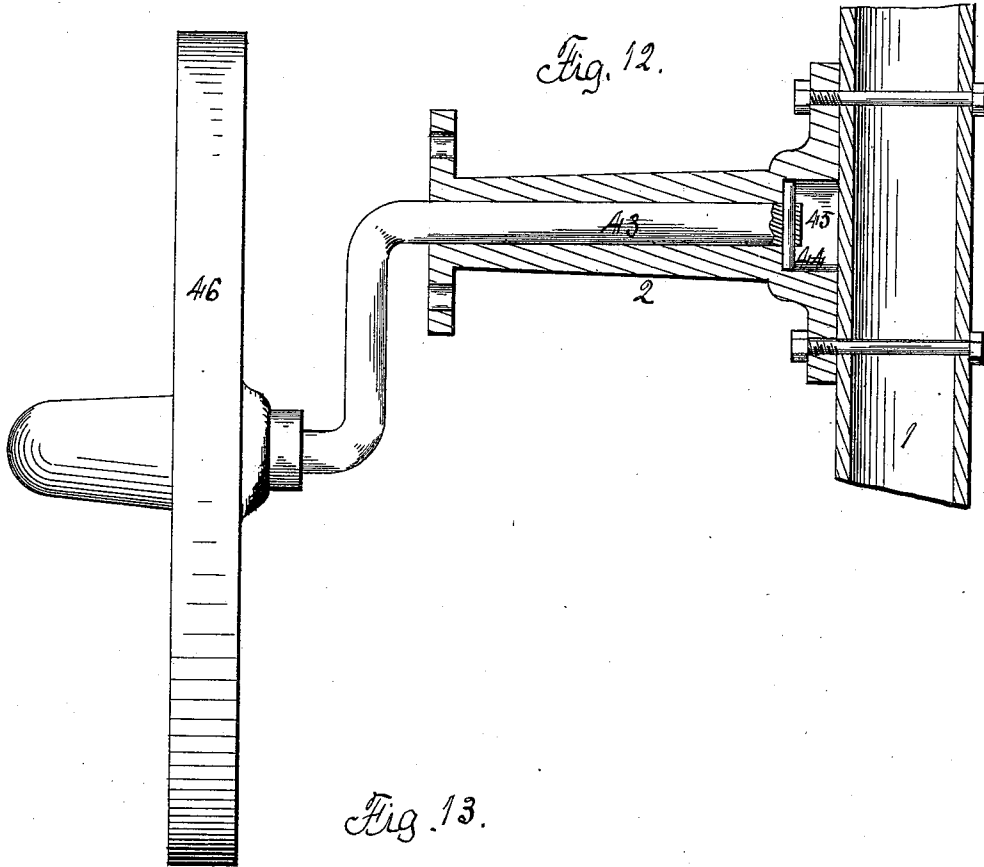
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# UNITED STATES PATENT OFFICE.

GUSTAF JERNBERG, OF ROCKFORD, ILLINOIS, ASSIGNOR TO THE EMERSON MANUFACTURING COMPANY, OF SAME PLACE.

## WHEELED PLOW.

SPECIFICATION forming part of Letters Patent No. 629,722, dated July 25, 1899.

Application filed October 27, 1898. Serial No. 694,760. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAF JERNBERG, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Wheeled Plows, of which the following is a specification.

The object of this invention is to construct a disk plow in which the plowing-disk is capable of adjustments to take more or less land and to vary the suck, and in the various details of construction pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved plow. Fig. 2 is a perspective view of the rear portion of the plow. Fig. 3 is an under face representation of portions of the plow. Fig. 4 is a face representation of the upper portion of the guide forming a support for the plow. Fig. 5 is a vertical section through the furrow-wheel. Fig. 6 is a vertical section on dotted line *a*, Fig. 5. Fig. 7 is a face view of the lower portion of the lever for raising the furrow-wheel. Fig. 8 is a vertical lengthwise section of the adjustable connection between the hand-lever and furrow-wheel. Fig. 9 is a vertical section through the disk plow and its connection with the supporting-frame. Fig. 10 is a horizontal section through the disk plow and its support. Fig. 11 is a vertical section on dotted line *b*, Fig. 10. Fig. 12 is a horizontal section through the support for the axle of the land-wheel. Fig. 13 is a side elevation of the scraper-support. Fig. 14 is a face elevation of the scraper-support.

The main frame of the plow consists of the lengthwise tubular section 1, from which extends at right angles thereto a tubular support 2, held in position by a brace-rod 3. A square tubular support 4 is located in advance of the tubular support 2 and extends from the opposite side of the lengthwise tubular section 1 and joined to the main tubular support by a clamp arrangement, consisting of the bracket 5, fitted to the upper surface of the tubular section, its upper surface formed with a flat-sided channel 6. This socket is secured to the tubular section by bolts 7, passing through the parts. The square tubular support is located in the channel and held in place by the yokes 8, sur-

rounding the tubular section, their ends connected by bars, and nuts turned upon the ends of the yokes clamping the parts together. A brace-rod 9 connects the main frame and tubular support. To the free end of this square tubular support is secured a socket 10, having a downward tubular extension 11. A round bar 12 is located in the tubular extension 11, and to its upper end is secured an arm 13, extending transversely of the main frame of the plow. A collar 14 is located on the upper portion of the round bar 12 and held in a manner to turn by the two washers 15, held in place by the pins 16. From this collar extends a stud 17, supporting a roller 18.

To the socket 10 is secured a toothed segment 19, and to the segment is pivoted a hand-lever 20, having the usual spring-actuated plunger and thumb-lever. This hand-lever is provided with a cam-opening 21, which receives the roller 18 of the collar 14, thereby forming a connection between the hand-lever and round bar 12. Upon the lower end of this round bar 12 is located a bracket 22, having a tubular extension 23. This bracket is held in position by a collar 24 and pin 25. A sand-cap 26 surrounds the upper end of the bracket 22. A furrow-wheel 27 has a tubular extension 28 with its end closed. This extension incloses the end of the round bar 12, and the wheel is joined to the bracket 22 by bolts 29. An oil-opening 30 is formed through the bracket near the sand-cap, and the closed tubular extension 23 forms a well to hold oil and prevent dirt or grit gaining access to the wearing parts.

To the tubular section 1 is secured a toothed segment 31, and to the segment is pivoted a hand-lever 32, provided with the usual spring-actuated plunger and thumb-lever. To this hand-lever is pivoted a link 33, having its free end upper surface provided with serrations 34. An extension 35 has its under face provided with serrations 36 and is provided with a lengthwise slot 37. A bolt 38 connects the parts together in an adjustable manner, and the free end of the extension 35 has a pivotal connection with the free end of the arm 13.

By means of the hand-lever 32, through its connection with the furrow-wheel 27, it can

be adjusted to properly track in the furrow ahead of the plow, and by the adjustment of the link and extension in connection with each other the position of the hand-lever and furrow-wheel may be adjusted with respect to each other.

At the point of the pivotal connection between the hand-lever 32 and the segment 31 is pivoted a plate 39, having a projection 40 located in the path of the hand-lever. This plate is held in its adjusted connection with the segment by a bolt passing through the curved slot 41 in the segment and a thumb-nut 42 on the end of the bolt. By means of this plate, after the hand-lever is adjusted to hold the furrow-wheels properly in the furrow, the plate is adjusted to bring the projection against the lever when it is clamped in position. In turning corners the furrow-wheel is moved by the hand-lever, and when righted the hand-lever is moved against the stop, which will insure the wheel being returned to its original position.

The tubular support 2 is hollow, and within which is located an axle 43, held in place by a pin 44, passed through it and located within an enlarged space 45, which permits of its oscillating therein. The outer end of this axle is bent and supports the land-wheel 46, and the hand-lever 47 for raising and lowering the land-wheel is of an old construction, and a minute description is not deemed necessary.

To the rear end of the tubular main frame 1 is secured a head 48, having a tubular depending portion 49. A caster-wheel 50 is supported by an arm 51, one end 52 being bent and located in the portion 49. A projection 53, rising from the head, forms a stop to the arm and insures a firm connection between the caster-wheel and main frame when the plow is in use; but in turning corners the caster-wheel is free to turn.

A disk plow is supported by the head 48 in the following manner: The head is provided with vertical guideways 54, in which is located a guide 55, its upper end provided with a horizontal opening 56. A hand-lever 57 has a pivotal connection with a tooth-segment 58, secured to the upper face of the head. The lower end 59 of this hand-lever has a projection 60 located in the horizontal opening 56 of the guide 55 and held in position by the bolt and nuts 61. By means of this hand-lever the guide can be raised and lowered and held at any adjustment. The lower end of this guide has horizontal-extending wings 62, each having a vertical opening 63. These wings are concave on their outer faces in a horizontal and vertical direction. A plowing-disk 64 has a collar 65 secured to its concave face and is provided with a ball-race 66 and tubular shank 67. A bracket, composed of the wings 68, having horizontal openings 69, a central tubular shank 70, and a ball-race 71, is secured to the wings of the guide by bolts 63½ passing through the openings of the

wings of guide and bracket. This tubular shank 67 of the collar secured to the plowing-disk is located within the tubular shank of the bracket, and a bolt 72, passing through the parts, and a collar at each end having a nut on one end, hold the parts together. Balls 73 are located in the ball-races of the collar and bracket, which forms an antifric-tion connection. By means of the horizontal openings 69 in the wings 68 and the vertical openings 63 in the wings 62 the plowing-disk can be adjusted in any desired direction to give it more or less land and to vary its suck according to the condition of the soil, and by means of the hand-lever 57 the plowing-disk can be raised and lowered. A socket 74, forming a part of the head, has a central opening within which is located a scraper-support 75, adjustable therein by means of a set-screw. The upper end of this scraper-support extends in a horizontal direction, and upon it is located a socket 76, having a serrated face, and an arm 77, provided with an upward extension 78. A cap 79 has a serrated face, also a central groove 80 in its outer face. A scraper 81 has a shank 82 located in the groove 80 and held in place by an eyebolt 83, surrounding it and passing through the cap and socket, receiving a nut 84 on its end, by which the parts are clamped together. An arm 85 is located on the horizontal portion of the support between the upturned extension 78 and socket and secured to the support by a set-screw 86, its upper end 87 being perforated. An eyebolt 88 surrounds the upper end of the shank of the scraper and passes through the perforations of the arm 85. A coil-spring 89 surrounds this eyebolt, one end resting against the shank and the other end against the arm. As the arm 85 has a fixed connection with the scraper-support and the shank of the scraper has a movable engagement therewith and held from displacement by the upward extension 78 engaging the arm by means of the spring, the scraper can be held against the concave face of the plowing-disk in a yielding manner, and the force can be regulated by turning the arm upon the scraper-support, which will vary the pressure of the spring against the shank of the scraper, and by means of the serrated faces the scraper can be turned to fit the surface of the plowing-disk. The socket 76 has a set-screw 90, by means of which it may be firmly clamped to the scraper-support when it is desirable to have the scraper rigidly attached.

The land and caster wheels are constructed with the oil-receptacle in the same manner as the furrow-wheel.

I claim as my invention—

1. In a wheeled plow, the combination of a main frame, a disk plow, a support for the plow consisting of two sections joined together and their meeting faces curved and adjustable with respect to each other so that the plow can be adjusted to take more or less land.

2. In a wheeled plow, the combination of a main frame, a disk plow, a support for the plow consisting of two sections joined together and their meeting faces curved and adjustable with respect to each other so that the plow can be adjusted to take more or less land and to vary its suck. 10
- 5 3. In a wheeled plow, the combination of a main frame, a disk plow, a support for the plow consisting of two sections joined together and their meeting faces curved and adjustable with respect to each other so that the plow can be adjusted to vary its suck. 10

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