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HITTITE STELE FROM THE ENVIRONS OF RESTAN AND HITTITE MONUMENTS OF ARSLÂN TÉPÉ.¹

By P. S. RONZÉVALLE.

IN 1902 M. A. Garcia, engineer, chief of the third section of the line, then under construction, from Rayâk to Hamah, sent me photographs of a monument which he had discovered lying upon the right bank of the Orontes, not far from Restan, the ancient Arethuse. It was easy to recognize here, at a glance, a Hittite monument (Fig. 1). Thanks to the topographical directions which were furnished me by M. Garcia, I found the monument some months later. It is situated about 4 kilometers (2½ miles) down stream from Restan, not far from a barrage of modern abandoned noria, 1 kilometer (0.62 mile) east of the Circassian village of Zahr el 'Asy, which faces it upon the left bank of the river. The right half, longitudinally, of the monument was lacking, but I had the good fortune to take the missing half out of the very bed of the river, where it had served as a barrage.

The stele, of gray local basalt, measures 2 meters in total height (6

¹ Translated for Records of the Past from Mélanges de la Faculté Orientale, University of St. Joseph, Beyrouth, Syria, III, part 2, 1909, by Helen M. Wright.

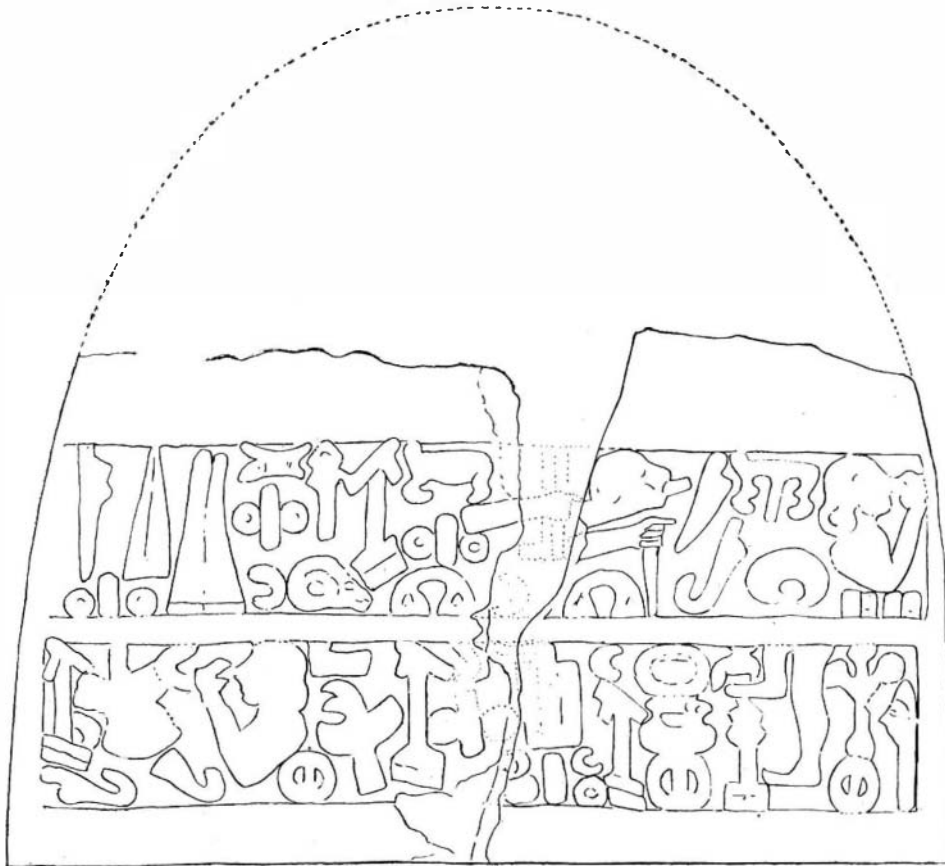


FIG. 3.—RESTORATION OF THE HITTITE STELE INSCRIPTION FROM RESTAN.

feet 6.7 inches) in its present state; the part seen by M. Garcia is 45 centimeters (1 foot 6 inches) wide and the half by me is almost the same; the thickness is 28 centimeters (11 inches). It is complete, except at the top, and naturally, too, but in a very limited degree, along the line of fracture. Various notches, particularly on the reverse of the stele, may be ancient, and indicate, perhaps, that the monument was used in a building; but the matter is very doubtful, for the block certainly does not occupy its original position and appears to me to have been used elsewhere during the Byzantine period. In fact, not far from the river toward the south there stands a small tell dating from that epoch and covering, without doubt, relics of the place inhabited or even founded by the Hittites, fifteen or twenty centuries earlier.²

As we see (Figs. 1 and 2), the inscription comprises only two lines of characters in relief, separated by a thin molding. It is of the type of the Hamath inscription reputed to be the most ancient up to the present time;³

² It would be very desirable to undertake methodical explorations at that point; the country is deserted, so they would be very easy to carry on, and not expensive, the tell being very small.

³ Compare in this connection the remarks of Prof. Sayce apropos of the inscription of Kara Dagh, Proceedings of the Society of Biblical Archeology, 1909, p. 83, et seq.

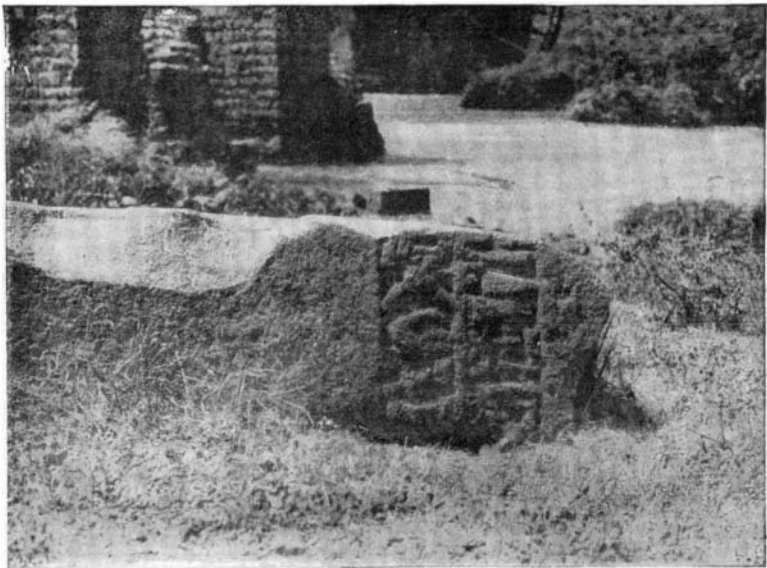


FIG. 1.—NEAR VIEW OF HITTITE INSCRIPTION AT RESTAN.

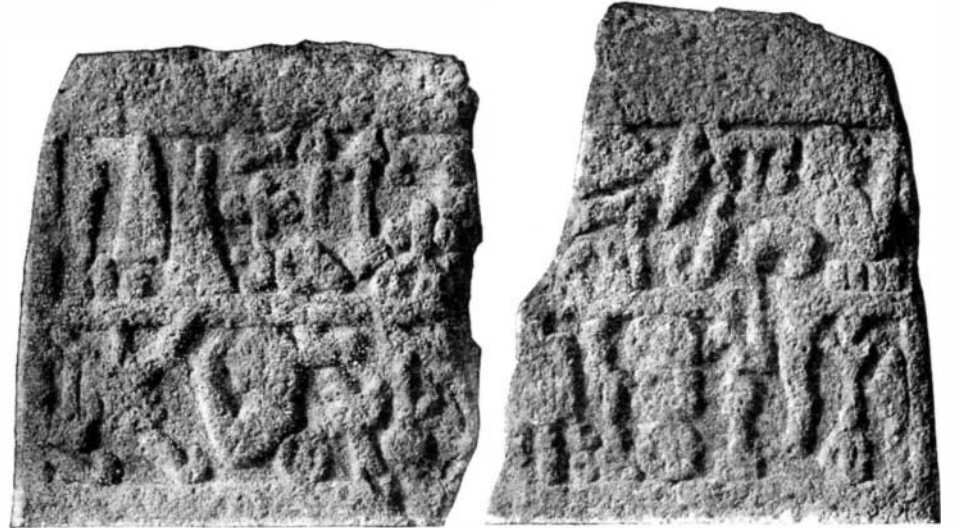


FIG. 4.—THE TWO PARTS OF THE HITTITE INSCRIPTION AT RESTAN.

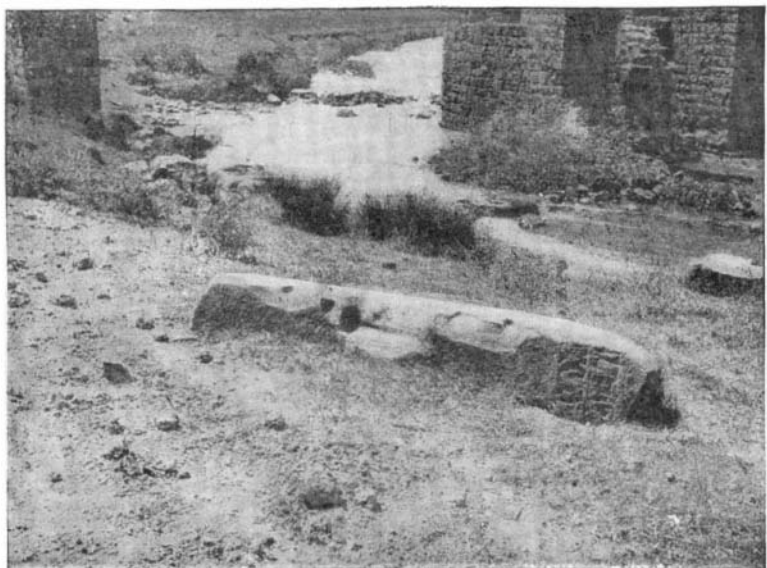


FIG. 2.—THE HITTITE STELE AT RESTAN.



FIG. 5. HITTITE RELIEVES FROM ARSLÂN TÉPÉ.

better still, it reproduces a large number of the groups of signs of which the inscriptions of Hamah are composed. It is that which has encouraged me to attempt a restoration (Fig. 3) which I submit to the friendly examination of specialists.

Our stele is, at least with its epigraph, the most southern Hittite stone monument which has been recovered up to date.¹ I believe it contemporary with the stelæ of Hamah; but not having seen the originals I cannot establish conclusive material comparison. If that conjecture were confirmed, the new monument might become the touchstone for deciphering these texts, still obstinate to all consistent interpretation in spite of the firm confidence of Prof. Sayce.

The photographs reproduced in Figs. 5 and 6 were sent to me from Malatia in April, 1907, by a correspondent desiring to know what these curious sculptures represented. Their discovery, he told me in his letter, dated back to January 15th of that year and had been made accidentally upon the little hill of Arslân-tépé, at Orda-Sou, a village situated about an hour north of Malatia. Arslân-tépé, you know, has yielded more than one Hittite piece.² These new reliefs are most interesting, and although the photographs which were communicated to me are defective, it seems advisable to me to publish them without further delay. But I regret that our photogravures are so imperfect. In fact, I am obliged to specify, by short description, certain details which have almost disappeared in these reproductions. I may state, moreover, that the stones have been strongly retouched before being photographed; my correspondent informs me, indeed, that in order to show off the sculptures, they had had the unfortunate idea of smearing with black paint the free surfaces of the tablet.

These photographs were taken in the Serail itself of Malatia, where the monuments had been transported and exhibited while awaiting their departure for Constantinople.³

The four monuments are authentic in spite of the doubts which assailed them when I described them for the first time to the Academy of Inscriptions and Belles-Lettres. They are in limestone and of varying dimensions; it goes without saying that they are materially independent among themselves, although they were apparently made part of the same construction, temple or palace. That one which bears the god mounted upon a stag is, in its actual state, 82 centimeters high by 45 centimeters wide and 49 centimeters thick (2 feet 8 inches by 1 foot 6 inches by 1

foot 7 inches). The same block bears upon one of its edges a figure of a lion, of which my correspondent has sent me a sketch too imperfect to be published.

Each of these reliefs except the last at the right has its counterparts in the known monuments of Hittite art. The two on the left represent religious scenes. The upper tablet presents to us the figure of a beardless god, made small in order to have all entire on the same block, holding in his right hand a bow and in the other the rein of a stag upon which he is mounted. In front of the god is a beardless figure clothed in a long tunic with fringed border, holding in the right hand a lituus⁷ and in the other a vase, the contents of which he pours at the feet of the stag. That figure, apparently a priest, has no head dress; his abundant hair presents the customary large roll. Behind the priest, a small servant, with bare legs and pointed feet, brings to the sacrifice an ibex which he holds by the horns; his hair presents the same characteristic. Above the horns of the stag are four or five hieroglyphs, giving, without doubt, the name of the god; the text continues to the right, in two indistinct groups, which represent, perhaps, the name and rank of the priest.

The second scene is the companion of the first. In place of the priest we have a priestess, whose head is covered with a low head dress, surmounted by a long veil, which hangs down to her feet behind. With her left hand she makes a gesture of invocation, with the other pours a libation in a vase supplied with two handles and a foot and placed on the ground. The divine figure here appears very complex. It is furnished with wings; it is unquestionable, but it is impossible for me to explain certain of the appendages, which, at least at the right, cannot be symbols of writing. The god seems bearded, but that cannot be determined with any certainty. His left hand, held before him, holds an object entirely indistinct; the other, brought back toward the breast, holds a kind of scepter which, according to my correspondent, would have the form of a caduceus of which we see nothing

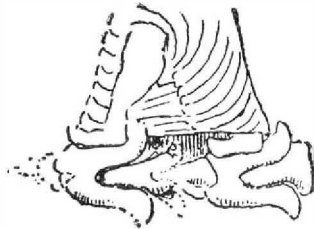


FIG. 6.—OUTLINE OF BASE OF THE GOD.

but the end. The most interesting detail, perhaps, is the support of the god. Unfortunately, our plate is very imperfect at this point, and I deem it necessary to give a reproduction in outline (Fig. 6).⁸ What can be the signification of this curious support? All things considered, I believe that it represents lightning, very much conventionalized, and I propose, pending a more extended examination, to identify it with the support still unexplained of the portable *edicule* of the reliefs of Yazili-Kiaya, an *edicule* which we encounter even in Hittite writing.⁹

¹ I do not know whether it is necessary to take seriously what many have said of the stele of As-Sâlihiyé from Damascus, described first by Porter, *Five Years* . . . I, p. 384, then refound by Wilson and carried to London by the Palestine Exploration Fund, cf. *Quarterly Statements*, 1899, pp. 87, 152, and 210. Conder reviewed it in the second edition of his *Syrian Stone-lore*, p. 463.

² Messerschmidt, *Corpus Inscript. Hittiticæ*, p. 13; cf. 2nd Nachtrag (M.V.A.G., 1906, p. 328), p. 7, pl. XLVII, which reproduces the bas-relief in basalt in the Louvre (Heuzey, *Les origines orientales de l'Art*, pl. X). My correspondent recalls having seen, at the age of 14, the bas-relief of similar style, but in limestone, preserved to-day in Constantinople.

Arslân-tépé (mound or hill of the lion) probably derived its name from a figure of a lion discovered or seen in the ruins; that may be one of the lions of the bas-relief above mentioned, but I would rather believe that the name made allusion to the relief which I shall mention later, in the text and the notes, or to some other sculpture representing some large isolated lion.

³ The American Expedition from Cornell University found them still at Malatia (cf. *Orientalist Literaturzeit.*, 1908, col. 258, and *American Journal of Archaeology*, 1908, p. 89). According to my correspondent "another stone, very large, has been subsequently transported to the Serail"; it bears a text of which he sent me a copy, too indistinct to be reproduced here. I do not believe it necessary to reproduce further his copy of other texts.

⁷ My correspondent, whom I questioned about the unusual termination of the lituus, believes he sees there "a head of a goat, whose eyes only are distinguishable."

⁸ My correspondent, whom I asked to describe the support, saw in it "two birds with tails touching each other."

⁹ Cf. in the latter case, Sayce, *Proceedings of the Society of Biblical Archaeology*, 1905, pp. 23, 27. I wonder whether the support of the two metamorphosed bull genii of Yazili-Kiaya might not be also a conventionalized lightning. Cf. Human and Puchstein, *Reisen in Kleinasien* . . . p. 56 and pl. IX. Upon the various forms of lightning in oriental art, cf. the original and useful work of P. Jacobstahl, *Der Blitz in d. orientalis. u. griech. Kunst*, 1906.

The third tablet is very fragmentary; two bearded figures with long rolled tresses, wearing the same costume, one following the other, the first set upon the tops of mountains, represented by little pedestals.¹⁰ The same figure holds with his right hand a club and with the left a staff bossed at its upper end, perhaps a lance. The second figure appears to pierce with his lance an enemy (man or beast) which touches him above the knee. The club which hangs about his elbow is noticeable.

There remains the last fragment, which constitutes for me a veritable enigma. The scrolls of the border¹¹ can be only a variety of the ornament in spiral or in twist, so frequent in Anatolian art; but what is to be thought of the rest of the sculpture? In whatever direction we turn it, we do not arrive at any conclusions as to the significance of the three objects which seem confined in the meshes abutting on the border.¹² It would be more prudent to wait until the monuments are taken to Constantinople where they may be studied at leisure.

Such as they are, these fragments are important for many reasons. If the date can be proved, at least approximately, the much discussed date of the sculptures of Yazili-Kiaya would be proved, and with it assured chronological data for the history of Hittite art. Besides, the preservation of these reliefs of Arslân-tépé was much better than that of the rock reliefs of Yazili-Kiaya, many details which are distinguished with difficulty upon the latter appear here with clearness. That is true especially of the head dress and of the costume of the four divinities. No doubt if excavations were made at Arslân-tépé, some results very important to all Hittite antiquities would be forthcoming. It is high time to do this. According to my correspondent, many other sculptures than these which I have just described have been obtained from the ruins and have disappeared before the Turkish government could lay hands on them. With the rest of these stones have been discovered also some metal objects, particularly a silver dish. It is probable that the finds would not be very heavy; the tell is not more than 30 meters (98 feet) high and the same in circumference, according to appearances, and it probably covers a temple or palace built upon an artificial elevation.¹³

For the head dress, compare Perrot, IV, p. 645, where it seems better preserved than anywhere else. The same ornamentation in ringlets is seen, besides, in our reliefs from Arslân-tépé, even upon the clubs. That makes me believe that the supposed "caduceus" of the winged god, the end of which we do not see, is likewise a club. For the costume of the same god, I have already referred to Perrot, IV, Yazili-Kiaya, section D. For the others, it is necessary to compare not only the Hittite sculptures, but also the figures from the islands and from Asia which have been preserved for us by the monuments of Egypt. Compare W. M. Müller, *Aisen u. Europa* . . . pp. 337-368. Note an interesting detail; the hooked form of the sword, fixed horizontally at the belt of the two gods one following the other.

¹⁰ As at Yazili-Kiaya.

¹¹ The photograph of my correspondent includes only the two rows of the original block; there remains at the right a surface 48 cm. (5 ft. 1 in.) long, where there was no relief. It is, then, clearly a border.

¹² My correspondent sees here animal figures, "of which only the eyes are distinguishable."

¹³ After this article went to press, I read the short notice by Prof. Garstang concerning the same monuments in the first part of the *Annals of Archaeology and Anthropology*, Liverpool, pp. 3-4, pl. IV-V. I am very glad that the reproductions of the English savant are better than ours; they will serve in some points as a check on my very long description.

AN IMPROVED SINGLE-STAGE AIR COMPRESSOR.

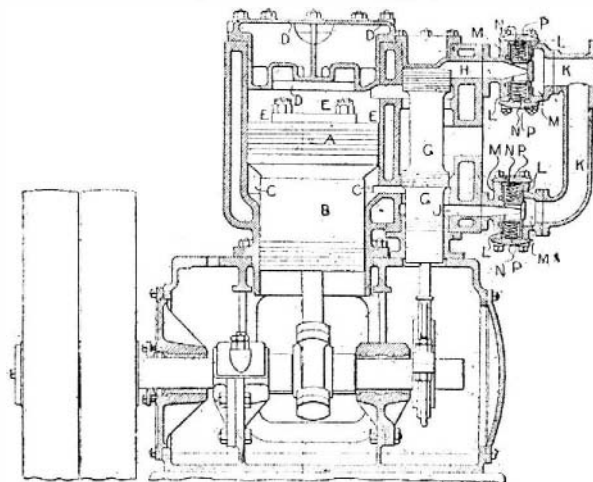
The accompanying illustration shows an improved form of single-stage air compressor of the vertical trunk piston type, which has been designed by Mr. S. E. Alley.

It will be seen that the trunk piston, of otherwise usual construction and form, has parts A B of two diameters, the greater A above and the lesser B beneath, thus forming a down-stroke compression chamber C between the annular area formed by the reduction of the cylinder to fit the lower smaller piston part B and the annular piston area due to the difference in area between the lesser lower piston part B and the greater upper piston part A; while between the upper surface of the piston part A—the piston head—and the cylinder cover D is formed the usual up-stroke compression space E.

Inlet and discharge of air from the two compression spaces C E are controlled by a piston valve G between the discharges H J, from which and the delivery K from the compressor are automatic valves controlling that delivery. These valves consist of thimbles L fitted in cylindrical cavities and bearing upon seats in passages formed in valve boxes M arranged in the delivery pipes, springs N within the

thimbles and acting between them and covers P on the valve boxes being provided to operate them.

In carrying out this design, the object has been to simplify construction, reduce weight, and to produce a novel, simple, and effective combination of com-



AN IMPROVED SINGLE-STAGE AIR COMPRESSOR.

pressing unit and its controlling valve gear.

It will be seen that such a compressor as this, while essentially single stage, may be looked upon as a unit of one stage in a multiple stage compressor, consisting as a whole of a plurality of such units inter-connected in series.—The Practical Engineer.

The work of Omori, Milne, Denison, and others on the movements of horizontal pendulums due to other than seismic or microseismic causes suggested an investigation of the movements of the pair of Bosch-Omori instruments at the Harvard seismographic station, taking the records for April, May, October, November, December, 1908. Two types of inflection were investigated for each of the components E-W and N-S, and the results appear to suggest a connection with the variations of barometric pressure. The movements of the pendulums show greatest response during the autumn and winter months, and these seasons are those in which barometric maxima and minima are best developed. The possibility of using horizontal pendulums in forecasting on windward coasts has been suggested, and if it can be proved that such indications are given in advance of the barometer, the method may prove valuable.