WAVE - THEORY!

DISCOVERY OF THE CAUSE OF GRAVITATION!

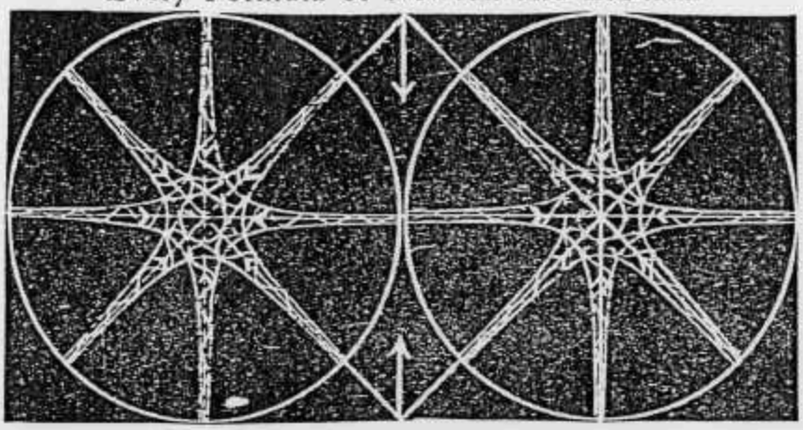
MAGNETISM, ELECTRODYNAMICS, AND OTHER FORCES OF NATURE OBEYING THE GEOMETRICAL LAW OF THE INVERSE SQUARES: WITH COMPLETE MATHEMATICAL and PHYSICAL ANALYSIS.

Based on

Fourier's Wave-Theorem of 1802, $\frac{1}{\pi}\int_{-\infty}^{+\infty}\frac{\sin P\xi\, d\xi}{\xi}=1$,

From Which Follow

Every Formula of Newton and LaPlace.



"La découverte de la loi del'attraction universelle a conduits les géomètres à ériger sur une seule base le plus beau monument de l'intelligence humaine, la Mécanique Céleste."— LAPLACE.

Ἀγεωμέτρητος οὐδεὶς εἰσίτω.

— BY —

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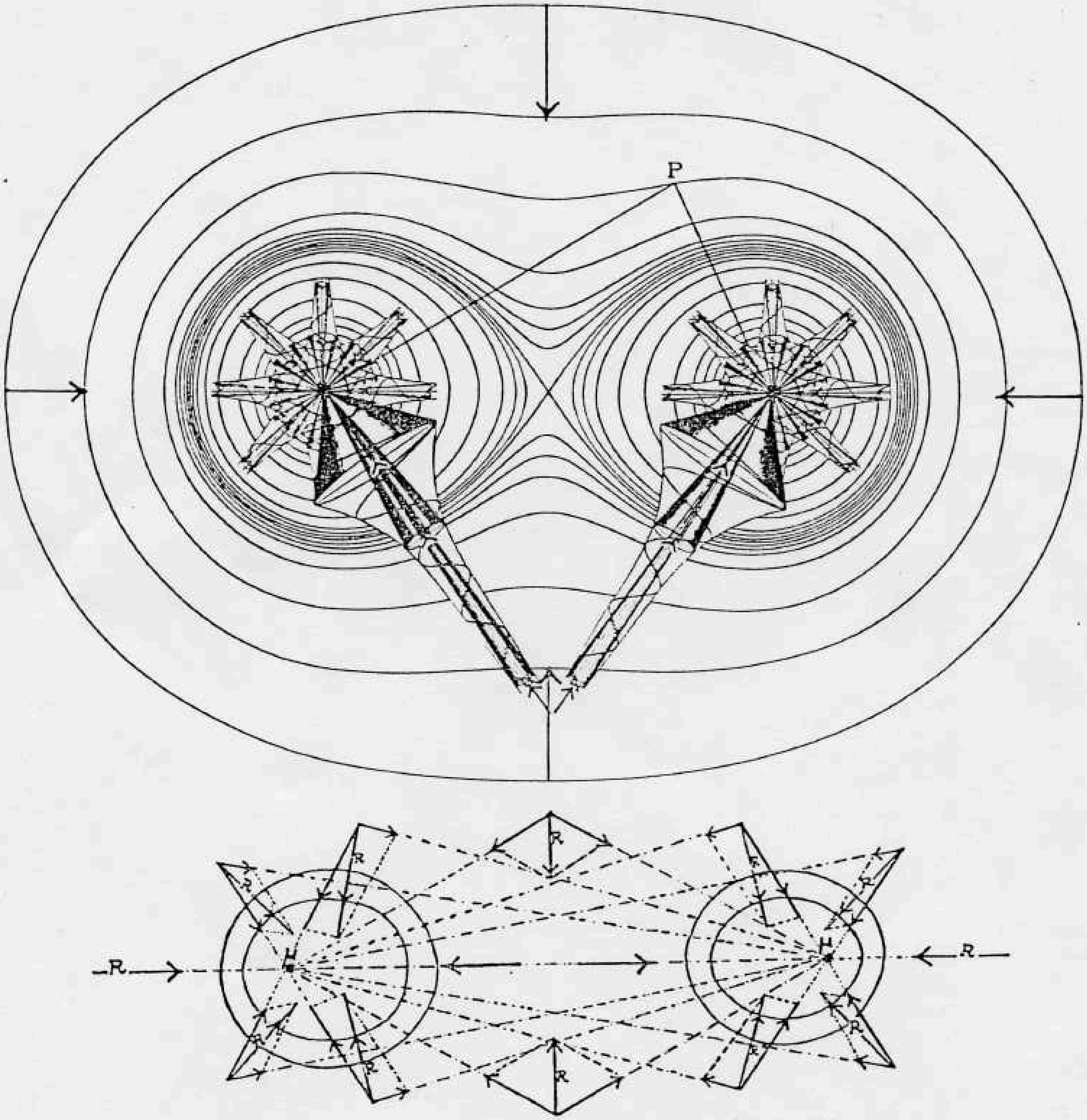
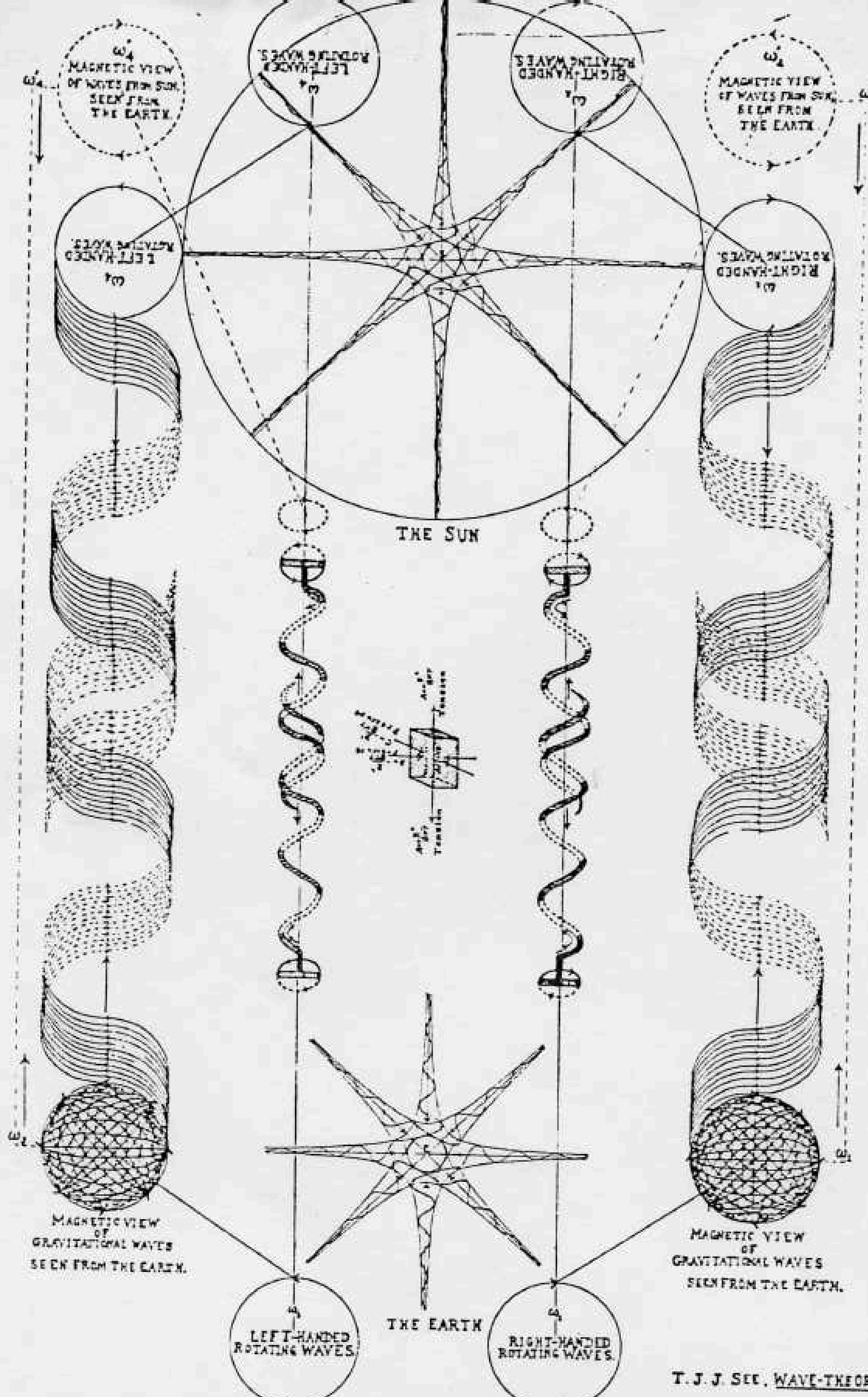


Plate XIII. *Illustration of the Interpenetrating Wave-Cones about a System of Equal Double Stars*; T. J. J. See, Wave-Theory, Jan. 14, 1938.

In the Principia Newton treats the Boundary Forces as Interpenetrating like the Wave-Cones here Illustrated. Q.E.D.

Diagram of the equipotential surfaces about two equal masses, μ and μ, originally given in *Thomson* and *Tait*'s Treatise on Natural Philosophy, 1st ed., 1873. Without regard to the cause involved this upper diagram represents the actual surfaces which exist under the potential of gravitation to two equal stars; but in the light of the New Theory of the Aether we may now interpret the meaning of the distortions of the surfaces shown, which were first published about half a century ago.

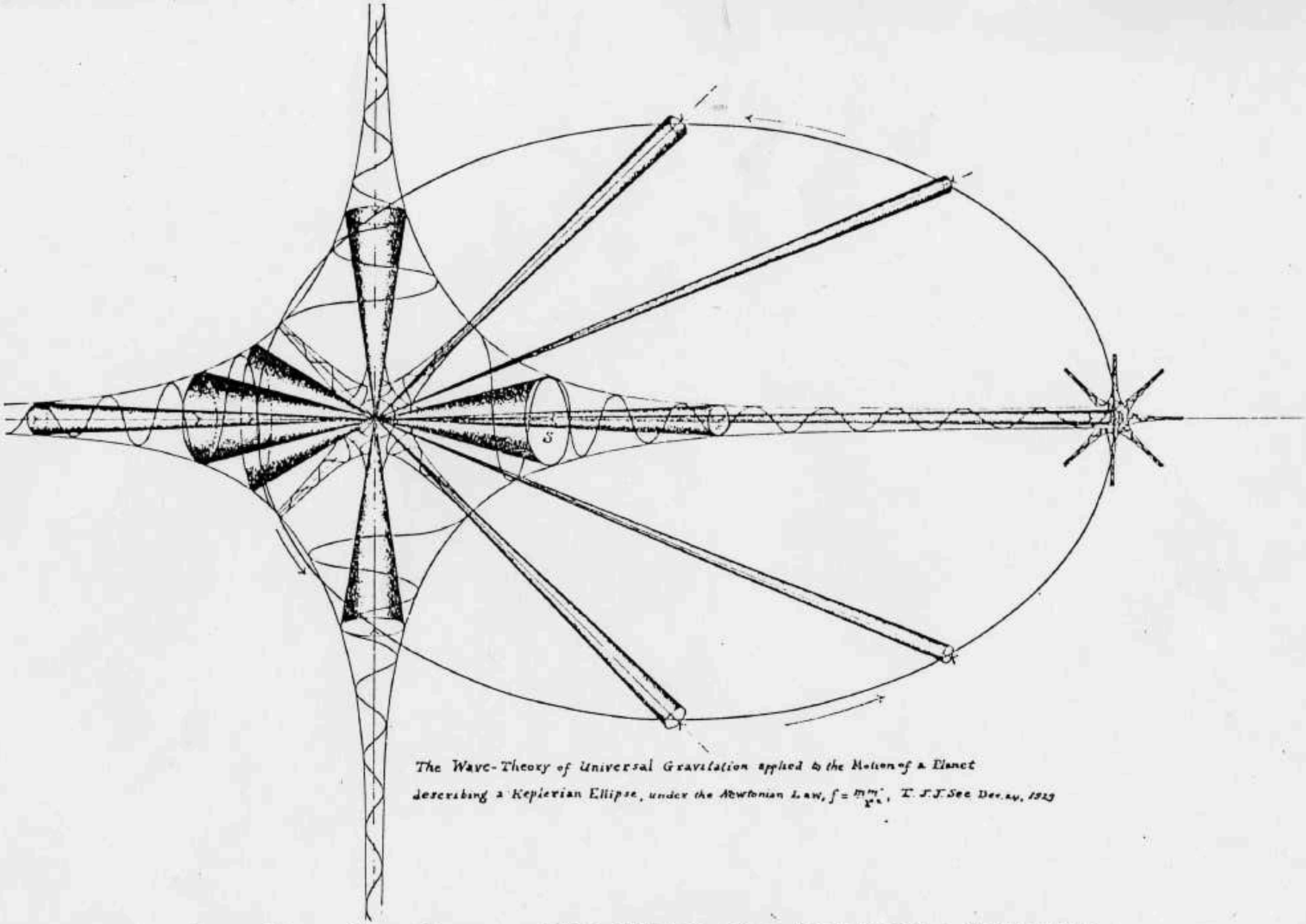
In the lower figure we see how the vectors directed to the two equal stars are compounded geometrically, in every part of the diagram, according to the law expressed in equation (126). This illustrates the whole theory of the equipotential surfaces, about two equal masses, and constitutes as triumphant a verification of the Wave-Theory as the incomparable Geometry of *Newton*'s Principia does for the law of universal gravitation, now referred at last to its true cause.



T. J. J. SEE, WAVE-THEORY. APRIL 6, 1934.

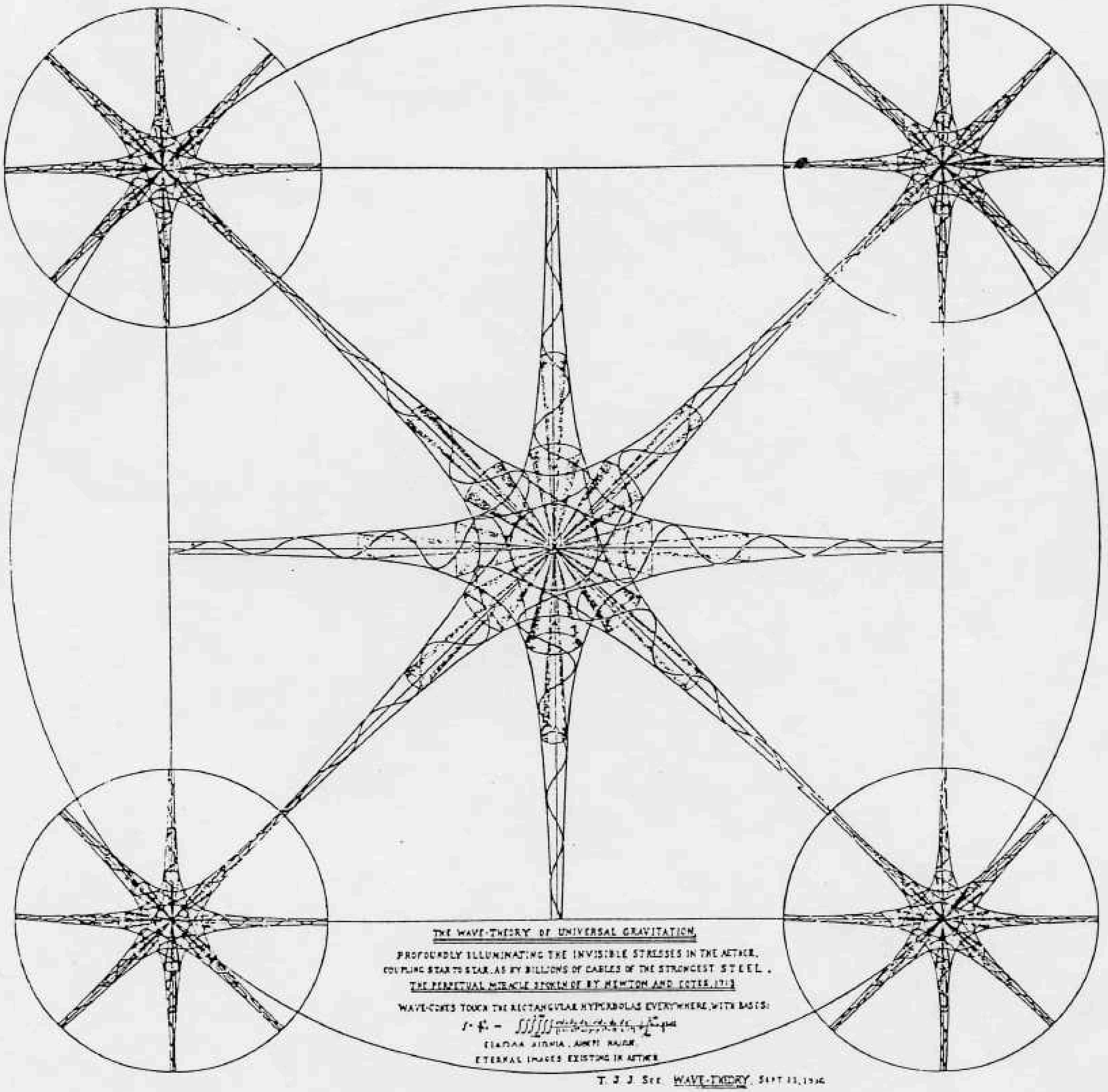
A MAGNETIC VIEW OF THE GRAVITATIONAL PULLING BETWEEN THE EARTH AND SUN, UNDER FOURIER WAVES: [illegible] · THEOREM OF 1802. SEPARATED INTO RIGHT-HANDED AND LEFT-HANDED ROTATIONS RESPECTIVELY, EACH GROUP EQUALLY FREQUENT. AS IN LIGHT, THE WAVES TEND TO CANCEL THE OTHER PASSING WAVES OF OPPOSITE ROTATION. WAVE-AMPLITUDES TEND TO COLLAPSE, THUS THE AETHER PULLS PERPETUALLY, AS HERE SHOWN BY MECHANICAL MODEL OF THE INTERLOCKED CORK SCREWS OR WAVE-HELIX. NEWTONIAN ATTRACTION [illegible] Q.E.D.

Plate X. Illustration of the Electrodynamic View of the Gravitational Pulling between the Earth and Sun. Since the Aether is under the Universal Bursting Power of 689,321,600,000 Atmospheres, and thus of Infinite Strength, the Miraculous Pulling of the Planets, with Forces vastly exceeding the tensile strength of millions of millions of cables of the strongest steel, now becomes perfectly intelligible. Universal Gravitation no longer is the "Perpetual Miracle" spoken of by Cotes in the Preface to the Second Edition of Newton's Principia. 1713.



The Wave-Theory of Universal Gravitation applied to the Motion of a Planet describing a Keplerian Ellipse, under the Newtonian Law, $f = \frac{mm'}{r^2}$. T. J. J. See Dec. 24, 1929

Plate IX. Wave-Theory of the Motion of a Planet in a Keplerian Ellipse, 1929. The Base of the Wave-Cones, $B = \pi\left(\frac{K}{2c}\right)^2$, gives a general view of the Intensity of the Force at any point of the orbit.


THE WAVE-THEORY OF UNIVERSAL GRAVITATION,
PROFOUNDLY ILLUMINATING THE INVISIBLE STRESSES IN THE AETHER,
COUPLING STAR TO STAR, AS BY BILLIONS OF CABLES OF THE STRONGEST STEEL.
THE PERPETUAL MIRACLE SPOKEN OF BY NEWTON AND COTES, 1713
WAVE-CONES TOUCH THE RECTANGULAR HYPERBOLAS EVERYWHERE, WITH BASIS:
ETERNAL IMAGES EXISTING IN AETHER
T. J. J. SEE WAVE-THEORY, SEPT 13, 1936

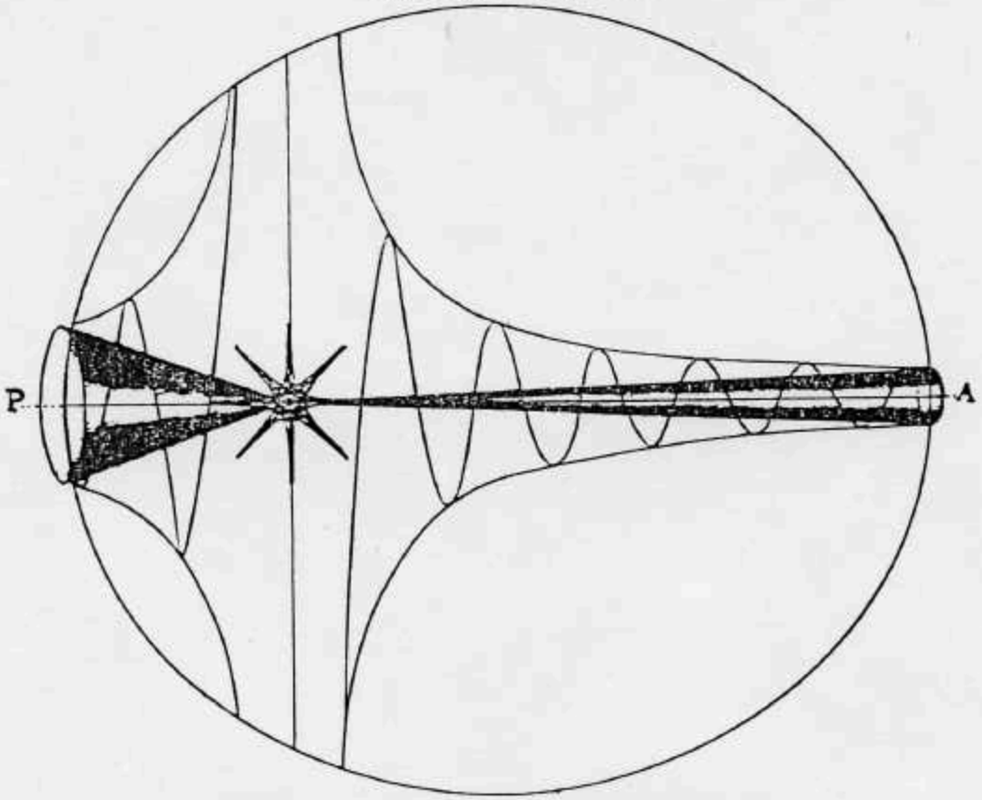
ΕΝ ΑΙΓΛΗΕΝΤΙ ΟΛΥΜΠΩ

ΜΕΤ'ΑΘΑΝΑΤΟΙΣΙ ΘΕΟΙΣΙΝ, ΑΙΘΕΡΙ ΝΑΙΩΝ

MEMORIAE VIRORUM IMMORTALIUM

NEWTONI ET LAPLACEI

MCMXXVII.



GRAVITATIS CAUSA AETHERIS UNDAE

ΚΤΗΜΑ ΤΕ ΕΣ ΑΕΙ Θ. Ι. Ι. ΣΗΗ

Plate VII. A Memorial Plate dedicated to the Memory of Newton and Laplace, 1927, when I discovered how to derive every Potential and Force Function of Celestial Mechanics from Fourier's forgotten Wave-Theorem of 1802: $\frac{1}{\pi}\int_{-\infty}^{+\infty}\frac{\sin\alpha\beta}{\beta}\,d\beta = 1$

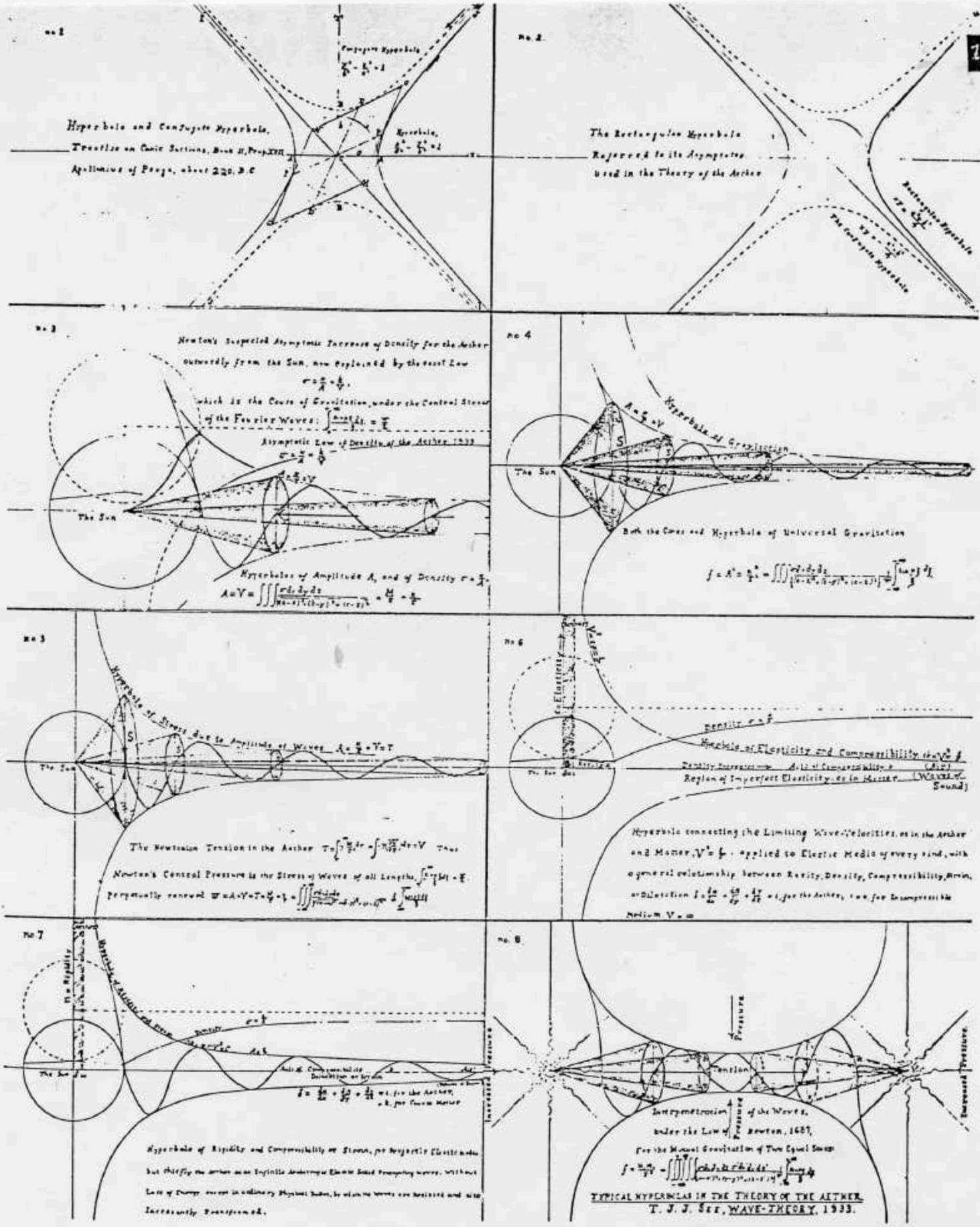
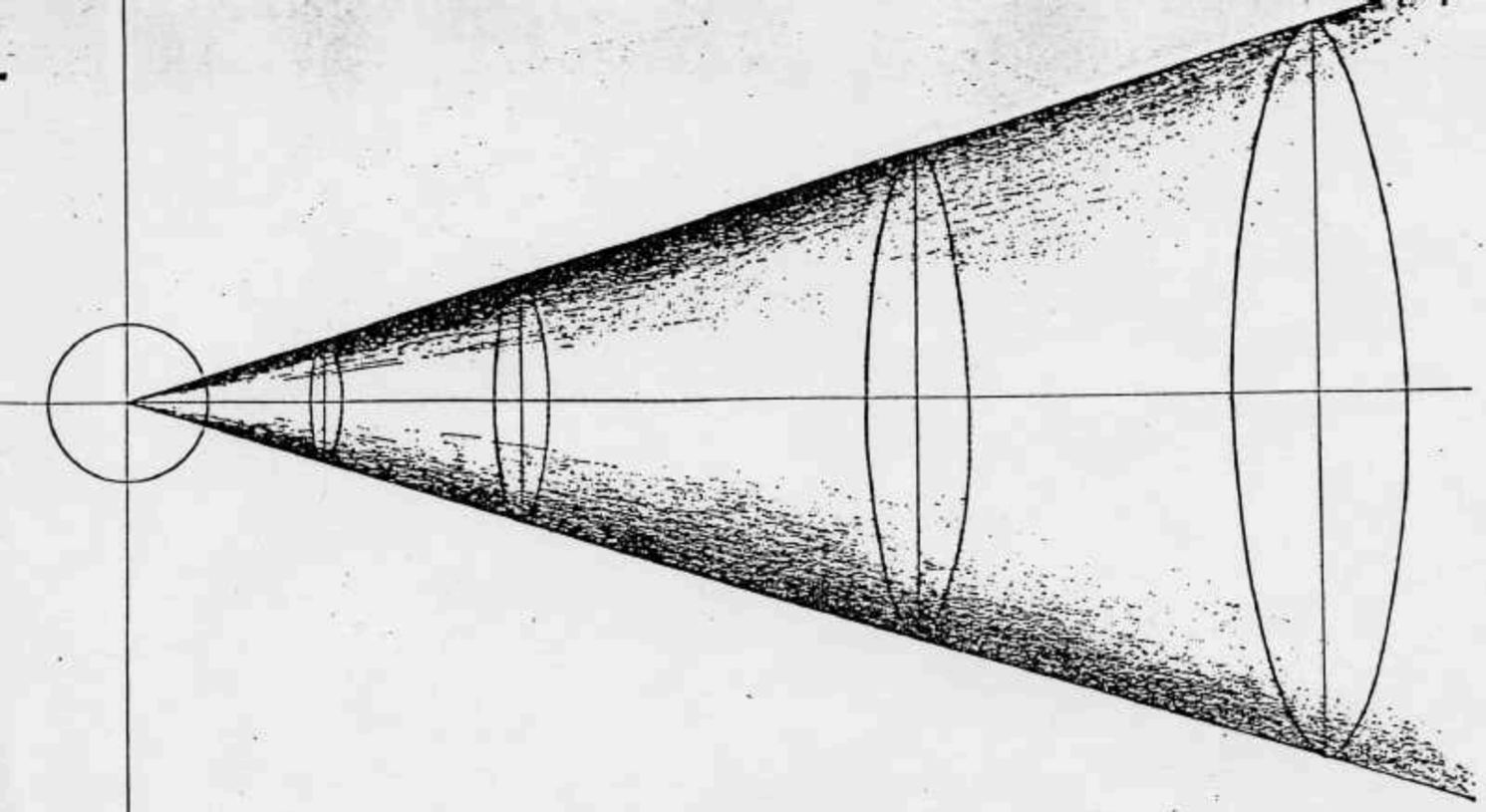
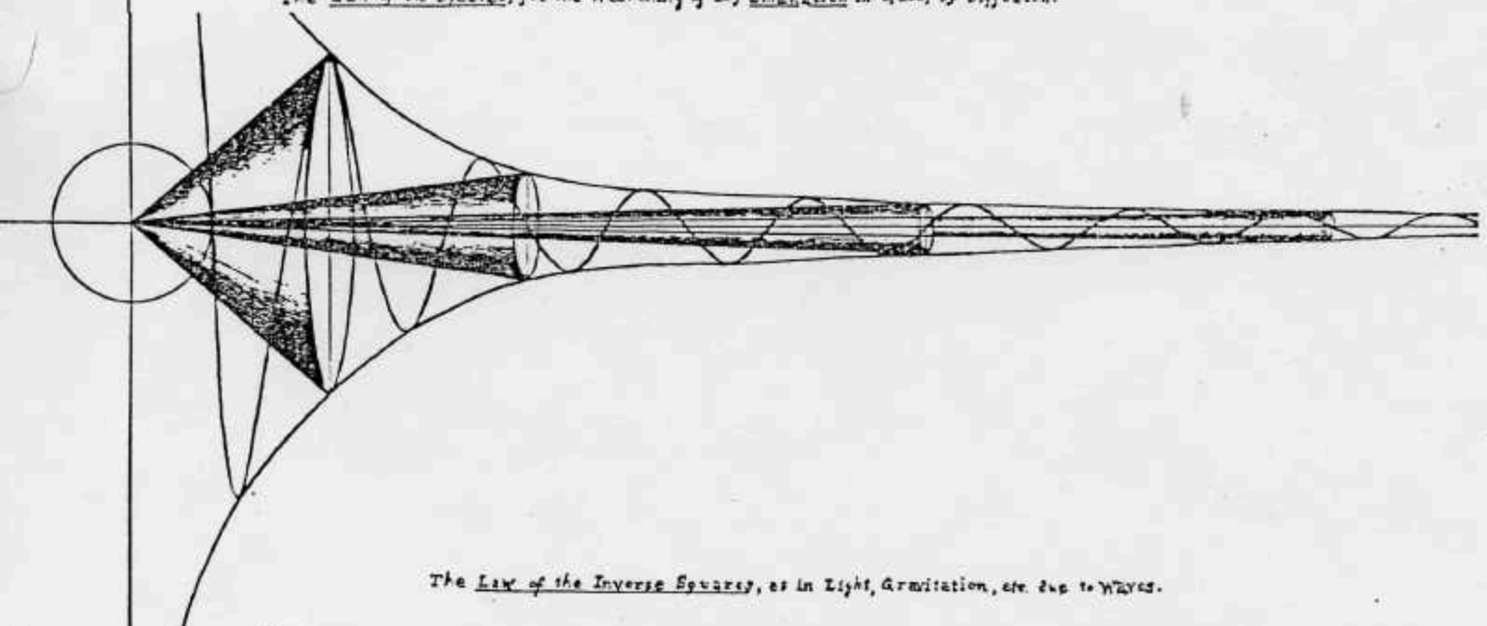


Plate VI. Illustrations of Typical Hyperbolas in the Theory of the Aether. In no. 3 special attention should be called to the Newton-See Law of Density of the Aether, $\sigma = \frac{\kappa}{A} = \frac{\kappa}{V} = \frac{\kappa}{r}$, increasing Asymptotically as we go outwardly from the Sun.



The Law of the Squares, for the Weakening of any Emanation in Space, by Diffusion.



The Law of the Inverse Squares, as in Light, Gravitation, etc. due to Waves.

Illustrations of the Laws of the Squares and of the Inverse Squares, T. J. J See, Wave-Theory, 1931.

Plate V. Illustration of the Law of Squares, for diffusing Light, Gravitation, etc., over wider Surfaces, $S = 4\pi\omega \cdot r^2$, for a cone of Solid Conical Angle ω : and, below, the Law of the Inverse Squares, for the Decreasing Intensity. The Cone-Bases show the Intensity of Light, Gravitation, etc., at any distance, (cf. AN.5044, Apr., 1920, and 8th. Paper, Band 226, Feb., 1926). Heretofore no such figures were available, which largely explains the delay in the progress of the Wave-Theory of Gravitation, since the time of Newton.

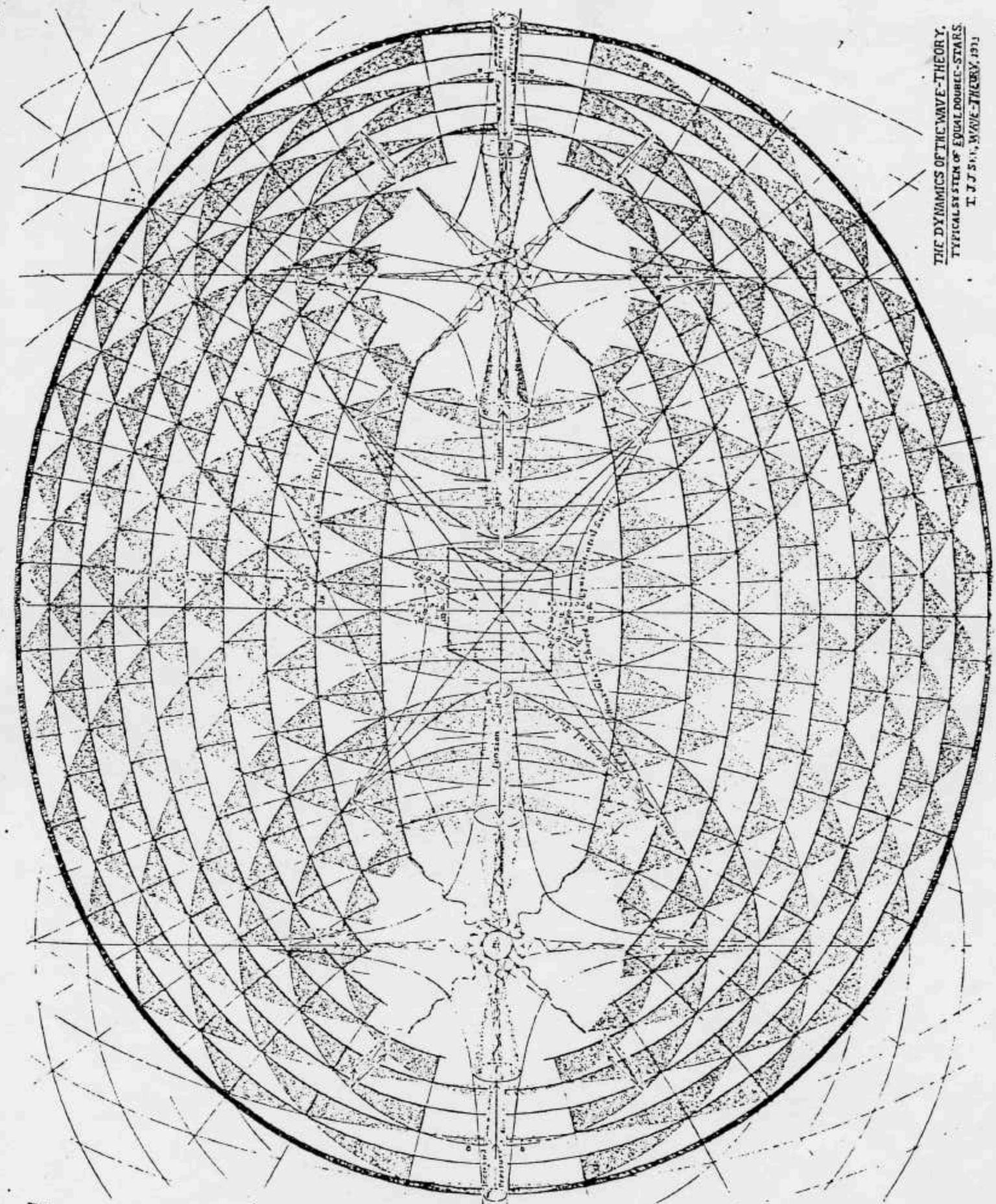


Plate IV. Plate shows a section of the Infinite System of Ellipsoids, and of the corresponding orthogonal surfaces of the Infinite System of Hyperboloids. Near the centre of the Plate is shown the Centrifugal Tensions and numerically equal Pressures.

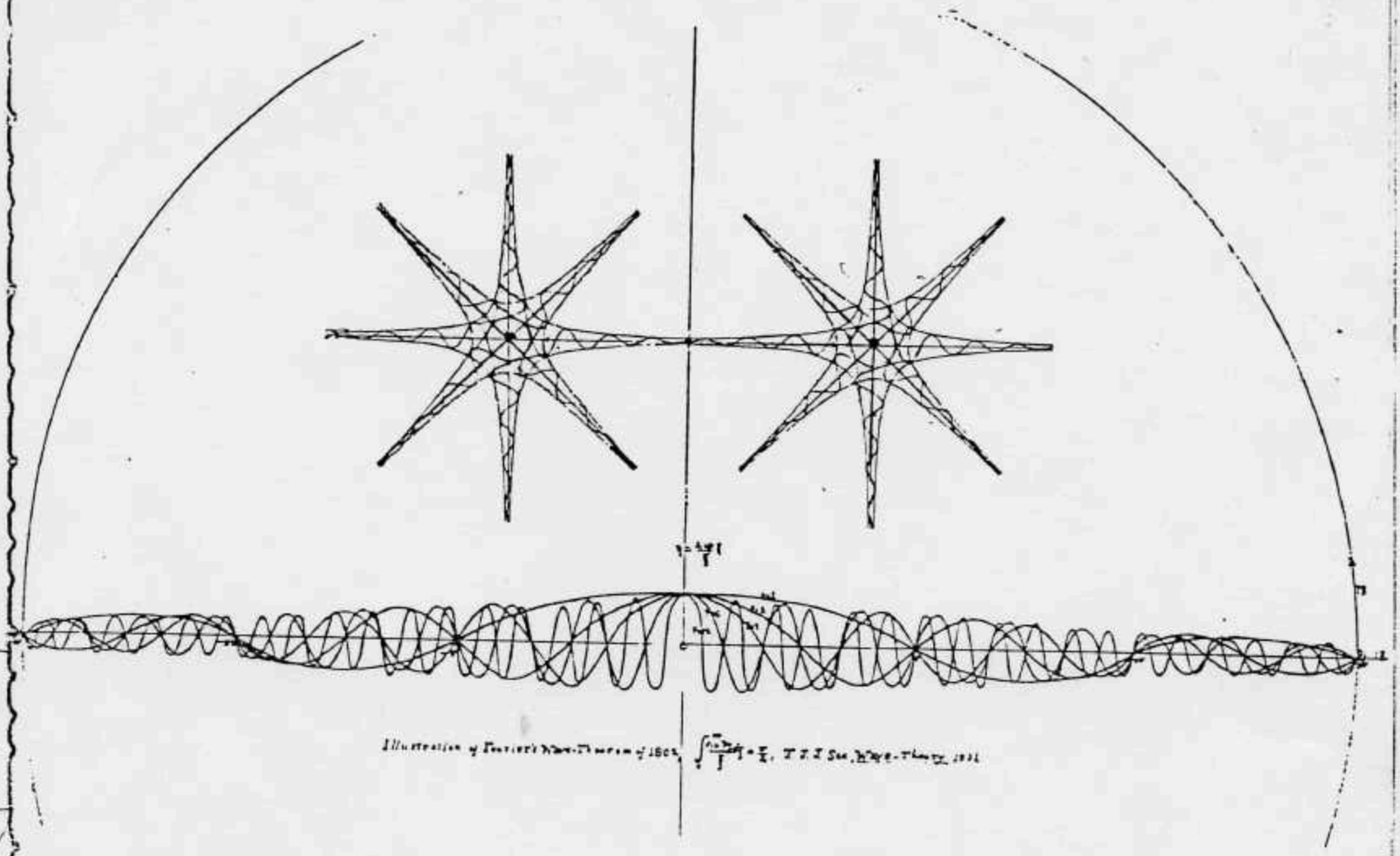


Plate II. More complete Illustration of the Fourier Waves, from every direction, and traveling in every direction, $\frac{1}{\pi}\int_{-\infty}^{+\infty}\frac{\sin p\xi}{\xi}d\xi = 1$, under balanced symmetry of Stress about a Vibrating Corpuscle or Body. In this Wave-Theorem of 1802, as Fourier shows, (Théorie Analytique de la Chaleur, section 415) the larger the multiple p , the shorter the waves, as shown in this plate. In Nature the longer waves, moving under Resistance, tend to break up into shorter waves; and hence the unlimited Gamut of Waves pervading the Universe, — this Cosmic Order having existed for millions of ages, as justly remarked by Sir Wm. Herschel, (Phil. Trans., 1785, pp213-266; idem, 1789, pp214-226).

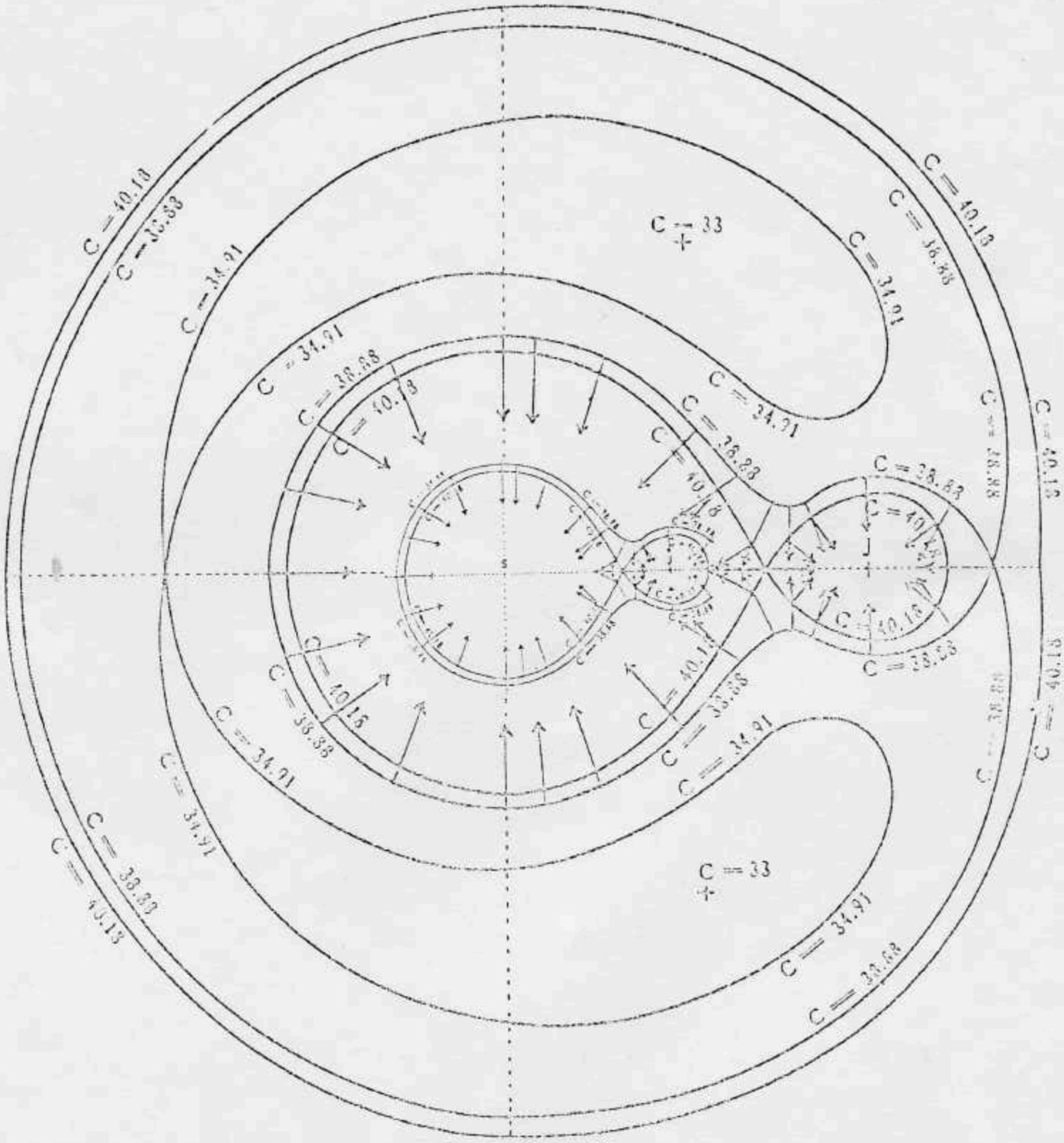


PLATE IX. DARWIN'S DIAGRAM OF THE CURVES OF CONSTANT RELATIVE ENERGY IN THE xy-PLANE, THE RATIO OF THE MASSES BEING AS 10 TO 1.

ADAPTED TO RESONANCE OF JUPITER AND SATURN.

FROM THE SMALL TERMS OF WEBER'S FUNDAMENTAL LAW OF 1846, WHICH ADD TO THE RESONANCE CÉLESTE, WE MAY NOW INTERPRET THE EFFECTS OF THE WAVE-INTERPENETRATION.

(α) THE INTERPENETRATION OF WAVES SHOWN IN THE PLATE OF SEPT. 22, 1936.

This Plate is very useful for our grasp of the mechanism underlying the motions of the Planets and their Satellites. We see not only that the Aether Stresses act in the right lines shown, but also in such a way to give Least Action — a principle first introduced by Maupertuis, in a Paper presented to the Paris Academy of Sciences, April 15, 1744, and soon confirmed for Nature by the great mathematician Euler, yet heretofore not physically intelligible, even to the foremost geometers and natural philosophers.

The Newton-See Law of 1721-1933:

$$\sigma = \frac{K}{A} = \frac{K}{V} = \nu r, \qquad \text{---(346)}$$

$$A = \frac{K}{r} = V = \iiint \frac{\sigma\, dx\, dy\, dz}{\sqrt{(a-x)^2+(b-y)^2+(c-z)^2}}; \qquad \text{---(347)}$$

explains the increase of density of the Aether outwardly from either body, as we see very clearly from the figures 7 and 8, of the Plate on Typical Hyperbolas in the Theory of the Aether, 1933.

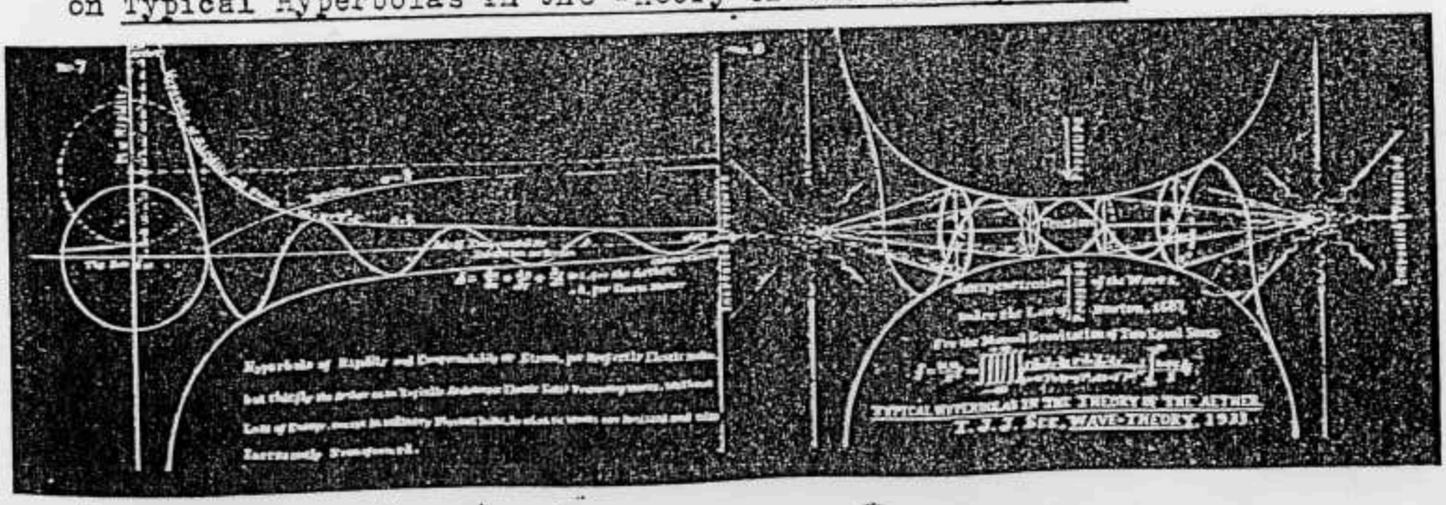


Fig. 5. Law of Density $\sigma = \frac{K}{A} = \nu r$.

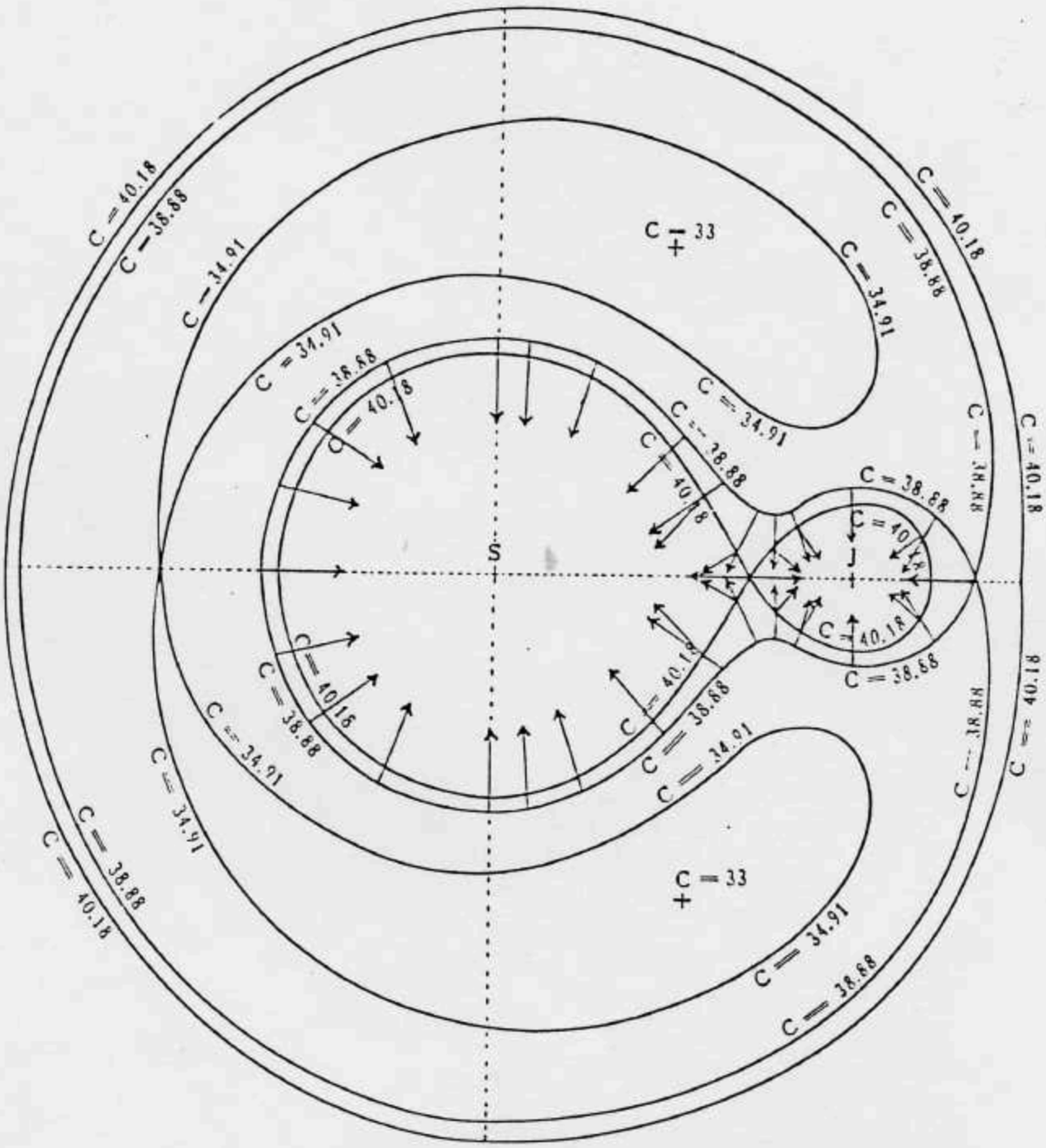


PLATE VII. Darwin's Diagram of the Curves of Constant Relative Energy in the xy-Plane, the Ratio of the Masses Being as 10 to 1.

tion of the Earth, not only their phenomena follow from the suppos-
itions, but also that the several orbs, and the whole system, are so
connected in order and magnitude, that no one part can be transposed
without disturbing the rest, and introducing confusion into the whole
Universe."

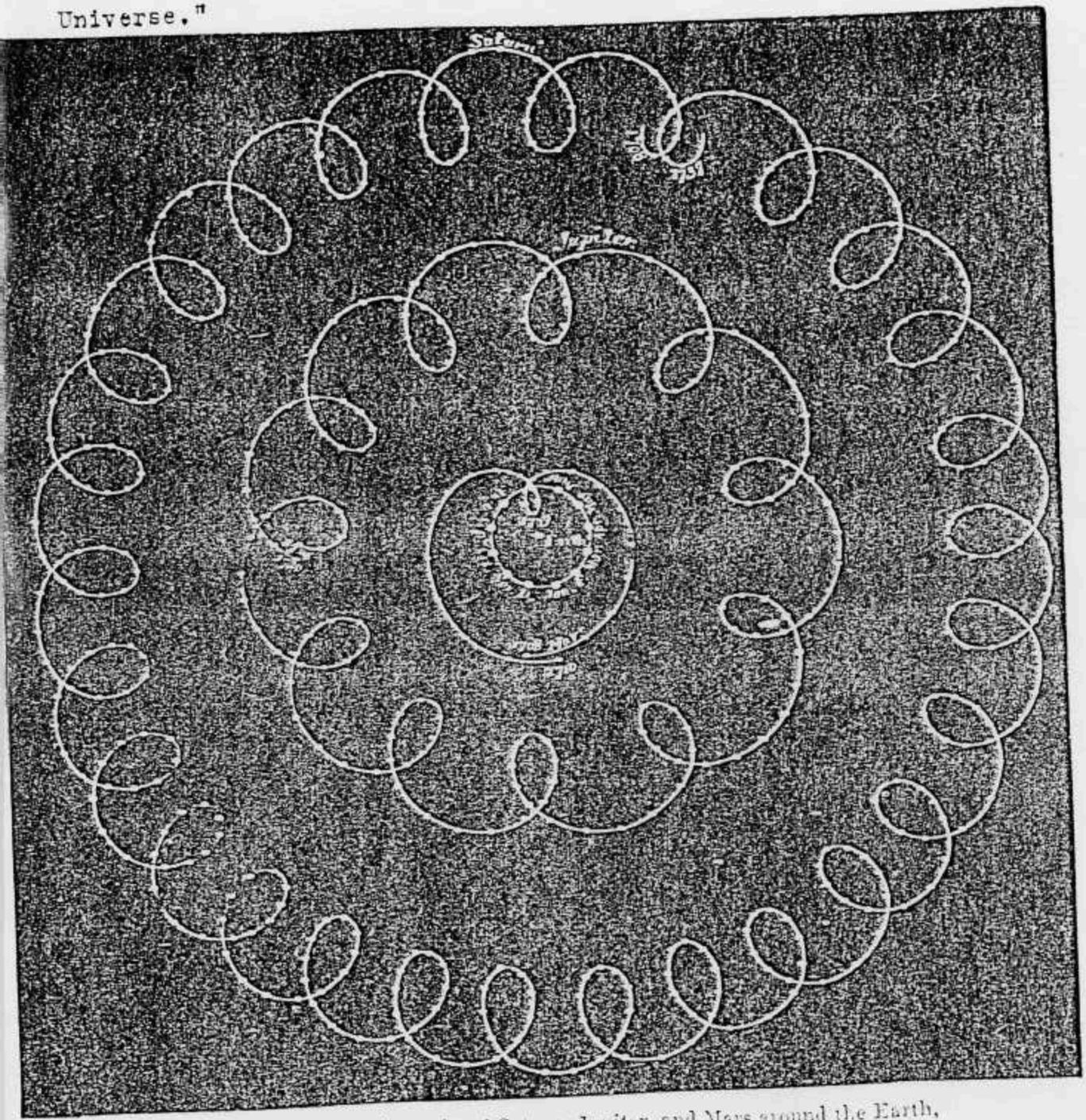


FIG. 3 — Showing the paths of Saturn, Jupiter, and Mars around the Earth, supposed to be at rest.

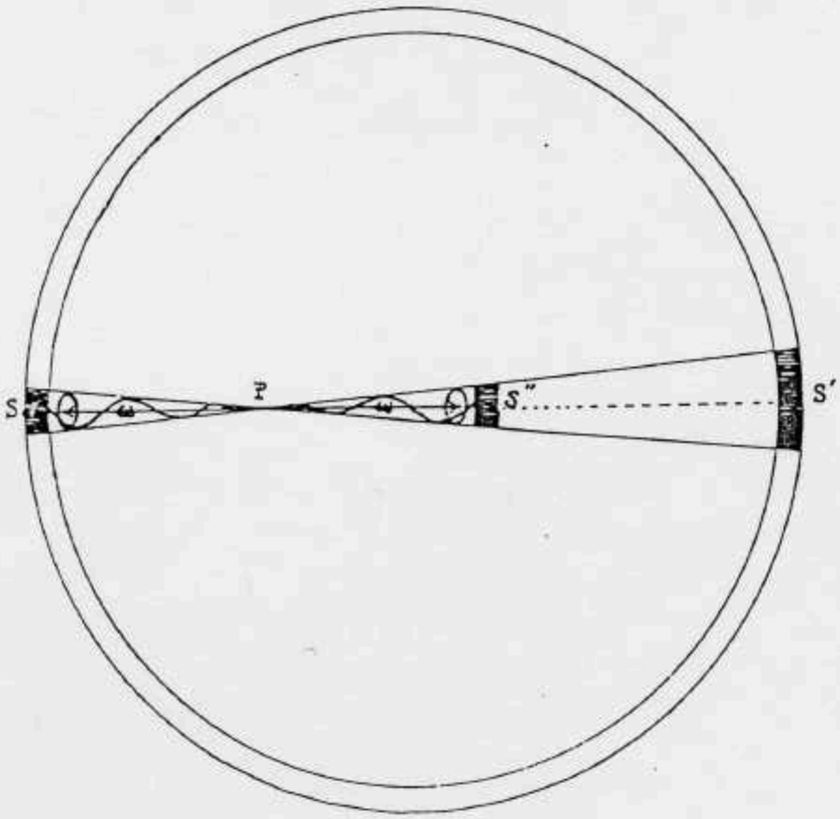


Fig.1. Illustration of the Wave-Theory as applied to the equal and opposite Attraction of the elements of a homogeneous Spheroidal Shell. Since the Bases of the Gravitational Cones shown in Plate I make clear the decrease of the Wave-action, inversely as the square of the distance, it is obvious that the action of the larger base at S' is exactly equivalent to that of the smaller base S'' between S' and P, which is identical with the opposite action of base S on the other side of P. In Nature the equilibrium of the opposite elements of a spheroidal shell is attained by the secular action of Universal Graviation, which at length produces the series of concentric spheroidal shells long known to underly the symmetrical Figures of the Planets, Sun and Stars.

This separation into two distinct parts seems advisable, because the argument in Part II is new, and independent of that in Part I, Book IV; yet similar in purport, and constitutes a new and overwhelming demonstration of the Wave-Theory which is very fundamental.

1. Although this development is largely unfolded in Book I, we here start with a direct derivation of every formula of Newton and Laplace, from the long-forgotten Wave-Theorem of Fourier, 1802: $\frac{2}{\pi}\int_0^{\infty}\frac{\sin p\xi}{\xi}d\xi = \frac{1}{\pi}\int_{-\infty}^{+\infty}\frac{\sin p\xi}{\xi}d\xi = 1.$ ---(40)

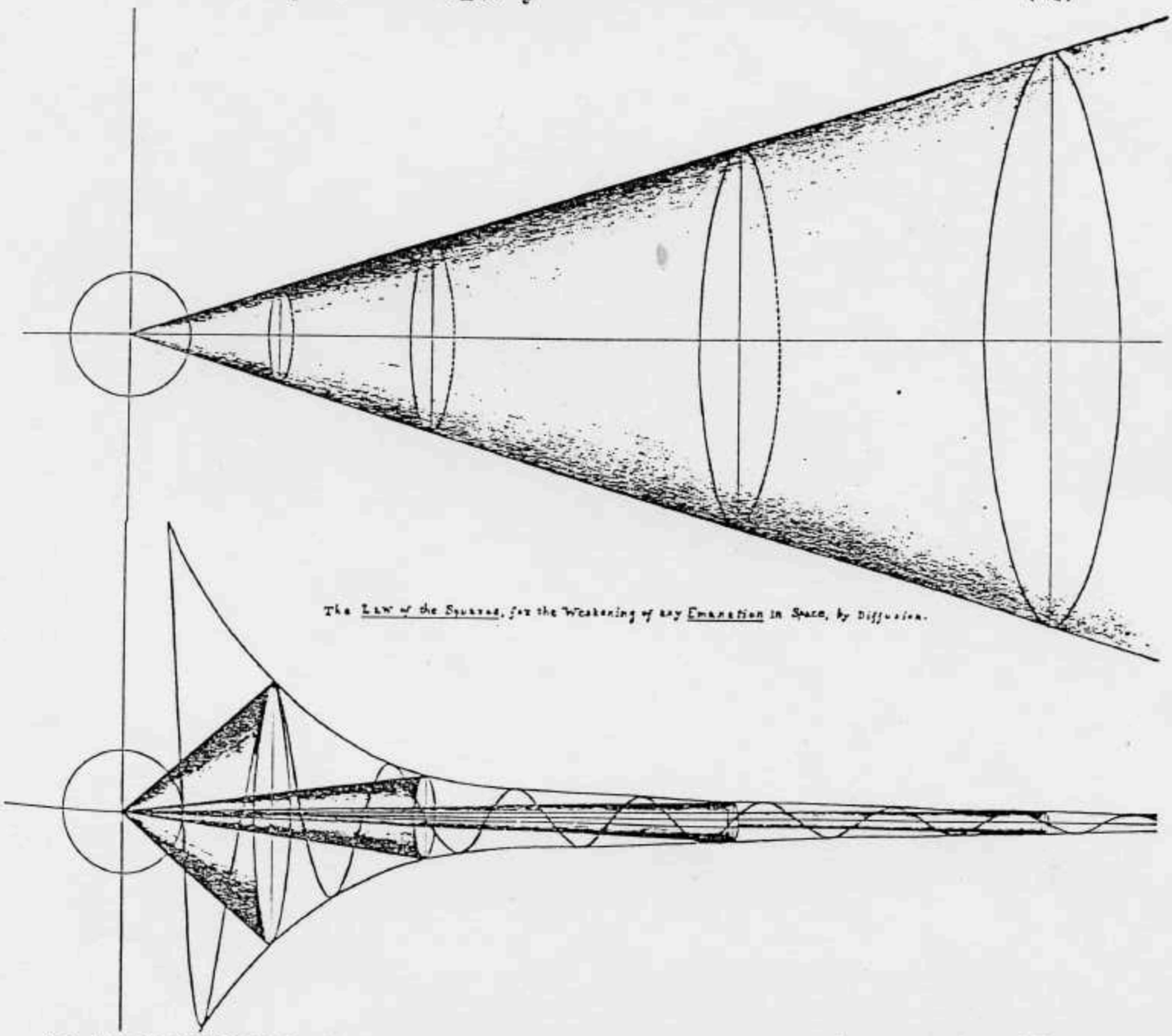


PLATE I. ILLUSTRATING THE LAW OF THE INVERSE SQUARES.

2. Then we pass to the Halley-Newton Emanation Theory of

(β) THE RESULT OF THIS INQUIRY IS TO CONFIRM THE WAVE-THEORY BY THE MOSSOTTI ANALYSIS.

If we examine any well constructed diagram of the centres of coordinated Atomic Arrangements, like the following, we shall find it difficult to believe that the Atomic Forces, in a Solid, extend sensibly to a depth of more than ten Atoms; and therefore the above restrictions in the terms of the Mossotti equations for ϵ are justified, as the chief terms, found by calculation in section II, equation (25).

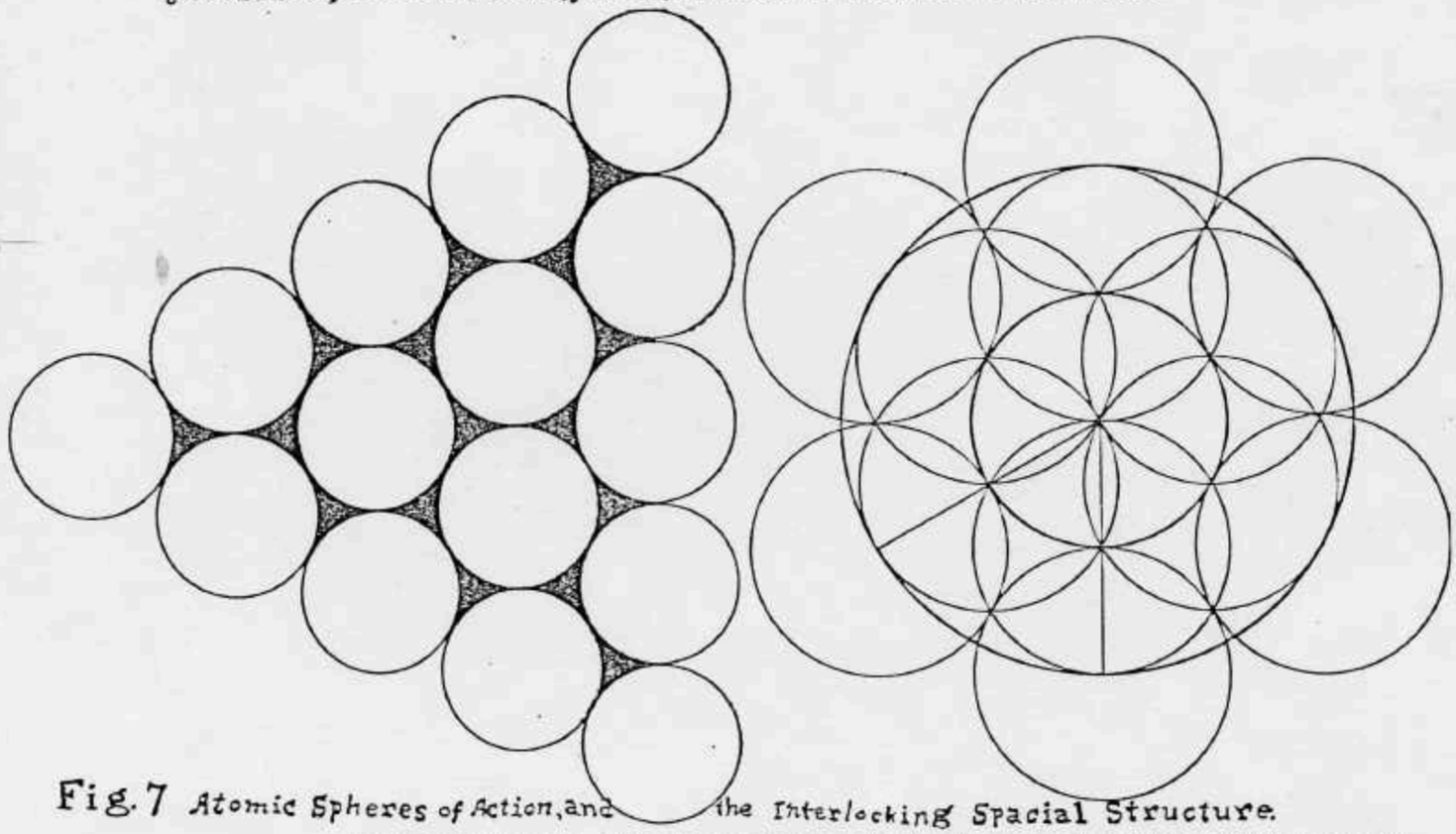


Fig. 7 *Atomic Spheres of Action, and the Interlocking Spacial Structure.*

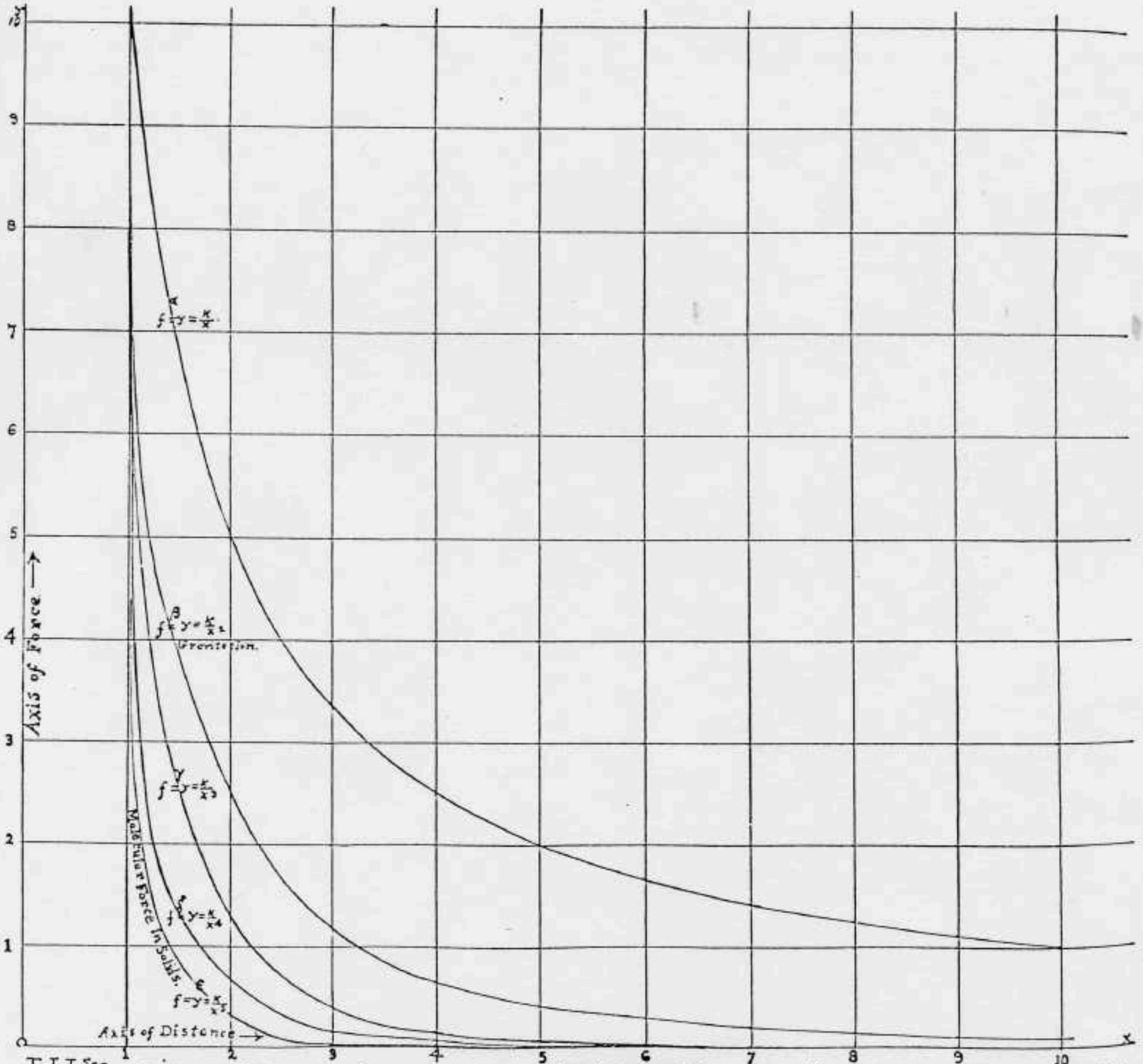
The equations of the Components of the Elastic Force would thus take the form along the three axes:

$$\frac{\partial \varepsilon}{\partial x} = -\sigma \frac{\partial}{\partial x} \iiint_{-\infty}^{+\infty} \frac{f \cdot \sigma' dx' dy' dz'}{r(x'-x)^2+(y'-y)^2+(z'-z)^2} \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{\sin n\xi}{\xi} d\xi + \sigma \frac{\partial}{\partial x} \iiint_{-\infty}^{+\infty} \frac{g \cdot \sigma_1 d\xi_1 d\eta_1 d\zeta_1}{r(\xi_1-x)^2+(\eta_1-y)^2+(\zeta_1-z)^2} \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{\sin n\xi}{\xi} d\xi + \sigma \frac{\partial}{\partial x} \iiint_{-\infty}^{+\infty} \frac{g \cdot \sigma_2 d\xi_2 d\eta_2 d\zeta_2}{r(\xi_2-x)^2+(\eta_2-y)^2+(\zeta_2-z)^2} \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{\sin n\xi}{\xi} d\xi + \cdots$$

$$\frac{\partial \varepsilon}{\partial y} = -\sigma \frac{\partial}{\partial y} \iiint_{-\infty}^{+\infty} \frac{f \cdot \sigma' dx' dy' dz'}{r(x'-x)^2+(y'-y)^2+(z'-z)^2} \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{\sin n\xi}{\xi} d\xi + \sigma \frac{\partial}{\partial y} \iiint_{-\infty}^{+\infty} \frac{g \cdot \sigma_1 d\xi_1 d\eta_1 d\zeta_1}{r(\xi_1-x)^2+(\eta_1-y)^2+(\zeta_1-z)^2} \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{\sin n\xi}{\xi} d\xi + \sigma \frac{\partial}{\partial y} \iiint_{-\infty}^{+\infty} \frac{g \cdot \sigma_2 d\xi_2 d\eta_2 d\zeta_2}{r(\xi_2-x)^2+(\eta_2-y)^2+(\zeta_2-z)^2} \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{\sin n\xi}{\xi} d\xi + \cdots$$

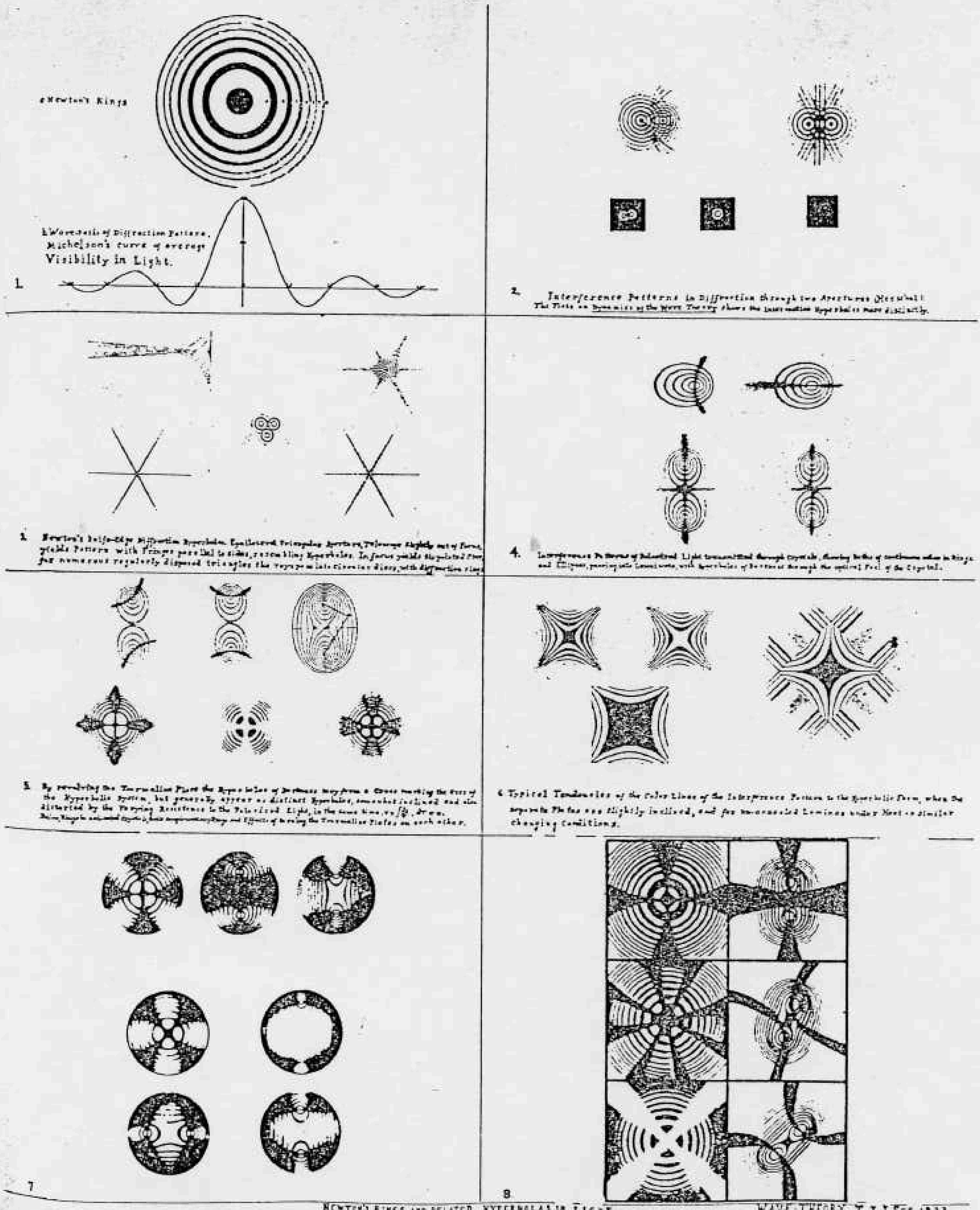
$$\frac{\partial \varepsilon}{\partial z} = -\sigma \frac{\partial}{\partial z} \iiint_{-\infty}^{+\infty} \frac{f \cdot \sigma' dx' dy' dz'}{r(x'-x)^2+(y'-y)^2+(z'-z)^2} \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{\sin n\xi}{\xi} d\xi + \sigma \frac{\partial}{\partial z} \iiint_{-\infty}^{+\infty} \frac{g \cdot \sigma_1 d\xi_1 d\eta_1 d\zeta_1}{r(\xi_1-x)^2+(\eta_1-y)^2+(\zeta_1-z)^2} \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{\sin n\xi}{\xi} d\xi + \sigma \frac{\partial}{\partial z} \iiint_{-\infty}^{+\infty} \frac{g \cdot \sigma_2 d\xi_2 d\eta_2 d\zeta_2}{r(\xi_2-x)^2+(\eta_2-y)^2+(\zeta_2-z)^2} \frac{1}{\pi} \int_{-\infty}^{+\infty} \frac{\sin n\xi}{\xi} d\xi + \cdots$$

This is a fair description of what happens, yet the cause involved is not illuminated; and hence we insert here a much needed Diagram of the Curves of Force and their Inverse Distances, which throws much light on this obscure subject, and renders it easy to grasp.



T.J.J See.
March 20, 1935. Decrease of Force for Inverse Powers of the Distance 5th Power "Sensible only at Insensible Distances" Laplace.

Plate X.



NEWTON'S RINGS AND RELATED HYPERBOLAS IN LIGHT — WAVE-THEORY. T. J. J. SEE, 1933.

Interference Phenomena yielding all the Conic Sections, for Light of Uniform Wave-Length [illegible]
Newton's Rings pass into the Related Hyperbolas under changing Resistance, with Varying Paths of Equal Time, [illegible]

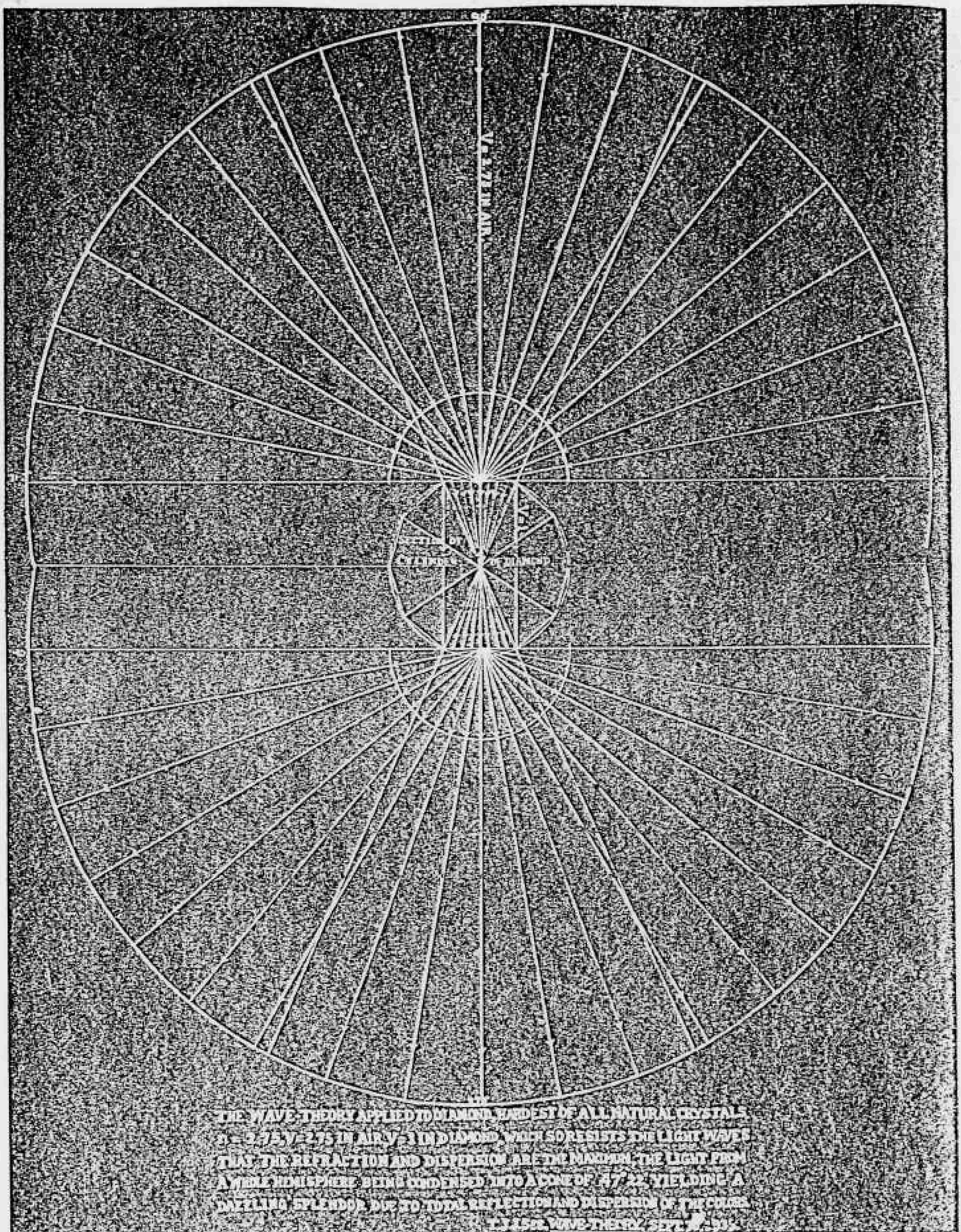

THE WAVE THEORY APPLIED TO DIAMOND, HARDEST OF ALL NATURAL CRYSTALS
= 2.75, V=2.75 IN AIR, V=1 IN DIAMOND, WHICH SO RESISTS THE LIGHT WAVES
THAT THE REFRACTION AND DISPERSION ARE THE MAXIMUM; THE LIGHT FROM
A WHOLE HEMISPHERE BEING CONDENSED INTO A CONE OF 47° 22', YIELDING A
DAZZLING SPLENDOR, DUE TO TOTAL REFLECTION AND DISPERSION OF THE COLORS.

Plate VIII.

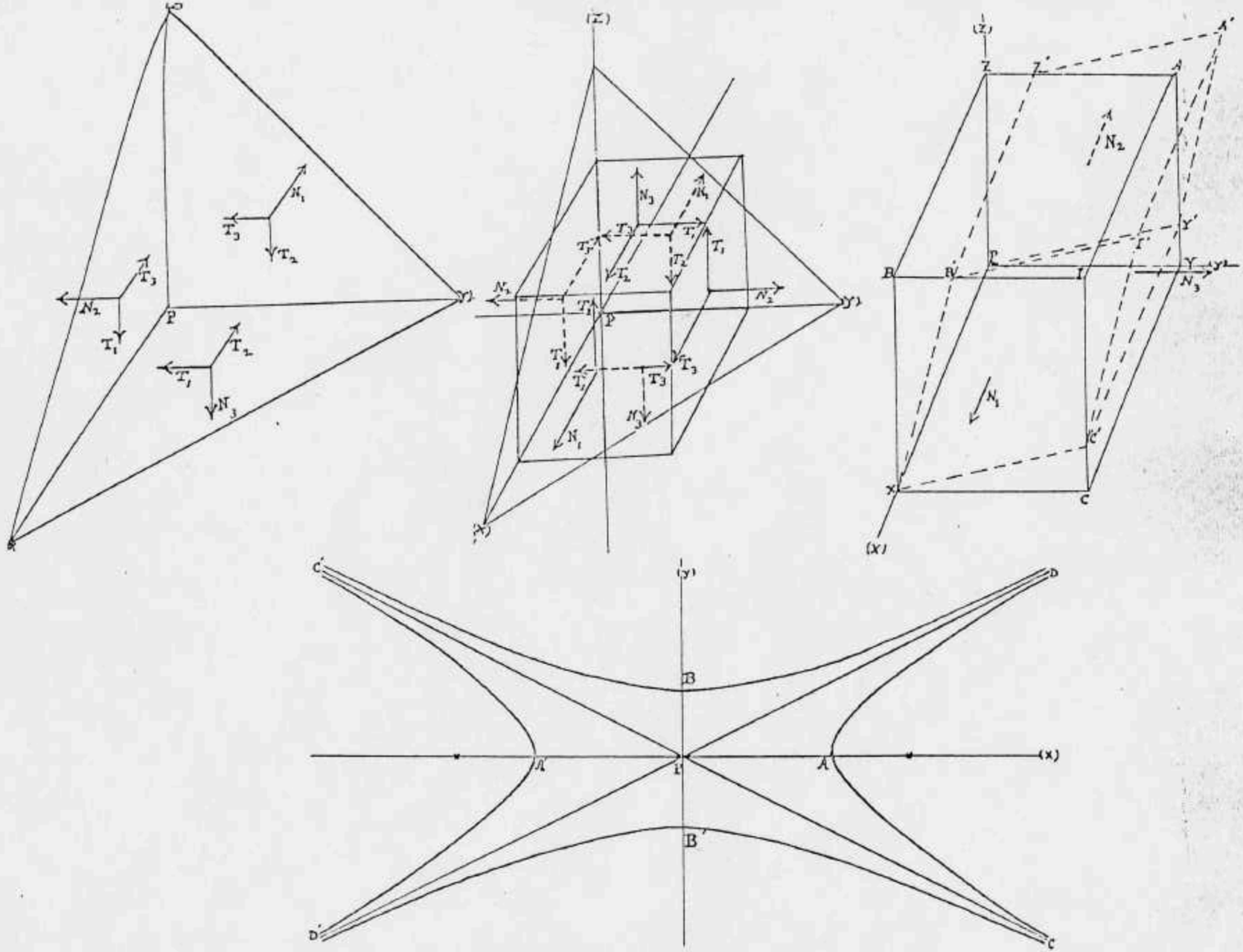


Plate VI. *Stresses in the Theory of Elasticity*, illustrated Graphically.

Fig. 181.

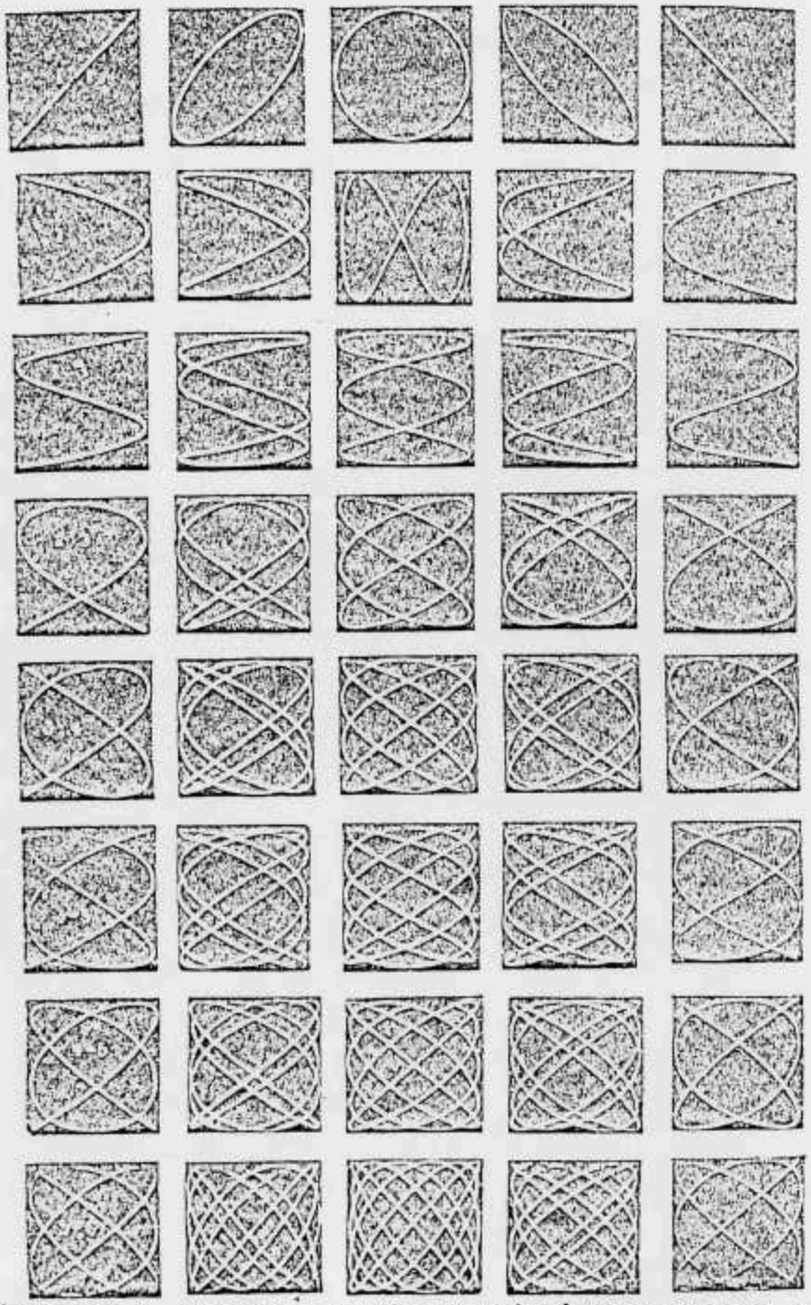


Fig. 182. 1:2.

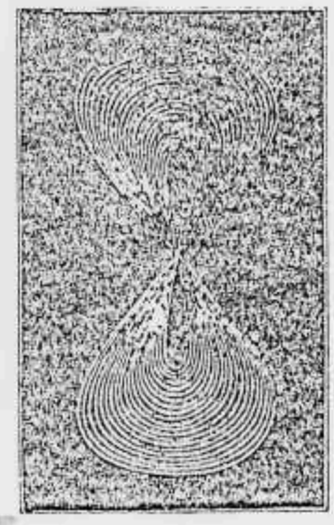


Fig. 183. 1:3.

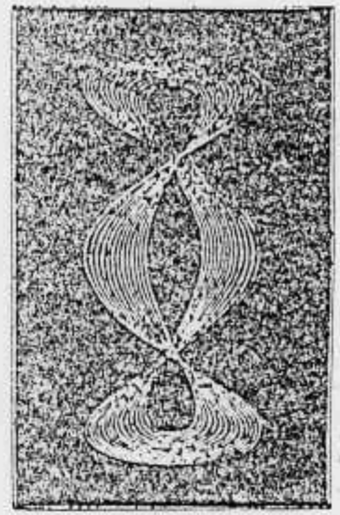


Fig. 184. 2:3

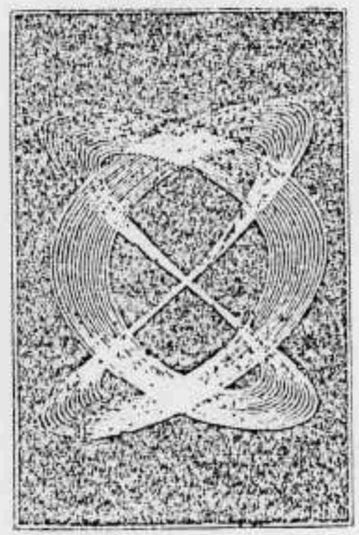


Fig. 185 3:4

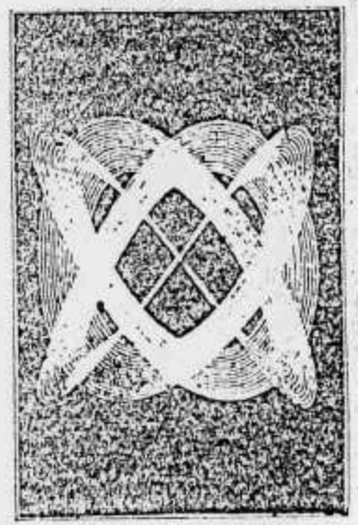


Plate IV. Combinations of Vibrations in Different Periods, and others as Slowly Changing.

Plate III. Illustrating the Tidal Stresses of the Wave-Theory of Molecular Forces.

The Geometrico-Physical Images of the Amplitudes of the Waves, the Cone-Bases, and Spheres resting thereon correspond to the Weight, $W = mg = ff' = \frac{K}{r^3}, \frac{K^2}{r^2} = \frac{K}{r^5}$, Q. E. D.

T. J. See, Wave-Theory, Book III, 1938.

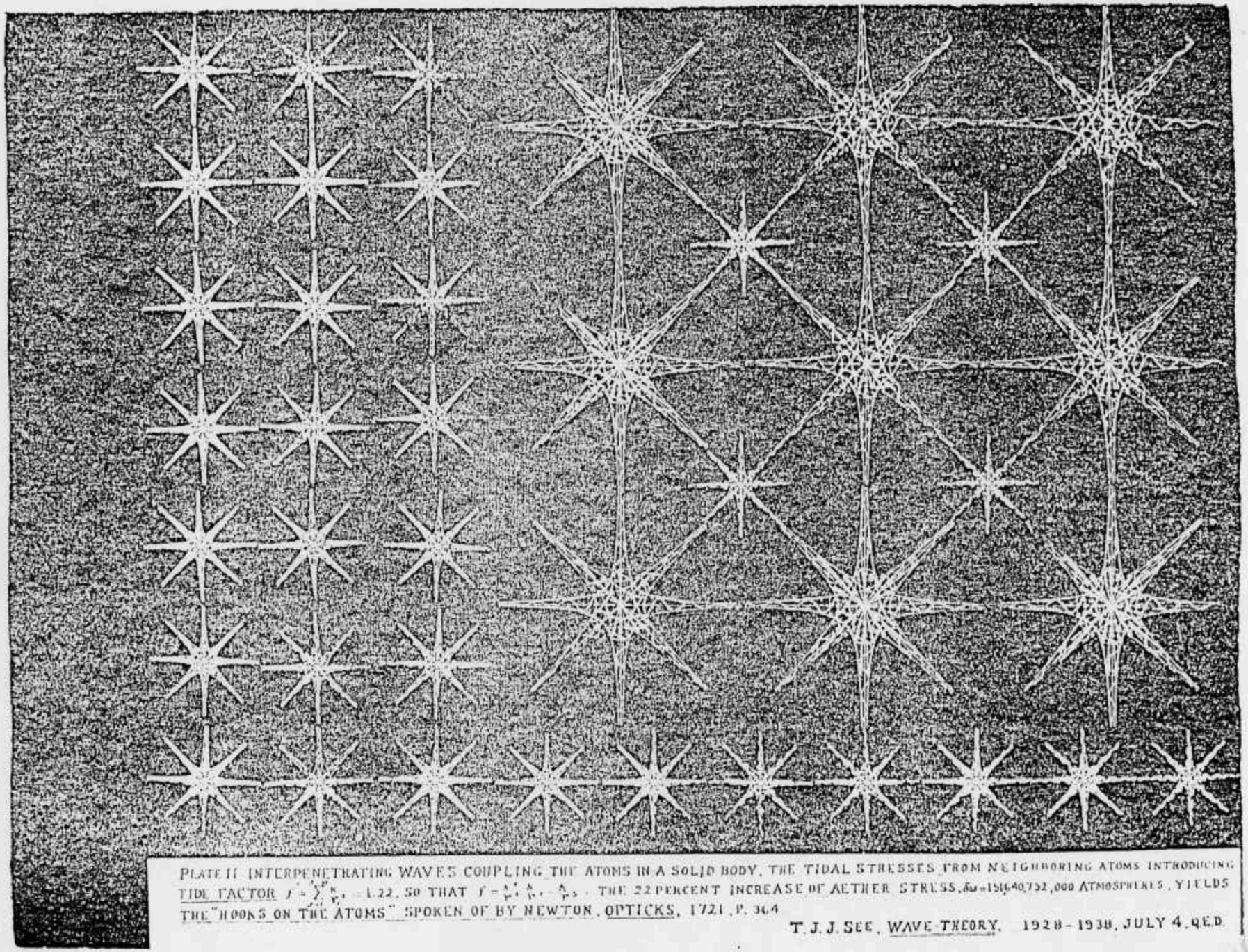


PLATE II INTERPENETRATING WAVES COUPLING THE ATOMS IN A SOLID BODY, THE TIDAL STRESSES FROM NEIGHBORING ATOMS INTRODUCING TIDE FACTOR $f = \sum^{n} \frac{r}{r_n}$, = 1.22, SO THAT $f = \frac{r}{r_1} \cdot \frac{r}{r_2} \cdot \frac{r}{r_3}$, THE 22 PERCENT INCREASE OF AETHER STRESS, $\delta\omega$ = 1516,40,732,000 ATMOSPHERES, YIELDS THE "HOOKS ON THE ATOMS" SPOKEN OF BY NEWTON, OPTICKS, 1721, P. 364

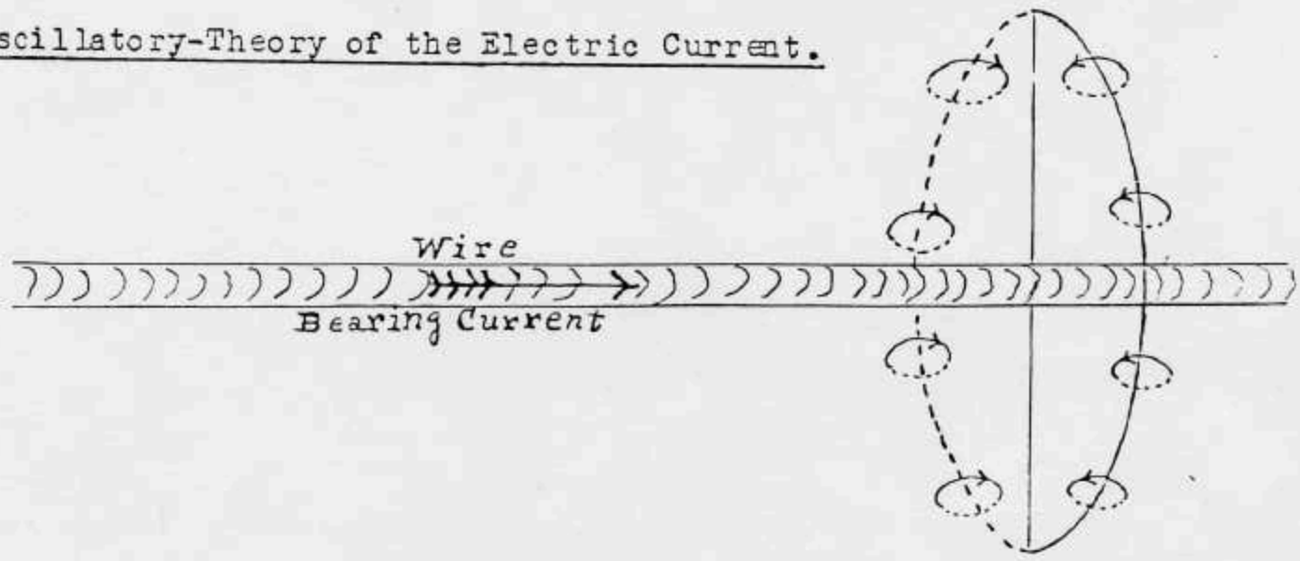
T. J. J. SEE, WAVE THEORY, 1928 - 1930, JULY 4, Q.E.D.

ANALYSIS OF THE MOTIONS IN VORTEX RINGS, WITH PARTICULAR REFERENCE TO THEORETICAL VORTEX ATOMS, AND THE OTHER EXTREME SPECIFIED BY THE IRROTATIONAL CONDITION.

In the lifetime of Sir W.Thomson (Lord Kelvin)(1824-1907) the problem of Theoretical Vortex Atoms called forth from himself and the most eminent of his contemporaries — Tait, Helmholtz, Maxwell, J.J. Thomson — various ingenious investigations, relative to the stability of such motions in frictionless fluids. Helmholtz in particular early treated this Wirbelbewegung in such a way as to establish profound criteria, which deserve our notice.

For although the probability of Vortex Atoms in Nature decreased, after Lord Kelvin later on became somewhat doubtful of the reality of this order in the Physical Universe; yet since Vortical Rotations of the Aether occur everywhere in Light, Magnetism, Electrodynamics, and we now refer Molecular Forces to the Relative Motion and Interpenetration of Waves, it seems to me that we ought to analyse the motions in Vortex Rings and Vortex Atoms, in sufficient detail to render this subject intelligible to the reader conversant with mathematical analysis.

Moreover, the following figure will make clear that in a Common Smoke Ring, such as is easily blown from an orifice into the Air, the rotations of this Ring are of the very type we have traced in our Oscillatory-Theory of the Electric Current.



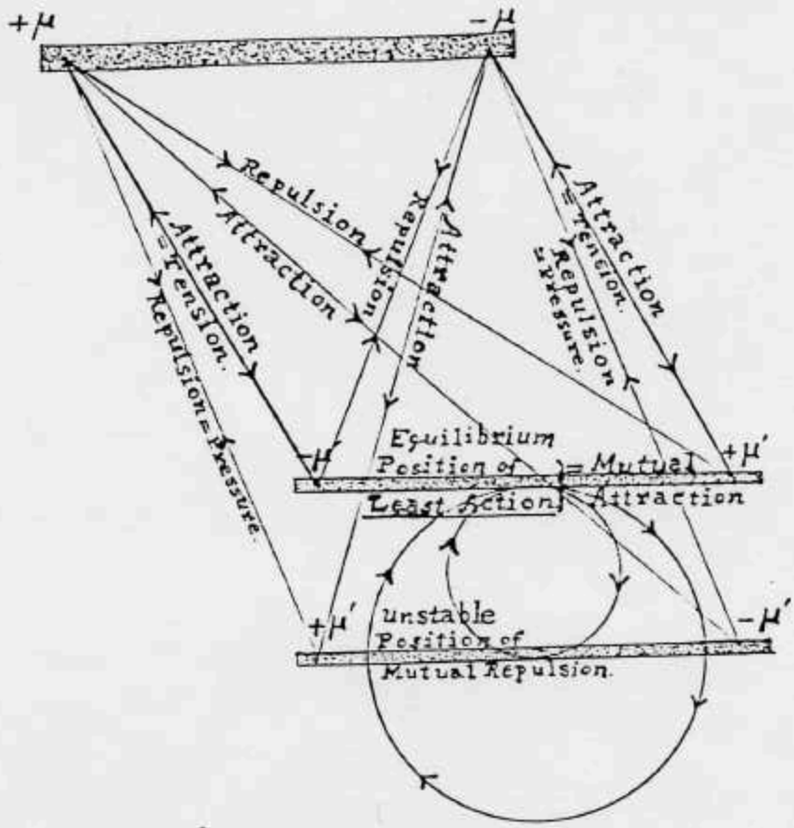
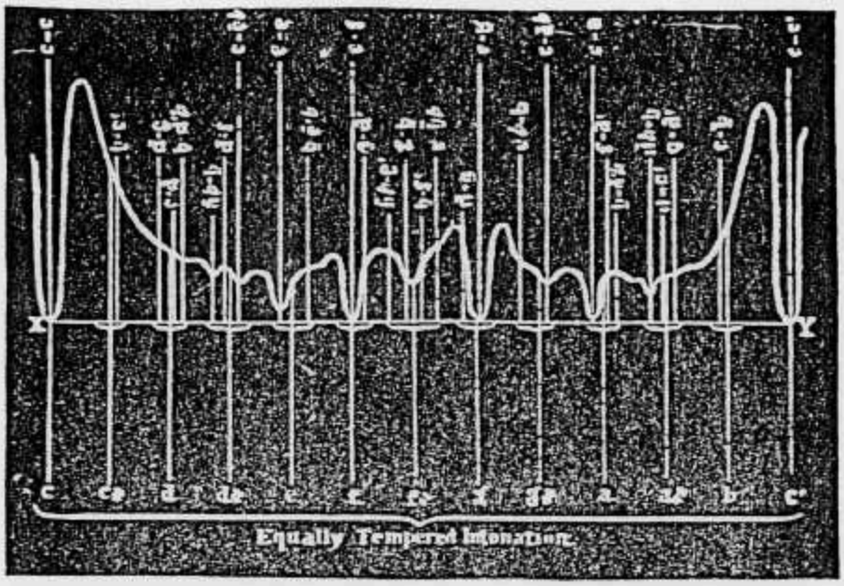
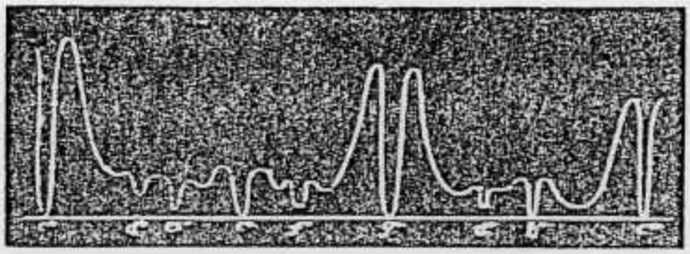


Diagram of the Formula for two Magnets : $I = \frac{\mu\mu'}{s^2} + \frac{\mu\mu'}{s'^2}$, showing why the smaller Magnet, with Poles μ', μ', reverses to the Equilibrium position of Least Action = Attraction.

In this Diagram we see why the freely suspended Needle, or smaller Magnet, is unstable till it reverses its Poles, and yields to shrinkage of the Aether, under Attraction, with the average Wave-Amplitude smaller: $(A' - dA) = A = \sqrt{a^2 - 2aa'\cos(p-p') + a'^2}$, thus contracting under the negative sign of the middle term, $-2aa'\cos(p-p')$, Q.E.D. This also explains the Attraction of the Needle to the Wire, with a Wave-Field about it; and of two Currents upon each other, in Electrodynamics, under the Wave-Theory, which in fact explains all the Forces of Nature, even the Molecular and Atomic forces, as shewn in Book III of this Treatise on Waves in the Aether.

2. The correctness of this Physical Mechanism for explaining the Magneto-Optical phenomena discovered by Faraday and Zeemann is so obvious, and dynamically so incontestable, that it is impossible for any difference of opinion on the subject ever to arise among careful investigators. For the rotation of the Plane of Polarization, the Doubling of the Spectral Lines, etc., are exact and well-defined phenomena.





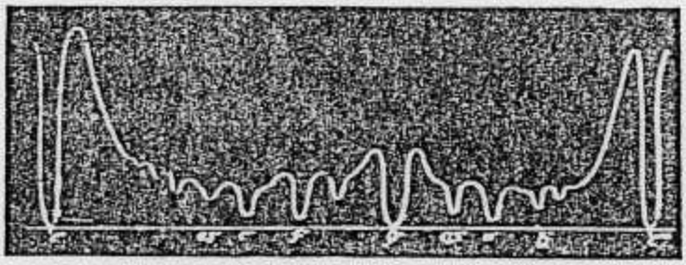
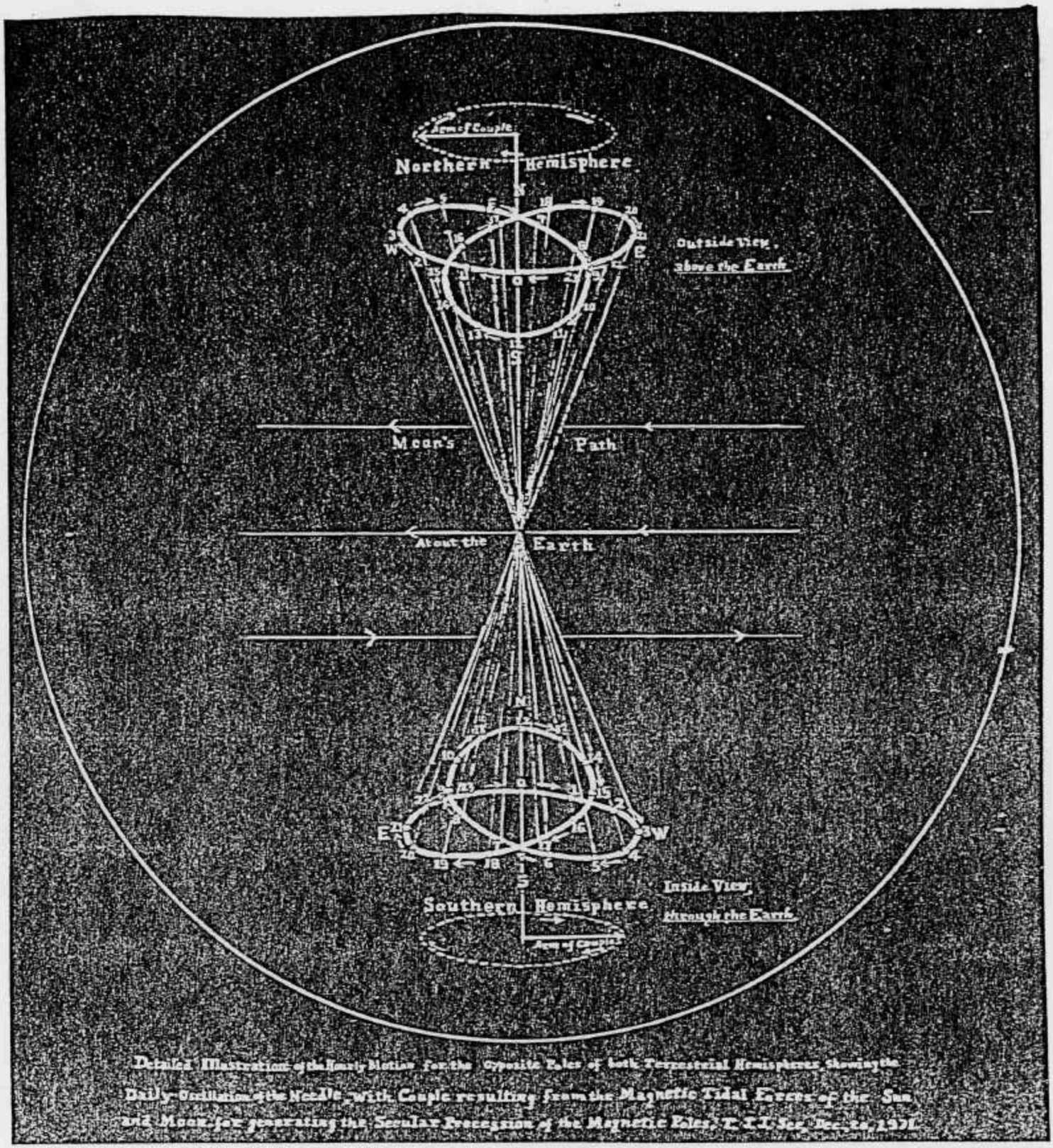


Fig. 6. Graphical Illustrations of the Intensities of Sound, yielding Beats for Tuning Forks, of slightly different Periods, — Jarring Wave-Impulses in the Air, analogous to the Dissonance of the Aether Waves of the Celestial Bodies not attuned to a Music of the Spheres. This explains the enormous penetrating power of the Cosmic Ray, which for over 30 years has been a great mystery to all investigators.



Detailed Illustration of the Hourly Motion for the Opposite Poles of both Terrestrial Hemispheres, showing the Daily Oscillation of the Needle with Couple resulting from the Magnetic Tidal Forces of the Sun and Moon for generating the Secular Precession of the Magnetic Poles. T. T. Sep. Dec. 22, 1906.

Plate XII. Illustrating the Diurnal and Semi-diurnal Tides in Terrestrial Magnetism, under the opposite Inductions at work, in the Sun's Powerful Magnetic Field, as the Earth's Magnetic Poles rotate in Conical Paths, some 20° from our Geographical Poles.

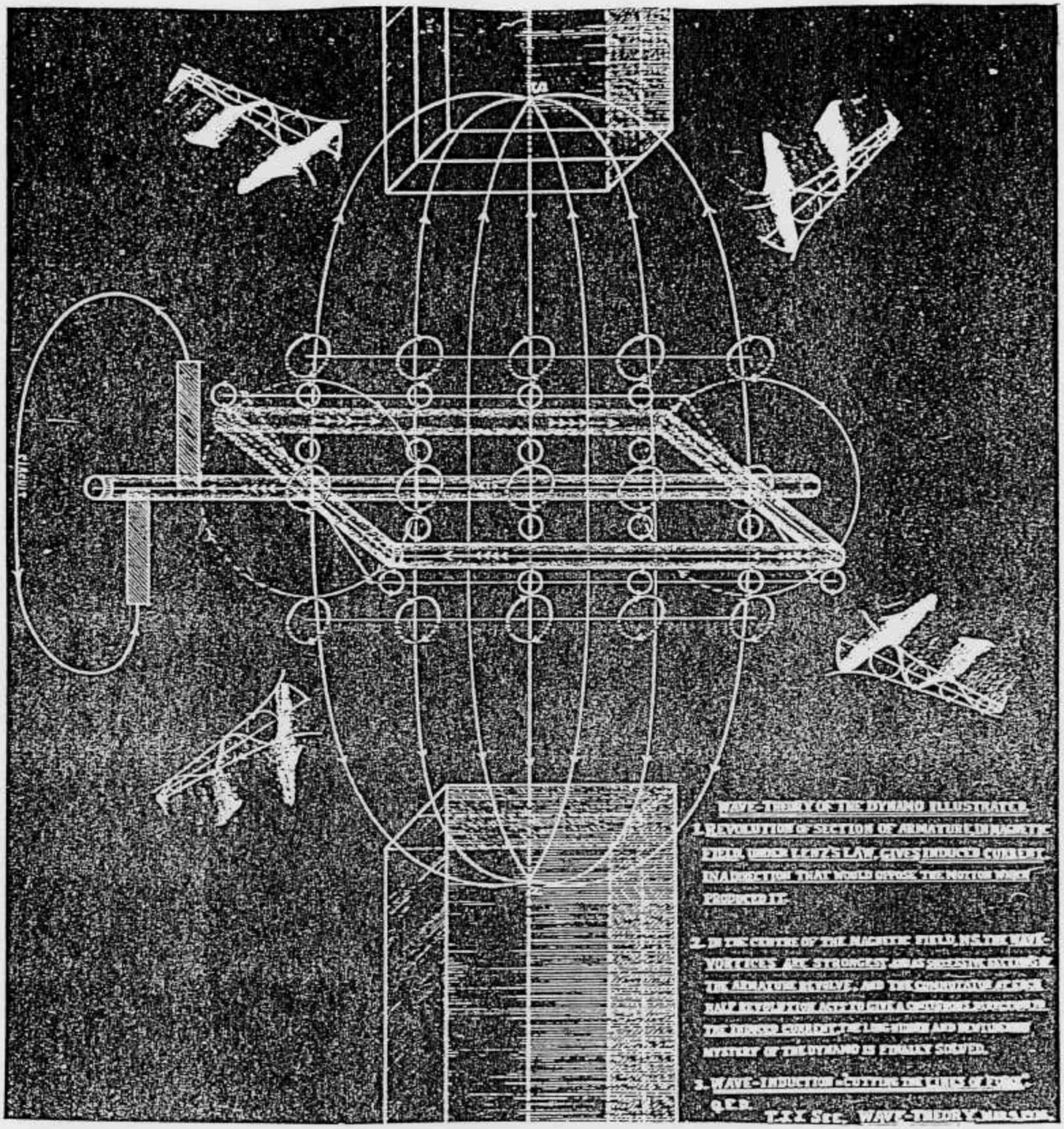
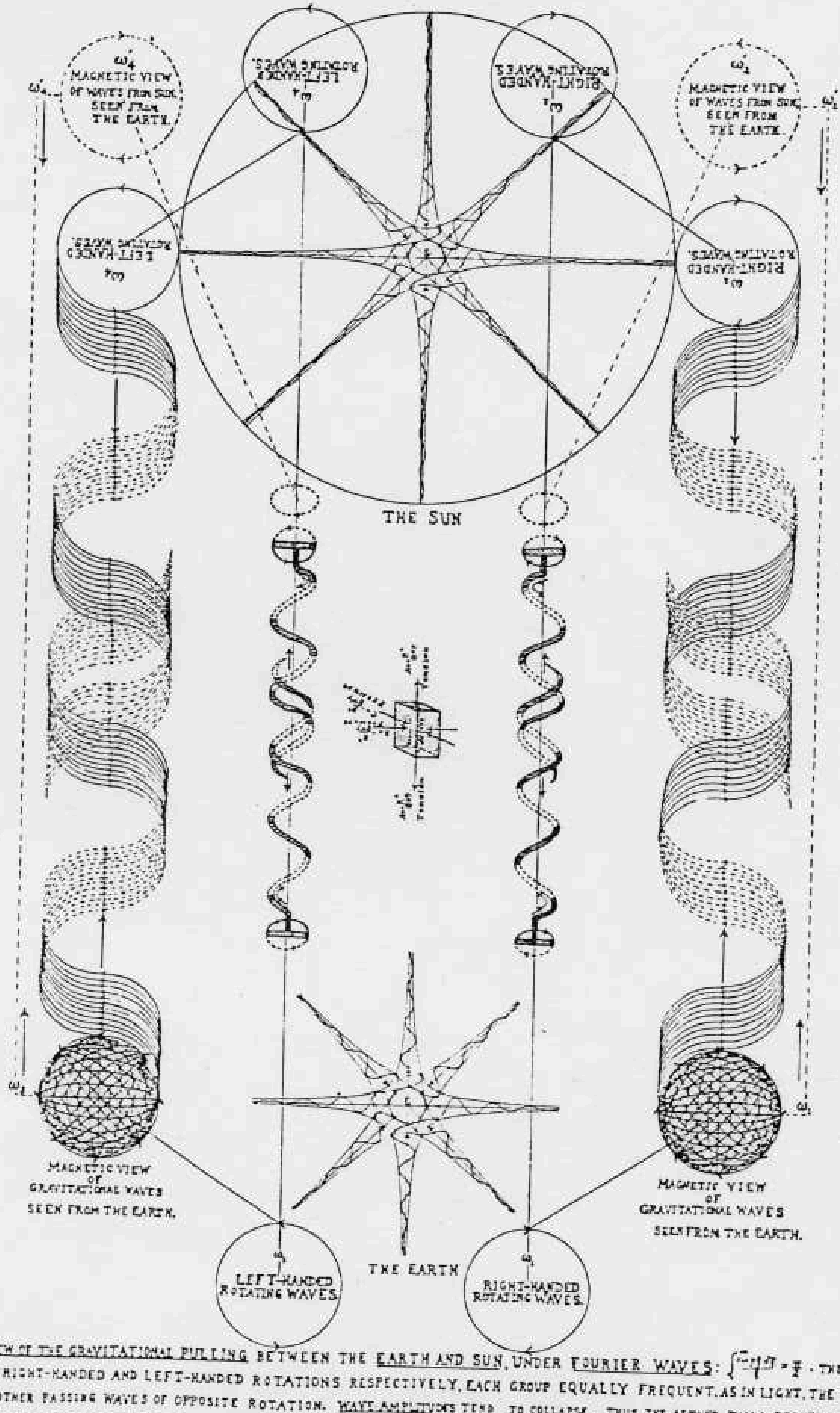


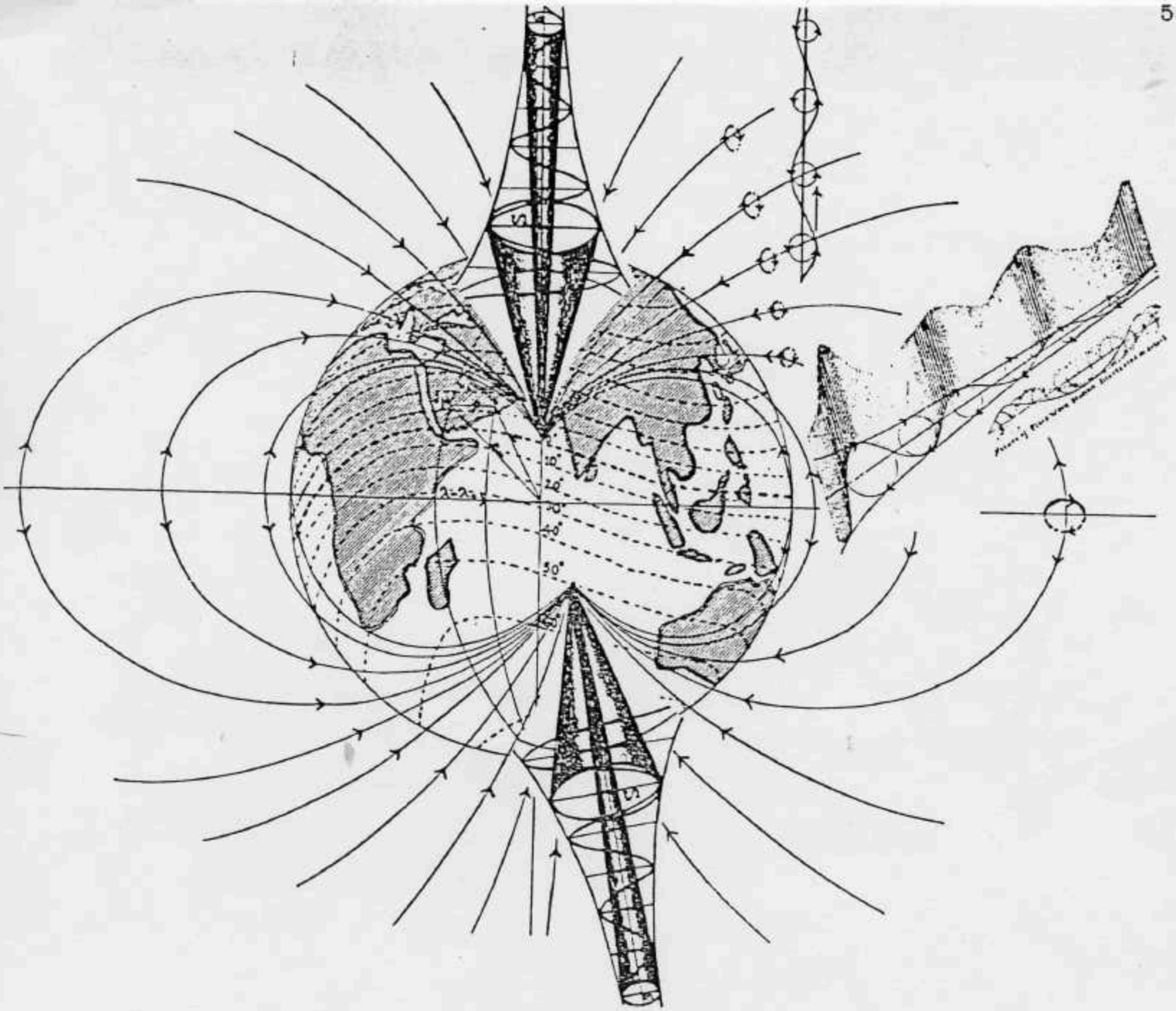
Plate XI. Illustrating the Wave-Theory of the Dynamo, under Lentz's Law showing how the Induced Current is generated, — with the Physical Significance of cutting the Lines of Force, around which the Vortices of the Aether Waves rotate, and which thus leads to Induction or new Wave-generation, by the relative motion of a section of the Armature.

Repetition of Plate X, of the First Paper, Second Series, for exhibiting the Mechanism of the Invisible Waves of Gravitation, which pull with the strength vastly exceeding that of millions of millions of cables of the strongest steel.



A MAGNETIC VIEW OF THE GRAVITATIONAL PULLING BETWEEN THE EARTH AND SUN, UNDER FOURIER WAVES: [illegible] · THEOREM OF 1802. SEPARATED INTO RIGHT-HANDED AND LEFT-HANDED ROTATIONS RESPECTIVELY, EACH GROUP EQUALLY FREQUENT, AS IN LIGHT, THE WAVES TEND TO CANCEL THE OTHER PASSING WAVES OF OPPOSITE ROTATION. WAVE AMPLITUDES TEND TO COLLAPSE, THUS THE AETHER PULLS PERPETUALLY AS HERE SHOWN BY MECHANICAL MODEL OF THE INTERLOCKED CORK SCREWS OR WAVE-HELIX. NEWTONIAN ATTRACTION [illegible] Q.E.D.

T. J. J. SEE, WAVE-THEORY. APRIL 6, 1934.



VERIFIED PHYSICAL THEORY OF THE MAGNETIC WAVE-FIELD ABOUT THE EARTH.

T. J. J. See. *Wave-Theory*, 1932.

Plate VIII. General View of the Wave-field about the Terrestrial Globe, showing Magnetic Wave-Cones at the Poles, similar to those of Gravitation, with vertices located at depths of 0.66 and 0.76 of the radius respectively: significance of this Plate lies in the observationally verified fact that at the Poles the Law of the Inverse Squares holds for Magnetism, as in Gravitation; yet in other regions the two terms of the Gauss-See Harmonic Law of 1922 operate:

$$\frac{I}{\gamma} = \gamma^2\left(\frac{r^2}{s^2} + \frac{r^2}{s'^2}\right), \quad \gamma = \frac{1}{1+\sigma\vartheta}.$$

and the Magnetic Intensity follows a more complex Law.

with one variable radius:

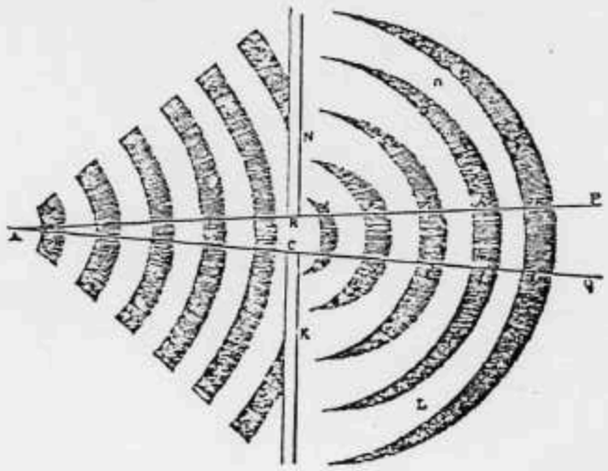
$$S = 2\pi r.l, \quad \ldots\ldots\ldots (40)$$

so that, on the basis of Gauss' Curvature, we are reduced to the extraordinary form:

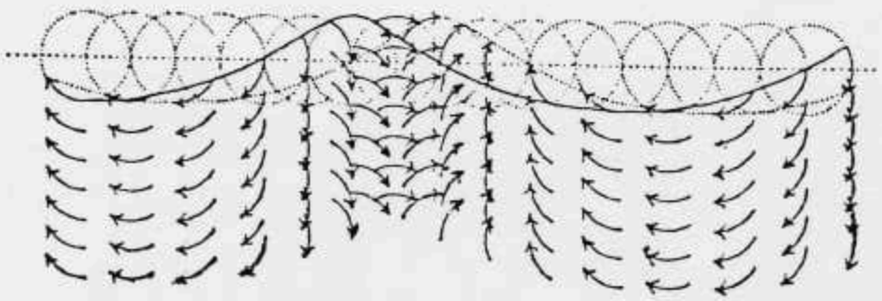
$$k = \frac{ki}{r}, \quad \ldots\ldots\ldots\ldots (36)$$

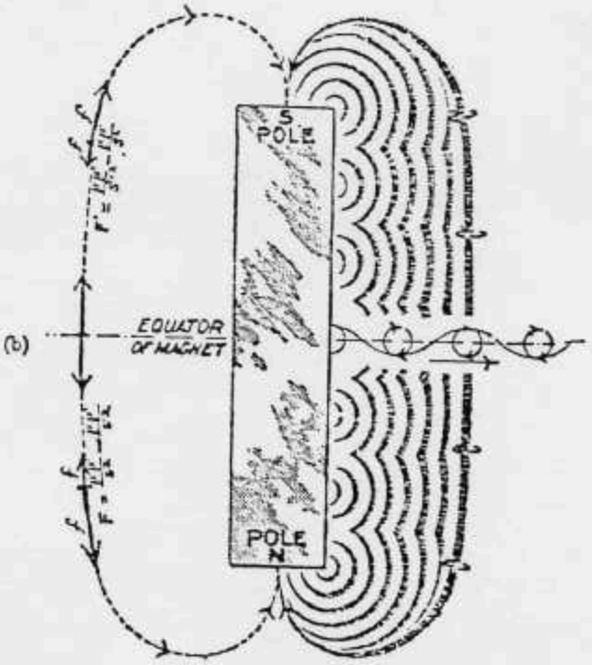
and this can only indicate Waves propagated cylindrically from the conducting wire. Q.E.D.

One of the most unfortunate errors ever committed in Physical Science was Maxwell's misleading conclusion, Treatise on Electricity and Magnetism, 1873 § 821, that although there are Rotations in both Light and Magnetism, there are no Waves in Magnetism. He looked for Waves in the direction of the Line of Force, whereas he should have seen the Waves and Rotations normal to these Lines — which caused the Lines to shorten themselves, as Faraday observed (Experimental Researches, section 1297, etc., Nov. 1837).



(a)





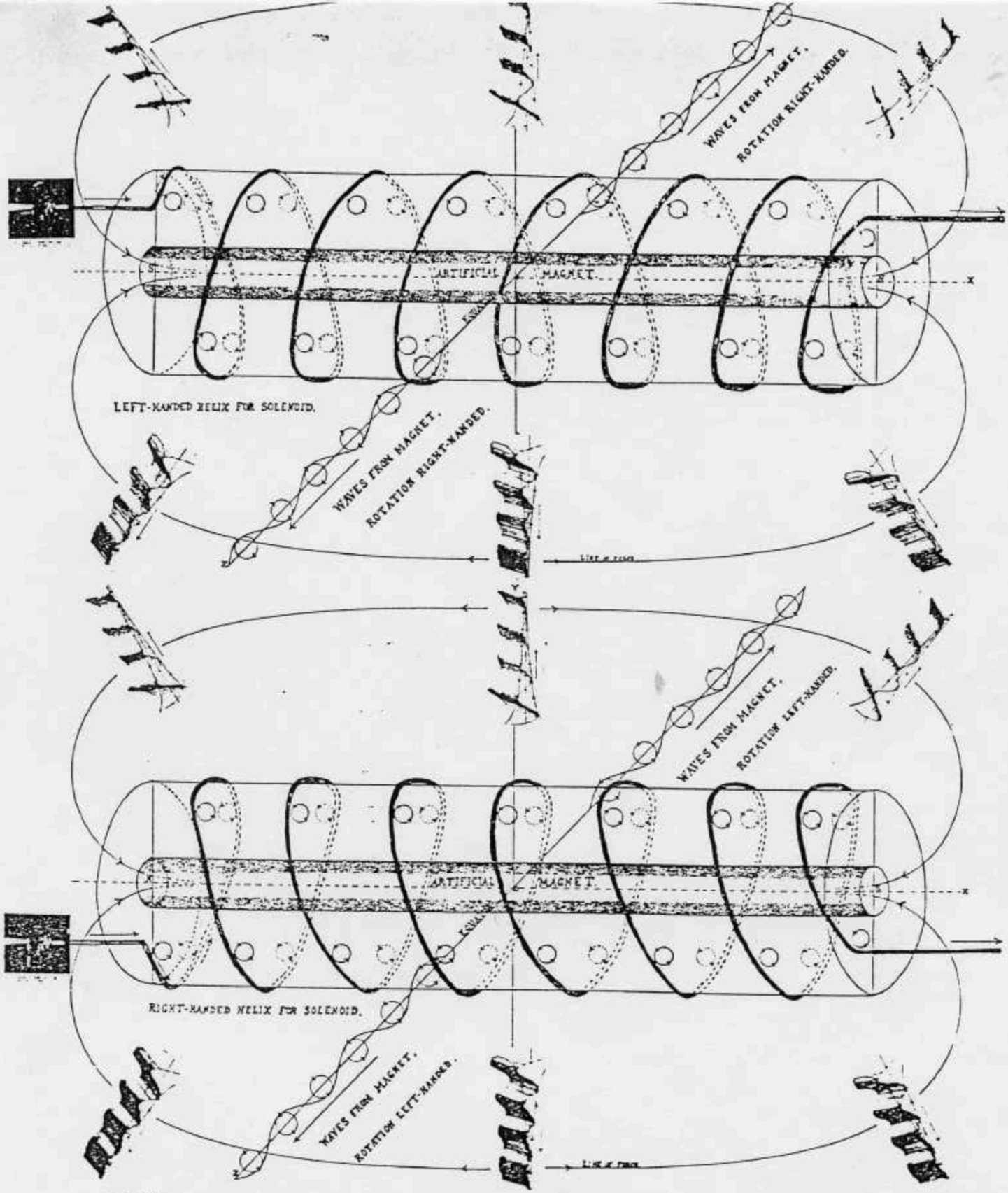
T. J. J. See. New Theory of the Aether.

Astronom. Nachrichten Bd. 226. Tafel 4.

Plate VIIA (a) *Newton's* diagram of the spread of waves to a new radius, after passing through an orifice *B C*; with *Airy's* illustration of the nature of the wave-motion below (cf. Tides and Waves, 1845).

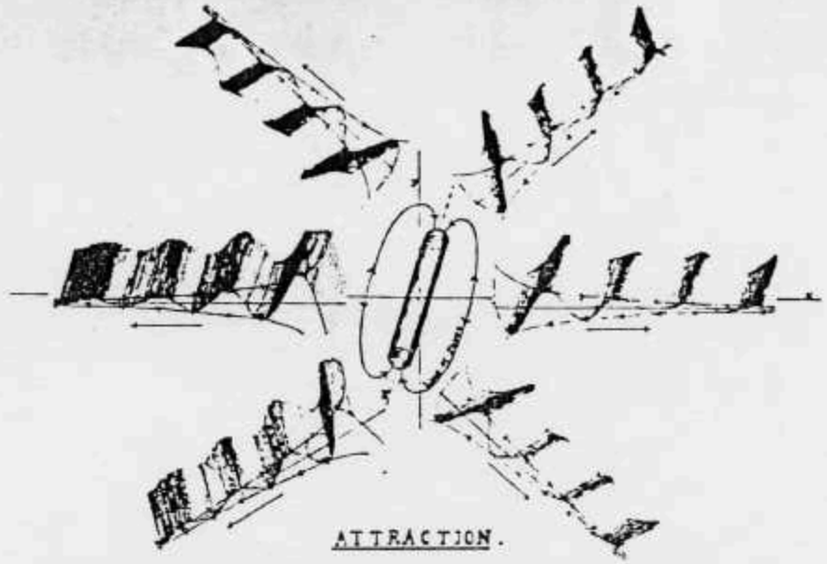
(b) Illustration of the simultaneous compounding of wave motions from closely adjacent orifices, by extension of *Newton's* theory. As the rotations about the axes are parallel, the tension in each wave-disturbance tends to shorten the arc of the whole wave filament, and make the wave front a minimum. We thus get magnetic lines of force nearly straight in the equatorial regions of the magnet, with rapid curvature towards the poles. This lower diagram (b), in connection with the diagram (a) above, completely explains the observed phenomena in magnetism, and assures us that the wave-theory assigns the true cause of magnetism. Drawn by *J. F. Greathead.*

C. Schaidt, Lithaber Georg Obelm, Kiel.

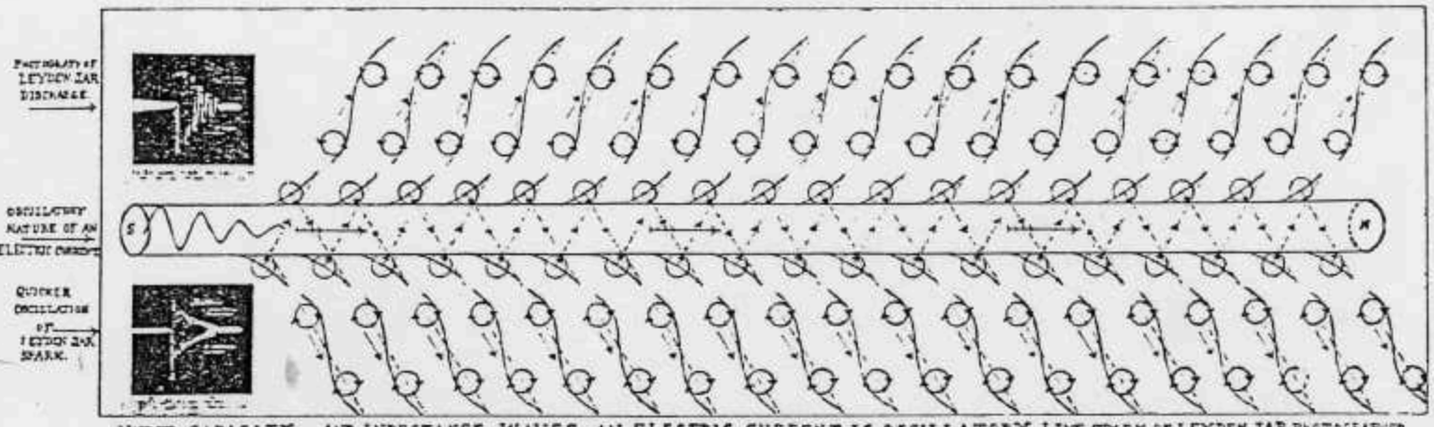


THE WAVE-THEORY OF MAGNETISM VERIFIED BY THE ELECTRODYNAMIC ACTION OF CURRENTS IN SOLENOIDS, WHICH WAS AMPÈRE'S METHOD OF MAKING ARTIFICIAL MAGNETS, 1820. IN VIEW OF THESE SEVERAL PROOFS THE WAVE-THEORY OF MAGNETISM IS ESTABLISHED FOREVER. T. J. J. SEE, WAVE-THEORY, APRIL 24, 1934.

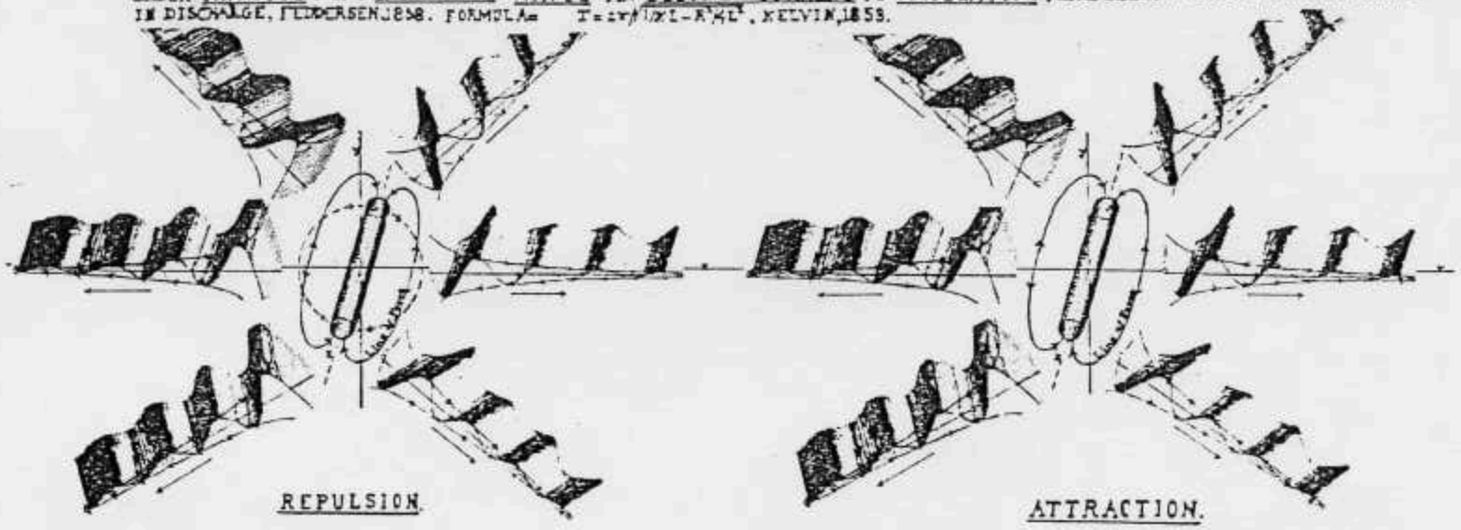
Plate VI. Illustrating Ampère's Method for making Artificial Magnets by the Solenoidal Wave-actions of Currents, 1820. The outside Waves here shown are proceeding from the Artificial Magnet in the centre of each Coil



ATTRACTION.



UNDER CAPACITY. AND INDUCTANCE-WAVES-AN ELECTRIC CURRENT IS OSCILLATORY, LIKE SPARK OF LEYDEN JAR PHOTOGRAPHED IN DISCHARGE, FEDDERSEN, 1858. FORMULA= $T = 2\pi\sqrt{LC - R^2C^2}$, KELVIN, 1853.



REPULSION.

ATTRACTION.

ILLUSTRATION OF SUSPENDED NEEDLE BODILY ATTRACTED OR REPELLED BY ELECTRODYNAMIC ACTION OF CURRENT. NEEDLE HAS SIDES, AND CHANGES ENDS, UNDER LEAST ACTION, CONVERTING REPULSION INTO ATTRACTION: $F = \mu\frac{ei}{r} + \mu\frac{ei}{r}$, 1922. T. J. J. SEE, WAVE-THEORY, 1934.

Plate V. Illustrating the Attraction, under the Mutual Wave-Actions between a freely suspended Magnetic Needle above a Current. And below, to the left, the Repulsion, when the Needle is transferred, without reversing its Poles, for the position of Least Action; then on the right, below, the position of Equilibrium, as the Needle automatically reverses its Poles, and shows Attraction, with Least Action,

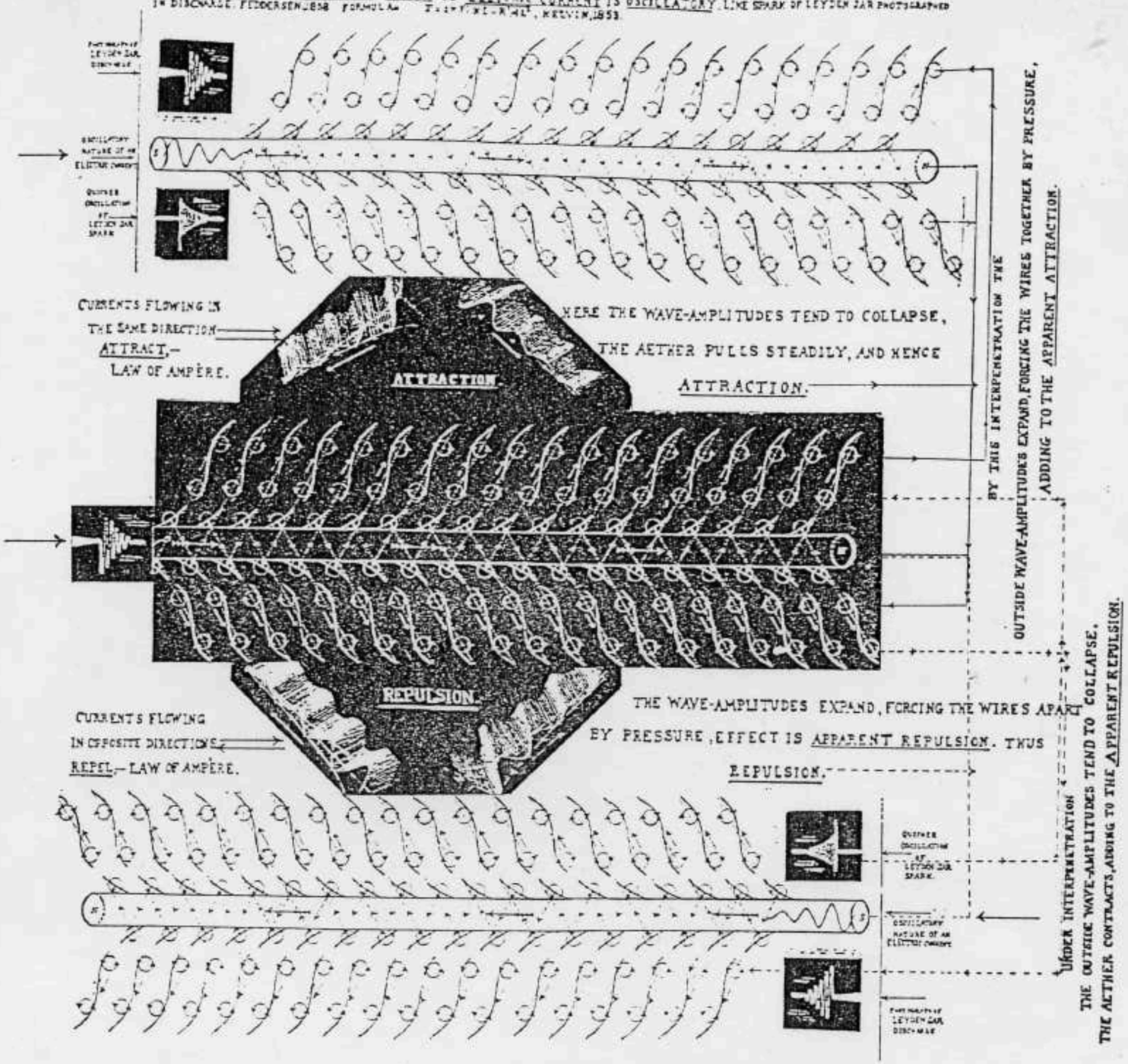
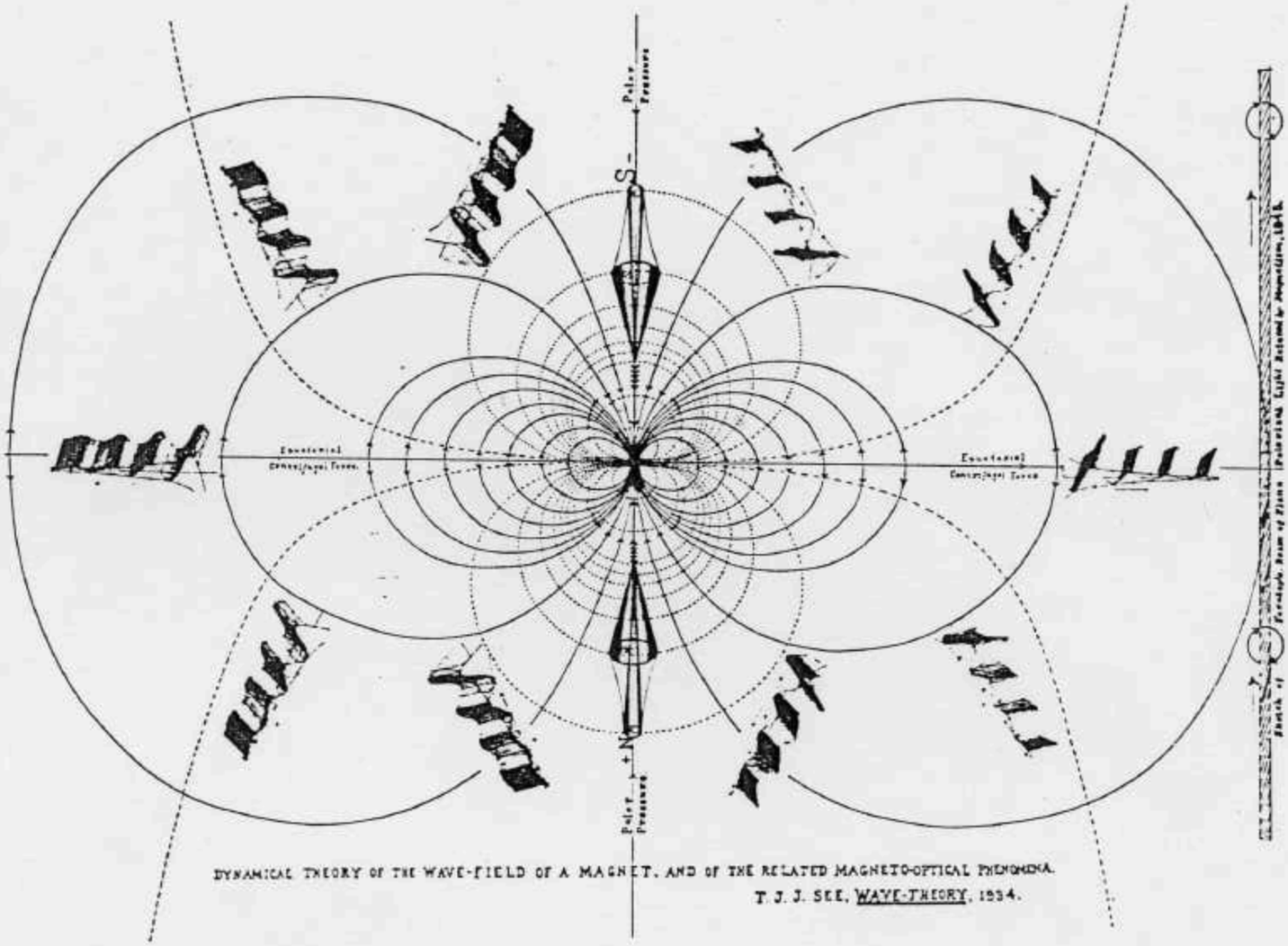


ILLUSTRATION OF THE WAVE-THEORY OF THE MUTUAL ELECTRODYNAMIC ACTION OF TWO CURRENTS, WHEN MOVING IN THE SAME DIRECTION AND IN OPPOSITE DIRECTIONS RESPECTIVELY, UNDER THE LAWS OF AMPÈRE OR LENTZ.

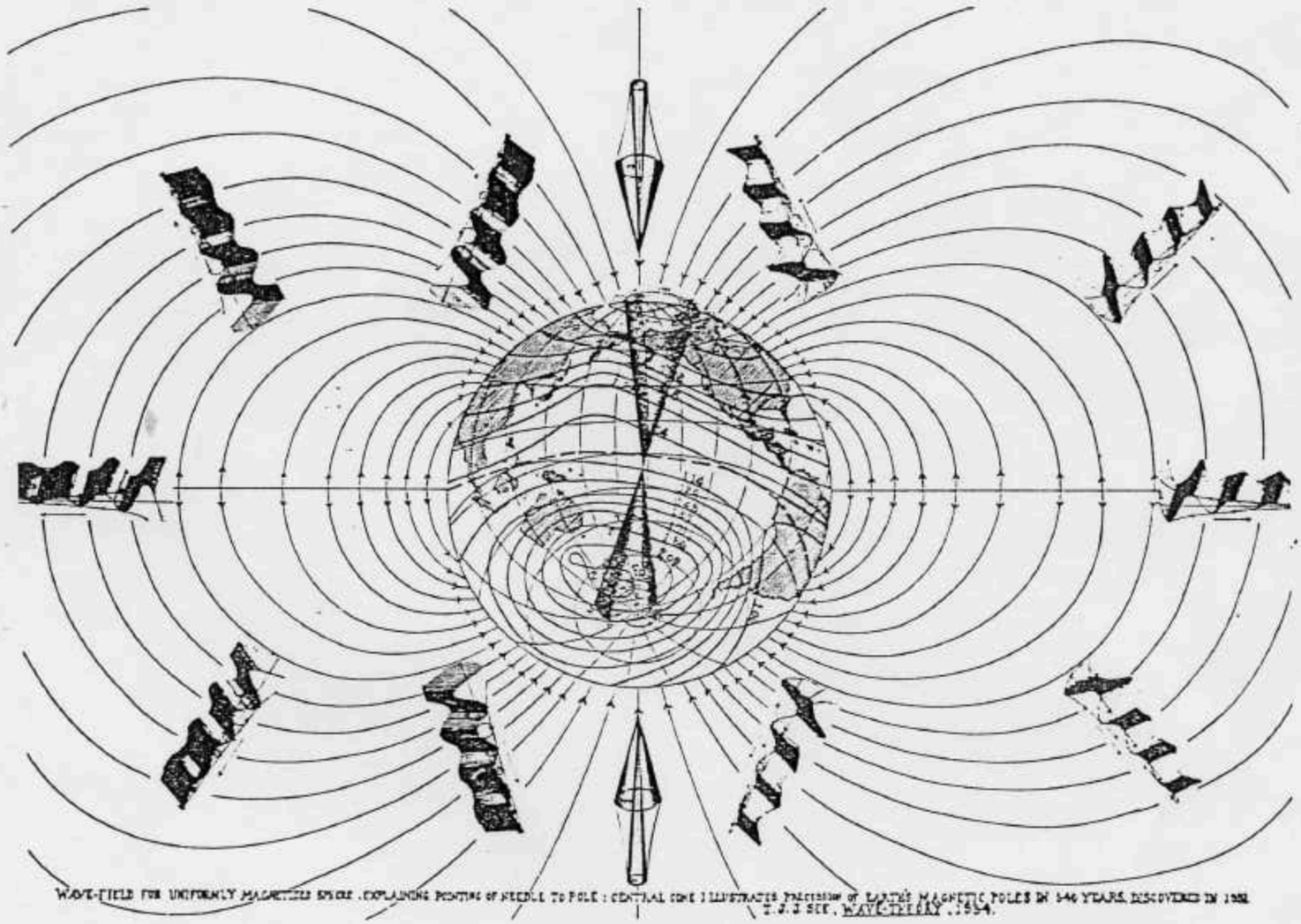
T. J. J. SEE, WAVE-THEORY, APRIL 12, 1934.

As the Waves from the Two Magnets mutually interpenetrate, each Wave tends to expand the Amplitudes of the Waves from the other Magnet. Thus we solve a mystery which has bewildered philosophers since the study of Magnets was begun by Thales, 600 B.C.



DYNAMICAL THEORY OF THE WAVE-FIELD OF A MAGNET, AND OF THE RELATED MAGNETO-OPTICAL PHENOMENA.
T. J. J. SEE, WAVE-THEORY, 1934.

Plate III. Illustrating the Mutual Repulsion of Two Magnets presenting like Poles. Thus the Medium expands, according to the Formula: $(A+dA) = A' = \sqrt{a^2 + 2aa'\cos(p-P) + a'^2}$, which pushes the Magnets apart.



WAVE-FIELD FOR UNIFORMLY MAGNETISED SPHERE, EXPLAINING POINTING OF NEEDLE TO POLE: CENTRAL CONE ILLUSTRATES PRECESSION OF EARTH'S MAGNETIC POLES IN 1440 YEARS, DISCOVERED IN 1892 [illegible] SEE, WAVE-THEORY, 1954.

In Section VI below we indicate the nature of these integrations for the Aether Stresses and Waves operating throughout all Space.

Plate II. Illustrating the Mutual Attraction of Two Magnets presenting opposite Poles. The Waves of each Magnet interpenetrate with those of the other Magnet, throughout all Space: the Waves in each field have the Aetherons rotating in opposite Directions — Counter-clockwise and Clock-wise respectively — thus causing shrinkage of the Aether everywhere about. Thus we have Attraction, or mutual pulling.

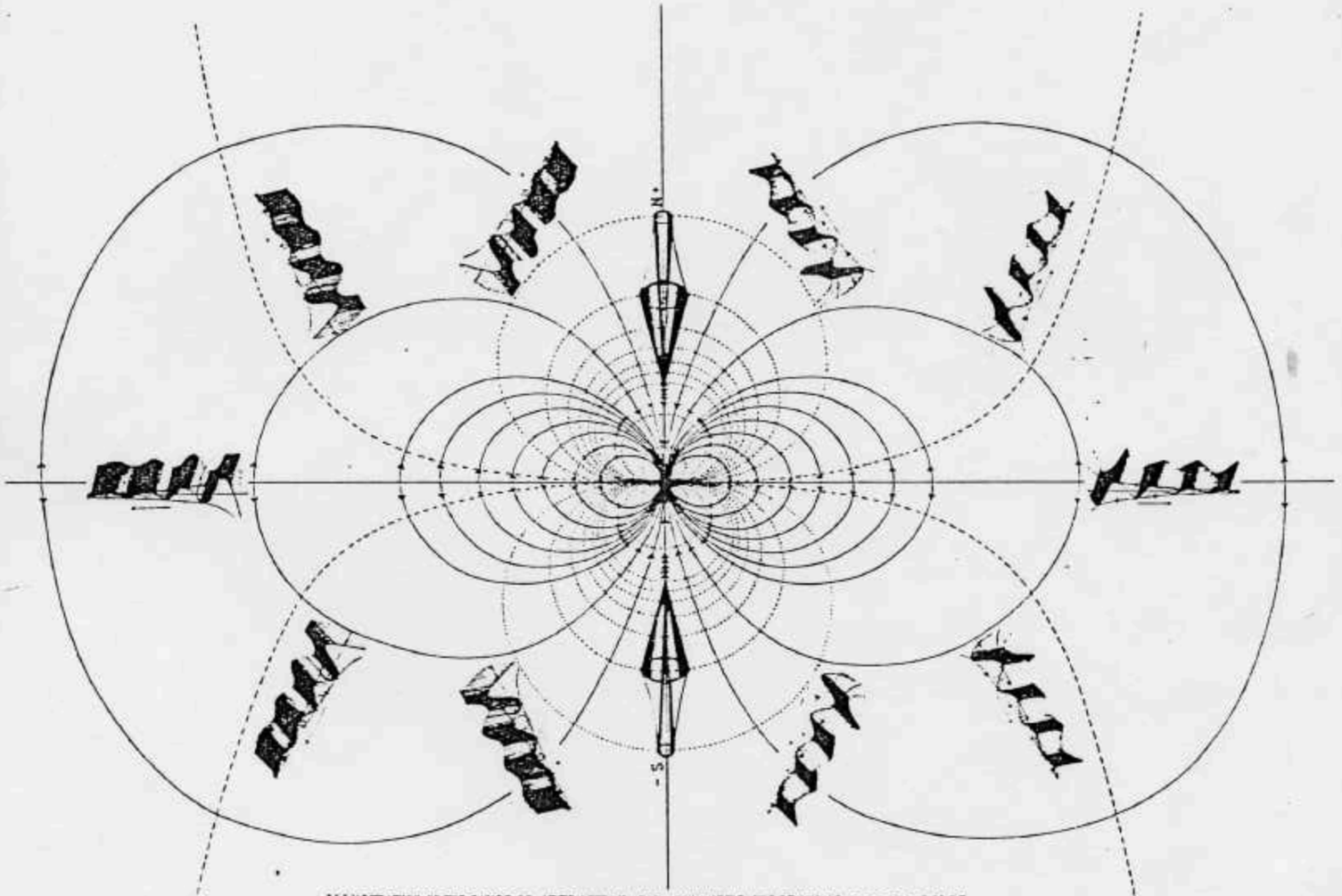


ILLUSTRATION OF THE CAUSE OF ATTRACTION. FOR MAGNETS PRESENTING OPPOSITE POLES.
THE INTERPENETRATING WAVE-FIELDS HAVE OPPOSITE ROTATIONS. THE WAVE-AMPLITUDES COLLAPSE, THE AETHER CONTRACTS LIKE STRETCHED INDIA RUBBER, WITH MAXIMUM TENSION BETWEEN THE MAGNETS. T.J.J. SEE, WAVE-THEORY, MARCH 20, 1934.