

K189
1933

BIBLIOGRAPHY
OF
PIMPINELLA ANISUM LINNE

BY
WILLIAM ISRAEL KATZ

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SCHOOL OF PHARMACY

A THESIS SUBMITTED FOR THE DEGREE OF
GRADUATE IN PHARMACY

UNIVERSITY OF WISCONSIN

1933

(Anise.)

Confectioner's Jour., --, p. --; (Bull. Pharm., 9, p. 512.)

(Gives the habitat, ancient uses of the drug, description of the plant and modern uses of the fruit.)

Pythagoras.

(6 c B.C.)

(Anisum.)

-----, --, p. --; (Leyel, The Magic of Herbs, p. 124.)

Lists Anise as one of the ingredients used in an antidote for the bites of scorpions.

Pliny, Cajus Secundus

Ca 20 A.D.

Anise.

Natural History, v. 4, p. 271; (Marzell, Unsere Heilpflanzen, p. 104.)

Gives ancient uses of Anise, its habitat, and various remedies derived from the plant.

Megenberg, K.V.

(14 c)

(Aneis.)

Buch der Natur., Herausgegeben von Pfeiffer, p. 384; (Marzell, Unsere Heilpflanzen, p. 104.)

(Records various names for Anise in common use before 1374, and some of its uses.)

Anisum.

Materia Medica libri sex, p. 58; (Marzell, Unsere Heilpflanzen, p. 103.)

Gives its therapeutic properties and quotes other authorities, and that it grows in Crete and Egypt.

Anisum.

Deplantis Epitome utillissima, p. 515.

Describes the plant, gives its habitat, constituents, uses and a number of synonyms.

(Anisum vulgare.)

Rariorum plantarum historia, v.2, p. 202; (Hayne, Darstellung & Beschreibung der Arzneigewächse, v.7, p. 22; Woodville, Med. Bot., 2 ed., p. 135; Willdenow's Linne' Species Plantarum, 4 ed., v.1, p. 1473; Abrege De L'histoire des plantes Usuelles, v.2, p. 510; De Candolle, Prodrumus, v.4, p. 122; Houttuyn, Natuurlyke Historie Linnaeus, pt. 2, st. 8, p. 224.)

Compares common Anise with that of the Phillipine Island Anise which is evidently a Star Anise.

Of Anise.

The Herball, a generale historie of plantes, 2 ed., p. 1035; (Woodville, Med. Bot., 2 ed., v.1, p. 135; Ray, Historia plantarum, v.1, p. 450.)

Describes the plant and its fruit, gives the habitat, synonyms, time of cultivation, its temperature and uses.

Parkinson, J.

1640

(Anisum.)

Theatrum botanicum, p. 911; (Woodville, Med. Bot., 2 ed., v. 1, p. 135; Ray, Historie plantarum, v.1, p. 450.)

The original was not available.

Bauhin, C.

1671

(Anisum herbariis.)

Pinax, 2 ed., p. 159; (Hayne, Darstellung & Beschreibung der Arzneigewächse, v.7, p. 22; Woodville, Med. Bot., 2 ed., v. 1, p. 135; Willdenow's Linne's Species Plantarum, 4 ed., v. 1, p. 1473; Abrege De L'histoire des plantes Usuelles, v. 2, p. 510; Linne, Mat. Med., p. 86; Houttuyn, Natuurlyke Historie, Linnaeus pt. 2, st. 8, p. 224.)

Gives a number of different scientific names for Anise and the author of each.

Ray, J.

1686

Anisum.

Historia plantarum, v.1, p. 450; (Woodville, Med. Bot., 2 ed., v. 1, p. 135.)

Gives a description of the different parts of the plant, its habitat, medicinal virtues, uses, preparations and comments by various authors.

Ray, J.

1694

(Cuminum Semine rotundiore et minore.)

Stirpium europaearum extra Britannicas, p. 63; (Willdenow, Linne' Species plantarum, 4 ed., v.1, p. 1473.)

The original was not available.

Morison, R.

1699

(*Anisum Vulgatius minus annuum.*)

Plantarum universalis historiae oximensis, v.3, p. 297;
(Woodville, *Med. Bot.*, v.1, p. 135.)

The original was not available.

Rivinus, A.I.

1699

(*Anisum.*)

Ordo plantarum pentapetalo, p. 73-74; (Winkler, *Real Lexikon-medicinisch-pharmaceutischen Naturgeschichte und Rohwaarenkunde*, v.2, p. 281.)

The original was not available.

Lemery, N.

1721

Anisum.

Dizionario overo Trattato universale delle Droghe semplici,
p. 21.

Anise is cultivated in gardens in Italy; describes the plant, its fruit, uses, production in other countries, and preparations.

Blackwell, E.

1737

(*Pimpinella foliis trifidis incis.*)

A Curious Herbal, p. 374; (Winkler, *Real Lexikon medicinisch-pharmaceutischen naturgeschichte und Rohwaarenkunde*, v.2, p. 281; Willdenow, *Linne' Species Plantarum*, 4 ed., v.1, p. 1473; De Candolle, *Prodromus*, v.4, p. 122; Nees & Esenbeck, *Plantae medicales*, tab. 374.)

The original was not available.

Linne, C.

1737

(Anisum foliis radicalibus simplicibus.)

Hortus cliffortiamus, p. 107; (Willdenow, Linne' Species Plantar., 4 ed., v.1, p. 1473; Houttuyn, Natuurlyke Historie Linnaeus, pt. 2, st. 8, p. 224.)

The original was not available.

Royen, A.V.

1740

(Anisum foliis radicalibus simplicibus.)

Flora lugdabotanae, p. 116; (Willdenow, Linne' Species Plantar., 4 ed., v.1, p. 1473; Houttuyn, Natuurlyke Historie Linnaeus, pt. 2, st. 8, p. 224.)

The original was not available.

Linne, C.

1748

(Anisum foliis radicalibus simplicibus.)

Hortus upoalensis, p. 67; (Willdenow, Linne' Species Plantar., 4 ed., v.1, p. 1473; Houttuyn, Natuurlyke Historie Linnaeus, pt. 2, st. 8, p. 224.)

The original was not available.

Linne, C.

1749

Pimpinella foliis radicalibus trifidis incisus.

Mat. Med., 1 ed., 86; 2 ed., p. 320; (Willdenow, Linne' Species Plantarum, 4 ed., v.1, p. 1473; Houttuyn, Natuurlyke Historie Linnaeus, pt. 2, st. 8, p. 224.)

Gives habitat, part used, uses, properties and preparations of Anise with references.

Trew, C.J.

1750-1773

(Anisum.)

Herbarium Blackwelliconum, etc., cent. 4, t. p. 374; (Hayne, Darstellung & Beschreibung der Arzneigewaechae, v.7, p. 22.)

The original was not available.

Linne, C.

1753

Anisum.

Species Plantarum, 1 ed., p. 399; (Lindley, Flora Medica, p. 38; Linne, Mat. Med., p. 86; Bentley & Trimen, Medicinal Plants, v.2, p. 122; De Candolle, Prodrum, v.4, p. 122; Nees & Esenbeck, Plantae Medicinales, tab. 267.)

Gives several scientific names with references.

Kniphof, J.H.

1757-1764

(Pimpinella foliis radicalibus trifidis incisis.)

Botanica inorginali Centuria, 2, n. 57; (Willdenow, Linne' Species Plantar., 4 ed., v.1, p. 1473.)

The original was not available.

Miller, P.

1760

Pimpinella radicalibus trifidis incisis.

Gardners Dictionary, 7 ed., n. 7; (Willdenow, Linne' Species plantar., 4 ed., v.1, p. 1473.)

The original was not available.

Lewis, W.

1761

Anisum.

An Experimental History of Materia Medica, p. 54.

Describes the plant, gives its habitat, cultivation, preparations and uses of Anise.

Linne, C.

1772

Pimpinella Anisum.

Materia Medica, 2 ed., p. 86.

Gives botanical source, with references, habitat, part used, properties, uses, and preparations of Anise.

Houttuyn, W.

1777

Pimpinella Anisum.

Natuurlyke Historie, Linnaeus, Pt. 2, St. 8, p. 224; (Willdenow, Linne' Species Plantarum, 4 ed., v.1, p. 1473.)

Describes the plant and its fruit, gives common names in several languages, history, uses, with several pre-linnean names with reference.

Gaertner, J.

1788-1791

Anisum vulgare.

De fructibus et seminibus plantarum, p. --; (Bruntz & Jaloux, Plants officinales et Plantes a Drogues Medicamentenses, p.154; Nees & Esenbeck, Plantes Medicinales, tab. 267.)

The original was not available.

Icones plantarum medicinalium, p. 223; (Winkler, Real Lexikon
medizinisch-pharmaceutischen naturgeschichte und Rohwaaren-
kunde, v.2, p. 281.)

The original was not available.

Monro, D.

1788

Anisum Semen.

A Treatise on Med. & Pharm. Chymistry and Materia Medica,
v.3, p. 19.

Gives the botanical source, the physical properties,
uses and dose of Anise.

Woodville, W.

1790

Pimpinella Anisum.

Med. Bot., 1 ed., p. 135, t. 52; Ibid., 2 ed., v.1, p. 135;
(Wood & Bache, U.S. Dispens., 2 ed., p. 90; Ibid., 3 ed.,
p. 90; Ibid., 4 ed., p. 93; Ibid., 5 ed., p. 102; Ibid.,
6 ed., p. 102; Ibid., 7 ed., p. 102; Ibid., 8 ed., p. 102;
Ibid., 9 ed., p. 100; Ibid., 10 ed., p. 101; Ibid., 11 ed.,
p. 106; Ibid., 12 ed., p. 119; Ibid., 13 ed., p. 126; Ibid.,
14 ed., p. 129; Ibid., 15 ed., p. 194; Bentley & Trimen,
Medicinal plants, v.2, p. 122.)

Gives synonyms, describes the plant, gives properties
and uses of the drug, with a full page colored illustration
and references.

Pimpinella Anisum.

Linne's Species Plant., 4 ed., v. 1, p. 1473; (Wood & Bache, U.S. Dispens., 2 ed., p. 90; Ibid., 3 ed., p. 90; Ibid., 4 ed., p. 93; Ibid., 5 ed., p. 102; Ibid., 6 ed., p. 102; Ibid., 7 ed., p. 102; Ibid., 8 ed., p. 102; Ibid., 9 ed., p. 100; Ibid., 10 ed., p. 101; Ibid., 11 ed., p. 106; Ibid., 12 ed., p. 119; Ibid., 13 ed., p. 126; Ibid., 14 ed., p. 129; Ibid., 15 ed., p. 194; Ibid., 16 ed., p. 197; Ibid., 19 ed., p. 197; An. American Physician, Eclectic & Gen. Dispens., 1 ed., p. 232; Coxe, J.R., Am. Dispens., 1 ed., p. 511; Ibid., 4 ed., p. 525.)

Gives synonyms, with references, describes the plant, and gives properties and uses of the drug.

 Moench, K.

1794

(Anisum Officinale.)

Methodus plantas horti botanici agri marburgensis, p. 100; (Lindley, Flora Medica, p. 38.)

The original was not available.

 Willdenow, C.L.

1797

Pimpinella (Anisum), foliis radicalibus trifides incisus.

Linne's Species Plantarum, 4 ed., v. 1, p. 1473; (Hayne, Darstellung und Beschreibung der Arzneigewächse, 7, p. 22; Nees & Esenbeck, Plantae Medicinales, tab. 267.)

Gives the habitat of Anise and a number of scientific names with reference.

 Coxe, J.R.

1806

Pimpinella Anisum. Semen. Ed.

Am. Dispens., 1 ed., p. 511; Ibid., 4 ed., p. 425; Ibid., 6 ed., p. 463; Ibid., 7 ed., p. 477; Ibid., 8 ed., p. 499; Ibid., p. 543, 9 ed.

Describes the plant and the fruit and lists the official preparations of Anise.

Morelot, S.

1807

Anis Vert.

Nouveau Dictionnaire general Des Drogues simples et composees de Lemery, v. 1, p. 78.

. Gives a number of scientific names of the plant, cultivation, and uses of Anise.

Thacher, J.

1810

Pimpinella Anisum. Anise. The seeds.

Am. New Dispens., 1 ed., p. 181; Ibid., 2 ed., p. 302; Ibid., 4 ed., p. 322.

Describes the plant and the fruit and discusses the uses of the latter.

Sprengel, K.

1813

(Lison Anisum.)

Plantarum Umbelliferarum Prodrumus, p. 35; (Hayne, Darstellung & Beschreibung der Arzneigewachse, v.7, p. 22.)

The original was not available.

Hoffmann, G.F.

1814

(Tragium Anisum.)

Genera plantarum Umbelliferarum, etc., v.1, p. 91; (Hayne, Darstellung & Beschreibung der Arzneigewachse, v.7, p. 22.)

The original was not available.

Raemer, J.J. & Schultes, J.A.

1820

, Lison Anisum.

Equitis Systema vegetabilium, etc., v.6, p. 407; (Lindley, Flora Medica, p. 38; Winkler, Real-Lexikon medicinisch-pharmaceutischen naturgeschichte und Rohwaarenkunde, v.2, p. 281; De Candolle, Prodrumus, v.4, p. 122; Nees & Exenbeck, Plantas Medicinales, tab. 267.)

The original was not available.

An. American Physician.

1827

Pimpinella.

Eclec. & Gen. Dispens., 1 ed., p. 232.

Describes the plant and fruit, habitat, properties, uses, and lists the official preparations of Anise.

Stephenson, J. & Churchill, J.M.

1827-1830

(Pimpinella Anisum.)

Medical Botany, v.3, p. 156; (Lindley, Flora Medica, p. 38; Bentley & Trimen, Medicinal Plants, v.2, p. 122.)

The original was not available.

Wagner, D.

1828

(Anisum.)

Pharmaceutisch-Medizinische Botanik, v.2, p. 229; (Winkler, Real Lexikon medicinisch pharmaceutischen naturgeschichte und Rohwaarenkunde, v.2, p. 281.)

The original was not available.

Nees v. Esenbeck, T.F.L. & 3 others.

1829

Pimpinella Anisum.

Plantae medicinales, tab. 267; (Nees v. Esenbeck & Esbermaier, Handbuch der medicinisch pharmaceutischen Botanik, v.3, p. 19; Lindley, Flora Medica, p. 38; Kohler, Medicinal Pflanzen, v.2, p. 347; Winkler, Real-Lexikon Medicinisch pharmaceutischen naturgeschichte und Rohwaarenkunde, v.2, p. 281; Bentley & Trimen, Medicinal Plants, v.2, p. 122; De Candolle, Prodrumus, v.4, p. 122; Luerssen, Handbuch der syst. Bot., v.2, p. 766.)

Gives description of the plant and its parts, a number of synonyms, habitat, and references, with a full page plate of the plant.

De Candolle, A.P.

1830

Anisum.

Prodrumus, v.4, p. 122; (Lindley, Flora Medica, p. 38.)

Gives a number of references with scientific name of Anise.

Guimpel, F. & Schlechtendal, D.F.L.

1830

(Anisum.)

Abbildung und Beschreibung Pharm. Borussica Gewachse, v.1, p. 129; (Winkler, Real Lexikon medicinisch-pharmaceutischen naturgeschichte und Rohwarrenkund, v.2, p. 281.)

The original was not available.

Murray, J.

1832

Pimpinella Anisum.

System of Materia Medica & Pharmacy, p. 195.

Describes the cultivation, uses and official preparations of Anise.

Nees v. Esenbeck, L. & Ebermaier, J.B.

1832

Pimpinella Anisum Lin. Koch.

Handbuch der medicinisch-pharmaceutischen Botanik, v.3, p. 19.

Gives the distribution of *Pimpinella Anisum*, description of the fruit and its uses.

Winkler, E.

(1834)

(*Pimpinella Anisum*.)

Homopaetische arzneigewaechse, p. 99; (Winkler, Real-Lexikon medicinisch-pharmaceutischen naturgeschichte und Rohwaarenkunde, v.2, p. 281.)

The original was not available.

Guibourt, N.J.

1836

Der fruit d' Anis.

Histoire Abreegee des Drogues Simples, 3 ed., v.2, p. 273.

Describes the plant and its parts, particularly the fruit, and gives its habitat.

Lindley, G.

1838

Pimpinella Anisum.

Flora Medica, p. 38.

Describes the plant and the fruit and gives its uses with references.

Pereira, J.

1842

Hemlock, Anise and Fool's Parsley.

Pharm. Jour., 2, p. 337.

Differentiates between Hemlock, Anise and Fool's Parsley, giving the histology of each with references.

Winkler, E.

1842

Pimpinella Anisum L.

Real-Lexikon der Medicinisch-pharmaceutischen Naturgeschichte und Rohwaarenkunde, v.2, p. 281.

Describes the plant, gives several scientific names and synonyms with references; a description of the plant and its parts, parts used, uses and constituents.

Wood, G.B. & Bache, F.

1847

Anisum U.S., Lond., Ed., Dub.

U.S. Dispens., 2 ed., p. 90; Ibid., 3 ed., p. 90; Ibid., 4 ed., p. 92; Ibid., 5 ed., p. 102; Ibid., 6 ed., p. 102; Ibid., 7 ed., p. 102; Ibid., 8 ed., p. 102; Ibid., 9 ed., p. 100; Ibid., 10 ed., p. 101; Ibid., 11 ed., p. 106; Ibid., 12 ed., p. 119; Ibid., 13 ed., p. 126; Ibid., 14 ed., p. 129; Ibid., 15 ed., p. 194; Ibid., 16 ed., p. 197; Ibid., 17 ed., p. 170; Ibid., 19 ed., p. 145; Ibid., 20 ed., p. 146; Ibid., 21 ed., p. 135.

Describes the plant, the fruit, gives its habitat, properties, adulterants, medical properties and uses.

Redwood, T.

1849

On Drug Grinding.

Pharm. Jour., 8, p. 227; (Am. Jour. Pharm., 21, p. 31.)

Gives loss observed in powdering Anise.

Wittstein, G.C.

1851

(Pimpinella Anisum.)

Chemischer u. pharmaceutischen praeparata, p. 35; (Kohler, Medizinal Pflanzen, v.2, p. 348.)

The original was not available.

King, J.

1852

Pimpinella Anisum.

Am. Dispens., 1 ed., p. 303; Ibid., 6 ed., p. 714; Ibid., 8 ed., p. 639; Ibid., 10 ed., p. 639; Ibid., 15 ed., p. 639; Ibid., 16 ed., p. 639.

Gives history of the drug, its properties, uses and preparations.

Schleiden, M.J.

1852

Pimpinella Anisum.

Handbuch der Medicinisch-pharmaceutischen Botanik, 1 ed., p. 339.

Describes the plant and the fruit and names a variety much larger than the ordinary Pimpinella Anisum.

Wiggers, A.

1853

Pimpinella.

Grundriss der Pharmacognosie, p. 344.

Gives the scientific name of the plant, describes drug, and lists the constituents.

Campaynes, E.J.

1854

Pimpinella Anisum.

Handbuch von Drogisten en Apothekers-Leerlingen, p. 437.

Gives places of commercial production, method of cultivation, time of harvesting, description of fruit, compares it with Star Anise and gives constituents of the fruit.

Hayne, F.G.

1855

Pimpinella Anisum.

Darstellung und Beschreibung der Arzneigewächse, v.7, p. 22; (De Candolle, Prodrum, v.4, p. 122; Nees v. Esenbeck, *Plantae Medicinales*, tab. 267.)

Gives a number of scientific names with references, common names and where grown, description of parts, history, parts used and full page colored illustration with explanation.

Hayne, F.G.

1855

Pimpinella Anisum.

Darstellung & Beschreibung der Arzneigewächse, v.7, p. 22; (Kohler, *Medizinal Pflanzen*, v.2, p. 347; Winkler, *Real-Lexikon medicinisch-pharmaceutischen naturgeschichte und Rohwaarenkunde*, v.2, p. 281; Nees v. Esenbeck & Ebermaier, *Handbuch der medicinisch pharmaceutischen Botanik*, v.3, p. 19; Bentley & Trimen, *Medicinal Plants*, v.2, p. 122; Luerssen, *Handbook der syst. Bot.*, v.2, p. 766.)

Gives synonyms and references, describes the plant and its various parts, and gives a short history of the drug.

Berg, O.

1857

Fructus Anisi Vulgaris.

Pharmazeutische Waarenkunde, 1 ed., p. 360; Ibid., 2 ed., p. 383; Ibid., 3 ed., p. 363.

Gives botanical classification, description of several parts of plant, particularly fruit and constituents.

1860

(Anissamen mit Schierlingsamen vermengt.)

Pharm. zeit., 5, p. --; (Wittsteins, Vierteljahres f. Pharm., 10, p. 254; Am. Jour. Pharm., 33, p. 408.)

(Announces the occurrence of Anise as an adulterant of Poison Hemlock in Romango, and gives an explanation.)

Henkel, J.B.

1862

Pimpinella Anisum.

Med. Pharm. Botanik, 1 ed., p. 97.

Gives a description of the genus Pimpinella, and of the species Pimpinella Anisum, the parts used, habitat, properties and uses.

Berg, O. & Schmidt, C.T.

1863

Pimpinella Anisum.

Darstellung und Beschreibung Offizinellen Gewaechse, 1 ed., v.2, p. 18; Ibid., 2 ed., v.2, p. 77; (Kohler, Medicinal Pflanzen, v.2, p. 347; Bentley & Trimen, Medicinal Plants, v.2, p. 122; Luerssen, Handb. der Syst. Bot., v.2, p. 766.)

Gives a number of references, describes the plant and its fruit, gives its habitat and preparations containing Anise, with a full page illustration.

McKesson, J.

1872

Report of the Committee on the Drug Market.

Proc. Am. Pharm. Assoc., 20, p. 128.

German Anise has been wanting, but the supply of the Italian and French has more than made up for this deficiency.

Fistedt, R.F.

1873

Pimpinella Anisum Linn.

Organick Pharmakologi, p. 162.

Gives a brief history of the drug, the constituents, and uses with references, also preparations.

----- 1874

(Verfälschung der Fructus Anisi Vulg.)

Pharm. Zeitschr. für Russland, 13, p. ---; (Zeitschr. Oesterr. Apoth. Ver., 13, p. 173; Am. Jour. Pharm., 47; p. 348; Proc. Am. Jour. Pharm., 23, p. 497.)

A large quantity of Anise from Russia contained Conium fruit and was exported to Holland.

----- 1876

(Adulterated Anise.)

Apoth. Zeitung Leipzig, 11, p. --; (Am. Jour. Pharm., 48, p. 328; Proc. Am. Pharm. Assoc., 24, p. 404.)

Tells of clay granules used to adulterate Anise seed in Moravia to the extent of 20%. The method of detection is given.

1876

(Adulteration of Aniseed.)

Pharm. Geschäftsbl., --, p. --; (New Rem., 5, p. 262.)

(Tells of the adulteration of Aniseed with clay in Moravia.)

Poehl, A. von

1877

Schierling im Anis.

Petersb. med. Wochenschr., 36, p. --; (Chem. Centralbl., v. 49, p. 108; Pharm. Centralh., 19, p. 103; Proc. Am. Pharm. Assoc., 26, p. 247; Yrbk. Brit. Pharm. Conf., v.15, p. 242.)

(A sample of Russian Anise Seed suspected of Conium adulteration was found to contain a bastard variety of Anise.)

1878

The Poison Cupboard.

Chem. & Drugg., 20, p. 169.

A Hamburg firm detects Conium seeds in Russian Aniseed.

Luerssen, C.

1879

(Pimpinella Anisum.)

Handb. der syst. Bot., v.2, p. 766; (Kohler, Medicinal Pflanzen, v.2, p. 347.)

Describes the plant, gives its habitat and cultivation with references.

Sayre, L.E.

1879

Anisum.

Organic Materia Medica & Pharmacol Botany, p. 157.

Describes the plant as compared with Conium, including their constituents.

Stille, A. & Maisch, J.M.

1879

Anisum, U.S.--Anise.

Nat. Dispens., 1 ed., p. 177; Ibid., 2 ed., p. 180; Ibid., 3 ed., p. 207; Ibid., 5 ed., p. 214.)

Gives the botanical origin, description, impurities, constituents, pharmaceutical uses, medical action and uses of Anise.

Bentley, R. & Trimen, H.

1880

Pimpinella Anisum.

Medicinal Plants, v.2, p. 122; (Stille & Maisch, Nat. Dispens., 2 ed., p. 180; 3 ed., p. 206; 5 ed., p. 214; King, Am. Dispens., 18 ed., v.1, p. --; Wood & Bache, U.S. Dispens., 16 ed., p. 197; Ibid., 17 ed., p. 170; Ibid., 19 ed., p. 145; Kohler, Medizinal Pflanzen, v.2, p. 347; Merrell, A Digest of Materia Medica & Pharmacy, p. 104.)

Gives synonym, description, official parts and names, cultivation, composition, properties, uses, and preparations with a full page colored illustration and references.

Fluckiger, F.A.

1881

Fructus Anisi.

Pharmakognosie des Pflanzenreiches, 2 ed., p. 893; Ibid., 3 ed., p. 945.

Gives a brief history of Anise, description, its cultivation and constituents.

Edes, R.T.

1883

Anisum.

Therap. Handb. of U.S.P., p. 38.

Gives Therapeutic uses and dose of Anise.

Merrell, A.

1883

Anisum.

A Digest of Materia Medica & Pharmacy, p. 104.

Mentions the part used, its constituents, preparations, uses and dose.

Oldberg, O. & Wall, O.A.

1884

Anisum; U.S.

A Comp. to U.S.P., p. 146.

Gives botanical origin, habitat, part used, description, constituents, medicinal uses, and dose of Anise.

Marme, W.

1886

Fructus Anisi.

Lehrbuch der Pharmacognosie des Pflanzen und Thierreichs,
p. 316.

Gives description, anatomy, constituents, synonyms, uses and preparations of Anise.

Warneke, H.

1886

Der Aschengehalt einiger pharmaceutisch wichtiger Samen, Fruchte und Fruchttheile.

Pharm. Zeit., 31, p. 536; (Am. Jour. Pharm., 59, p. 28.)

Reports the ash content of Anise as determined by experiment.

Lochman, C.L.

1887

A Common & Dangerous Admixture of Conium Fruit with Italian Anise.

Am. Drugg., 16, p. 81; (Proc. Am. Pharm. Assoc., 35, p. 145; Wissenschaftliche Drogenkunde, v.2, p. 443.)

While experimenting with Italian Anise Seed, found from 2 to 5 percent of Conium which when planted produced fruit the first year with the Anise.

Lochman, C.L.

1887

A Common & Dangerous Admixture of Conium Fruit with Italian Anise.

Proc. Penn. Pharm. Assoc., 10, p. 130; (Am. Drugg., 16, p. 81; Pharm. Rec., 7, p. 198; Am. Jour. Pharm., 59, p. 375; Pharm. Jour., 46, p. 973.)

Discusses the adulteration of Aniseed with Conium fruits and gives the distinguishing characteristics of the two fruits.

Weynton, O.

1887

The Commercial Products of Siam.

Pharm. Jour., 47, p. 146.

Discusses the Aniseed found in Assam, describing it, and the method of cultivation.

Lawson, W.

1890

Adulterated Anise Fruit.

Brit. & Col. Drugg., 17, p. 215.

Gives notes on incident of medical practitioner who on examination of a sample of Anise fruit, found it to contain 70% by weight of clay.

Lawson, W.

1890

Note on Adulterated Anise Fruit.

Pharm. Jour., 49, p. 722; (Proc. Am. Pharm. Assoc., 38, p. 448.)

Samples of Anise were found to contain up to 70% of clay in the form of small casts.

Meyer, A.

1891

Fructus Anisi.

Wissenschaftliche Drogenkunde, v.2, p. 443.

Gives the scientific name, cultivation, morphology, anatomy, constituents, history, and adulterations of Anise seed. Also a full page plate illustration is given.

Maiden, J.H.

1892

Australian Anise.

Notes on Australian Economic Botany, p. 135; Pharm. Jour., 51, p. 817; (Proc. Am. Pharm. Assoc., 40, p. 793; Yrbk. Brit. Pharm. Conf., 29, p. 161.)

The fruit of *Seseli Harveyanum*, F.v.M. is used in Australia under the name of Anise.

Von Moeller, J.

1892

Das Pulver der Umbelliferenfruchte.

Pharm. Post, 25, p. 24; (Proc. Am. Pharm. Assoc., 40, p. 561.)

The identification of powdered Anise, by means of the microscope is described.

1892

Anise in Cyprus.

Chem. & Drugg., 41, p. 276.

Discusses the cultivation of Anise in the Island of Cyprus, and gives its uses and yields.

Karsten, H.

1893

(Pimpinella Anisum.)

Deutsche Flora, v.2, p. 834; (Kohler, Medicinal Pflanzen, 2, p. 347.)

Describes the plant and gives the uses of the fruit.

Maisch, J.M.

1895

Anisum.

A Manual of Organic Materia Medica, v. 2, p. 355; ¹ibid., 4 ed., p. 346; ¹ibid., 5 ed., p. 335.

Gives the botanical origin, habitat, description, constituents, properties and dose of Anise, with illustration of longitudinal and transverse sections of the fruit on page 356.

(Berlin Correspondent.)

1897

A Dangerous Adulteration of Aniseed.

Pharm. Jour., 58, p. 399; (Yrbk. Brit. Pharm. Conf., 34, p. 165.)

Tells of Aniseed received at Rotterdam which was found to contain 10% of Hemlock fruits.

Itallie, E.J. von

1897

Hemlock in Anise.

Chem. & Drugg., 50, p. 789; (Drugg. Cir., 41, p. 194.)

A sample of Anise submitted to the Dutch Customs was found to contain as much as 10% of Hemlock.

Knowlton, F.H.

1897

Anise & Star Anise--Comparison & Description.

Proc. Am. Pharm. Assoc., 45, p. 519.

Describes and compares Anise and Star Anise.

Volkart, A.

1897

Anis mit Schierlingsfruchten.

Schweiz. Woch. f. Chem. u. Pharm., 35, p. 314; (Brit. & Col. Drugg., 34, p. 390.)

Found that Anise was adulterated with Conium and with the fruits of *Setaria glauca* Beauv. and has full page plate showing the difference between the two fruits.

Volkart, A.

1897

Anis mit Schierlingsfruchten.

Schwicks. Chem. u. Pharm., 35, p. 314; (Am. Jour. Pharm., 70, p. 353; Pharm. Centralb., 1898, p. 297.)

Discusses the adulteration of Anise with poison hemlock fruit. A full page plate of figures of the two fruits are given.

----- 1897

Hemlock in Anise.

Chem. & Drugg., 50, p. 789.

Cites a case of adulteration of Anise with Hemlock to the extent of 10% imported by a firm in Holland and disposed of in Germany.

----- 1897

Structural Characteristics of Some Important Drugs.

Pharm. Jour., 58, p. 231.

Gives the histology of Anise fruit with illustrations.

----- 1897

Russian Anise.

Chem. & Drugg., 51, p. 968.

Discusses the shortage of Anise in Russia and the consequent advance in price.

Dragendorff, G.

1898

Pimpinella Anisum L.

Die Heilpflanzen der verschiedenen volker und zeiten, 1'ed.,
p. 489.

Deals with the history of Anise, where grown, parts
used, medicinal properties, uses. States that it is one of
the greater hot seeds.

Kohler, E.

1898

Pimpinella Anisum L.

Medizinal Pflanzen, v.2, p. 347.

Gives a description, time of flowering, habitat,
anatomy, synonyms, parts official, constituents, uses, and
references. Also gives the pharmacopeias its preparations
are contained in.

Hommell, P.E.

1899

A History of Umbelliferous Plants.

N.J. Pharm. Assoc. Proc., 29, p. 61; (Merck's Rep., 8, p. 559.)

Gives a brief general history of Anise seed.

(Editor.)

1900

The Materia Medica of the Pharmacopoeia.

Pharm. Jour., 64, p. 114.

Gives the histology of Anise fruit with illustrations.

Lyons, A.B.

1900

Pimpinella Anisum L.

Plant names, Scientific & Popular, 1 ed., p. 290.

Gives the habitat and several synonyms of the fruit and scientific names.

Moor, C.G. & Priest, M.

1900

The Ash of B.P. Drugs.

Yrbk. Brit. Pharm. Conf., 37, p. 403.

Gives Ash content of Anise from different geographical sources by different observers.

Glaser, L.

1901

Weitere Beitrage zur Untersuchung von Drogenpulvern.

Pharm. Zeit, 46, p. 887; (Pharm. Jour., 67, p. 663.)

Gives the ash content of Anise in the whole and powdered form in a table with other drugs.

1901

Aniseed.

Chem. & Drugg., 59, p. 189.

Gives data showing the decrease of the exports of Aniseed from Malaga from 1899 to 1900.

Kraemer, H.

1902

Anisum (Anise.)

A course in Botany & Pharmacognosy, p. 188.

Gives the habitat of the plant, description of the fruit, its constituents and adulterants.

Gadd, H.W.

1904

Fruits.

Drugs, Their Production, preparation, and properties, p. 69.

Gives the habitat, description, constituents and preparation of Anise.

1907

Russian Aniseed.

Chem. & Drugg., 67, p. 483.

Gives the exports data of Aniseed from Riga during 1903 and 1904.

Sebillot, P.

1906

(Anise.)

Le folk lore ale France, v. --, p. 468; (Marzell, Unsere Heilpflanzen, p. 104.)

(Records some of the popular beliefs concerning Anise that were obtained in upper Brittany.)

1906

Russian Aniseed.

Chem. & Drugg., 69, p. 322.

Gives the exports data of Aniseed from Riga during 1903, 1904, and 1905.

Kraemer, H.

1907

Anisum.

A text-book of Botany & Pharmacognosy, v.2, 2 ed., p. 560; Ibid., 3 ed., p. 560.

Gives the habitat, description, constituents, allied drugs, and adulterants of Anise, with a full page plate of illustrations.

Schimmel & Co.

1908

Anise Oil.

Semi-annual Rep., Apr., p. 16; (Proc. Am. Pharm. Assoc., 56, p. 218.)

Sample of Aniseed from Alexejewka was found to contain as much as 30% of Coriander.

1908

(Anisum.)

Wurttemb. Jahrb. f. Stat. u. hdskd., --, p. 219; (Marzell, Unsere Heilpflanzen, p. 104.)

Anise has but little use as a medicinal agent, aside from a domestic remedy.

Wall, O.A.

1909

Anisi Fructus.

Notes on Pharmacognosy, p. 472.

Gives the scientific name, habitat, description, uses, dose, and adulteration of Anise fruit.

(Editor.)

1910

The Doctor's Dispensatory.

Drug News, 5, p. 78.

Gives a description, habitat, principle constituents, dose, and uses of Anise fruit.

Gane, E.H. & Webster, M.H.

1910

Pharmacopoeial Notes & Comments.

Merck's Rep., 19, p. 166.

Suggests the ash limit of the fruit should not exceed 4 to 5 percent.

Gilg, E.

1910

Fructus Anisi (vulgaris).

Lehrbuch der Pharmacognosie, 2 ed., p. 246; Ibid., 3 ed., p. 270.

Gives the habitat, cultivation, constituents, history and uses of Anise.

Schneider, A.

1910

Microscopical Examination of Drugs, Foods and
Textile Fabrics.

Merck's Rep., 19, p. 61.

The general histology of Anise fruit is given.

Umney, J. & Bennett, C.

1911

Anise.

Chem. & Drugg., 78, p. 60.

Gives a number of ash determinations which show that
the samples of anise had been adulterated.

A London Correspondent.

1912

The London Drug Market.

Am. Drugg., 60, p. 329.

Gives the habitat and the markets of Anise.

Rusby, H.H.

1912

Report of Committee on Drug Market.

Jour. Am. Pharm. Assoc., 2, p. 686.

Anise. "Great quantities containing much weed seed,
gravel and pellets of dirt arrive. The ash test should be
rigidly applied."

Brewer, J.

1913

Summary of Drug Examination Results.

Jour. Am. Pharm. Assoc., 2, p. 964.

Gives percentages of foreign material such as stems, sticks, dirt, etc., also Coriander seed contained in samples of Anise seed.

Kebler, L.F.

1913

Report of Committee on Drug Market.

Jour. Am. Pharm. Assoc., 2, p. 1084; (Drugg. Circ., 57, p. 738.)

Discusses the adulteration of Anise seed even to the extent of mislabeling it Fennel seed.

Rusby, H.H.

1913

Report of the Committee on Drug Market.

Jour. Am. Pharm. Assoc., 2, p. 1084.

Mentions various adulterants and impurities contained in Anise seed especially the Russian variety.

Rusby, H.H.

1913

Report of Committee on Drug Market.

Jour. Am. Pharm. Assoc., 2, p. 1084; (Drugg. Circ., 57, p. 738.)

Discusses the adulteration of Anise with stones and earth.

Schimmel & Co.

1913

Russian Anise Oil.

Semi-annual Rep., Oct., p. 22; (Yrbk. Am. Pharm. Assoc., 2, p. 203; Meyer Bro. Drugg., 35, p. 5.)

Describes the methods of cultivation and discusses the trade of Russian Aniseed.

1913

Russian Anise.

Chem. & Drugg., 82, p. 51.

Gives the exports data of Anise from Riga during 1909, 1910, and 1911.

(Remington, J.P.)

1914

U.S.P. IX Abstract of proposed changes with new standards and description.

Jour. Am. Pharm. Assoc., 3, p. 362.

Gives proposed changes in the monograph of Anise with reference to definition, impurity limit, detailed description, and ash content.

1914

Anise.

Chem. & Drugg., 84, p. 742.

States that Anise is rare plant in England, and that it is grown to some extent near Chipping Campden.

(Editor.)

1915

The Cultivation of Medicinal Plants.

N.A.R.D. Jour., 20, p. 1415.

Gives the scientific and common names, cultivation and uses of Anise.

1915

Spanish Anise.

Chem. & Drugg., 86, p. 326.

Gives the export data of Anise from Alicante during 1913.

1915

Anise Seed.

Chem. & Drugg., 87, p. 796.

Gives the production of Anise in Persia and tells where this crop is shipped to.

(Editor.)

1916

Aniseed.

Perf. & Ess. Oil Rec., 7, p. 59; (Perf. & Ess. Oil Rec., 8, p. 225.)

Gives the uses of Aniseed in liquers.

Blair, T.S.

1917

Anisum.

Botanic Drugs, p. 90.

Mentions Anise and its uses.

Blin, H.

1917

(The Production of Aniseed.)

La Parfumerie Moderne, --, p. --; (Perf. & Essen. Oil Rec.,
8, p. 224.)

(Discusses the cultivation, the plant, gives exports
data, method of harvesting and yield of Anise, also the
commerce and uses of the fruit.)

Wall, O.A.

1917

Anisi Fructus.

Handbook of Pharmacognosy, 4 ed., p. 437; Ibid., 5 ed., p. 121.

Give the scientific name, describes the plant, gives
habitat, uses, dose, and adulterants of Anise.

Bruntz, L. & Jaloux, M.

1918

Pimpinella Anisum L. (Anisum vulgare Gaertn.)

Plantes officinales et Plantes und Drogues medicamenteuses,
p. 154.

Lists the different editions of the National Pharma-
copoeias in which the fruit and volatile oil of Pimpinella
Anisum have been official.

Coupin, H.

1920

Anis vert.

Les Plantes medicinales, p. 82.

Describes the plant, gives the habitat, cultivation,
parts used, uses and dose of the fruit.

Lloyd, J.U.

1921

Anisum.

Origin & History of all the Pharmacopoeial vegetable drugs, chemicals and preparations, p. 16.

Gives list of Pharmacopoeias in which Anise was official, its botanical origin, history and early uses.

Brandt, W. & Wolff, M.

1922

Prufung und wertbestimmung von Fructus Anisi.

Ber. deutsch. Pharm. Gesell., 32, p. 34; (Yrbk. Brit. Pharm. Conf., 16, p. 315.)

Gives chemical tests for determining the presence of Conium fruits in Anise fruits.

Marzell, H.

1922

Anis (Pimpinella Anisum.)

Unsere Heilpflanzen, p. 103.

Traces the history of the use of Anise from the Romans, and derivation of the name with references.

1924

Anise or Anise Fruits.

Chem. & Drugg., 101, p. 474.

Describes the fruit, gives its properties, habitats and exports.

Level, C.E.

1926

Herbal Nostrums.

The Magic of Herbs, p. 269.

Mentions Anise as one of the ingredients used in a nostrum known as Godfrey's Cordial.

Level, C.E.

1926

Aromatic Oils & Waters.

The Magic of Herbs, p. 189.

Mentions Anise as one of the ingredients used in Angelica Water.

Level, C.E.

1926

Herbs in Medicine.

The Magic of Herbs, p. 17.

Mentions Anise as one of the drugs used by Hippocrates (ca 400 B.C.).

Level, C.E.

1926

Herbs in Medicine.

The Magic of Herbs, p. 13.

Mentions Anise as being mentioned in Assurbanipal's library (ca 650 B.C.).

Greenish, H.G.

1929

Anise Fruits.

A Text book of Materia Medica, 5 ed., p. 122.

Gives the botanical source, synonyms, description, constituents, varieties and uses of Anise.

Rusby, H.H., Bliss, A.R. & Ballard, C.W.

1930

Carminatives of the Umbelliferae or Parsely Family.

The Properties and Uses of Drugs, p. 321.

Gives the official monograph of the N.F.V., habitat, cultivation, constituents, dose and official preparations of Anise.

Lessner, O.

1931

Pimpinella Anisum L.

Die Gift und Arzneipflanzen von Mitteleuropa, p. 215.

Gives the habitat, cultivation and constituents of Anise.

List of Journals Consulted.

Am(eric)an) Drugg(ist), v. 13-21; 1884-1891.

Am(eric)an) Drugg(ist) & Pharm(aceutical) Rec(ord), v. 22-72;
1892-1924.

Am(eric)an) Drugg(ist), v. 73-82; 1925-1931.

Am(eric)an) Jour(nal) of Pharm(acy), v. 1-103; 1829-1931.

Brit(ish) & Col(onial) Drugg(ist), v. 12-84; 1887-1931.

Bull(etin of) Pharm(acy), v. 7-42; 1893-1928.

Bull(etin of the) Am(eric)an) Pharm(aceutical) Assoc(iation),
v. 1-6; 1906-1911.

Chem(ist) & Drugg(ist), v. 1-112; 1859-1931.

Dig(est of) Com(ments on the) U.S.P. & N.F., 1905-1922.

Drugg(ist) Cir(cular), v. 51-73; 1907-1929.

Drugg(ist) Cir(cular and) Chem(ical) Gaz(ette), v. 10-50;
1866-1906.

Jour(nal of the) Am(eric)an) Pharm(aceutical) Assoc(iation),
v. 1-20; 1912-1931.

Merck's Archives, v. 1-16; 1912-1931.

Merck's Report, v. 2-40; 1893-1931.

Meyer Bro(ther) Drugg(ist), v. 9-54; 1890-1931.

Midl(and) Drugg(ist), v. 1-60; 1899-1926.

Midl(and) Drugg(ist) & Pharm(aceutical) Rev(iew), v. 43-61;
1909-1927.

Mont(real) Pharm(aceutical) Jour(nal), v. 4-42; 1893-1931.

N(ational) A(ssociation of) R(etail) D(ruggists) Notes,
v. 1-53-; 1902-1931.

- N(ational) A(ssociation of) R(etail) D(ruggists) Jour(nal),
v. 18-52; 1914-1931.
- Nat(ional) Drugg(ist), v. 6, 12-60; 1885-1930.
- New Eng(land) Drugg(ist), v. 5-15; 1893-1903.
- New Rem(edies), v. 1-12; 1872-1883.
- N(orth) W(estern) Drugg(ist), v. 1-19; 27-39; 1899-1931.
- Perfum(e) & Essen(tial) Oil Rec(ord), v. 1-25; 1910-1930.
- Pharm(aceutical) Jour(nal), v. 1-127; 1841-1931.
- Pharm(aceutical) Rec(ord), v. 1-15; 1881-1893.
- Pharm(aceutical) Rev(iew), N.Y., v. 14-26; 1896-1908.
- Prac(tical) Drugg(ist), v. 1-49; 1897-1931.
- Proc(eedings of the) Am(ericana) Pharm(aceutical) Assoc(iation),
v. 1-59; 1851-1931.
- Sou(thern) Pharm(aceutical) Jour(nal), v. 1-24; 1908-1932.
- Spatula, 1-22; 1894-1916.
- West(ern) Drugg(ist), v. 2-50; 1880-1928.
- Y(ea)rbook (of the) Brit(ish) Pharm(aceutical) Conf(erence),
v. 4-67; 1867-1930.

LIST OF BOOKS CONSULTED

- Ainslie, W., *Materia Medica*, 1 ed., v. 1-2, 1826.
- Allen, T., *Encyclopedia of Pure Materia Medica*, v. 1-10; 1879.
- American Chemical Institute, *Positive Medical Agents*, 1 ed.,
1855.
- Anshutz, E.P., *New, Old and Forgotten Remedies*, 1 ed., 1900.
- Archiatrum, D., *Renodaerimid Parisien Institution-umpharmaceut-
icarum, Libri Quinque*, 1608.
- Baillon, H., *Traite De Botanique Medicale Cryptogamique*,
1 ed., 1889.
- Barton, B. & Castle, T., *British Flora Medica*, 2 ed., 1877.
- Barton, W.P., *Vegetable Materia Medica of the United States
or Medical Botany*, 1 ed., 1818.
- Berendes, I., *Paulos' Von Aegina Des Besten Arztes Sieben
Buches*, 1 ed., 1914.
- Berendes, J., *Arzneimittlehre Dioskurides*, 1 ed., 1902.
- Berendes, J., *Die Hausmittel Dioskurides*, 1 ed., 1902.
- Berg, C., *Atlas des Officinellen Pflanzen*, v. 1-4, 1893-1902.
- Berg, O., *Pharmazeutische*, v. 5, 314; 1866.
- Berg, O., *Pharmakognosie des Pflanzen und Thierreiches*, 1869.
- Berg, O., *Pharmazeutische Warrenkunde*, 1 ed., 1857; 2 ed.,
1869; 3 ed., 1879.
- Bigelow, J., *Treatise on the Materia Medica*, 1 ed., 1822.
- Blair, T., *Botanic Drugs. Their Materia Medica, Pharmacology,
and Therapeutics*, 1 ed., 1917.
-

- Bocquillon-Tunousin, H., *Matiere Medicale Etudes Des Plantes Des Colonies Francaises*, 1895.
- Bohn, W., *Die Heilwerte der Pflanzen*, 1839.
- Brown, O., *The Complete Herbalist*, 1 ed., 1870.
- Budge, E., *The Divine Origin of the Craft of the Herbalist*, 1 ed., 1928.
- Carson, J., *Synopsis Materia Medica Pharmacy*, 4 ed., 1867.
- Cauvet, D., *D' Histoire Naturelle Medicale*, v. 1-2, 1877.
- Chevalier, M., *Les Vegetaux Utiles De L'afrique Tropicale Francaise*, 1 ed., 1911.
- Christy, T., *New Commercial Plants*, v. 1-10, 1878.
- Commelin, C., *Praeludia Botanic*, 1703.
- Compain, M., *Guide de L' herboriste-Droguiste*, 1 ed., 1920.
- Coupin, H., *Les Plantes Medicinales*, 1 ed., 1920.
- Coxe, J.R., *American Dispensatory*, 1 ed., 1806; 4 ed., 1818; 6 ed., 1825; 7 ed., 1827; 8 ed., 1830; 9 ed., 1831.
- Culpeper, N., *The Complete Herbal*, 2 ed., 1653.
- De Candolle, P., *Essai Sur Les proprietes Medicales des Plantes*, 2 ed., 1816.
- De Tavera, T.H., *The Medicinal plants of the Phillipines*, 2 ed., 1901.
- Dewitt, F.D., *The Romance of the Apothecarie's Garden at Chelsea*, 1 ed., 1922; 2 ed., 1924.
- Dufour, J., *Annales de Chemie*, v. 48, 1803.
- Eichler, A., *Specielle und Medicinisch Pharmaceutische Botanik*, 1 ed., 1886.
-

- Esenbeck, T., Handbuch der Medicinisch-pharmaceutischen Botanik, v. 1-3, 1830-1833.
- Esser, P., Die Giftpflanzen Deutschlands, 1 ed., 1910.
- Ewell, J., The Medical Companion, 3 ed., 1817.
- Falck, A., Die Offizinelten Drogen und Ihre Ersatzstoffe, 1 ed., 1928.
- Fenner, B., Fenner's Hand Book of the U.S.P. of Revisions, 1894.
- Fischer, H., Mittelalterliche Pflanzenkunde, 1 ed., 1928.
- Fristedt, R.F., Organisch Pharmakologi, 1 ed., 1873.
- Fluckiger, F., Pharmaceutischen Waarenkunde, 1 ed., 1873.
- Fluckiger, F., Grundriss Pharmakognosie, 1884.
- Fluckiger, F., Pharmakognosie des Pflanzenreiches, 1 ed., 1881; 2 ed., 1891.
- Fluckiger, F., Pharmakognosie, 1 ed., 1884.
- Fluckiger, F., The Principles of Pharmacognosy Trans. by Power, 1 ed., 1880.
- Fluckiger, F. & Hanbury, D., Pharmacographia, 1 ed., 1874; 2 ed., 1879.
- Garsault, F., Atlas plantes de Glaffro, v. 1-2, 1765.
- Garsault, F., Plantes de Garsault, v. 65, 1765.
- Gebner, O., Die Gift und Arzneipflanzen von Mitteleuropa, 1931.
- Gibbs, W., Spices and How to Know Them, 1909.
-

- Gilg, E., Lehrbuch der Pharmakognosie, 1910.
- Gilg, E. & Brandt, W., Lehrbuch der Pharmakognosie, 1 ed., 1922; 2 ed., 1927.
- Gmelin, J.F., Geschichte der Pflanzengiste entworfen, 1803.
- Goebel, F. & Kunze, G., Pharmaceutische Warrenkunde, v. 1-2, 1827-1834.
- Gadd, H., Drugs, their Production, Preparation, and Properties, 1904.
- Good, P., The Family Flora and Materia Medica Botanica, v. 1, 1845; v.2, 1854.
- Greenish, H., Materia Medica, 5 ed., 1929.
- Griffith, R., Medical Botany, 1 ed., 1847.
- Guibourt, N., Drogues Simples Naturelle, v. 1, 1869.
- Guibourt, N., Histoire Drogue Simples, 1 ed., 1836; 2 ed., 1836.
- Guibout, N., Las Drogues Simples, v. 1-4, 1852.
- Hamilton, E., The Flora Homoeopathica, 1 ed., 1852.
- Hand, W., House Surgeon and Physician, 1 ed., 1820.
- Hansen, A., Drogenkunde, Ein Setfaden und Repetitorium fur Studium und Praxis, 1 ed., 1897.
- Hartwich, C., Die Menschlichen Genusmittle, 1 ed., 1911.
- Hayne, F., Darstellung und Beschreibung der Arzneigewaechse, v. 1-13, 1853-1856.
- Hedges, H., A Polyglot Index in Materia Medica, 1884.
-

- Henkel, D., Handbuch der Pharmacognosie, 1867.
- Henkel, J., Botanik Atlas, 1 ed., 1862-1863.
- Heraul, J., Traite de Matière Medicale Pharmacognosie, 1912.
- Heraud, A., Nouveau Dictionnaire des Plantes Medicinales,
6 ed., 1927.
- Humphrey, J., Drugs in Commerce, 1 ed., 1921.
- Husemann, A. & Hilger, A., Die Pflanzenstoffe für Aerzte,
Apotheker, Chemiker, und Pharmakologen, 1 ed., 1871;
Ibid., 2 ed., 1882; 3 ed., 1884.
- Johnson, L., Medical Botany of North America, 1 ed., 1884.
- Jombert, C., Traite Des Metaux et Des Mineraux, 1750.
- Juillet, A., Le Pyrethre Insecticide de Dalmatie, 1 ed., 1924.
- Karsten, G. & Altomanns, F., Lehrbuch der Pharmakognosie, 1 ed.,
1909; 2 ed., 1920.
- King, J., American Dispensatory, 6 ed., 1864; 8 ed., 1872;
10 ed., 1875; 15 ed., 1881; 16 ed., 1889; 18 ed., 1900.
- Klein, G., Handbuch der Pflanzenanalyse, 1931.
- Kobert, R., Beiträge zur Kenntnis der Vegetabilischen
Hamagglutinine, 1913.
- Koch, L. & Gilg, E., Pharmakognostisches Praktikum, 1907.
- Kohler's Medizinal Pflanzen Atlas, v. 1-3, 1890-1898.
- Kohl, F., Die Officinellen Pflanzen der Pharmacopoea
Germanica, 1895.
- Kraemer, H., A Course in Botany and Pharmacognosy, 1 ed., 1902.
- Kraemer, H., A Text-book of Botany and Pharmacognosy, 2 ed.,
1907; 3 ed., 1907; 4 ed., 1910.
-

- Kraemer, H., Scientific and Applied Pharmacognosy, 1 ed., 1915; 2 ed., 1920; 3 ed., 1928.
- Kreuz, C., Pharmakognosie für den Erstunterricht, 1886.
- Kunth, K., Pharmacopoea, 5 ed., 1834.
- Lanessan, J.T., Histoire des Drogues D' Origine vegetale, v. 1, 1878; v.2, 1878.
- Lange, J., Icones Plantarum officinalium Scandinaviae, v. 1-3, 1926.
- Leclerc, H., Les Epices, 1929.
- Lehamam, P.J.T., Plantes Remedies et Maladies, 1922.
- Lessing, M.B., Materia Medica, 1859.
- Lessing, B., Kurzier Abriss der Materia Medica, 1859.
- Lewis, W., Experimental History of the Materia Medica, 1761.
- Leyel, C., The Magic of Herbs, 1 ed., 1926.
- Lindley, J., Flora Medica, 1 ed., 1838.
- Linne, C., Materia Medica per Regna tria Natviae, 1772.
- Linne, C., Materia Medica, v. 1, 2 ed., 1772.
- Lloyd, J.U. & Lloyd, C.J., Drugs and Medicines of North America, 1884-85.
- Lloyd, J., Origin and History of all the Pharmacopoeial Vegetable Drugs, 1 ed., 1921.
- Luerssen, C., Die Pflanzen der Pharmacopoea Germanic, 1 ed., 1883.
- Maisch, J., A Manual of Organic Materia Medica, 3 ed., 1887; 5 ed., 1892; 6 ed., 1895.
-

- Marchand, N., *Botanique Cryptogamique Pharmaco Medicale*, 1883.
- Marme, W., *Lehrbuch des Pharmacognosie des Pflanzen und Thierreichs*, 1 ed., 1886.
- Marzell, H., *Neues Illustriertes Krauterbuch*, 1 ed., 1921.
- Marzell, H., *Unsere Heilpflanzen*, 1 ed., 1922.
- Maveric, J., *La Medicine Hert-metique des plantes*, 1848.
- Merrell, A., *A Digest of Materia Medica and Pharmacy*, 1 ed., 1883.
- Meyer, A., *Wissenschaftliche Drogenkunde*, v. 1-2, 1891.
- Mitlacher, W., *Die Offizinelten Pflanzen und Drogen*, 1912.
- Moens, J., *De Kinacultuur in Asie*, 1854-1882.
- Monro, D., *A Treatise on Medical and Pharmaceutical Chymistry and the Materia Medica*, v. 1-4, 1788.
- Morelot, S., *Nouveau Dictionnaire general des Drogues Simples et Composees*, v. 1-2, 1807.
- Muller, C., *Medicinal Flora*, 1890.
- Murray, J., *System of Materia Medica and Pharmacy*, v. 1, 1815; v. 2, 1821; v. 3, 1828; v. 5, 1832.
- Nedkarnt, K.M., *The Indian Materia Medica*, 1927.
- Nicolai, E., *Systema Materiae Medicae ad Praxin Applicatol*, 1751.
- Oldberg, O., *Unofficial Pharmacopoeia*, 1881.
- Oldberg, O. & Wall, A., *A Companion to the United States Pharmacopoeia*, 1884.
- Parke, Davis & Co., *Organic Materia Medica*, 2 ed., 1890.
-

- Parke, Davis & Co., Pharmacology of the Newer Materia Medica,
No. 1-58, 1889-1891.
- Parke, Davis & Co., Standardized Products, 1911.
- Paullini, C., Sacra Herba Seu Mobilis Salvia, 1688.
- Pobequin, H., Les Plantes Medicinales de la Guines, 1912.
- Pollock, A., Botanical Index to all Medicinal Plants, 1 ed.,
1872.
- Premier, T., Abrege De L' Histoire des Plantes Usuelles, v. 1-
3, 1761.
- Reichenback, H., Flora Lipsunsis Pharmaceutica, 1817.
- Reil, W., Materia Medica der Reinen Chemischen Pflanzenstoffe,
1857.
- Rembert, D., Purgantium aliarumque Eo., 1575.
- Reutter, L., Traite De Matiere Medicale et de Chemie Vegatale,
1 ed., 1923.
- Rice, C., Revision of the U.S.P., 1880.
- Richard, P., Dictionnaire des Drogues, 1827.
- Riecke, V. & Berge, F., Giftpflanzenbuch der allegemeine aun
besondere Roturgeschichte, 1 ed., 1855.
- Rosemont, R., Comment nos Peres Le Soignainent, 1917.
- Rusby, H., Bliss, A. & Ballard, C., The Properties and Uses
of Drugs, 1 ed., 1930.
- Sayre, L., A Manual of Organic Materia Medica and Pharmacog-
nosy, 1 ed., 1895.
- Sayre, L., Conspectus of Organic Materia Medica and Pharmacal
Botany, 1879.
-

- Schleiden, M., Handbuch der Botanischen Pharmacognosie, 1857.
- Schleiden, J., Medicinisch-Pharmaceutischen Botanik, 1852.
- Schlickum, R., Pharmakognosie als Vademecum, v. 1-2, 1924.
- Schmitthenner, F., Pharmacognosie des Pflanzen und Tierreiches,
1905.
- Schneider, A., General Vegetable Pharmacography, 1 ed., 1900.
- Schroderi, J., Quercetanus Pedivivus Doymatico, 1679.
- Shecut, J., Flora Carolinacensis, 1 ed., 1806.
- Sheffield, T., Medicina Brittanica, 1 ed., 1747; 2 ed., 1751.
- Sowerby, J. & Johnson, C., British Poisonous Plants, 2 ed.,
1861.
- Step, E., Herbs of Healing, 1613.
- Stokvis, B., Voordrachten over Geneesmiddeller, 1 ed., 1906;
2 ed., 1907; 3 ed., 1909.
- Storck, A., Libellus Quo Demonstratus Cicutam, 1759.
- Stuart, G.A., Chinese Materia Medica Vegetable Kingdom, 1911.
- Thatcher, J., New American Dispensatory, 1 ed., 1810; 2 ed.,
1913; 4 ed., 1821.
- Thornton, R., A Family Herbal, 2 ed., 1814.
- Trommsdorff, J., Handbuch der Pharmaceutischen Waarenkunde,
2 ed., 1806; 3 ed., 1822.
- Tournefort, M., Histoire des Plantes, 1698.
- Trillero, D.W., Dispensatorium Pharmaceuticum Universale
Sive Thesaurus Medicamentarium, 1764.
-

- Tschirch, A., Handbuch der Pharmakognosie, 1 ed., v. 1-2, 1909-1910; 2 ed., v. 1-2, 1912-1917; 3 ed., v. 1-2, 1923-1925.
- Villers, A. & Thumen, F., Die Pflanzen des Homoeopathischen Arzneischatzes, v. 1-2, 1893.
- Waggaman, S., A Compendium of Botanic Materia Medica, 2 ed., 1895.
- Wall, O., Notes on Pharmacognosy, 3 ed., 1909.
- Wall, O., Handbook of Pharmacognosy, 4 ed., 1917; 5 ed., 1928.
- Wallis, T., Practical Pharmacognosy, 1925.
- Warncke, T.S., Laeren om Laegemidlernes, 1862.
- Wasicky, R., Lehrbuch der Physiopharmakognosie für Pharmazeuten, 1 ed., 1929; 2 ed., 1932.
- Wellman, M., Die Schrift des Dioskurides, 1780.
- Wepferi, J., Historia Cicutae aquatical, 1715.
- Wheeler, J., Plantarum Medicinalium 1830.
- Weigand, J., Lehrbuch der Pharmakognosie, 1 ed., 1863; 2 ed., 1887.
- Wiggin, N., Grundriss der Pharmacognosie, 1853.
- Winkler, L., Animalia als Arzneimittel einst und jetzt, 1 ed., 1908.
- Wood, G.B. & Bache, F., United States Dispensatory, 2 ed., 1834; 3 ed., 1836; 4 ed., 1839; 5 ed., 1843; 6 ed., 1845; 7 ed., 1847; 8 ed., 1849; 9 ed., 1851; 10 ed., 1854; 11 ed., 1858; 12 ed., 1869; 13 ed., 1870; 14 ed., 1879; 15 ed., 1883; 16 ed., 1892; 17 ed., 1894; 18 ed., 1899; 19 ed., 1907.; 20 ed., 1918; 21 ed., 1926.
-

Woodville, W., Medical Botany, v. 1-4, 1810.

Wren, R., Potter's Cyclopoedia of Botanical Drugs and Preparations, 3 ed., 1923.

Youngken, H., A Text Book of Pharmacognosy, 2 ed., 1926.

Youngken, H.W., Pharmaceutical Botany, 1 ed., 1926.

Ziegler, J.H., Materia Medica, 1 ed., 1771.

UNITED STATES PHARMACOPOEIA (O-X)

(1820-1920)

and

NATIONAL FORMULARY (I-V)

(1888-1926)

HISTORY

of

PIMPINELLA ANISUM LINNE

U.S.P.-1820. P. p. 29.

Anisum. Pimpinella anisum. W.I. 1473.
Anise. Semina. The seeds.

U.S.P.-1830 (Phil.). P. p. 5.

Anisum. Pimpinella anisum. W.I. 1473.
Anise. Semina. The seeds.

U.S.P.-1840. P. p. 13.

Anisum. Anise.
The fruit of Pimpinella Anisum.

U.S.P.-1850. P. p. 14.

Anisum. Anise.
The fruit of Pimpinella Anisum.

U.S.P.-1860. P. p. 16.

Anisum. Anise.
The fruit of Pimpinella Anisum.

U.S.P.-1870. P. p. 18.

Anisum. Anise.
The fruit of Pimpinella Anisum.

U.S.P.-1880., p. 36.

Anisum.

Anise.

The fruit of *Pimpinella Anisum* Linne (Nat. Ord., Umbelliferae, Ortho-/ spermae).

About one-sixth of an inch (4 millimeters) long, ovate, compressed at the sides, / grayish, finely hairy, and consisting of two mericarps, each with a flat face, and / five light brownish, filiform ridges, and about fifteen thin oil-tubes, which can be / seen in a transverse section by the microscope. It has an agreeable, aromatic odor, / and a sweet, spicy taste. It may be distinguished from *Conium* fruit, which it / somewhat resembles, and which has been mistaken for it, by the *Conium* fruit con-/ sisting usually of single mericarps, which are smooth, grooved upon the face, and / have crenate ridges and no oil-tubes.

U.S.P.-1890., p. 41.

Anisum.

Anise

The fruit of *Pimpinella Anisum* Linne (Nat. Ord. Umbelliferae).

About four or five mm. long, ovate, compressed at the sides, grayish, finely hairy, / and consisting of two mericarps, each with a flat face, and five light brownish, / filiform ridges, and about fifteen thin oil-tubes, which can be seen in a trans-/ verse section by the microscope. It has an agreeable, aromatic odor, and a / sweet, spicy taste.

It may be distinguished from *Conium* fruit (which it somewhat resembles, / and which has been mistaken for it; by the odor and taste, and by the *Conium* / fruit consisting usually of single mericarps, which are smooth, grooved upon / the face, and have crenate ridges with wrinkles between them, and no oil-tubes.

U.S.P.-1900., p. 46.

Anisum.

Anise

The ripe fruit of *Pimpinella Anisum* Linne (Fam. Umbelliferae), / obtained from cultivated plants.

Ovoid, laterally compressed, 4 to 5 mm. long; carpels usually cohering and / attached to a slender pedicel; grayish or greenish-gray to grayish-brown; each / with a flat face and five light brown filiform ridges and about sixteen oil-tubes; odor / and taste agreeable and aromatic.

No mouse-like odor should be developed when solution of potassium hydrox- / ide is poured upon Anise (absence of Conium).

The powder contains one-celled, straight or curved, non-secreting hairs, which / vary from 0.025 to 0.100 mm. in length. Average dose, 0.500 Gm., 500 milligrammes ($7\frac{1}{2}$ grains).

U.S.P.-1910., p. 49.

Anisum.

Anise

Anis.--Aniseed

The dried ripe fruit of *Pimpinella Anisum* Linne (Fam. Umbelliferae) / without the presence or admixture of more than 3 percent of foreign / seeds or other vegetable matter.

Cremocarp broadly ovoid or pyriform, laterally compressed, from 3 to 6 mm. in / length and from 2 to 3 mm. in breadth; mericarps usually cohering and attached / to a slender pedicel from 2 to 12 mm. in length; summit with a ring-like disk and / 2 projecting, diverging styles; externally grayish or greenish-gray, seldom grayish- / brown, slightly pubescent; each with five light brown filiform ridges and in cross- / section with from 15 to 45 vittae. Odor and taste agreeable and aromatic.

(Cont.)

Under the microscope transverse sections of Anise show an epidermal layer with numerous papillae and short, one-celled, non-glandular hairs having very thick papillose walls; primary ribs each with a small fibro-vascular bundle, surrounded by a few sclerenchymatous fibers; vittae or oil-tubes from 15 to 45 in number, extending as a more or less interrupted circle in the tissues of the mesocarp on the dorsal side of each mericarp; 2 large vittae on the commissural surface, each separated from the other tissues of the mericarp by a large cavity due to shrinkage of the seed-coat; inner epidermis of pericarp consisting of a layer of narrow, tangentially elongated cells closely united with the 1-layered seed-coat, the inner walls of which are yellowish-brown and considerably thickened; endosperm of polygonal, thick-walled cells filled with spherical or ellipsoidal aleurone grains, each containing a small rosette aggregate of calcium oxalate; the aleurone grains surrounded with an oily protoplasm, the oil of which is liberated upon mounting sections in the hydrated chloral T.S. in the form of small globules; epidermal layer near the middle of the commissural surface composed of 2 or 3 rows of cells with thick porous walls, and beneath which occur small groups of thick-walled cells resembling stone cells.

The powder is yellowish-brown; consisting of numerous irregular fragments of pericarp showing portions of the yellowish vittae, fragments with tracheae and sclerenchymatous fibres of carpophore; cells of endosperm filled with aleurone grains about 0.006 mm. in diameter, each usually enclosing a rosette aggregate or crystal of calcium oxalate about 0.002 mm. in diameter; non-glandular hairs 1-celled, from 0.025 to 0.2 mm. in length, either straight or curved and with numerous, slight, centrifugal projections on the outer surface.

Heat 1 Gm. of the whole drug or powdered drug with 10 mils of potassium/hydroxide T.S.; no mouse-like odor develops (fruits of *Conium maculatum* Linne)./

Anise yields not more than 9 percent of ash.

Average Dose: Metric, 0.5 Gm.
Apothecaries, 8 grains.

Anisum

Anise
(U.S.P. IX)

Anis.

Anise Seed

Anise is the dried ripe fruit of *Pimpinella Anisum* Linne (Fam. / Umbelliferae).

Anise contains not more than 3 percent of other fruits, seeds or for- / eign organic matter and yields not more than 1.5 percent of acid- / insoluble ash.

Description and physical properties.

Unground Anise: Cremocarps broadly oval, laterally compressed, 3 to 6 mm. / long and 2 to 3 mm. wide; mericarps usually cohering and attached to a slender / pedicel 2 to 12 mm. long; apex with a ring-like disc and 2 projecting, diverging / styles; externally grayish or greenish-gray, seldom grayish-brown, slightly / pubescent; each mericarp with 5 light brown filiform ridges. Odor and taste / agreeable and aromatic.

Structure: Epidermal layer with numerous papillae and short, one-celled, non- / glandular hairs having very thick papillose walls; primary ribs each with a / small vascular bundle surrounded by a few fibres; from 15 to 45 oil-tubes; ex- / tending as a more or less interrupted circle in the tissues of the mesocarp on / the dorsal side of each mericarp and 2 large oil-tubes on the commissural side; / inner epidermis of pericarp consisting of a narrow, tangentially elongated / thin-walled cells except near the middle line of the commissural side where- / the / cells may have thick, porous or reticulate walls and some adjacent cells in the / mesocarp may be thick-walled and porous resembling stone cells; the seed coat / of one layer of cells, with thickened, yellowish brown inner walls, closely unites / with the inner epidermis of the pericarp except where separated by a large / cavity along the commissural side; endosperm chiefly of polygonal, thick-walled / cells filled with spherical or ellipsoidal aleurone grains.

(Cont.)

Powdered Anise: Yellowish brown; numerous irregular fragments of pericarp / showing portions of the yellowish oil-tubes; fragments with tracheae and fibres / of carpophore; cells of endosperm filled with aleurone grains, the latter about / 0.006 mm. in diameter and usually enclosing a rosette aggregate of calcium / oxalate about 0.004 mm. in diameter; non-glandular hairs 1-celled, 0.025 to / 0.200 mm. long, either straight or curved and with numerous, slight, centrifugal / projections on the outer surface.

Test for Purity: Heat 1 Gm. of Anise with 10 cc. of potassium hydroxide T.S.; / no mouse-like odor develops (absence of fruits of *Conium maculatum* Linne).

Preparations: Tinctura Rhei Dulcis, Species Laxative, Species Pectorales.

Average Dose: Metric, 0.5 gm.
Apothecaries, 8 grains.

SUMMARY OF U.S.P. & N.F. DATA OF PIMPINELLA ANISUM

Official in:

U.S.P., 1820, '30 (Phil.), '40, '50, '60, '70, '80,
'90, 1900, '10.
N.F., 1926.

Official Latin Title:

Anisum, U.S.P., 1820, '30 (Phil.), '40, '50, '60, '70,
'80, '90, 1900, '10.
N.F., 1926.

Official English Title:

Anise, U.S.P., 1820, '30 (Phil.), '40, '50, '60, '70,
'80, '90, 1900, '10.
N.F., 1926.

Official Abbreviation:

Anis., U.S.P., 1910.
N.F., 1926.

Official Synonym:

Aniseed., U.S.P., 1910.
Anise Seed., N.F., 1926.

Scientific Name:

Pimpinella Anisum, U.S.P., 1820, '30 (Phil.), '40, '50,
'60, '70, '80, '90, 1900, '10.
N.F., 1926.

Description:

U.S.P., 1880, '90, 1900, '10.
N.F., 1926.

Official Preparation:

Dose:

Average Dose: 0.500 Gm., 500 milligrammes (7½ grains).
U.S.P., 1900.

Average Dose: Metric, 0.5 Gm.
Apothecaries, 8 grains. U.S.P., 1910.
N.F., 1926.

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