The Plow Model Collection of the Agricultural University of Hohenheim
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of the

Agricultural University of Hohenheim

DIRECTORY

by

Prof. Dr. Ludwig Rau

1881

Translation by Gerald E. Rehkugler
assisted by Dr. Ari Van Tienhoven
Cornell University

Numbers in bold print represent plow models in the Cornell University collection.
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Contents

Literature

A. Wooden point, no share, no moldboard. [CU Models 1–86] ............................................. 1
   Class I.  Curved bent beam. Hook-shaped beam. ......................................................... 1
   A)  Hook-shaped beam. ......................................................... 1
   B)  Curved beam with handle attached. ......................................................... 3
   C)  Curved beam with handle attached to the plow point. ....................................... 4
   D)  Beam with handle and special frog-like point. ............................................... 5
   Class II.  Curved pulling beam. Pointed plow beam. ............................................... 6
   E)  Handle and beam. ......................................................... 6
   F)  Handle, beam and frog-like point. ......................................................... 10
   Class III.  Pointed plow sole. ................................................................................. 13
   G)  Handle, beam and plow sole. ......................................................... 13
   H)  Handle, beam, plow sole with landside. ................................................... 17
   I)  Handle, beam, plow sole with two landsides. ........................................... 25

B. Share originating from the plow sole. [CU Models 86a–121] ............................................. 27
   Class IV.  Beam with handle, sole, and special share supports. ................................ 27
   Class V.  Curved plow beam with share. ................................................................. 29
   K)  Handle with beam. ......................................................... 29
   L)  Handle, beam, and vertical support. ......................................................... 31
   Class VI.  Sole with share. ....................................................................................... 32
   M)  Sole, beam, and handle. ......................................................... 32
   N)  Sole, beam, handle, and support. ......................................................... 33

C. Single handle, pointed-sole with or without a share. [CU Models 122–174] ....................... 35
   Class VII.  Round ear pieces like spigots. ................................................................. 35
   Class VIII.  Angled ears, wing-shaped, flat, sickle-shaped, curved to the rear in a compact form. 40
   Class IX.  Straight or curved ears like moldboards. .............................................. 46

D. Iron-pointed tongue or iron share. [CU Models 175–188] ............................................... 47

E. Curved handles with pointed sole and sharp iron point or share. [CU Models 189–242] 54
   Class X.  Curved handles. ...................................................................................... 54
   O)  Beam, handles, and beam support. ............................................................... 54
   Class XI.  Pointed sole. ....................................................................................... 54
   P)  Sole, beam, and handle. ................................................................. 55
   Class XII.  Iron point or share fastened to the sole. ............................................ 55
   Q)  Straight moldboard mostly installed on the right side and perpendicular to the soil surface. 55
   R)  Moldboard on the right side, with a spiral. .................................................. 60
   S)  Twisting moldboard. .................................................................................... 61


G. Share rising steeply from point and to the rear like a spade. [CU Models 246–264] ......... 68
   Class XIII.  Share plate in the middle. ................................................................. 68
   Class XIV.  Share lateral to pulling beam with knife coulter in front close to the share. .. 69
   Class XV.  Lateral share like Class XIV. Separate moldboard behind the share. .......... 70
   Class XVI.  Lateral share with moldboard attached to the plow body. .................... 70
H. Share from the Karst region. Two wooden or iron-tooth shares. [CU Models 265–280].

Class XVII. No moldboard. ................................................................. 71
  T) Curved beam with support member. ........................................... 71
  U) Curved beam. ................................................................. 71

Class XVIII. Moveable moldboard in the middle. ........................................... 72

Class XIX. Rigid-knife moldboard in the middle or on the side. ................. 78

I. Iron point or share (tine- or spade-shaped). Moveable ear or moldboard, share plate or plow body. [CU Models 281–313] ................................................................. 79

Class XX. Moveable moldboard. ............................................................. 79
Class XXI. Moveable moldboard fixed in place or two fixed moldboards. ........ 84
Class XXII. Two straight (chained together) moldboards. ......................... 87
Class XXIII. Two sharply-angled points from the side of the moldboards (Spear or shear plow.) .............................. 87
Class XXIV. Rotating share plate with or without a moldboard. ............... 89
Class XXV. Two plow bodies, behind or next to one another, separately incorporated into one implement. ................................................................. 90

Note: Contents entries are hyperlinked in the PDF version.
Literature

Braungart, Dr. H. *Soil Tillage Apparatus and Its Practical Use with Ethnic Connection.* (Origin of the use of the apparatus.) Heidelberg. 1881 (Br).

Braungart, Dr. H. *Origin of The Agriculture of Indo-German People.* Heidelberg 1912. (Br.Urh.)


Goritz, Prof. Dr. K. *Description of the Model Collection.* Stuttgart 1845. (Go).


Heintel. *Agriculture of the Austrian Empire.* 1810. (H).


Linke. *Saxon and Ancient Fiefdom Agriculture.* 1842. (Li).


Petzold, Prof. Dr. A. *Review of Russian Turkestan.* 1842. (Pe).

Rau, Dr. K. H. *History of Plows.* Heidelberg 1845. (KHR).

Rau, Dr. K. H. *Tillage Tools of the London Exhibition.* Berlin. 1851. (KHR, Ausst.).

Rau, Dr. L. *Description and Illustrations of Practical Tillage Tools.* 1862. (LR).


Plow Models – Directory

Plows with an asterisk next to their number are plows of antiquity. The marks in parentheses following the description are from Dr. L. Rau.

A. Wooden point, no share, no moldboard.
The point is sometimes covered with iron and iron point; teeth or tongues occur.

Class I. Curved bent beam. Hook-shaped beam.

A) Hook-shaped beam.

*1. Italy, Sicily, Syracuse.
This model of about 500 B.C.E. is made from a figure on an old Syracusan bronze coin. The plow consists of two wooden parts. The point is pulled by the wooden beam. (KHR) p. 17. Fig. 2/(BR) Panel 1, Fig. 1, Part a.

This design is derived from figures on Etruscan tombs. Cadmus was the mythological founder of Thebes. The plow was also used in the Roman states, about 1500 B.C.E. (KHR) p. 17. Fig. 3/(BR) Panel 1, Fig. 1, Part b.
3. Italy, Etruscan.

(Etruria, an ancient country conquered by the Romans in 283 B.C.E.) Pre-Roman, about 800 B.C.E. (KHR) p. 17. Fig. 4/ (BR) Panel 1, Fig. 1, Part c.

4. India, Punjab, Amritsar.

This is a plow of the Sikh religious sect used in India from around 1500 B.C.E. (Br.Urh.) p. 339, No. 239.
B) Curved beam with handle attached.

*5. Italy, Etruscan.
This is pre-Roman, about 800 B.C.E and similar to model 2.

*6. Italy, Etruscan.
This is from a gem in a collection in Florence, Italy. Pre-Roman, about 800 B.C.E, it is similar to model 2. (KHR) p. 19, Fig. 7. / (Mo) Fig. 5.

*7. Greece.
Such plows are still in use in India by Iranians. (G) Panel 1B, Fig. 18/ (KHR) p. 20, Fig. 8./ (Br) Panel 1, Fig. 2, Part a.
*8. Italy, Latium, Rome.

(Latium, an ancient country in Italy, home of the Latin or Roman people). This plow was designed from a coin made during the reign of the Emperor Commodus, about 190 C.E. (Mo) Fig. 18. / (KHR) p. 20. Fig. 1c.

C) Curved beam with handle attached to the plow point.


This was made from a bas-relief drawing taken from a monument in Arezzo, pre-Roman, about 800 B.C.E. (KHR) p. 20, Fig. 9. / (Br) Panel 1, Fig. 2, Part c. / (Lo) p. 7. / (La) Panel 2, 19.
10. Egypt. (Missing in Hohenheim).

11. Austria, Karten. “Riss Plow”.
One of variably-formed plow bodies used until 1910 for making furrows. This came into use around 800 B.C.E. (K) p. 41, Fig. 9 as compared to Fig 1c.

It was intended for use in untilled meadows and was used from Roman times to 1800. (Br.Urh.) p. 58, No.10. / (Lo) I p. 89.

D) Beam with handle and special frog-like point.

13. Russia, Latvia, Insel, Osel.


15. Switzerland, Grisons Canton.

17. Abyssinia, Transcauscasia, Armenia (now Russia), and Persia.

Used for cutting the furrow before plowing. Still in use in 1900. (Br.Urh.) p. 264, No. 203.

Class II. Curved pulling beam. Pointed plow beam.

E) Handle and beam.


18a. Egypt. “Peasant Plow”
From a late Bronze Age drawing on a cliff in southern Sweden, it is similar to a prehistoric plow from Dostrup, Jutland, of the late Iron Age or the end of the Neolithic Age, 600 to 2000 B.C.E. (Br.Urh) p. 91 f.

20. India, Ceylon.
Still in use in the 19th century. (KHR) p. 27, Fig. 18.

This was in use before the Paleolithic Era. (Br.Urh.) p. 120, No. 84.

22. Morocco.
Related to ancient Egyptian plows, the plow beam has an iron-clad tip. (Br) Panel I, Fig. 3, Part a. / (KHR) p. 26, Fig. 16.

23. India, Ceylon.
This was still in use in 1820 in India, and is related to a Greek plow. A diversity of shapes and forms of this plow appeared throughout the country. Similar to Model 20. (Br.Urh.) p. 338, No. 237.

24. India.
Still in use in 1820. India used variation on the design of this plow until the middle of the century. (La) I, Panel 3, Fig. 22. This type of plow was similar to that of the Greek god Kora. (Br.UrH.) p. 338, No. 237. “The plow is like one engraved on a tomb site. Good for sandy or loam soil but not so for hard ground.” Quote applies to models 23, 24, 26, 30, 31, 32, 33, 34, 48, 49, 50, 51, and 57. (KHR) p. 27, Fig. 17./ (Br.Urh.) p. 335, No. 232.
This was taken from an Egyptian monument artifact in Munich. (The goddess Cybele was often called the Great Mother, since she was the goddess of the mysteries of nature and civilization.) (KHR) p. 26, Fig. 15./ (G) Panel IB, Fig. 1.

26. India, Dekkan, Kanara, Mangalore.
This is still in use in 1820, and is similar to Models 20, 23, and 24. (Br.Urh.) p. 336, No. 233.

27. Tibet. “Sturdy Tibetan Plow.”
This plow was brought from India by the Hindus and was till in use in 1820. (Br.Urh.) p. 343, No. 250.

28. Austria, Bosnia, Bjelina.

29. Turkestan.
It was still in use in 1850 C.E. (Br.Urh.) p. 306, No. 225 or 227./ (Pe) p. 32.
30. India, Conara, Banivasi.
This was still in use in 1820 and is similar to Models 20, 23, and 24. (La) I Panel 3, No. 22./ (Br.Urh.) p. 338, No. 237.

31. India, Dekhan, Karnatak, Koromandelkuste.
This was still in use in 1820 and is similar to models 20, 23, and 24. (Br.Urh.) p. 343, No. 249./ (Lo) I, p. 192.

32. India, Punjab, Khattakral.
This was still in use in 1820 and is similar to models 20, 23, and 24. (Br.Urh.) p. 339, No. 238.
33. India. “Common Plow.”
This was still in use in 1820 and is similar to models 20, 23, and 24. (Le) p. 374/ (Br.Urh.) p. 342, No. 247.

34. India. “Hook Plow.”
This was still in use in 1820 and is similar to models 20, 23, and 24. (Br.Urh.) p. 343, No. 248.


F) Handle, beam and frog-like point.

36. Russia, Poland. “Radlo.”
This was in use in the 19th century. “In Poland a simple plow is made by the farmer.” This plow comes from Neolithic time. (Br.Urh.) p. 211, No. 171.

*37. Egypt.
This ancient Egyptian plow was still in use in 1820. (Br) Panel I, Fig. 1, Part e/ (Lo) I, p. 7.

*38. Egypt.
This ancient Egyptian plow was still in use in the 19th century. (KHR) p. 30, Fig. 22./ (Lo) I, p. 6.

(continued)
This is from the old Kingdom, 5th Dynasty, about 2750 B.C.E. (Le) p. 253 ff.

40. Austria, Croatia, “Morlachien.”
41. Russia, Caucasus.  
(KHR) p. 30, Fig. 28.

42. Egypt, Thebes.  
This was taken from an ancient picture of the Middle Kingdom, in Thebes, upper Egypt. (KHR) p. 30, Fig. 24./ (Br) Panel I, Fig. 40/ (Le) p. 258 f./ (Mo) Fig 27. (Middle Kingdom 1700-2200 years B.C.E.)

43. Egypt.
Class III. Pointed plow sole.

G) Handle, beam and plow sole.


From a Roman coin description, this is supposedly the plow that the Romans used when founding a city, to break up the area where the surrounding walls surrounding were to be erected. In later times, when no longer used for cultivation, this plow was probably still employed in the ceremonial founding a city. (KHR) p. 26, Fig. 13./ (Mo) Fig. 14./ (La) I Panel 2, 18.


This is taken from an illustration on a coin of two bees pulling the plow. (Lo) I, p. 7./ (La) I Panel 2, 16.

*46. Italy, Sicily.

(KHR) p. 39, Fig. 36./ (La) I, Panel 2, 17.

(continued)
47. Italy, Emilia, Forli. “Virgil’s Plow.”
Described around 50 B.C.E by Virgil.

48. India, Ceylon. Still in use in 1820, it was similar to models 20, 23, and 24. (Br.Urh.) p. 341, No. 243.

49. India, Ceylon. “Rice Plow.”
Still in use in 1820, it was similar to models 20, 23, and 24. (Br.Urh.) p. 337, No. 236.

50. India, Hindustan.
Still in use in 1820, it was similar to models 20, 23, and 24. (Br.Urh.) p. 341, No. 244.

51. India, Assam.
Still in use in 1820, it was similar to models 20, 23, and 24. (Br.Urh.) p. 344, No. 251.
52. Italy, Sicily, Enna. “Serpent Plow.”
From a coin of the city of Enna, this pointed plow is pulled by two serpents. (Lo) I, p. 6 f.

53. Russia, Caucasus, Georgia.
“A plow easily pulled by animals.”

54. Greece.
500 to 700 B.C.E. this is taken from a picture of vestal virgins and the Greek god Kora holding the plow. (Br.Urh.) p. 102, No. 53.
55. Tibet. “Lightweight Tibetan plow.”

Still in use in the 19th century. In Hohenheim, this plow exists in normal size. (Br.Urh.) p. 346, No. 255

56. Italy, Sicily.

(KHR) p. 39, Fig. 37.

57. India, Kashmir. “Alabain.”

Still in use in 1820, it was similar to models 20, 23, and 24. (Br.Urh.) p. 341, No. 245.


This was still used up to 1820 in its original, simple form. This plow, used in Pastum and Rome, varies only slightly from the ancient plow of Sicily. (Br.Urh.) p. 57, No. 2.
60. Italy, Apulia, Tarent.
Similar to model 59.

61. Siam.

H) Handle, beam, plow sole with landside.

62. Turkey, Arabia, Yemen.

(KHR) p.43, Fig. 46.
63. Greece.

This is Demeter’s plow, named for Demeter, the Greek goddess of agriculture, marriage and fertility. Demeter corresponds to the Roman goddess Ceres. (Br.Urh.) p. 105, No. 57. / (G) II, Fig. 1

64. Spain, Malacca.

This Arabian plow came with the Moors to Spain in 700. Soon it was found in almost all the provinces. (Lo) I, p. 29. / (La) I, Panel 4, 26.
65. Tunisia.

Still in use in 1820 in the southeastern part of France, the plow is characterized by the very long sole. (KHR) Fig. 48. / (Lo) I, p. 29.


67. Egypt.
68. Italy, Apulia, “Gioja.”

Similar to model 59, it was still in use in 1820. (KHR) p. 49, Fig. 57.

*69. Egypt.

From an ancient Egyptian Stele in the Munich Museum, Old Kingdom, 6th Dynasty. Experts indicate the pulling beam is hauled by a rope. (Le) p. 255.

*70. Egypt.
71. Arabia.

72. Turkey.
This was still in use in 1820. (Lo) I, p. 154.

73. Italy, Sicily.

75. Italy, Campanien, Pastum.
This plow is very old and was still in use in 1820 and is similar to model 59. (La) I, Panel 4, 27. (Lo) I, p. 11.

76. Italy, Apulia, Otranto.
Still in use in 1820. (KHR) p. 49, Fig. 57.
Still in use in upper Egypt in 1845, this plow shows a wooden beam share with a metal tongue for digging into the soil. (Br) Panel II, 15.
78. Italy, “Campanien, Nocera.”

This plow is different from the other older and newer plows of Italy. K.H. Rau thinks they could have come from the “Saracens” or the Normans. The Normans have been in Italy since 1016. (KHR) p. 57, Fig. 64./ (Br.Urh.) p. 114, No. 67./ (Br) I, 4, e.

I) Handle, beam, and plow sole with two landsides.

79. Bosnia, Sarajevo.
A simplified German plow, similar to plow models 80 and 81, it is a four-sided, goose-necked wooden plow with a wheel, in use in the 19th century. (Le) p. 277.

80. Bosnia, Sarajevo.
Yoke plow in use in the end of the 19th century. (Le) p. 277.

81. Bosnia, Sarajevo.
A yoke plow in use at the end of the 19th century, it is similar to plow model 79. (Le) p. 276.
82. Turkey, Armenia, Erzerum, Persia. Probably in use in the 1870’s, it was a very robust plow. The plowshare partly enters the soil and partly moves it aside. (Le) p. 359./ (Lo) I, p. 182.

83. South America, Argentina, Buenos Aries.

84. Italy, Sicily, Marsalla.

85. Russia, “Small Russian ’Ralo.’.

86. Russia, Caucasus, Georgia. Still in use in the 19th century, it was introduced into Russia by German crusaders in the 11th, 12th or 13th centuries. (KHR) p.60, Fig. 68.
B. Share originating from the plow sole. One- or-two-edged plow shares. No moldboard. (Tine Plow).

Class IV. Beam with handle, sole, and special share supports.

86a. France.

According to Laacke (1903), page 136, this plow was used in northern France from the 11th century to 1870. It incorporates all the principles of the modern plow — a horizontal sole, a vertical support, a pulling beam and a handle. (Br) Panel I, 8, a./ (KHR) p. 58, Fig. 67./ (Br.Urh.) p. 119, No. 82.


It was still in use in the Wolfach region in 1840, and use from time to time in cultivating woodlands. (KHR) p. 31, Fig. 30.
88. Germany, Rhineland. “Hamburg Hook.”

Still in use in 1834, it was a plow for steep slopes. Here it is used with a wheel frame; initially it did not. (Li) p. 122/ (KHR) p. 32, Fig. 31.

89. Germany, Saxony. “Erzgebirger Hook.”

Still in use in 1834, it was a plow for steep slopes. Here it is used with a wheel frame; initially it did not. (Li) p. 122/ (KHR) p. 32, Fig. 31.


A plow of the mountains of Silesia and Moravia through 1800, its share is wide with plates on both sides together, making it a substantial tool. The front part of the pulling beam is attached to the handle, as with the Belgian plow. (H) II, p. 403./ (KHR) p. 37, Fig. 33.
90. Arabia.
Illustrated on a monument in upper Egypt, it was in use in 1820 and also in France. (La) I, Panel 3, 24.

Still in use until the end of the 17th century, it had been illustrated in Chinese writings of 1230. (Le) p. 398./ (Br) I, Fig. 4, d./ (Lo) I, p. 208, No. 153 b.

Class V. Curved Plow Beam with Share.

K) Handle with a beam.

92. China, Formosa.
A plow still in use in 1867. The bottom of the plow handle attaches at a perpendicular angle to a wooden beam that holds the share. (Lo) p. 402.
93. Egypt.

Still in use in 1820, it was similar to plow models 20, 23, and 24. (Br.Urh.) p. 344, No. 252.

95. India, Dekhan, Malabarkusti.

96. Greece.
This plow is mentioned in the writings of the poet Hesiod in 900 years B.C.E., the oldest of Greek agricultural records. (KHR) p.23, Fig. 12./ (Mo) Fig. 24.
*97. Greece.
Described by the poet Hesiod in the 9th and 10th centuries B.C.E., it was also known previously in Egypt from ancient Egyptian carvings. (L) p. 136./ (Br.Urh.) p. 60, No. 16.

An ancient Greek wheel plow from Caylus from a carving in Jasper around 300 B.C.E., although its time of introduction is unknown. This plow does not appear in the literature or ancient pictures after 1000. (L) p. 136./ (La) I, p. 7, Panel 6, 37/ (G) IB, Fig. 6/ (KHR) p. 20, Fig. 26/ (Le) p. 229/ (Mo) Fig. 36.

99. Turkey, Palestine, Jerusalem.
Still in use in 1897, but it was described by Leser on page 352 as a Kurdish plow. (KHR) p. 43, No. 46.

L) Handle, beam, vertical support

100. Italy, Sicily, Syracuse, “Palagenia im Val di Noto.”
It was still in use in 1840. (KHR) p. 30, No. 26.

101. Russia, “Minor Russian Bar.”
Used today, it is also known as the Hain plow, brought to Russia by an immigrant. (Br.Urh.) p. 63, No. 25./ (Le) p. 204.

102. Germany, Prussia, Nassau-Siegen. “Hain Tine.”
Still in use in 1820, it was used in the 16th century for breaking up forest land where a normal sole would not work. (KHR) p. 31, No. 29./ (Go) p. 31. A full-size model of this plow exists in Hohenheim as number 23.
It was still in use in the 18th century. (Le) p. 167.

*104. Upper Egypt.

Class VI. Sole with share.

M) Sole, beam, and handle.

105. Italy, Calabria.
Still in use in 1840, according to Laacke page 136 this plow existed in Egypt 2000 B.C.E. It was described by Virgil and later came to Rome. (KHR) p. 40, No. 41./ (G) II, Fig. 7.

106. Arabia.
107. Turkey, Tripoli.

108. Germany, Silesia. “Silesian Spring Tine.”
(KHR) Fig. 43.

This design was taken from a coin of a Roman estate of Sempronius 130 B.C.E. It is noteworthy that in ancient Rome a wheel was fixed to the rear of the plow body, which reduced the friction of the plow sole on the soil. (KHR) p. 40, No. 40./ (Mo) Fig. 27.

This was in use from the time of Plinius in the 1st century. (La) I, Panel 6, No. 36./ (Lo) I, p. 30.

N) Sole, beam, handle, and support.

111. Italy, Latium, “Campagna di Roma.”
It was used in the area around Rome in 1840. The plowman stands on the back of the plow to help make a deeper furrow. (La) I, Panel 4, No. 28./ (Lo) I, p. 70./ (KHR) p. 43, No. 47.

112. Italy, Sardinia, “Cagliari.”
A commonly used plow from Sardinia, it was a very old plow still in use in 1910. (KHR) p. 45, No. 50.

113. Italy, Latium. “Aratro romano.”
114. Italian, South Tyrol, “Trient.”

115. China, Petschyli, Peking.
It was still in use in 1858. (Le) p. 387.

116. Russia, Poland, “Lublin”.
It was probably in use in 1840. A full-size plow number A42 exists at Hohenheim.

117. Istrien, Buze. “Ralo Buze.”

118. Germany, Bavaria.
This was a Bavarian bedding plow.
119. Upper Egypt.
Still in use in 1840, it had a primitive, simple hook with a bifurcated wooden beam leading up to a tongue-shaped share. (Br) II, Fig. 15.

120. Tunisia.

121. Spain.

C. Single handle, pointed sole with or without a share. Two primitive ears on each side of the moldboard.

Class VII. Round ear-pieces like spigots. (Spigot ears extend to the right and left pointing up and/or to the side.)

122. Algeria.

123. Switzerland. “Graubunden Engadin.”
It was still in use in 1840. (Go) p. 32.

124. Mexico, Leon, Mehedin.

125. France, Garonne
Still in use in 1820, it was used in the cultivation of maize. (La) I, Panel 5, No. 32.

126. South America, Columbia, Tuquerres.
127. Spain, Castile.

This was known in early Roman times and is still in use in 1820. (Lo) I, p. 152.

128. Algeria.

Similar to a plow of Algeria illustrated by Leser, it was still in use in 1930. (Le) p. 339.


130. France, “Charrue du Centre.”

This plow, illustrated by Leser, is from the area of the Loire, its two smooth wedges appear behind the share on the sole. It was still in use in 1900. (Le) p. 319.

131. Spain, Valencia.

Still in use in 1820, it was used in Valencia until the Roman plow appeared. It featured pegs on the moldboard. (Lo) I, p. 30./ (La) I, p. 5, Panel 5, No. 35.
132. Italy, Sicily, between Palermo and Messina.

133. Germany, Saxony. “Voigtlander Hook.”

It was still in use in 1820. (Go) p. 30.
134. Bohemia, Czechoslovakia. “Radlo Mountains.”

It was still in use in 1839. (Le) p. 284/ (Me) I, p. 102.

135. China.

It was still in use in 1820. (La) I, Panel 5, No. 34./ (Lo) I, p. 208, No. 153 c/ (KHR) p. 30, Fig. 27.


It was still in use in 1820 C.E. (La) I, Panel 5, No. 33./ (Lo) I, p. 208, No. 153./ (Br.Urh.) p. 347, No. 258.
137. France, “Bouche du Rhone, Marseille.”
Still in use in 1900, it was illustrated by Leser as from “Dep. Gers,” a simple-shaped share engaging the soil. (Le) p. 320.

It was still in use in the last century (19th Century). (Le) p. 166.
Class VIII. Angled ears, wing-shaped, flat and sickle-shaped are curved to the rear in a compact form. The wings are angled to the side and upward relative to the sole, and back toward the handle.

139. Arabia.

140. Abyssinia.

142. Bohemia. (Czechoslovakia.) “Pointed Share.”

Still in use in 1880, a pointed shovel becomes the plow in the soil. (Le) p. 292/ (Me) I, p. 104/ (BR) Panel 43, Fig. 427.

143. Bohemia. (Czechoslovakia.) “Broad Share.”

Still in use in 1880 in Saazer Kreis, it was an ancient implement with a modified spade. (BR) Panel 43, Fig. 426/ (Me) I, p. 104.

144. Bohemia. (Czechoslovakia.) “Bernauer Radlo.”

145. India.

Still in use in 1820, it was similar to plows 20, 23 and 24. (Br.Urh.) p. 345, No. 253.
146. Spain. “Aradro Ascensio.”
Still in use in 1900, it was similar to the plow of Estremadura illustrated by Leser on page 329.

From an old Egyptian application, the Greeks fitted this plow with a share and moldboard. It was illustrated on a statue of Demeter, dating from about 1000 B.C.E. (Demeter, the Greek goddess of agriculture, marriage and fertility corresponds to the Roman goddess Ceres.) (KHR) p. 49, Fig. 56. (G) II, Fig. 1.

It was still in use in the 19th century, according to Leser, page 163.
149. Italy. “Capanion, Canni.”

This plow was mentioned by the Roman poet Virgil in his agricultural poems of around 50 B.C.E. (BR) I, Fig. 3 d.

150. Germany, Saxony. “Pulled-Hook Share.”

This was an old Normandy plow for light soil in the 11th to the 13th century. (Lo) I, p. 48/ (KHR) p. 28, Fig. 21/ (S)

152. France. “Araire du Midi.”

153. Greece.
It was still in use in 1840. The plow exists at Hohenheim at full size. (Le) p. 270.

Related to the Crimean Tartars, this plow was illustrated on a stone monument.

155. Austria. Stetermark. “Styria Province.”
It was in use at the beginning of the 19th century. (K) p. 39.
156. Bohemia. (Czechoslovakia.) Prachin. “Pluzica.”

This plow was still used in 1900 for certain purposes. (Me) I, p. 104/ (Br.Urh.) p. 107, No. 62.


This was still used in 1900 for certain purposes. (Me) I, p. 104/ (Le) p. 289/ (Br.Urh.) p. 107, No. 61.

158. China, Hongkong.

159. Italy, Calabria.

It was still in use in 1830. A full-size plow of this type is at Hohenheim.

This plow is similar to the Sanabresischen Plow illustrated by Leser on page 326. Also called the “Arado romano” its connector and sole consists of a bar; two moldboards appear to the right and left of the sole.

161. Algeria, Setif.

It was in use in Algeria about 1930, according to Leser on page 339. A full-size plow of this type is at Hohenheim designated as number A41.

161a. Spain, France. “Charrue basque.”

162. Germany, Saxony. “Dresden hook.”

163. Spain, Castile.

164. France. “Araire Languedocien.”
165. Italy, South Tyrol, Nauders. “Filjaune.”

166. Portugal.

(Br.Urh.) p. 92, No. 49./ (KHR) p. 57, Fig. 63.

168. Italy, Umbria, Terni, Spoleto.

169. Italy, Emilia, Parma.


**Class IX. Straight or curved ears like moldboards, above and sometimes merged with the sole.**

171. Italy, Emilia, Bologna.

172. France. “Araire des Provence.”

173. Belgium.

In use about 1930, it had a double moldboard. (Le) p. 147.

**D. Iron pointed tongue or iron share.**

This plow has a moldboard in the middle.

175. Siam.

176. Germany, Brandenburg, Prenzlau.

178. Siam.
   It was in use in the 19th and 20th centuries. (Br.Urh.) p. 348, No. 260. (Le) p. 427.

179. China, Shanghai.

181. Germany. “Mecklenburg Hook.”

In use for centuries and still in use in 1837, it was simple and economical for cutting the crust and the soil. (KHR) p. 53, Fig. 62.
An old Roman plow described by Virgil about 70 B.C.E., it was still in use in the 19th century. This plow has been in use for five to six thousand years. (KHR) p. 45, Fig. 51.

This plow continues to be in use today. (K) p. 245.
Still in use in 1850 and is similar to the plow described by Hedde, this plow can be pulled by women. (Le) p. 401./ (Lo) I, p. 208, No. 153a.
186. Switzerland, Graubunden, Engadin.

It was still in use in 1840. (Br.Urh.) p. 72, No. 41.


(continued)
188. Switzerland, Graubunden.

Still in use in 1840 C.E. (Br.Urh.) p. 72, No. 41.
E. Curved handles with pointed sole and sharp iron point or share. A moldboard fastens either to the right or left side.

Class X. Curved handles.

O) Beam, handles, and beam support.

189. Northern Russia. “Kossula.”

190. Russia, Kastroma. “Kossula.”

Somewhat in use today, this plow is manually maneuverable. The frame has only a share with no shovel. (Le) p. 180.
Class XI. Pointed sole.

P) Sole, beam, and handle.

191. Italy, Rome.

192. Germany, Alsace, Strasbourg. “Fischart’s Plow.” Fischart was the original builder; he lived about 1570.

192a. France. “Virai provencal.”

Class XII. Iron point or share fastened to the sole.

Q) A straight moldboard mostly installed on the right side and perpendicular to the soil surface.

193. Germany.

194. Germany, Saxony. “Plow of Saxony Origin.” This plow originated in Saxony about 1200.
195. Germany, Thuringen. “Country plow”.

One of the better plows in use in Germany in 1832. (Go) p. 12.

196. Germany, Bavaria, Upper Bavaria.


197. Germany, Bavaria, Mittelfranken, Bayreuth.

This was in use in 1840 and probably was still used up to 1900. (Br.Urh.) p. 128, No. 95./ (KHR) p. 76, Fig. 69.

198. Germany, Black Forest. “Brachpflug.”
199. Germany, Oldenburg, East Friesland.


201. Yugoslavia, Croatia. “Guard Plow.” It was still in use in 1880. (Br) Panel 43, Fig. 440.

202. Poland, Galicia. “Country Plow”. It was still in use in 1880. (Me) I, p. 78/ (Br) Panel 43, Fig. 440.

Southern Russia. “Steppe Plow.”
It was still in use in the 19th century.

204. France, Brittany.
205. Russia, Caucasus, Georgia.
With two unequal-size large wheels not unlike the Socha, it was still in use in 1870. Its Moldboard was planar and wooden; its broad-share and “Sech” were of iron. (Le) p. 200./ (Br.Urh.) p. 259, No. 200.


208. Denmark.
Still in use in 1820, it was simple and easy to use. (Le) p. 162/ (La) II, p. 2.

208a. France. “Charrue provencale.”

R) Moldboard on the right side, with a spiral.

209. Siam.
This plow was still in use from around 1900 to 1923. (Le) p. 425.


It was still in use in the 19th century. (Br.Urh.) p. 348, No. 259.

212. China, Kiangai.
This plow was seen in the Shanghai area in 1850. It was referred to in a Leser article on page 385. (Br.Urh.) p. 348, No. 259.

This plow was referred to in 1859, 1897 and 1901 by Leser on page 416.
214. India, East India, Malacca.

From the 1851 London exhibition, the wooden moldboard, with a sole and iron-point attached, slowly twisted like a screw. (KHR, Ausst.) p. 112./ (Br.Urh.) p. 347, No. 256.

215. Celebes, Makassar.

It was still in use in 1930. (Le) p. 413.

S) Twisting moldboard.

218. Austria, Tyrol, Imst.

219. France, Vosges, La Salle. This plow was probably still in use in the 19th century.


221. France, Seine, Inferieure, Montivillier.

222. Sweden.
223. Italy, Lombardy, Mailand.

Around 1850 in use in Mailand, its share extending forward is double-sided. (Le) p. 307./ (Br.Urh.) p. 59, No. 11.

Simple and ruggedly built, it was still in use in 1820. (La) II, p. 1.

It was still in use in 1845. (KHR) p. 79, Fig. 71.


It originated in the 18th century C.E. and was still in use in the 19th century. (KHR) p. 77, Fig. 70./ (Br.Urh.) p. 127. No. 92.
227. Italy, Lombardy, Bergamo.

228. Austria, Lower Austria. “Zugmaiers Plow.”
Still in use in 1840, it enjoyed a wide reputation and distribution in the Austrian state. (Go) p. 15.

229. Sweden.
This plow was widely distributed in the middle of the 19th century. (Le) p. 164./ (Br.Urh.) p. 133, No. 104.

230. Belgium, Flanders, Cortryk.
In 1825-1840, it was known in Hohenheim as the “Schwerz'scher Plow;” it is known today as a wheel plow. (Le) p. 148./ (LR) p. 9./ (Go) p. 4.

This plow was distributed by Thaer in Northern Germany around 1800. (T) Booklet 1.


233. Germany, Wurttemberg. “Hohenheimer Screw Plow”.
It was still in use in 1856. (LR) p. 10.

It was still in use in 1880. (Br) Fig. 110.
It was in use in 1880. as a walking plow. A full-size plow exists in Hohenheim. Model A 97.

This was used in 1880. (Br) Panel 8, Fig. 94.

237. Austria. “Ritter Kleyle’s Plow.”


It was used in 1840. (Go) p. 18.


Bella, who lived around 1840, described this plow.

It was in use in 1880. (Br) Fig. 56.

This plow was shown at the 1851 London Exhibition. (KHR, Ausst.) p.121.

F. Two-sided share. Two-sided, straight, and vertical moldboards.

It was probably still in use in 1820.

244. France, Savoy, Bonneville.
245. Italy, South Tyrol, Etschtal, Glurns.

**G. Share rising steeply from the point and to the rear, like a spade. Spade plow, Buchadlo’s.**

Class XIII. Share plate in the middle.

246. China.  
In use in 1820, it was a plow adapted by the Chinese. (La) I, p. 6. It is similar to the plow illustrated by Leser on page 396 for the year 1676.


248. India, Dekhan, Madras.  
In use in 1820, it was similar to models 20, 23, and 24 and compared to the Mecklenburger Hook by Braungart on page 337 number 235.

249. Germany, area near Nuremberg.

250. Germany, South Baden. “Sebastian Brant’s Simple Plow.”  
Sebastian Brant was a scholar and poet around 1500.

251. France, Alsace, area near Strasbourg.
Class XIV. Share lateral to the pulling beam with the knife coulter in front, close to the share.

252. Germany, South Baden. “Holbein’s Plow.”
Holbein 15-16\textsuperscript{th} century is similar to Leser on page 129.

253. France, Pas de Calais, Arras.

In use around the 19\textsuperscript{th} century, it was a four-sided bedding plow with a steep curved share, or a “Ruchadlo” share. (Le) p. 288.

255. Bohemia, Kosmanos.

256. Bohemia. “Steffeck’s Ruchadlo.”

Steffeck was a mid-19\textsuperscript{th} century painter.
257. France, Calvados, Caen.

This plow was in use in 1850. (Br.Urh.) p. 152, No. 137.

Class XV. Lateral share like Class XIV with separate moldboard behind the share.


261. Netherlands, Province of Geldern and Yssel.

262. Germany, Westphalia, Vinsebeck.

Class XVI. Lateral share with moldboard attached to the plow body.

263. Germany, Westphalia, Vinsebeck.

(continued)
264. Belgium, Brabant, Antwerp.  
It was still in use in 1820, especially for heavy soils.  (La) II, Panel 4.

**H. Share** from the Karst region with two wooden or iron-tooth shares.

Class XVII. No moldboard.

T) Curved beam with support member.

265. Java

266. Central Russia. “Socha.”  
This was still in use in 1820.  (La) I, Panel 4, No. 29.

**U) Curved beam.**


268. Russia, Finland. “Socha.”  
This was still in use in 1820.
Class XVIII. Moveable moldboard in the middle.

269. Russia, Latvia. “Latvian Hook.”

Plow of the Socha area with narrow shares and shovels, it was still in use in 1930. It was described in 1820. (Le) p. 193.
270. Russia, Kurland. “Kurland Hook.”

Still in use in 1840, it was similar to plow number 266.


This was similar to plow number 266. (Br) p. 169/ (KHR) p. 35.

Still in use in 1840, it was similar to plow number 266.
273. Russia, Livland.

Still in use in 1840, it was similar to plow number 266.
274. Russia, Moscow. “Socha.”

Still in use in 1840, it is similar to plow number 266. (KHR) p. 34.
275. Russia, Siberia. “Socha.”
This plow was still in use in 1856. (Br) p. 168.

276. Russia, Wiatka. “Grossrussische Socha.”
Still in use in 1840, and similar to plow number 266, it had a hand-maneuverable divider that was perpendicular to the left end of the left share. (Le) p. 178.
Class XIX. Rigid knife moldboard in the middle or on the side.

277. Russia, Poland, Volynien.

Still in use in 1840, it was similar to plow number 266.

278. Russia, Poland. “Poland Socha.”

It was still in use in 1840, and similar to plow number 266.

279. Russia. “West Russian Socha.”

Still in use in 1820, and similar to plow number 266, it was used occasionally used before 1930. (Le) p. 199/ (KHR) p. 35, No. 32.
280. Germany. “Prussian Zogge.”

It was still in use in 1840 and similar to plow number 266. (Le) p. 118/ (KHR) p. 35.

I. Iron point or share (tine- or spade-shaped.) Moveable ear or moldboard, share plate or plow body. (Able to be turned or changed.)

Class XX. Moveable moldboard.

281. France, Vogesen, Epinal.

(continued)
282. Portugal.
283. Germany, Rhineland. “Kolner Wessel, Bonner Huns Plow.”
Still in use in 1910, the original, ancient Indo-Germanic plow has changed little in form to its present shape. (Br. Urh.) p. 69, No. 39. / (KHR) p. 52, Fig. 61/ (Go) p. 12, No. 15. It is available at Hohenheim in full size.

284. Germany, Oldenburg, Idar.

286. Moravia, Zlin. It was still in use in 1800. (Me) I, p. 85.
287. Germany, Hessen, Westphalia, Nassau, Siegen.
Class XXI. A moveable moldboard fixed in place, or two fixed moldboards.

288. France, Vosges, St. Leonard.


This plow has a right or left twist. It was an English sweep plow of the middle of the previous century, but not used widely in Kent. (Le) p. 157.


This is similar to model number 291. (Le) p. 157.
Class XXII. Two straight (chained together) moldboards.

293. Germany, Wurttemberg, Oberndorf.

Class XXIII. Two sharply-angled points from side of the moldboards. (Spear or shear plow.)

295. Italy, South Tyrol, Meran.

Class XXIV. Rotating share plate with or without moldboard. (Wenderruchadlo).

297. Germany, Saarland, Silesia.


300. Germany, Hesse, Wiesbaden. “Albrecht’s Turner.”

301. Bohemia, Prague. “Steffek’s W-Ruchadlo.”
Steffek was a painter of the mid-19th century.

Class XXV. Two plow bodies, behind or next to one another, separately incorporated into one implement.

302. Germany, Wurtemberg, Korntal.
Built for the first time in 1842, it was soon abandoned as too expensive. (Go) p. 10. / (KHR) p. 95.

303. Germany, Wurtemberg. “Festival Displayed.”
305. Austria, Salzburg. “Guided Plow.”

Easily guided, this plow was used in 1839. Also named the Norischer plow, it was rotating plow with two bedding-plow bodies attached to the pulling beam. (Le) p. 294. / (Go) p. 13.

308. Germany, Wurtemberg. “Mohl.”

309. Germany, Wurtemberg, Wielderstadt.
This plow has been in use since 1820. (Go) p. 9.

It was in use in 1844. (Go) p. 9.

It was in use in 1860. (LR) p. 14.

This plow was in use in 1851. (LR) p. 14. A full-size model exists in Hohenheim.

313. United States of America.