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The interstices in corded wood make $\frac{1}{3}$ of the whole volume. 7. Bibl. Phys. com. 234.
wood burnt into charcoal loses half its weight & has $\frac{1}{3}$ of its volume. 6. Bibl. Phys. com. 287
ratio of the diameter of a circle to its circumference.

7: 22 by Archimedes.

113: 355 by Adrian Mathesius which is true to the 6th place of decimals.

33 215: 104 318 by Mr. Lambert, which is true to the 9th place of decimals.

265 381: 833 719 by the same, true to the 11th place i.e. as 1: 1A 159 265 358 This is sufficiently exact to ascertain the circumference of the earth to less than $\frac{1}{100}$ of a mile.

1810. Feb. 24. — Mar. 1. in dredging the terras which forms the N.W. side of the garden, digging turf below the garden wall, and bringing & laying it on the terras, 3 men did at square yards a day.

* but various experiments, giving from 10 parts solid for from $3\frac{1}{2}$ to 8 interstices averaged on the whole 3 parts solid to 2 void, so that the interstices are $\frac{2}{3}$ & the solid $\frac{1}{3}$. Bulletin de la Société d'encouragement &c Dec. 1809. No. 66.

also the loss of wood in cutting fire wood with an axe is 15 per cent, and takes twice as

long as the saw, a tree of 18. 3. being crosscutted in 6. and cut with the axe in 8'. 1. quart of salt saturates a gallon of water.

Diary of the state of the ice or snow in the ice house

| | 1811. snow | 1812. snow | 1813. snow | 1815 | 1816 | 1820 |
|---------|-----------------|---------------------|---------------|---------------------|------|---------------------|
| Jan. | | | | | | |
| Feb. | | | | | | |
| Mar. | | | | | | |
| Apr. | | | | | | |
| May 1 | 14 ft. | | | | | |
| June 1 | 13. | | | | | |
| July 15 | 12. | 20. 9 $\frac{1}{2}$ | | 20. 7 $\frac{1}{2}$ | | 29. 7 $\frac{1}{2}$ |
| Aug. 1 | 11. | | | | | |
| Sept. 1 | 7 $\frac{1}{2}$ | 4. | 4. | 7. 6 $\frac{1}{2}$ | | |
| Oct. 1 | 5 $\frac{1}{2}$ | 20. failed | | | | |
| Nov. 1 | 2-9 | | | 15 grms. 11 junc. | | |
| Dec. | wax 5 lbs | | | | | |