the quantity of arſenic is ſo great, that it would ſcarcely deserve the name of ſilver ore if the arſenic were not very eaſily diſſipated. It is ſoft and eaſily cut ; has a brilliant metallic appearance, and conſiſts of conchoidal laminae. A quintal contains only from four to six ounces of ſilver, but it is eaſily reduced by evaporating the arſenic, after which the ſilver is left behind ſlightly contaminated with iron.

3. The red or ruby ſilver ore, the *rothgulden of* the Germans, has the metal combined with ſulphur and ar­ſenic It is a heavy ſhining ſubſtance, ſometimes trans­parent, and ſometimes opaque ; the colour generally crimson, though ſometimes grey or blackiſh. It is found in ſhapeleſs maſſes, or cryſtallized in pyramids or polygons, ſometimes dendritical or plated, or with ra­diated incrustations. It is found in quartz, flint, ſpar, pyrites, ſparry iron ore, lead ore, cobalt ore, jaſper, baro-ſelenite, gneiſs, &c. When radiated or ſtriated, it is called *rothgulden bluth.* It cracks in the fire, and deto­nates with nitre. Its ſpecific gravity is from 7,400 to 5,684. Bergman informs us, that this kind contains, in the hundred, 60, ſometimes 70, pounds of ſilver, 27 of arſenic, and 13 of ſulphur. The darkeſt coloured ores are the richeſt, the yellow kinds much poorer ; but the moſt yellow do not belong to this ſpecies, being in fact an orpiment with 6 or 7 per cent. of ſilver. This laſt kind is brought chiefly from Potosi in America, and is called *roſi-cler* by the Spaniards.

4. The *ſchuartz gulden,* or s*ilber muim,* contains the metal mineralized by ſulphur and a ſmall quantity of ar­ſenic and iron. It is of a black ſooty colour, and was ſuppoſed by Cronſtedt to contain a good quantity of copper, to which its colour was owing ; but later experiments have evinced, that there is no copper at all in it. It is either of a ſolid or brittle consiſtence, and of a glaſſy appearance when broken, or of a looſer texture, and ſooty or deep black colour ; or it is found like moſs, or thin leaves, lying on the ſurface of other ſilver ores, or thoſe of lead and cobalt, or in clays, ponderous ſpar, gneiſs, &c. It contains from 25 to 60 per cent. of ſilver.

5. The *minera argenti alba,* the *Weissgulden ore* of the Germans, is a heavy, ſoft, opaque ſubſtance, fine grained or ſcaly, bright and ſhining in its fractures, of a whitiſh, steely, or lead colour ; ſometimes cryſtallized in pyramidical or cylindrical forms, but often in amorphous grains, or reſembling moſs, or in the form of thin laminæ incruſtating other bodies, found in quartz, ſpar, stelſtein, pyrites, blend, lead-ore, cobalt-ore, ſparry iron ore, fluors, &c. It is very fuſible. Its ſpecific gravity is from 5 to 5,300. Its proportion of ſilver from 10 to 30 per cent. It is found, though not commonly, in Saxony, Hungary, the Hartz, and St Marie aux Mines.

6. The *weiſertz,* or white ſilver ore, is an arſenical pyrites, containing ſilver. It is met with in the Saxon mines ſo exactly reſembling the common arlenical py­rites, that it cannot be diſtinguiſhed from it by inſpection. Cronſtedt ſuppoſes that the ſilver it contains may exiſt in a capillary form ; but Profeſſor Brunnich thinks this is not altogether the case. It is very ſcarce, but met with near Freyberg. There is likewiſe a brown *mulm* having the appearance of rags, met with in the crevices and upon the lumps of cubic lead ore in a mine

near Clauſthal and other places, which contains a great quantity of ſilver. It is of a whitiſh ſhining colour ; hard, granulated, and ſolid, ſometimes ſtriking fire with ſteel. It diſcovers a mixture of arſenic, by emitting a garlic ſmell when heated.

7. The *leberertz* of the Germans has the metal com­bined with ſulphurated antimony. It is of a dark grey and ſomewhat browniſh colour. A variety of a blackiſh blue colour is found in the form of capillary cryſtals, and called *ſederertz* or plumoſe ſilver ore. It is met with in Saxony, and contains ſometimes a mark or half a pound, ſometimes only two, three, or four ounces, and ſometimes only a mere trifle of ſilver, per cent. There is another ſilver ore, alſo called *leberertz* by the Ger­mans, which contains arſenic and regulus of antimony. This ore is ſometimes alſo found of a dark grey colour; for the moſt part amorphous, but ſometimes cryſtallized into pyramids. It appears red when ſcraped, and contains from one to five per cent. of ſilver. The great­eſt part of this ore is copper, and the next arſenic. Ac­cording to Bergman, the copper amounts to 24 per cent. It is found in Transylvania ; and a kind was lately diſcovered in Spain, of a hard ſolid consiſtence, and of a greyiſh blue colour.

8. The *gooſe dung* ores contain ſilver mineralized with ſulphur in combination with iron, arſenic, and cobalt. It looks like the *weſsgulden,* excepting that the cobalt, by its decompoſition, gives it a roſy appearance. There are two varieties; one of a dull tarniſhed ſurface and fer­ruginous look ; the other has a ſhining appearance like the *leberertz.* It contains from 10 to 40 or 50 per cent. of ſilver. The arſenic is in an acid ſtate, and united to the cobalt.

9. The *dal fahlertz* contains ſilver mineralized with ſulphurated copper and antimony, and reſembles the dark-coloured *wejſsgulden,* giving a red powder when rubbed. It is found either ſolid or cryſtallized, and is met with in the province of Dal, where it is melted by a very difficult proceſs, calculated to preſerve the diffe­rent metals it contains. There is another kind which has arſenic united to the rest of the ingredients. It is only the grey copper ore impregnated with ſilver, of which it contains from one to twelve per cent. the quantity of copper being from 12 to 24 per cent. and the remainder conſiſting either of ſulphur or arſenic, with a little iron. It is the moſt common of all ſilver ores ; and M. Monnet remarks, that where copper is united to arſenic, ſilver is always to be found. A va­riety has been found at Schemnitz, containing a portion of gold alſo.

10. The pech*eblende* is an ore of zinc containing ſil­ver, and is met with in the Saxon and Hungarian mines among the rich gold and ſilver ores. It is either of a metallic changeable colour or black. Of theſe there were formerly two varieties, viz. either in the form of fine ſcales or in balls, but the latter is now entirely un­known. A black blend is found in Bohemia, which is very heavy, with the ſurface ſomewhat elevated like ſome kinds of haematites, but no ſilver has yet been ex­tracted from it

11. The *bleyglanz,* potters ore, or galena, contains ſil­ver mineralized with ſulphurated lead. It is alſo called *pyritous ſilver,* and is of a brown colour, yielding but a very ſmall portion of metal. It is met with at Kunſ-