Paper hangings made by Mr. Andrew Humphreys, of Philadelphia, were of excellent quality, and deserve particular commendation.

Much credit is due to Mr. George Parkinson, for his excellent specimens of *preserved fruit*. They were put up with much skill, particularly the smaller fruits. The brandy fruits were much improved by age.

The committee cannot close this report, already extended much beyond their original design, without expressing their favourable opinion of several articles, upon whose merits the space allotted to them will not permit them to enlarge. Amongst these, are a pair of splendidly cut, *glass decanters*, from Messrs. Bakewell, Page and Bakewell, of Pittsburg. The *Atlantic Souvenir*, for 1828, which reflects the highest credit upon the liberal patronage bestowed upon the Fine Arts, by the enterprising publishers, Messrs. Carey, Lea and Carey. A splendid *side board* and *French secretary*, from Mr. C. P. White. A beautiful and highly finished *flute*, by Mr. Catlin. A pair of *cotton blankets*, from the Eagle Factory, Trenton, and some handsome *dimities*, from the Hamilton manufactory, at Lowell, Massachusetts.

Some articles of great merit are not mentioned in this report, as they were brought into the exhibition after the lists were handed to the judges; and the committee are apprehensive, that others may have been overlooked, for which, they must beg the indulgence of the depositors, it being almost impossible to avoid doing injustice to some, in so extended a catalogue. Should any one feel himself aggrieved, the committee hope that they may have an opportunity of repairing their fault in the detailed report of the exhibition, which will be published as soon as it can be prepared.

Signed	JAMES RONALDSON,	} Committee.
	THOMAS FLETCHER,	
	ADAM RAMAGE,	
	ABRAHAM MILLER,	
	SAM'L. J. ROBBINS,	
	A. G. RALSTON,	

Philadelphia, October 18th, 1827.

On washing Emery for Optical purposes, &c. By M. CHEZY.

In order to obtain *very fine emery*, and of different degrees of fineness, the sieve is not sufficient, but water must be used. After having well ground the coarse emery on an iron plate, with a muller of the same metal, it is thrown into a vessel, which must be rather wider at bottom than at top, by a gradual increase. The vessel must then be filled with clear water, so that it may stand eight or ten inches above the emery. The whole is then to be strongly agitated with an iron spatula; after which it must be left to settle for an hour. The emery falls to the bottom, but the water remains turbid, being charged with emery, in the state of an extremely fine and light matter. The shortest leg of a syphon, filled with clear water, must be

plunged to the depth of four inches below the surface of the emery water; holding the other extremity of the syphon closed with the finger, which is afterwards to be withdrawn, that the water may flow through the syphon, without stirring the vessel, or agitating the emery which is at the bottom of it. The water thus drawn off is to be received into another large vessel, and the first vessel is to be again filled, and its contents agitated as before. The same operation is to be repeated till the water passes clear through the syphon. The powder which passed over with the water, and which was received in the second vessel, is too fine to be usefully employed in grinding glass. The vessel being emptied and cleared, the same operations are to be repeated, with this difference only, that instead of leaving the water to settle for an hour, no longer time is employed than half an hour; and when the water passes clear through the syphon, the operation is discontinued, and the emery obtained by subsidence from the water, and carefully defended from all impurities, is reserved under the denomination of "*emery of half an hour.*"

The same operation being repeated, allowing only a quarter of an hour for the subsidence, affords an emery, which is, indeed, fine, but less so than the preceding, and is to be reserved under the denomination of "*emery of a quarter of an hour.*"

By similar processes, emery may be obtained, of half a quarter of an hour; or of any other length of time which may be desired, as of four, of two, of one, of one half, or one quarter of a minute. To measure the half or quarter of a minute, a pendulum beating seconds (or a weight suspended by a string of 39,2 English inches) may be used. The oscillations are to be counted from the moment of the ceasing of the agitation; and, at the instant of the thirtieth or fifteenth oscillation, the finger being withdrawn from the mouth of the syphon, previously placed in the water, suffers this fluid to flow. The sieve may be used for coarser emery.

Observations by MR. GILL.

We have extracted this article from Nicholson's quarto journal of Natural Philosophy, vol. III. It forms a useful addition to the information we have given in the article, p. 398, on Mr. Blore's (a late workman of Mr. Tulley's) method of washing over emery. We do not think, however, that the finest emery would be of no use in grinding glass; on the contrary, we have found that the glass *greyed by the finest emery we could produce*, and applied upon lead, is the best to be employed in the microscope, for removing the false glare produced by the sun's light, or the light of a candle or lamp.

It would be convenient to mount the syphon in a hole made in a flat piece of wood, at the proper height, to reach four inches down below the surface of the water; when the board was laid upon the top of the vessel, the trouble of supporting it at the proper height by the hand, would be thus saved.

[*Technological Repository.*