



THE art of Paper-making ought to be regarded as one of the most useful which has ever been invented in any age or country; for it is manifest, that every other discovery must have continued useless to society if it could not have been disseminated by manuscripts, or by printing.

Scientific men, who were neither artists nor manufacturers, have, by means of this invention, been enabled to communicate their projects, which mechanics have afterwards improved and perfected, and by this means enriched the commonwealth.

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[8]

Without the use of Paper, geography and navigation must have been very incorrectly understood; the beautiful charts of the ocean so accurately laid down have established our commercial intercourse with every part of the globe with safety; at the same time that the delineations upon maps of places, rivers, and countries, are now so correct, that they enable a traveller to proceed without danger, and even predict, with certainty, the time it will require to convey him to any part of the globe.

It may be afferted, indeed, of this country, that its grandeur and commercial dignity have been greatly exalted by the invention of Paper; for it is prefumed, that the fuperiority which diftinguishes the manufactures of this Island, chiefly depends upon the liberal publications concentered from all the rest of the world, which have so greatly increased in latter years, and which are likely



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farther to be augmented. It is, in short, the reputation of the goods fabricated in Great-Britain, which has elevated it to the splendour and fame it now possesses, in the scale of nations, and enables it to monopolize the trade of the universe.—All these are benefits which have slowed from the invention of Paper, and which have so largely contributed to the present slourishing state of the country.

What infinite trouble and labour, what a fruitless consumption of time has not been saved by the knowledge of Paper! how many laborious and dangerous experiments have not philosophical projectors been spared! what labour of investigation and study have not been abridged by the events which the experiments of others have handed down to posterity! thereby affording to the present age a body of information more than adequate to the knowledge any one man could have



[10]

have attained to, in a thousand years, with all his faculties.

This reflection alone, must fix such an impression on any thinking mind of the invaluable utility of Paper, as to render any further commendation unnecessary; but in short, the inventions of Paper and Printing have been the causes of the various gradations of improvement in every art and fcience. Without it, the prefent age would neither have been more civilized nor wifer than it was many centuries ago, because one age could never have conveyed to its posterity, what the labours of the past had atchieved; for it is well known, that, in dark and barbarous ages, the inhabitants of no country have ever made any progress towards improvement and civilization, without the use of Writing, Printing, and Paper; and it feems very probable, that the early knowledge of this article amongst the Chinese, has been the cause of those acquire-



[11]

acquirements which have distinguished that truly wonderful nation: for it may be affirmed, that in proportion to the quantity of Paper consumed, by any stated number of inhabitants in literary pursuits, so will be their comparative information, civilized state, and improvement.

To enumerate all the various advantages which the invention of Paper has afforded mankind, could not be contained in an Essay of this nature: its uses are unquestionable; and the important services it has yielded to all countries where it has been employed are not to be calculated; it is sufficient to say here, that the growing youth are educated with facility in the principles of their duty, and barbarous states have been softened and enlightened by means of this discovery.

Although this fubject might be much enlarged upon, the intention of this Address is most humbly to present to Your

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[12]

Most Gracious Majesty the sirst useful Paper manufactured solely from Straw, and on which these lines are printed.*

From the remarks which have been already made, every person must be convinced, that it is of the utmost consequence to prevent a scarcity of the materials from which Paper is to be fabricated. Although cotton has been likewise used for this purpose, paper-makers in this country have depended on linen Rags for the regular pursuit of their employment.

All Europe has of late years experienced, an extraordinary scarcity of this article, but no country has been so much injured by it as England. The greatly advanced price, and the absolute scarcity, equally operating to obstruct many printing-presses in this kingdom; and various works remain, for these reasons, unpublished, which

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^{*} Part of this edition is printed on remanufactured white Paper.



[13]

might have proved very ferviceable to the community.

The great demands for Paper in this country have rendered it necessary to fupply its mills from the continent with Rags. This fupply is extremely precarious, and is likely to be more wanted, as the confumption of Paper increases, because this material, which is the basis of Paper, is not to be obtained in England in fufficient quantity. The evil consequence of not having a due fupply of Rags has been the stoppage of a number of Papermills; and as it is a manufactory which requires numerous hands (of men, women, and children); a great number of them have been thrown upon their respective parishes for want of employment. A still more important confideration, in the view of commerce, prefents itself, when the raw material comes from abroad, because the importation of it is paid in hard cash,

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[14]

the preparation of which might have advantageously employed numbers of idle hands at home.

These reflections induced me to make various experiments, with a view to remedy, in some degree, this evil; and, after many trials, I have the fatisfaction to remark. that I have discovered several substitutes for linen Rags, which have been heretofore unknown, or the experiments unfuccefsful, and which will merit the attention of the public. One of these discoveries is the Art of extracting Printing and Writing Ink from Waste Paper, whether in small or large pieces, by obliterating the ink, and rendering the Paper perfectly white, without injuring the texture of the regenerated Paper, and of a quality as good as it originally was, for the purposes of writing and re-printing.

It is worthy of the directors of families to order their fervants to fave all the waste White



[15]

White Paper, fuch as letters and old writing-paper, which are generally thrown away or burnt, and regarded as of no consequence; for, should this be attended to, very confiderable quantities would be collected, and large fums of money faved, which are now expended in foreign countries for Rags; because, if we calculate that Great Britain contains fifteen hundred thousand families, and that half a sheet of Paper should be daily faved in every family, it would produce four thousand four hundred tons,* which is about onethird of the quantity of Rags which have, of late, been converted annually into Paper in this country, whereby near two hundred thousand pounds would annually remain in this country, which fum is now fent abroad for the purchase of Rags; and eighty-two thousand one hundred and twenty-five pounds would be faved from fire

^{*} A ream, or five hundred sheets, being calculated at eighteen pounds weight.



[16]

fire and destruction, calculating a pound of old Paper torn into pieces at two pence.

It has been imagined, that the present war has principally contributed to produce the fcarcity of Paper-stuff, which, however, does not appear to be the cause, because the quantity of Rags used for making lint is very inconfiderable, compared to the enormous quantity at present used for the manufacture of Paper. Cartridges have usually been made on the continent of old written Paper, which heretofore has been of no other use to Paper-makers than for the fabrication of paste-boards.—It appears, from various confiderations, that the fcarcity has originated from the extension of learning, which occasions much larger quantities of Paper for writing and printing; the large increase of newspapers and monthly publications. Additional stationers, printers, and bookfellers, countenance this opinion.