

GEORGE W. WIGNER, London: (Germ. P., No. 2956, Dec. 8, 1877.)—*Purification of Sewerage* by the use of the following substances :

Alum .....	338 pts.
Blood .....	2 "
Clay .....	1010 "
Magnesia .....	5 "
Burnt clay .....	10 "
Salt .....	5 "
Bone black .....	15 "
Charcoal .....	20 "
Lime stone containing magnesia .....	1 "
Sulphate of alumina .....	90 "
"    "    iron .....	2 "
Gypsum .....	35 "
Alumina .....	50 "

4 lbs. of this mixture are said to be sufficient to purify 1,000 lbs. of sewerage.

The patent describes many of the apparatus necessary for the same.

PETER JACQUES, in Heumingen, and ALFR. SANVAL, in Strassburg, use *vegetable albumen* for the albumen employed in *tanning*. (Germ. P., No. 3644, Jan. 29, 1878.)

EDM. HAWTHORN MICKLEWOOD, GEORGE PEARSON FRIEND and WILLIAM RABLEY, in Paris: *Manufacture of Artificial Leather*. (Germ. P., No. 3128, March 19, 1878.)—Leather clippings are first treated with soda lye, then they are worked in a like manner as rags into paper, and the so-formed leather-paper is then tanned and pressed.

JOHANN PETER GRIESS, Strapenhill, Burton on Trent, England (Germ. P., No. 3224, March 12, 1878), prepares new *coloring materials* by the action of diazophenols on phenols.

The following substances have been applied by him, and have yielded colors, which may be practically utilized :

1. *Diazophenols* : Diazonitrophenol, Diazonitrobromphenol, Diazodichlorphenol, Diazosulfophenol, Orthodiazosulfophenol, Diazochlorsulfophenol, Diazobromsulfophenol, Diaziodsulfophenol, Diazonitrocresol, Diazosulfocresol, Diazosalicylic acid, Diazosulfosalicylic acid.

2. *Phenols* : Phenol, Kresol from coal tar,  $\alpha$  Naphtol,  $\beta$  Naphtol,  $\beta$  Sulfonaphtol,  $\alpha$  Sulfonaphtol, Resorcin, Orcin, Dioxynaphtalin, Dioxysulfonaphtalin.

All colors which may be prepared by the action of the mentioned Diazophenols upon Phenol, Kresol, Resorcin and Orcin, are yellow, orange, or brown ; those upon  $\alpha$  Naphtol,  $\beta$  Naphtol, and Dioxynaphtaline, as well as their Sulfoderivatives, are brown, purple, or red.

In all cases equal molecules of Diazophenols and Phenols enter into reaction, which takes place in the cold, but the fluids must be kept slightly alkaline during the operation.

Free mineral acids prevent the formation of the colors; acetic acid, however, does not interfere.

In some cases the coloring matter separates from the fluid quite easily ; in others, however, it must be precipitated by the addition of salt or muriatic and acetic acids.