MONSANTO CHEMICAL COMPANY

PHOSPHATE DIVISION, SALES DEPARTMENT

July 13, 1953

TO: ALL PHOSPHATE DIVISION SALESMEN

SUBJECT: AROCLOR PATENTS

To assist you in the promotion and sale of Arcolors, the Patent Department has gathered together abstracts of some of the patents issued concerning Aroclor use.

Please review these and we trust that the information will suggest Aroclor uses in your area.

P. G. Benignus

PGB/mm

DSW 269472

PATENTS RELATING TO THE USE OF AROCLORS AS PLASTICIZING FLAMEPROOFING AND OPACIFYING AGENTS FOR PLASTICS, PARTICULARLY VINYL PLASTICS

DSW 269473

1,887,676 Henry A. Gardner
Nov. 15, 1932

RESIN COMPOSITION SUITABLE FOR THE PRODUCTION OF FILMS

Claim 1. "A coating composition comprising a resin composition consisting essentially of a resinous material of the group consisting of rosin, glycerin ester resin, cumaron resin and glycerin ester and aldehyde condensates, chlorinated diphenyl, and a drying oil."

DSW 269474

1,972,446 Russell L. Jenkins, assignor to Swann Research, Inc. Sept. 4, 1934

ADHESIVE COMPOSITION

Claim 1. "An adhesive with reduced penetrating power which is thermoplastic, self-healing, substantially odorless and tasteless and which is comprised of chlorinated polyphenyls, a plasticizer and a pigment."

DSW 269475

2,028 716 Myron E. Delaney, assignor to Halowax Corporation
Jan. 21 1936

FIRE RESISTANT ELECTRICAL CONDUCTOR

Claim 1. "A covered wire having an inner conducting core and a cover impregnated with a material including a halogenated condensed nucleus cyclic compound, an incombustible plasticizer therefor, and an inert substance filling the pores and interstices of the cover to assist in retaining the said material on the wire in case of fire."

"Diphenyl, acenaphthene or phenanthrene may be chlorinated or otherwise halogenated to be substantially flame-proof in themselves and they form syrupy, viscous liquids and amorphous resin-like solid materials, depending upon the degree of halogenation. When added to the crystalline chloronaphthalene or other halogenated cyclic compounds, they yield very excellent flexible impregnating materials. The structureless or amorphous property of the plasticizers and the fact that they are syrupy, viscous or resin-like materials, prevents the chlorinated naphthalene or anthracene from cracking along the crystalline surfaces whenever the textile or wire is deformed, thus preventing the occurrence of any opening which would form a leakage path through which electricity might pass from the wire or which may weaken the coating and tend to lower its resistance to the action of flame."

DSW 269476

2,045,886 Daniel E. Strain, assignor to E. I. du Pont de Nemours & Company July 7, 1936

FLEXIBLE ARTICLE

Claim 1. A flexible article which comprises a flexible base material treated with methyl methacrylate polymers.

"In producing coating compositions it is frequently admisable to incorporate one or more plasticizers with the methyl methacrylate polymer or related coating compositions. Plasticizers exert, in general, a profound influence upon the properties of the resulting plastics, and consequently upon the properties of the articles coated with such plastics. A few representative examples of plasticizers which may be used in conjunction with the aforementioned resins are: **** halogenated hydrocarbons such as chlorinated diphenyl compounds; ethers such as dicresoxyethyl-ether; and also non-drying or semi-drying oils."

DSW 269477

2,052 000 Fritz Oschatz, assignor to I. G. Farbenindustrie Akt.
Aug. 25, 1936

LACQUER

Claim 13. "The process of producing lacquers, which comprises mixing with one another a polymeric vinyl halide containing more halogen than corresponds to the formula

$$(CH_2{=}CH\text{-halogen}_{1.14})_n,$$

a condensation product of a polycarboxylic acid, a polyhydric alcohol and a monocarboxylic acid containing more than 6 carbon atoms, chlorinated diphenyl and a solvent."

DSW 269478

2,054,309 Leo Rosenthal et al, assignors to I. G. Farbenindustrie Akt. Sept. 15, 1936

PROTECTING OF LIGHT METALS

Claim 1. "Light metals being coated with a protective layer containing as the essential ingredient a chlorinated rubber and having interposed there-between a layer containing as the essential ingredient a product of the polymerization of such polymerizable carboxylic acid derivatives as contain the grouping $CH_2=C=$."

" Example 2

A sheet of light metal containing an alloy of 90% of aluminum and 10% of magnesium is furnished with a priming coating by applying thereto by spraying a lacquer of the following composition:

	Parts
Polymerized vinylacetate	12.0
Chlorinated caoutchouc	2.4
Tricresylphosphate	2.4
Zinc white	20.0
Butanol	6.0
Xylene	20.0
Toluene	37.2

After drying, there is applied the protective coating by means of a lacquer of the following composition:

	Parts
Chlorinated caoutchouc	14.0
Tricresylphosphate	3.5
Chlorinated diphenyl of a chlorine content of 55%	2.0
Red iron oxide	10.0
Toluene	37.0
Xylene	33.5"

DSW 269479

2,058,120 William L. Wirbelauer, assignor to Johns-Manville Corporation Oct. 20, 1936

COLORED FIRE-RESISTANT FABRIC AND METHOD OF MAKING THE SAME

Claim 2. "Colored asbestos cloth, adapted for use in awnings, comprising asbestos cloth and, associated therewith, a pliable coloring composition including a drying oil, a pigment, and combustion extinguishing, waterproofing, mildew-proofing, and plasticizing agents, the said coloring composition being provided with fractures at close intervals, to increase the pliability."

"A typical composition used for coloring asbestos cloth by impregnation is the following:

Coloring composition used

	Parts by weight
Pigments	22.5
Pulverized diatomaceous earth	2.5
Boiled linseed oil	15.0
Spar varnish	5.0
Tricresyl phosphate	3.0
Aluminum naphthenate	0.75
Aluminum stearate	0.75
Polychlordiphenyl	14.0
3-chlor-2-hydroxy-diphenyl	0.5
Linoleate of lead and manganese	1.0
Volatile thinner (petroleum spirits)	35.0
Total	100.00 "

DSW 269480

2,071,636 Russell L. Jenkins, assignor to Swann Research, Inc. Feb. 23, 1937

PIGMENTED COMPOSITION

Claim 1. Process of producing translucency in organic plastic compositions consisting in incorporating with the plastic a highly halogenated diphenyl.

DSW 269481

2,077 699 Emil Kline, assignor to E. I. du Pont de Nemours & Company Apr. 20 1937

CELLULOSIC STRUCTURES

Claim 1. A cellulosic structure characterized by a subdued or low luster and having a finely divided completely halogenated ring hydrocarbon compound uniformly distributed throughout the mass thereof, said compound consisting of a ring hydrocarbon in which each hydrogen in the molecule has been substituted by halogen and being sufficiently inert to resist change or removal during the process of preparing the structure and the usual operations to which the structure may be subjected in use.

"I have found that I can produce cellulosic structures, such as filaments, threads, sheets, films, caps, tubing and the like, of either the regenerated cellulose or cellulose derivative type having a subdued or low luster and/or being opaque by incorporating in the solution from which the structure is prepared an organic substance, having an index of refraction differing by at least 0.1 from the mean index of refraction of the material constituting the mass of the structure and specifically a highly halogenated ring hydrocarbon, such as a highly halogenated derivative of benzene, diphenyl, naphthalene or anthracene, and which substance is non-fugitive, that is, it remains uniformly distributed substantially permanently throughout the mass of the cellulosic structure."

DSW 269482

2,077,700 Emil Kline, assignor to E. I. du Pont de Nemours & Company Apr. 20, 1937

ARTIFICIAL SILK HAVING SUBDUED LUSTER

Claim 1. Rayon containing approximately 1.25%, by weight, of finely divided deca chlorodiphenyl uniformly distributed throughout the mass thereof to impart a subdued or low luster and/or opacity to the product.

DSW 269483

2,096,110 Harvey G. Kittredge et al, assignors to Foilfilm Inc.
Oct. 19, 1937

ADHESIVE

"In combination, in an adhesive, of approximately 25% of viscous chlorinated diphenyl, approximately 50% of solid chlorinated diphenyl and approximately 25% of paracoumarone-indene resin."

DSW 269484

2,111,395 Otto J. Hartwick, assignor to Pittsburgh Plate Glass Company Mar. 15, 1938

RESIN FILM FOR COATING BARRELS AND SIMILAR ARTICLES

Claim 1. A chemically inert coating material for lining metallic containers of alcoholic beverages consisting of from 23 to 27 per cent of a chlorinated diphenyl resin, from 25 to 33 per cent of a resin constituting a condensation product of vinyl acetate and vinyl chloride in the proportions of about 87 per cent of vinyl chloride to about 13 per cent of vinyl acetate, from 24 to 40 per cent of inert metallic oxide pigment, from 11 to 15 per cent of a powder of a metal selected from a group consisting of copper and aluminum, from 2 to 7 per cent of a plasticizer, and an inert volatile solvent for the resins.

DSW 269485

2,111,449 James Willard Humphrey et al, assignors to American Viscose Corporation Mar. 15, 1938

DELUSTERED RAYON

Claim 1. "An article of manufacture, comprising delustered rayon containing from about 0.2 to 10 per cent chlorinated diphenyl delustrant and from about 0.5 to 15 per cent petroleum delustrant by weight dry yarn, the amount of petroleum delustrant present being substantially in excess of the amount of chlorinated diphenyl delustrant."

DSW 269486

2,115,214 Clifford Jay Rolle, assignor to Ault & Wiborg Corp. Apr. 26, 1938

COATING COMPOSITION

Claim 1. "A baking enamel containing a resin consisting of the conjoint polymer of vinyl acetate and vinyl chloride in which the proportion of vinyl chloride is in excess of the vinyl acetate and containing liquid chlorinated diphenyl as a plasticizer for the vinyl resin, and solvent and pigment, the proportions of the ingredients being such that a baked film of the composition upon metal, is free from orange peel formations, and is capable of being bent with the metal without cracking or flaking during forming and configurating operations."

DSW 269487

2,143,470 Wilhelm Becker et al, assignors to I. G. Farbenindustrie Akt. Jan. 10, 1939

RUBBER COMPOSITION

Claim. "A rubber mixture having incorporated therewith a chlorinated diphenyl, a chlorinated naphthalene and a high molecular weight film-forming organic compound of high chlorine content selected from the group consisting of chlorinated rubber, polyvinyl chloride, after-chlorinated polyvinyl chloride, after-chlorinated polyvinyl esters and after-chlorinated halogen butadiene polymerizates, the total chlorine content of the mixture of rubber plus the high molecular weight film-forming compound plus the chlorinated diphenyl plus the chlorinated naphthalene being not substantially below about 50% and the composition being capable of being worked and vulcanized like natural rubber and yielding vulcanizates which show no tendency to exude any of the said ingredients."

DSW 269488

2,145,235 Robert E. Cryor, assignor to Union Asbestos & Rubber Company Jan. 31, 1939

LOCOMOTIVE CAB CURTAIN

Claim 1. "A locomotive cab curtain comprising a fabric having asbestos warp threads and having spun glass weft threads, and said fabric being impregnated with a waterproofing and fireproofing composition, including chlorinated rubber, a non-combustible plasticizer and a strengthening agent selected from a group of natural or synthetic wax-like materials having melting points in the range of 60 to 110 degrees C."

"Typical examples of a preferred composition are as follows:

1. 36% chlorinated rubber, 12% chlorinated naphthalene, 52% chlorinated diphenyl.

2. 36% chlorinated rubber, 12% carnauba wax, 52% chlorinated diphenyl.

3. 40% chlorinated rubber, 12% carnauba wax, 48% tricresyl phosphate.

4. 40% chlorinated rubber, 12% chlorinated naphthalene, 48% chlorinated diphenyl.

5. 25% chlorinated rubber, 30% chlorinated naphthalene, 45% chlorinated diphenyl.

6. 25% chlorinated rubber, 40% carnauba wax, 35% tricresyl phosphate."

DSW 269489

2,147,824 John Krauss Webb, assignor to International Standard Electric Corporation Feb. 21, 1939

ELECTRICAL INSULATING MATERIAL

Claim 1. "A process of manufacturing tapes, sheets or the like, of electrical insulating material which comprises impregnating tapes, sheets or the like, of fibrous material with styrene or styrene mixture so as to fill the pores a nd interstices thereof, subsequently converting the styrene into polystyrene at an elevated temperature while the fibrous material is immersed in a bath of liquid styrene or styrene mixture whereby loss of styrene by volatilization during polymerization is inhibited, thereafter removing the fibrous material from said bath and subsequently treating the fibrous material to remove any surplus of polystyrene."

Claim 6. "A process according to claim 1 wherein the fibrous base is impregnated with a mixture comprising approximately 60% styrene and approximately 40% chlorinated diphenyl."

DSW 269490

2,158,281 James G. Ford et al, assignors to Westinghouse Electric & Manufacturing Company May 16, 1939

FIREPROOF CABLE COMPOUND

Claim 1. "A fireproof dielectric compound comprising from 50 to 61.50% of chlorinated naphthalene containing 54 to 65% chlorine, from 25 to 31% of chlorinated diphenyl material containing 54 to 69% chlorine, and from 7.5 to 25% of polymerized styrene, said compound being plastic within the temperature range of from about -0°C. to about 100°C. so that in a cable impregnated therewith the compound remains sufficiently flexible at the lower temperature to be bent without injury and sufficiently plastic at the higher temperature as not to run out of the cable."

DSW 269491

2,160,904 John H. Reilly et al, assignors to The Dow Chemical Company, June 6, 1939

PLASTIC DERIVATIVES OF VINYLIDENE CHLORIDE

Claim 1. A composition comprising polymeric vinylidene chloride prepared from monomeric vinylidene chloride having a boiling point between 31.5° and 32°C., plasticized with between 5 and about 45 per cent, based on the weight of plasticized composition, of a material selected from the group consisting of chlorinated diphenyl oxides, chlorinated diphenyls, each of the foregoing containing between about 3 and about 6 chlorine atoms per molecule, chloronaphthalenes, and poly-chloro-benzenes, to increase the workability of the polymer at low temperatures and to increase toughness and strength thereof when subjected to heat treatment.

DSW 269492

2,183,611 Edward C. Homan, assignor to Irvington Varnish & Insulator Company Dec. 19, 1939

ELECTRICAL INSULATION MATERIAL

Claim 1. Bus bar insulation comprising an enveloping sheet of fabric coated with waterproofing material and faced on its external side with an adhered layer of flexible thermoplastic electrical insulating compound of high fire and water proof characteristics comprising 40 per cent copolymerized vinyl chloride and vinyl acetate, 26 per cent tricresyl phosphate, 13 per cent chlorinated diphenyl, 19 per cent filler material and 2 per cent lead oxide as a stabilizing agent, these ingredients in such proportions being adapted to become adhesively tacky under applied pressure and heat upwards of 250 degrees F. but which will remain set and non-dripping under bus bar operating temperatures, said sheet having overlapped meeting marginal portions bonded together by said compound.

DSW 269493

2,194,994 Maurice Belloc, assignor to Societe Nobel Francaise
Mar. 26, 1940

SOLVENTS FOR THE CONDENSATION PRODUCTS OF POLYVINYL ALCOHOLS AND ALDEHYDES

Claim 1. "A composition for use in making photographic films comprising a substantial quantity formal of glycol in amount sufficient to dissolve of high viscosity polyvinyl formal, and cyclic said polyvinyl formal."

" Example I

Coating composition for textiles, comprising polyvinyl acetal

	Grams
High viscosity polyvinyl acetal	225
Pentachlorodiphenyl.....	525
Cyclic formal of glycol.....	405
Methanol.....	45 "

DSW 269494

2,216,835 Wallace Hume Carothers, assignor to E. I. du Pont de Nemours & Company Oct. 8, 1940

POLYMERIC MATERIALS

Claim 1. A plasticized synthetic linear polyamide containing as the plasticizing agent a compound of the class consisting of halogenated hydrocarbons and halogenated hydrocarbon ethers, the said polyamide being capable of being drawn into continuous filaments which show by characteristic X-ray patterns orientation along the fiber axis.

"As additional examples of halogenated hydrocarbons and halogenated ethers which may be used in making the compositions of this invention, there may be mentioned chlorinated ethyl benzene tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, tetrabromobenzene, pentabromobenzene, hexabromobenzene, pentachlorodiphenyl, hexachlorodiphenyl, octachlorodiphenyl, polychlorinated naphthalene, polychlorinated anthracene, polychlorinated diphenyl ether, polychlorinated benzyl phenyl ether, polychlorinated alkyl benzenes, and polymerized chloroprene."

DSW 269495

2,227,637 Rudolf Engelhardt, assignor to I. G. Farbenindustrie Akt. Jan. 7, 1941

IMPREGNATING AND INSULATING MATERIAL

"The present invention relates to a new composition of matter suitable for being employed for insulating purposes and for filling interstices, for embedding or covering objects, such uses being referred to in the following as potting or compounding purposes."

Claim 1. "The composition of matter comprising a chlorinated polynuclear aromatic hydrocarbon selected from the group consisting of chlorinated diphenyls and chlorinated naphthalenes, the said materials having homogeneously incorporated therewith a polymerized N-vinylcarbazole in an amount of not more than about 7.5% of the total mixture."

DSW 269496

2,252,486 Maurice H. Arveson, assignor to Standard Oil Company
Aug. 12, 1941

COATING COMPOSITION AND THE LIKE

Claim 1. A composition of matter capable of forming a flexible, glossy, flame-resistant and waterproof coating comprising a mixture of a hard, brittle, highly chlorinated polymer of unsubstituted isobutylene normally insoluble in organic solvents, said chlorinated polymer containing between about 45% and about 65% chlorine, and compatible viscous chlorinated diphenyls as a plasticizing agent therefor, said chlorinated diphenyls containing at least 25% chlorine.

DSW 269497

2,267,773 Joseph Frederic Walker, assignor to E. I. duPont de Nemours & Company Dec. 30, 1941

COLLOIDAL DISPERSIONS OF 1,2-DIHYDRONAPHTHALENE POLYMER

Claim 1. "A composition of matter comprising a colloidal dispersion of the infusible polymer of 1,2-dihydronaphthalene in a halogenated organic compound having a boiling point not lower than 200°C. at one atmosphere and which is selected from the group consisting of: (1) halogenated benzenes and hydroxy benzenes having at least three nuclear halogen atoms: (2) halogenated benzenes and hydroxy benzenes having at least one nuclear aliphatic radical and at least two nuclear halogen atoms, (3) halogenated polycyclic aromatic hydrocarbons having at least one nuclear halogen atom, (4) halogenated polycyclic aromatic hydrocarbons having at least one nuclear hydrogen substituted by a hydroxy radical and at least one nuclear halogen atom; (5) halogenated polycyclic aromatic hydrocarbons having at least one nuclear aliphatic radical and at least one nuclear halogen atom, (6) halogenated aromatic-aliphatic ethers having at least one halogen atom in the aromatic radical and at least two carbon atoms in the aliphatic radical, and (7) wholly aliphatic halogenated hydrocarbons having at least three carbon atoms and not less than 30% by weight of halogen."

"III. Halogenated Polycyclic Aromatic Hydrocarbons Having One or More Nuclear Halogen Atoms

Examples

Polyhalogenated naphthalenes ("Halowaxes")
Halogenated diphenyls ("Aroclors")
Alpha-chlornaphthalene 2-chlordiphenyl
Alpha-brom-naphthalene 4-chlordiphenyl
Alpha-iodo-naphthalene 1-chloranthracene
Alpha-fluor-naphthalene "

DSW 269498

2,268,415 Arnold J. Morway et al, assignors to Standard Oil Development Company Dec. 30, 1941

COATING COMPOSITION

Claim 1. "A paint composition comprising a chlorinated isobutylene polymer, a drying oil and a pigment."

"With the harder varieties of chlorinated products, such as chlorinated isobutylene polymer containing above 45% chlorine, it may be necessary to use as much as 30% of a plasticizer, depending upon the use to which the finish is to be put. For general outside use the addition of drying oils and of drying oil-modified alkyd resin mixtures is preferred. Tricresyl phosphate and dibutyl phthalate are especially suitable plasticizers, although many other commercially available plasticizers, such as dibutyl tartrate, raw, blown, or boiled linseed oil, boiled tung oil, methyl cyclohexyl adipate, etc. are also compatible with chlorinated isobutylene polymer. Film plasticity is preferably obtained by changing the type of chlorinated polymer used rather than by adding more plasticizer. For finishes to be applied to concrete, stucco, plaster, cement, asbestos boards, brick and similar surfaces it is preferable to use a plasticizer which will not saponify, such as chlorinated diphenyl, highly aromatic oils and terpene balsams."

DSW 269499

2,273,436 Kurt Desmari et al assignors to I G. Farbenindustrie Akt. Feb. 17, 1942

COMPOSITION OF HALOGEN CONTAINING FILM FORMING MATERIAL

Claim 1. "A composition of matter comprising a halogen containing film-forming plastic material selected from the group comprising chlorinated rubber, polyvinyl chloride, and chlorobutadiene, and an acetal of a compound of the type formula aryl·X·alkyl·OH wherein X stands for a member of the group consisting of O and S as a plasticizer therefor."

" Example 1

An iron plate which has been well freed from rust is provided with a varnish-layer of the following composition:

	Parts
Chlorinated rubber (65% chlorine content)	12
Formaldehyde acetal of cresoxyethanol	3
Chlorinated diphenyl (57% chlorine content)	1.8
Red lead	60
A mixture of toluene-xylene (1:1)	23.2

On drying, there is applied twice a lacquer of the following composition:

	Parts
Chlorinated rubber (chlorine content 64%)	25
Formaldehyde acetal of phenoxyethanol	8

are dissolved in 52 parts of xylene or a mixture of toluene-xylene (1:2) and intimately mixed with 15 parts of iron oxide or titanium dioxide.

A very adhesive, elastic, stable protecting layer is thus obtained.

Instead of chlorinated rubber there can be employed the products of the afterchlorination of polymerized 2-chloro- or bromo-butadiene-1.3 of a chlorine content of 65%."

DSW 269500

2,291,673 Fritz Albers et al, assignors to General Aniline & Film Corporation Aug. 4, 1942

PRODUCTION OF PRINTING FORMS

Claim 15 "A printing material consisting of a support and two superimposed layers on one side of said support, the layer next to said support being essentially of gelatin, the upper layer black-colored comprising a mixture of chlorocaoutchouc, chlorinated diphenyls, stearin pitch, and higher aliphatic alcohols with 10-14 C-atoms or mixtures thereof and having such a degree of softness that said gelatin layer is exposed by a locally limited pressure on said upper layer."

2,291,988 Robert L. Sibley, assignor to Monsanto Chemical Company Aug. 4, 1942

METHOD OF IMPROVING THE PHYSICAL PROPERTIES OF RUBBER

Claim 1. The method of improving the physical properties of a rubber which comprises incorporating therein from substantially 0.5 to 3.0 parts on the rubber of an improving agent comprising a diphenyl selected from the class consisting of diphenyl and nuclear substituted diphenyls wherein the substituents are selected from the class consisting of hydrocarbon radicals, nitro radicals and halogen radicals.

DSW 269502

2,293,420 Georg Wick, Seized by Alien Property Custodian
Aug. 18, 1942

MANUFACTURE OF LACQUERED SHAPED ARTICLES

Claim 1. In the process of manufacturing shaped articles of sheet metal the steps which comprise coating the sheet metal from which the articles are to be formed with an air-drying lacquer having an after-chlorinated polyvinyl chloride as a basis, drying said coating and then, without subjecting the coated material to a baking treatment, shaping the coated sheet metal into the desired article by pressing, whereby articles are obtained having a corrosion-resistant crack-free coating.

"Example 4

	Parts
Polyvinyl chloride, after-chlorinated	14
Tricresyl phosphate	6
Alkyd resin of 75 per cent strength	5
Acetone	10
A mixture of methyl- and ethyl acetates	10
Butyl acetate	23
Solvent naphtha	33
	100

Example 5

	Parts
The lacquer used in Example 4	67
Alkyd resin of 75 per cent strength	4
Chlorinated diphenyl	2
Cyclohexanone	8
Toluene	17
Methylglycol acetate	2
	100

"

DSW 269503

2,306,570 Edward W. Scripture. Jr. Dec. 29, 1942

PROCESS FOR PROTECTING AND COLORING CONCRETE

Claim 1. "The process of imparting a uniform, durable color to a hardened concrete or mortar structure which comprises applying to the surface of such structure a liquid chlorinated diphenyl of relatively low viscosity, a coloring material, and a solution of at least one member of the group consisting of a chlorine-containing vinyl resins, and subsequently applying a coat of a high melting point wax-like substance."

DSW 269504

2,318,780 James Willard Humphrey assignor to American Viscose Corporation May 11, 1943

COATING COMPOSITION

Claim 1. A protective coating composition comprising approximately two parts polymerized butyl methacrylate, approximately one part copolymers of vinyl chloride and vinyl acetate and approximately three-fourths part normally solid chlorinated biphenyl.

DSW 269505

2 326,611 David R. Wiggam et al, assignors to Hercules Powder Company Aug. 17, 1943

BRUSH COMPRISING PLASTIC MASS

Claim 1. A brush comprising, in combination, a plastic mass substantially unaffected by hot water comprising:

	Per Cent
Ethyl cellulose having an ethoxyl content between about 41% and about 51%.....In excess of about	70
Substantially non-volatile liquid refined mineral oil.....About 5 to about	20
A water resistant softening modifier miscible with said oil.....About 5 to about	20

and a bristle tuft mounted in said plastic mass.

"The modifier, or mixture of modifiers, which may be included in the ethyl cellulose plastic to toughen, soften, plasticize, or otherwise improve the plastic, will in no case exceed more than about 20% of the plastic composition. Preferably, the modifier or mixture of modifiers will comprise between about 5% and about 15% of the plastic. Modifier or modifiers used must be insoluble in water and resistant to the action of water; preferably the modifier will be water repellent in nature. Preferably chlorinated diphenyl, methyl phthallyl ethyl glycollate, dibutyl phthalate, ethyl ortho-benzoyl benzoate or refined mineral oil is used in the brushes of this invention."

DSW 269506

2,333,513 Leo J. Berberich et al, assignors to Westinghouse Electric & Manufacturing Company Nov. 2, 1943

PLASTIC COMPOSITION

Claim 1. A moldable, fire-resisting composition suitable for an insulating member, comprising, in combination, 35% and higher amounts of polystyrene, a substantially symmetrically halogenated aryl compound having good electrically insulating properties and melting above 150°C. in amount sufficient to provide for fire resistance, and the resinous reaction product of one mol of maleic anhydride and from one to eight mols of styrene in amount sufficient to impart improved thermal strength characteristics to the polystyrene.

"It has been found that certain halogenated hydrocarbons having good electrically insulating properties may be incorporated into polystyrene in order to impart fire resistance thereto without causing any substantial increase in dielectric loss. The halogenated compounds which have been found to possess these characteristics are the symmetrically chlorinated aryl components having low or substantially zero dipole moment. Examples of such chlorinated compounds are decachlorobiphenyl, hexachlorobiphenyl, octochloronaphthalene, chlorinated terphenyl and hexachlorobenzene."

DSW 269507

2,347,103 Ralph F. Hayes, assignor to Monsanto Chemical Company
Apr. 18, 1944

POLYSTYRENE COMPOSITION

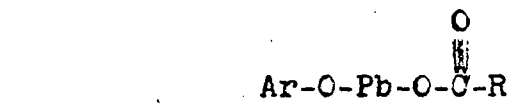
Claim 1. A new composition of matter comprising a mixture of polystyrene and a substantially equal amount by weight of decachloridiphenyl, and characterized by having a heat distortion temperature above that of the polystyrene.

DSW 269508

2,350,199 Ronald W. Staley, assignor to General Electric Company May 30, 1944

VINYL RESIN

Claim 1. A composition comprising (1) the product of conjoint polymerization of a mixture comprising vinyl chloride and an acrylic ester, and (2) a heat and light stabilizer comprising a compound having the general formula:



wherein Ar is an aryl radical and R is an aliphatic radical having at least 9 carbon atoms.

"Example 6

	Parts
Polyvinyl chloride.....	82
Plasticizer (#1488 Pyranol-a chlorinated diphenyl composition.....	15
Phenoxy lead stearate.....	3

DSW 269509

2,357,725 Harry Bennett Sept. 5, 1944

FLAMEPROOFING

Claim 1. A flameproofing emulsion comprising a solution of coalescable, permanently pliable, water-insoluble, incombustible halogen substituted hydrocarbon serving as organic binder material in a volatile organic solvent therefor and an aqueous solution of a water-soluble inorganic fire-retarding component, the aqueous solution being the dispersed phase and the emulsion, on application to a material to be flameproofed providing a continuous pliable film of coalesced particles of the binder material including interiorily isolated minute particles of the soluble fireretarding component and restricting access of water to the said component on exposure of the flameproofed material to water.

"Among binder materials that meet these general requirements and that are particularly satisfactory for use in my flameproofing emulsion are the following: Chlorinated rubber, chloro-rubber, neoprene, chlorinated naphthalene (Halowax) polychlor diphenyl such as Aroclor, and incombustible pliable rubbery chlorine derivatives of hydrocarbons in general."

DSW 269510

2,376,778 Ernest L. Kallander, assignor to Dennison Manufacturing Company May 22, 1945

HEAT-SEAL SHEET MATERIAL

Claim 1. "Sheet material having a thermo-adhesive coating which is resistant to cold flow, free from tackiness and which at temperatures between the range of approximately 200 to 400°F. becomes adherent to a wide range of surfaces without substantial loss of film strength and resistance to cold flow, said coating consisting essentially of 4 to 40 parts wax, 30 to 80 parts resin, and 10 to 50 parts of a mixture of rubber and a cyclo-rubber."

"Example 3

Paraffin wax, 140°F. M P	lbs	60
Chlorinated diphenyl (Aroclor 5460)	lbs	.134
Cumarone resin (Cumar W-1 1/2)	lbs	66
Pale crepe rubber	lbs	40
Cyclo-rubber (Pliolite #40, unmilled)	lbs	100
Copper inhibitor, antioxidant	lbs	1.5
Benzol	gals	52
Naphtha	gals	100
Alcohol	gals	3 "

DSW 269511

2,378,714 Martin Leatherman June 19, 1945

FIREPROOFING COMPOSITIONS

Claim 5. "A fireproofing composition comprising chlorinated paraffin having a chlorine content of approximately 46 per cent by weight of the paraffin, zinc carbonate, monocalcium chlorophosphate, a wetting agent for the solid ingredients, a dispersion medium and a plasticizer from the class consisting of tricresyl phosphate, chlorinated diphenyl and triphenyl phosphate."

DSW 269512

2,392,412 John E. Robinson et al, assignors to American Can Company Jan. 8, 1946

COMPOSITION FOR LINING THE SEAMS OF SHEET METAL CONTAINERS

Claim 1. "A gasket lining composition for lining the seams of sheet metal containers for anti-freeze liquids and the like, comprising the following mixture in approximately the following proportions by weight: 70 pounds of a copolymer of vinyl acetate and vinyl chloride, 35 pounds of chlorinated diphenyl, 35 pounds of butyl phthalyl butyl glycollate, 284 pounds of suitable solvent mixture and 4.25 pounds of a filling and coloring material, said composition being further characterized by providing an hermetic seal for said anti-freeze liquid containing highly penetrating ingredients."

DSW 269513

2,407,493 Lucas P. Hart, Jr., assignor to General Electric Company Sept. 10, 1946

ELECTRIC APPARATUS

Claim 1. "Electrical apparatus comprising in combination a tank having therein an electrical conductor and an insulating fluid comprising a halogenated aromatic hydrocarbon, and a gasket material between adjoining portions of said tank, said gasket material being exposed to the action of said fluid and comprising a plasticized copolymer of butadiene and acrylonitrile, the plasticizer for said copolymer being dissolvable in said fluid at operating temperatures of said apparatus, said fluid having the characteristic of replacing the dissolved plasticizer so as to maintain substantially the plasticity of said gasket material, whereby a fluid-tight seal is maintained between said adjoining portions of said tank."

"However, contrary to this prior knowledge that synthetic rubber-like materials such as those including butadiene swell up considerably more than rubber in chlorinated hydrocarbons, and in spite of the characteristics described above which show that this material is unacceptable as a gasket material in such chlorinated hydrocarbons as carbon tetrachloride, I have found that rubber-like or synthetic elastomer compositions such as those including butadiene, and particularly those which include a copolymer of acrylonitrile within the range of approximately 25 to 40%, and butadiene within the range of approximately 60 to 75% when in contact with hydrocarbons of the halogenated cyclic or aromatic hydrocarbon type, such as chlorinated aromatic hydrocarbons including chlorinated diphenyl, not only swell up much less than rubber but that the plasticity thereof is maintained and substantially no shrinkage, after initial expansion, occurs."

DSW 269514

2,407,666 Martin Leatherman Sept. 17, 1946

FIRE RESISTANT COATING COMPOSITION

Claim 10. "A composition of matter as described, comprising polymeric material from the group consisting of n-butyl methacrylate polymer and the ethyl, methyl, and propyl ester polymers of acrylic and methacrylic acids; plasticizing material from the group consisting of tricresyl phosphate, triphenyl phosphate, dibutyl phthalate and chlorinated diphenyls; polymeric material from the group consisting of polyvinyl chloride polymer and vinyl chloride-vinyl acetate copolymer the quantity of material from this group being at least equal to that of the first mentioned group; at least one solvent from the group consisting of acetone, mineral spirits, xylol, butanol, ethanol, isobutanol, toluol, naphtha, and Stoddard solvent and zinc carbonate in proportion roughly equal to about 40% by weight of the vinyl polymeric material; said plasticizing and solvent materials being in quantity to produce the desired consistency."

DSW 269515

2,428,202 James W. Kemmler, assignor to Sloane-Blabon
Sept. 30, 1947

FIRE-RESISTANT LINOLEUM PRODUCT

Claim 1. "A linoleum composition embodying a filler and a cement, the cement constituting from 20% to 30% by weight of the composition and containing oxidized and gelled siccative oil together with from 40% to 70% of chlorinated resin containing from 40% to 70% of chlorine, said chlorinated resin including at least 28.5% chlorinated paraffine, the filler being composed substantially entirely of inorganic materials, the composition being characterized by the fact that it will not continue to burn or glow more than 30 seconds after being withdrawn from the flame of a Bunsen burner in which it has been held for a period of 15 seconds."

" Example I

12 parts by weight of oxidized linseed oil gel were mixed with 20 parts by weight of chlorinated diphenyl and 8 parts of 40% to 45% chlorinated paraffin. This mixture was introduced into a Banbury mixer and 18 parts of wood flour, 24 parts of granulated cork and 18 parts of pigment and inert fillers were added thereto. The mixture was worked in a Banbury mixer for four minutes until a uniform product of suitable consistency was obtained. The resulting product was then applied to a backing of burlap which previously has been fire-proofed by treatment with borax. After curing for nine days at 200°F. the product was suitable cured. A sample of the product when subjected to a test for fire-resistance, as described above, produced a flame which went out after fifteen to twenty-five seconds. The chlorinated paraffine constitutes approximately 28.5% of the chlorinated resin mixture.

"In place of the chlorinated diphenyl used in this example a 70% chlorinated paraffine may be used. The chlorine content of the cement in this example, when chlorinated paraffine is used in place of the chlorinated diphenyl, is 43% to 44 % by weight."

DSW 269516

2,454,255 Joseph R. Mares, assignor to Monsanto Chemical Company Nov. 16, 1948

POLYSTYRENE-CHLORINATED META DIPHENYL BENZENE COMPOSITION

Claim. A composition of matter consisting of 100 parts of polystyrene resin and 100 parts of chlorinated meta diphenyl benzene containing 68% chlorine, said composition being characterized by a heat distortion temperature above that of polystyrene.

DSW 269517

2,461,538 Earl K. Fischer, assignor to Interchemical Corporation
Feb. 15, 1949

FIRE-RETARDING COMPOSITIONS

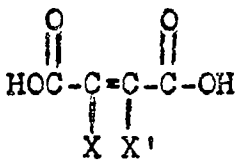
Claim 1. "In a fire-retarding composition, the combination of a flameproofing agent selected from the group consisting of chlorinated paraffin, chlorinated napthhalene, and chlorinated diphenyl and from 5 to 50%, based on the total weight of solids in the composition, of a powdered water- and organic solvent-insoluble non-combustible glow-retarding reaction product of an aldehyde with a member of the group consisting of urea, thiourea, biuret, guanidine, dicyandiamide and melamine, the average diameter of the reaction product particles ranging from 0.2 to 5 microns."

DSW 269518

2,461,942 Walter T. L. Ten Broeck, Jr., assignor to Wingfoot Corp. Feb. 15, 1949

VINYL CHLORIDE-ALKYL ESTER OF UNSATURATED DICARBOXYLIC ACID COPOLYMER SPONGE COMPOSITION

Claim 1. "A light weight, soft and elastic sponge composition comprised of a copolymer of 2% to 25% of an alkyl ester of an acid having the structural formula



in which X and X' are an atom of the group consisting of hydrogen and chlorine, and 75% to 98% of vinyl chloride, and containing 50% to 150% (based on the weight of the copolymer) of a liquid plasticizer which is a solvent for the copolymer, the sponge having gas filled cells dispersed therein."

"The sponge compositions may be filled or mixed with solid compositions which strengthen, color, or otherwise modify the physical properties thereof. These compositions include calcium silicate, magnesia, calcium carbonate, talc, titanium dioxide or colored pigments, such as lead chromate, or fibrous materials, such as asbestos, glass fiber, cotton floc or other vegetable fibers. Stiffening agents, such as finely divided glass, fuller's earth or diatomaceous silica, and inert fillers, such as sawdust, cork or gypsum, may be added. If desired, fire-proofing compositions, such as chlorinated diphenyl, may be included to increase the temperature of combustion. Suitable dyes may also be added to produce any desired color in the porous vinyl composition."

DSW 269519

2,475,626 Martin Leatherman July 12, 1949

COMBUSTION RETARDING COATING COMPOSITION

Claim 4. "A composition for rendering fabric rot- and fire-resistant, comprising a vinyl polymer of the group consisting of polyvinyl chloride and copolymers of vinyl acetate and vinyl chloride, zinc oxide in the proportion of 1 part zinc oxide to 1 1/2-3 parts of vinyl polymer, at least one plasticizer of the group consisting of tricresyl phosphate, triphenyl phosphate, dibutyl phthalate, and chlorinated diphenyl, at least one solvent of the group consisting of acetone, diacetone alcohol, ethanol, butanol, isobutanol, mineral spirits, naphtha, Stoddard solvent, toluol, and a solvent consisting of aromatic compounds having a specific gravity of about 0.858 and a boiling range from 265°F. to 375°F., and a suitable amount of inert pigment, said plasticizer and solvent being in quantity to produce the desired consistency."

DSW 269520

2,478,879 Walter T. L. Ten Broeck, Jr., assignor to Wingfoot Corporation Aug. 9, 1949

POROUS COMPOSITIONS

Claim 1. "A porous resinous product of good compression resistance and elasticity containing dispersed bubbles of a fixed gas, the product comprising a blend of (1) a copolymer of 90% by weight of vinyl chloride and 10% by weight of dialkyl ester of a butenedioic acid and (2) 5% to 40% by weight based on the vinyl chloride copolymer of a polyvinyl acetal resin."

"The sponge compositions may be filled or mixed with solid compositions which strengthen, color, or otherwise modify the physical properties thereof. These compositions include calcium silicate, magnesia, calcium carbonate, talc, titanium dioxide or colored pigments such as lead chromate or fibrous materials, such as asbestos, glass fiber, cotton floc or other vegetable fibers. Stiffening agents, such as finely divided glass, fuller's earth or diatomaceous silica and inert fillers, such as sawdust, cork or gypsum, may be added. If desired, fire-proofing compositions, such as chlorinated diphenyl, may be included to increase the temperature of combustion. Suitable dyes may also be added to produce any desired color in the porous vinyl composition."

DSW 269521

2,480,298 William Bernard Happoldt, Jr., assignor to E. I. duPont de Nemours & Company Aug. 30, 1949

FLAME RETARDANT COMPOSITIONS

Claim 1. "A composition of matter comprising at least 50 per cent by weight of solid polythene, 20 per cent to 35 per cent by weight of antimony trioxide and at least 6 per cent by weight of a solid chlorinated hydrocarbon, the said chlorinated hydrocarbon containing from 55 per cent to 80 per cent by weight of chlorine; the combined weight of antimony trioxide and the said solid chlorinated hydrocarbon being present in an amount of between 38 per cent to 50 per cent by weight based on the combined weight of polythene, antimony trioxide and chlorinated hydrocarbon present in said composition and said proportions of polythene, antimony trioxide and chlorinated hydrocarbon being based on the combined weight of polythene, antimony trioxide and chlorinated hydrocarbon present in said composition."

" Example IV

57.6 parts of polythene having a molecular weight of from 18,000-20,000 and containing 0.2% by weight of an antioxidant, 28.3 parts of antimony trioxide, and 14.1 parts of "Aroclor" 1270 which is a solid mixture of chlorinated diphenyls containing 70% chlorine were compounded and extruded on wire as described in Example I. The flame retardance rating of the wire coating was 4."

DSW 269522

2,481,687 Martin Salo et al, assignors to Eastman Kodak Company
Sept. 13, 1949

HOT MELT COATING COMPOSITION

Claim 1. "A composition of matter adapted for use in melt-coating operations having a viscosity of less than 100,000 cps. at 170°C. essentially consisting of 10-80% of a heat stable lower alkanoate ester of cellulose having a butyryl content of at least 45%, not more than two hydroxyls per 24 cellulose carbon atoms, and an acetone viscosity of 5-200 centipoises, 0-40% of a heat resistant organic acid ester of an aliphatic alcohol, which ester contains only C, H, and O and has a molecular carbon content of 18-24 carbon atoms and a molecular weight of 306-392 and 10-80% of a chlorinated diphenyl having a chlorine content of more than 40%."

2,486,756 John F. Murphy et al, assignors to Monsanto Chemical Company Nov. 1, 1949

SYNTHETIC RESIN ADHESIVE

Claim 1. An aqueous emulsion adhesive composition containing from 60 to 80% solids comprising 100 parts of polystyrene resin, 100 to 450 parts of kaolin, 150 parts to 500 parts of a plasticizer for the polystyrene resin, 20 to 50 parts of a water-soluble emulsifying agent, and 4 to 60 parts of sodium silicate.

"The chlorinated diphenyl shown in the examples acts as a plasticizer and flame retarder for the polystyrene resin. Other chlorinated aromatic hydrocarbons may be used such as the chlorinated terphenyls, the chlorinated naphthalenes and chlorinated diphenyls having other chlorine contents than that shown in the examples. The chlorinated hydrocarbons may be replaced in whole or in part by other well known plasticizers for polystyrene such as phthalate esters, phthalyl glycollates, phosphate esters, etc. It is essential, however, that a plasticizer or mixture of plasticizers be used in amounts ranging from about 150 parts to about 500 parts per 100 parts of polystyrene resin."

DSW 269524

2,506,014 Francis Joseph Curtis, assignor to Monsanto Chemical Company May 2, 1950

POLYVINYL ACETAL COMPOSITIONS

Claim 1. "A composition of matter consisting essentially of a polyvinyl acetal resin and a still residue obtained as a by-product in the process which includes the steps of heating a compound taken from the group consisting of benzene and mixtures thereof with toluene and xylene to temperatures at which diphenyls and terphenyls are formed, distilling the product to remove unconverted materials that boil below 200°C., chlorinating the resultant residue and distilling the chlorinated mixture at 250 to 420°C. to remove therefrom pure chlorinated diphenyls and chlorinated terphenyls, said still residue consisting essentially of chlorinated polyphenyl compounds taken from the group consisting of chlorinated tri-ortho-phenylene and chlorinated diphenyl benzene polymers, said residue having a melting point of from 50 to 250°C. and a chlorine content of 50 to 60%, said composition containing up to 100 parts of still residue per 100 parts of polyvinyl acetal resin."

DSW 269525

2,525, 177 William C. Lockwood, assignor to Calresin Corporation
Oct. 10 1950

VINYL RESIN COMPOSITIONS AND MOLDS PRODUCED THEREFROM

Claim 1. A resinous composition having, when cast and congealed, flexibility and rubber-like properties suitable for forming molds for casting of thermosetting resin, which includes a vinyl resin taken from the class consisting of polyvinyl chloride and polyvinyl chloride acetate resins, which polyvinyl acetate resins contain in excess of 88% vinyl chloride, a resinous chlorinated terphenyl hydrocarbon compound, which compound is solid at room temperature, and, in addition, plasticizers for said vinyl resin, and an oil substantially non-polymerizable and substantially non-volatile when exposed to temperatures up to substantially 400°F., the resin and plasticizer being so proportioned that said composition is free-flowing and substantially undecomposed when heated to a temperature of substantially 380 to 400°F. and of sufficient rigidity to maintain its mold shape at temperatures of about 150-200°F.

"I have found that a suitably chosen chlorinated terphenyl (chlorinated xenyl benzol) or chlorinated isomeric terphenyl or a mixture of the chlorinated diphenyl (xenyl chloride) and chlorinated terphenyls, when added to a suitably plasticized polyvinyl chloride or polyvinyl chloride-acetate resin not only increase the fluidity of the molten r esin so that it may be free-flowing at temperatures well below its decomposition point, but also increases the heat stability of such a resin."

DSW 269526

2,529,260 Paul O. Powers, assignor to Armstrong Cork Company
Nov. 7 1950

TILE AND BINDER FOR THE SAME

Claim 1. "A tile composed of a filler and a binder therefor having a melting point between 50° and 70°C. as determined by the ball and ring method and containing 50 to 80% of coumarone-indene resin having a melting point of 107°C. to 135°C. and a molecular weight above 500 as determined by the Rast method and 50 to 20% of plasticizer consisting principally of mineral oil which is non-volatile at ordinary room temperatures and has an aniline point of 87° to 120°C., said resin and plasticizer having a limited incompatibility with each other such as to produce a cloud-like separation of resin and plasticizer in the binder at a temperature between 20° and 70°C., said binder having a cloud-like separation of resin and plasticizer resulting from the limited incompatibility of resin and plasticizer characterized by a cloud point between 20° and 70°C. when the cloud point is determined by heating the binder until the resin and plasticizer are in solution and noting the temperature at which the binder becomes opaque on cooling, said tile having an initial indentation of 6 to 25 mils when determined according to the McBurney procedure."

"Other plasticizers which may be used either alone or in combination with the mineral oil and which have high solvent power, are diphenyl, chlorinated diphenyl, chlorinated polyphenyls, distyrene, di-indene, dicumarone, methyl abietate and analogous abietic acid esters as well as hydrogenated abietic acid esters, phthalic acid esters, such as methyl phthalyl ethyl glycollate, butyl phthalyl butyl glycollate, diethylene glycol phthalate, phosphoric acid esters of phenols, such as cresyl phosphate and phenyl phosphate, a nd diphenyl phosphates (xenyl phosphate)."

DSW 269527

2,536,657 Thomas S. Reese, assignor to The Di-Noc Company
Jan. 2, 1951

DRAWING MATERIAL

Claim 1. "Drawing material comprising a sheet of thermoplastic resinous material consisting mainly of a vinyl polymer which sheet is highly resistant to dimensional changes by atmospheric influences and which has firmly adhered thereto a coating of an acrylic resin, said coating being derived from a dispersion of the resin in a volatile liquid vehicle containing a finely divided abrasive flatting agent which extends throughout and imparts a tooth to the coating, being comprised of from roughly one-third to roughly one-half of flatting agent on the basis of the total solids deposited, being adapted to take pencil markings by virtue of the tooth imparted to it by the flatting agent, being adapted to take blue print solution, and having the surface appearance of finely ground glass."

"Suitable formulas for the coating material are as follows:

Example 1.-A formula embodying an acryloid of the acrylic ester type.

Material:	Parts by weight
Acryloid B-73.....	10
Aroclor #5460.....	4
Toluol..	8
Xylol.....	2
Diatomaceous earth.....	5 "

"Example 3.-A formula embodying an acryloid of the acrylic ester type and nitro-cellulose.

Material:	Parts by weight
Acryloid B-73.....	5
25% solution of R.S. 1/2° nitro-cellulose in 50% butyl acetate and 50% toluol	8
Aroclor #5460.....	4
Toluol.....	8
Xylol.....	2
Diatomaceous earth.....	5 "

DSW 269528

2,549,127 Donald D. Pew, assignor to Stopall Waterproofing Manufacturers, Inc. Apr. 17, 1951

WOOD WATERPROOFING COMPOSITION

Claim 1. "A waterproofing composition comprising:

	Per cent
A chlorinated polyphenyl.....	4 to 10
Hydrogenated methyl abietate.....	7 to 12
A methyl phenyl polysiloxane.....	3 to 6
Solvents.....	71 to 92 "

DSW 269529

2,556,451 Howard E. Smith, assignor to Insl-X Corporation
June 12, 1951

FUNGICIDAL INSULATING COMPOSITION

Claim 1. A hot melt coating comprising about 16.8 parts of lanolin, about 33.6 parts of butyl methacrylate polymer, about 16.8 parts of stearamide, about 4.2 parts of dibutoxy ethyl phthalate, about 28.6 parts of chlorinated diphenyl having a melting point of around 80°C, and about 1 part of phenyl mercury ortho benzoyl sulfimide.

DSW 269530

2,580,023 Kurt Helmholtz, assignor to Goodcliff-Eecen Industries Pty. Limited Dec. 25, 1951

COATING COMPOSITION

Claim 4. "A coating composition comprising about 5 parts by weight of chlorinated rubber, chlorinated to such a degree that the viscosity of a 25% solution in toluol is less than 40 seconds Saybolt, about 13 parts by weight of an organic solvent for the chlorinated rubber, about 2 parts by weight of a chlorinated rubber, about 2 parts by weight of a chlorinated diphenyl as plasticizer, about 80 parts by weight of lead powder, and about 0.00025 to 0.0001 parts of potassium osmiate."

DSW 269531

2,593,507 Eugene Wainer, assignor to Thompson Products, Inc. Apr. 22, 1952

METHODS OF MOLDING NONMETALLIC POWDERS

Claim 5. "The method of making a non-metallic article of desired shape and porosity which comprises heating a mixture composed of 50 to 65 parts by volume of a non-metallic, non-plastic powder material substantially free from uncombined metal and capable of veing vitrified and 35 to 50 parts by volume of a thermoplastic completely distillable binder containing a major proportion of poly-mono-olefinic thermoplastic resin, a hydrocarbon wax and a thermoplastic chlorinated hydrocarbon, continuing said heating to produce a plastic flowable mass without distillation of the binder ingredients, extruding the heated flowable plastic mass into desired article shape, and firing the article at temperatures materially above the distillation temperature of the binder ingredients to completely vaporize the binder cleanly out of the non-metallic powder material and to sinter non-metallic powder without forming a residue in the article."

"Of the poly-mono-olefinic resins, polybutene and polyvinylbutyl ether are in general suitable for all-around usage. The others, requiring somewhat higher temperatures for decomposition into fugitive gas, are of course also applicable with appropriate materials requiring higher temperatures for vitrification. Included also with the foregoing are halogenated derivatives, and these may be substituted for or used in conjunction with the synthetic resins. Like such, they decompose completely without residue; they also have another important property, viz., as halogenated derivatives, one of the products of decomposition is a dry hydrogen halide. The presence of a small amount of HCl or like halide aids the development of a dense structure through acceleration of diffusion processes at the high temperatures. Examples of these resins are : chlorinated polyethylene, fluorinated polyethylene, chlor-fluorinated polyethylene, the chlorinated diphenyls (these being commercially known as the "Aroclors"). These chlorinated diphenyls are available in molecular weights of a range such as from thin liquid to stiff resinoid solid. They are thermoplastic, and the low molecular weight type act as lubricants. In effect, the first group of resins alone or combinations of the first group plus the halogenated type constitute the base resins used in these mixtures. In some instances, such a halogenated resin can be used to provide the desired functions including that of lubricant. Also effective in this respect are the liquid polybutenes, that is, poly-butenes having molecular weights less than 1,000. The molecular weight of the poly-mono-olefinic resins may vary somewhat, but aside from the liquid usage just mentioned, they may range in general about 20,000 to 200,000.

2,606,165 Earl C. Chapin et al. assignors to Monsanto Chemical Company Aug. 5, 1952

FLOOR POLISHING COMPOSITIONS

Claim 1. "A floor polishing composition which comprises an aqueous emulsion containing a copolymer of 0.5 to 20 per cent by weight of methacrylic acid, from 40 to 80 per cent of ethyl acrylate and from 20 to 60 per cent of styrene, which emulsion has been treated with ammonia to the extent of at least one per cent of the stoichiometric equivalent of the methacrylic acid, from one to 25 parts by weight per hundredparts of polymer of a chlorinated biphenyl containing 30 to 60 per cent chlorine, and from one to 40 parts by weight per hundred parts of polymer of carnauba wax."

DSW 269533

2,612,463 Rodney G. Brown, assignor to E. I. du Pont de Nemours & Company Sept. 30, 1952

BOOKBINDING ADHESIVES AND A METHOD OF APPLYING SAME

"This invention relates to the art of book-binding, and more particularly to hot melt adhesives for use therein."

Claim 1. "A solvent-free, hot melt adhesive composition particularly adapted for binding books, comprising an ethanol-soluble synthetic linear polyamide having an intrinsic viscosity of at least 0.4 and containing amide groups separated by an average of at least two carbon atoms as an integral part of the main polymer chain and a compatible liquefying softener therefor, the ratio of polyamide to softener being between 45:55 and 65:35."

Claim 7. "The composition of claim 1, in which the liquefying softener is chlorinated diphenyl."

DSW 269534