Nov. 23, 1937. M. HAGEDORN 2,099,976

MANUFACTURE OF SHAPED ARTICLES

Filed July 15, 1933

Fig. 2

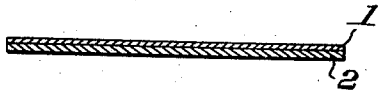


Fig. 1

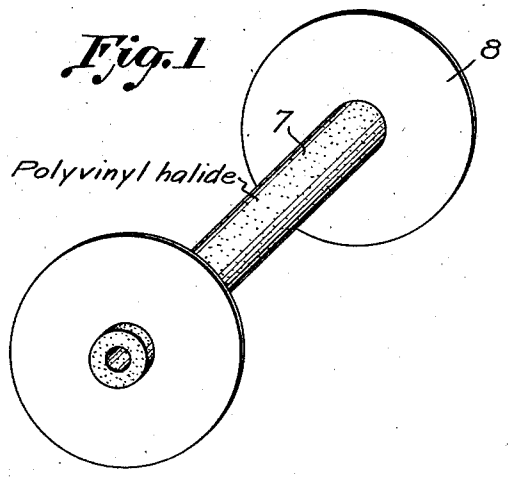


Fig. 4

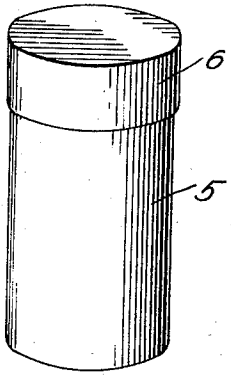
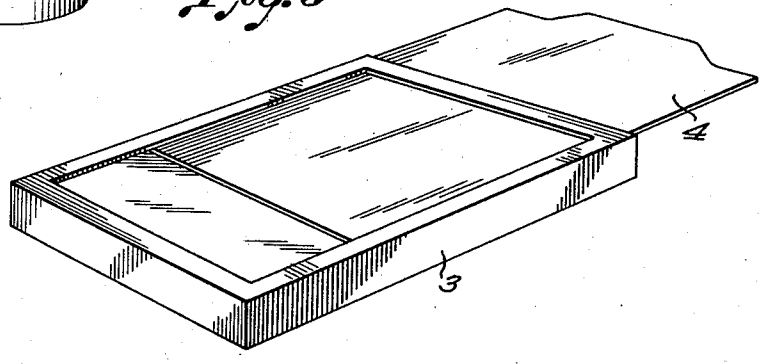


Fig. 3



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MANUFACTURE OF SHAPED ARTICLES

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Application July 15, 1933, Serial No. 680,654
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7 Claims. (Cl. 95—1)

My present invention relates to the manufacture of shaped articles and has for its object the manufacture of shaped articles from polymerized vinyl halide with a content of halogen corresponding with more than 1 atom but less than two atoms on one vinyl group corresponding with the formula $CH_2{:}CH_2$.

I have found that plastic masses from polymerized vinyl halide which contains more than one halogen atom and less than two halogen atoms on one vinyl group are for their indifference against photographic emulsions particularly suited for the production of all sorts of articles to be used for photographic purposes. This is most surprising when considering that the artificial masses hitherto known, for instance, such as are known under the trade name Bakelite, or condensation products from urea and formaldehyde, or hardened caoutchouc, or coumarone resin, or polymerized vinyl acetate, or casein have proved unsuitable. Compared with cellulose derivatives the new plastic masses have the advantage of being cheaper. Thus, the masses are suitable for the production of carriers for light-sensitive layers, for instance, roll films, cinematographic films, spools, slides, film-packs, filmpack holders, cores for photographic films, tanks for development, drying drums, parts of the casting machines, the printing devices and so on.

The accompanying drawing illustrates by way of example some articles according to the invention.

Fig. 1 shows a film spool having a core of polymerized vinyl chloride subjected to an after-chlorinating treatment;

Fig. 2 shows a photographic film;

Fig. 3 shows a slide for photographic plates and

Fig. 4 shows a box for storing cinematographic film.

Referring now to the drawing in particular, in Figure 1, 7 is the shaft and 8 are the flanges of the film spool. As illustrated the shaft 7 is formed of the polymerized vinyl chloride composition, while the flanges 8 may be formed of metal or other suitable materials. In Fig. 2, the light-sensitive emulsion layer 1 is carried by the support 2 which is made of after-chlorinated polymerized vinyl chloride. In Fig. 3, both the casing 3 and the cover 4 of the slide are formed of the polymerized vinyl chloride composition. In Fig. 4 the body 5 and lid 6 of the box are formed of this material.

The polymerized vinyl halide having the desired content of halide is obtainable by subjecting polymerized vinyl chloride to a chlorinating treatment in a solvent or a swelling agent for the polyvinylchloride.

The polyvinyl halide may be employed alone or in admixture with polymerization products of other aliphatic or aromatic unsaturated compounds, for instance acrylic acid esters, the subsequent halogenation being, if required, also applicable to the mixture of the two substances. Mixed polymerization products which have been after-halogenated, for instance, vinyl halide and acrylic acid alkyl ester are as well suited for use in the present process.

The new plastic masses may contain any kind of additions known in the manufacture of plastic masses from cellulose derivatives and of highly polymeric condensation products, for instance, softening agents, plasticizers, filling materials, pigments, organic dyestuffs and similar materials. Cellulose derivatives, too, are utilizable as additions.

The following examples illustrate the invention:

Example 1.—Polymerized vinyl in the form of a loose powder and containing 60 to 65 per cent of chlorine, is pressed without an addition whatever in a hydraulic press into strong, clear and transparent sheets of 200 μ thickness, which in the same way as glass plates are provided with an adhesive layer and then are coated with a light-sensitive photographic emulsion. The material is excellently suitable for use as a support for photographic layers or for use as circular supports for layers suited for recording sound photographically in the manner of taking gramophone records.

Example 2.—Polymerized vinyl containing 60 to 65 per cent of chlorine with the addition of 30 per cent of filling agent such as ground shale, asbestos and wood dust to which there may have been added 3 to 5 per cent of soot, is pressed into moulds for making spool-cores or other parts of spools under a high pressure at a temperature of about 130–135° C. The parts of the spools are used for the manufacture of all sorts of spools for photographic films.

Example 3.—Polymerized vinyl chloride containing 60 to 65 per cent of chlorine with or without the addition of filling agents or softening agents is made into casings for roll films or film packs or into parts of cameras or with the addition of dyestuffs into filters for photographic purposes by pressing or rolling.

What I claim is:

1. A slide for light sensitive photographic material which comprises a polymerized vinyl

chloride containing about 60 to 65 per cent of chlorine.

2. A photographic film having a support which comprises polymerized vinyl-chloride containing 60 to 65 per cent of chlorine.

3. A casing for light-sensitive photographic material which comprises polyvinyl-chloride containing 60 to 65 per cent of chlorine.

4. A carrier for photographic light sensitive layers, said carrier having a surface comprising a polymerized vinyl chloride containing about 60 to 65 percent of chlorine.

5. The invention as claimed in claim 4, wherein said carrier comprises a transparent film of polymerized vinyl chloride, in combination with a layer of photographic light sensitive material united thereto.

6. The invention as claimed in claim 4, wherein said carrier comprises a spool upon which a photographic film of light sensitive material may be wound.

7. The invention as claimed in claim 4, wherein said carrier comprises a casing for enclosing the light sensitive material.

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