Patented Dec. 5, 1939

2,182,399

UNITED STATES PATENT OFFICE

2,182,399

ADHESIVE

Walter P. Hilbourn, Lansing, Mich.

No Drawing. Application December 24, 1937, Serial No. 181,612

3 Claims. (Cl. 134—23.1)

This invention pertains to the preparation of a cement or adhesive and more particularly to a flexible, non-tacky adhesive having particular use in securing the edges of one or more sheets of paper. In preparing displays or blocks of paper sheets, particularly those composed of thin sheets for producing typewriter books, manifolds and the like, it is essential that the edges of the joined sheets be in absolute registry so that a plurality of copies may be made on typewriters or billing machines.

The adhesives previously used for padding sheets are far from satisfactory for the reasons that the adhesive dries out and becomes brittle, permits the sheets to separate or it is thick and tacky and tears the edges of the sheets when they are separated. These prior adhesives have also fallen short of their purpose of properly holding a small number of sheets together and have only been usable where a large pad or block is made.

One of the prime objects of the present invention is to produce an improved adhesive for the purposes outlined above, which will be quite flexible, neat and clean in appearance and capable of being removed from a sheet of paper without leaving heavy edges of cement either on the sheet or the remainder of the pad.

A further object is to prepare the adhesive in such a manner and of such ingredients that when applied the sheets of the pad or book adhere together and do not drop off until actually removed from the pad and will permit a single sheet of the pad to be turned back under the bottom of the pad without becoming detached.

This invention comprehends an improved adhesive or padding cement per se together with a method of preparing the ingredients to produce an adhesive having the desirable qualities outlined above.

After considerable experimentation, it has been found that a desirable cement may be prepared from the following ingredients in substantially the following proportions:

		Per cent
Acetic acid (36% solution in distilled water)	approximately	57
White flake glue	do	32
Venice turpentine	do	5
C. P. glycerine	do	5

Quantitative analysis of the improved adhesive shows that it contains specifically the above ingredients in the following proportions:

	Per cent
Acetic acid	57.143
Glue	32.143
Venice turpentine	5.357
C. P. glycerine	5.357

In mixing the ingredients, the following method is used to prepare a batch of 168 fluid ounces of cement:

First, 54 ounces by weight of white flake glue is dissolved in 96 fluid ounces of acetic acid, while gently heating the mixture to approximately 100° F. Upon the complete dissolution of the glue, the mixture is permitted to cool until only slightly warm and thereupon 9 fluid ounces of Venice turpentine is added and the mass is thoroughly agitated. Thereafter, 9 fluid ounces of C. P. glycerine is added and thoroughly mixed and the mass allowed to cool before being packaged in sealed containers.

If the adhesive is prepared in very cold weather or is to be used in cold climates, it is preferable to add from 1 to 2 ounces additional glycerine to the example above, so as to insure that the cement will be of a proper consistency and remain flexible.

In use, the padding adhesive is spread on the edges of the paper sheets by any suitable means, such as a knife, brush, et cetera, and is applied without the addition of an additional thinner or drier. In spreading the adhesive, it is best done at room temperature and while one coating may be sufficient, it has been found that ordinarily two or more thin coats should be applied to the edges after the drying of each successive layer.

What I claim is:

1. A flexible, non-sticky adhesive for use as a padding cement composed of a mixture of the following ingredients:

Acetic acid (36%),	Approximately 96 fluid ounces
White flake glue,	Approximately 54 ounces by weight
Venice turpentine,	Approximately 9 fluid ounces
C. P. glycerine,	Approximately 9 fluid ounces

2. A flexible, non-sticky, non-hardening adhesive comprising approximately ½ acetic acid, approximately ⅓ glue, and approximately $\frac{1}{16}$ each of Venice turpentine and glycerine.

3. An adhesive of the character described composed of a mixture of approximately 57% acetic acid, 32% white flake glue, 5% Venice turpentine and 5% glycerine.

WALTER P. HILBOURN.