

UNITED STATES PATENT OFFICE.

JOHN A. LINK, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR OF NINE-SIXTEENTHS TO CAMPBELL CARRINGTON AND ALEXANDER R. MULLOWNY, OF SAME PLACE.

MUCILAGE.

SPECIFICATION forming part of Letters Patent No. 565,361, dated August 4, 1896.

Application filed May 16, 1896. Serial No. 591,864. (No specimens.)

To all whom it may concern:

Be it known that I, JOHN A. LINK, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Adhesive Compounds; and I do hereby declare the following to be a specification thereof.

My invention relates to that class of adhesives that is most widely recognized by the terms "mucilage" or "cements," being intended for the uses to which these articles are adapted and applied; but unlike most of these preparations my adhesive is a solid substance, though it is designed to supplant the mucilage bottle and brush and for many purposes the more expensive liquid cements and glues.

A further object of my invention is the preparation of a stronger and more effective adhesive than merely dissolved gums and the like, and more convenient in all respects of transportation or shipment, exposure for sale, and safety and ease of application in practical use.

To these ends and in preparation of my compound I take of gelatin or glue one pound, of glucose one-half pound, and of glycerin three-fourths of a pound. I dilute and heat these together over a vapor bath and then pour into molds to cool. Or I may take of gelatin and glycerin each one pound and of glucose and sugar each one-half pound and melt together as described. When cooled, these compounds form a soft flexible elastic mass not unlike very soft rubber or the material of printers' rollers, and when formed into sticks or pencils of convenient size, usually by pouring while hot into suitable cylindrical envelops, it produces a very serviceable article for use, as the end of the pencil is admirably adapted to spreading a thin coat of the adhesive upon any surfaces it is designed to unite. These compounds, however, are difficultly soluble or are, in other words, too slowly soluble to adapt them to the many little uses that arise at the desk, such as gumming an imperfect envelop or stamp or a wrapper or label or mending a torn document or note, because too much time is required to moisten and dissolve the material sufficiently to coat the surfaces to be united. For prac-

tical use a touch to the tongue or to a damp sponge must suffice, and a single application of the pencil by rubbing it across the surfaces should spread the proper quantity of the dissolved material to insure the best results, any material too refractory to use as above described being unsuitable for the purpose.

The compounds described become, moreover, of a tougher and still more insoluble consistency as they slowly harden with lapse of time, and though retaining a certain degree of flexibility they redissolve with much difficulty, requiring both time and the application of heat for the process. I therefore add a strongly hygroscopic element or substance to the compound in such quantity as to retain a permanently greater percentage of water in combination, as well as to insure more instant solubility when moisture is applied—that is to say, the material is maintained in a soft, viscid, and tenacious consistency and at once combines at the surface with additional moisture when this is applied, so that a portion of the adhesive instantly adheres to anything it touches.

I find that four to six ounces of the nitrate of ammonium, when added to either of the compounds I have named, secures the results desired. The compound remains permanently moist and adhesive in consistency, only requiring additional moisture to dilute it sufficiently for spreading evenly; but these compounds, especially in the moistened condition described, are very subject to fermentative and putrefactive changes, and quickly become offensive unless preserved against these, and I therefore add, say, of acetic acid, one ounce; carbolic acid, one ounce; oil of myrbane, one ounce, or in place of this last an equal quantity of the oil of cinnamon or cloves or any highly aromatic essential oil or substance. I have found these sufficient to wholly prevent and resist deleterious or noxious changes in these compounds.

As another example, I take of gelatin or isinglass, one pound; of glucose, dextrin, or sugar, one pound, and of glycerin one pound, and to these I add, of acetic acid, of carbolic acid, and of an essential oil, each, one ounce. Lastly, I add six ounces of the nitrate of am-

monium; but I do not limit my invention to these compounds or to these proportions, as I employ any suitable group of adhesives which when diluted and softened with water and glycerin, and combined with a more highly hygroscopic substance and preserved by means of any effective agency, are well within the scope of said invention.

Having thus described my invention, what I claim is—

1. As a new article of manufacture, an adhesive compound preferably in stick form, being of a permanently plastic nature and composed of a suitable adhesive, saccharin matter, a suitable hygroscopic agent, and an antiseptic or preservative material in substantially the proportions specified.

2. An adhesive compound composed of a suitable adhesive, saccharin matter, glycerin, and a hygroscopic agent in substantially the proportions specified.

3. An adhesive compound composed of a suitable adhesive, saccharin matter, glycerin, a hygroscopic agent, and an antiseptic ele-

ment in substantially the proportions specified.

4. An adhesive compound composed of a suitable adhesive, saccharin matter, glycerin, and ammonium nitrate in substantially the proportions specified.

5. An adhesive compound composed of a suitable adhesive, saccharin matter, glycerin, ammonium nitrate, and an antiseptic agent in substantially the proportions specified.

6. An adhesive compound composed of glue, saccharin matter, glycerin, ammonium nitrate, and a suitable antiseptic substantially as described.

7. An adhesive compound composed of glue, saccharin matter, ammonium nitrate, and a suitable antiseptic in substantially the proportions specified.

In witness whereof I hereunto subscribe my name.

JOHN A. LINK.

In presence of—

FLORINE A. ALBRIGHT,
M. A. POLLARD.