

(No Model.)

G. WALKER.
DENTAL RUBBER.

No. 395,600.

Patented Jan. 1, 1889.

Fig. 1.

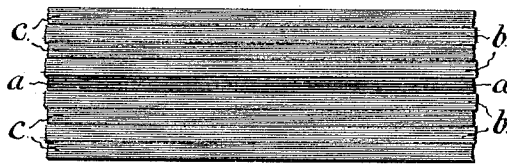
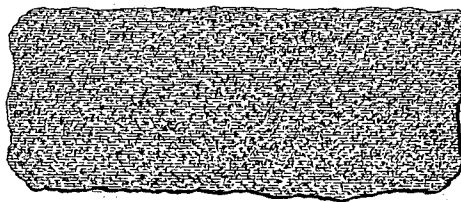


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GILBERT WALKER, OF LONDON, ENGLAND.

DENTAL RUBBER.

SPECIFICATION forming part of Letters Patent No. 395,600, dated January 1, 1889.

Application filed May 8, 1888. Serial No. 273,235. (No specimens.)

To all whom it may concern:

Be it known that I, GILBERT WALKER, of London, England, have invented a certain new and useful Vulcanizable-Rubber Compound for Artificial Dentures, of which the following is a specification.

My invention relates to an improvement in rubber for dentists' use in making the plates or bases of artificial teeth.

In accordance with my present invention I provide a vulcanizable rubber, composed of variously-colored rubbers finely comminuted and commingled, whereby the natural color of the human mouth is more closely imitated in the gum portion of the completed denture.

My invention is based on the discovery made by me that the natural appearance of the human gum can be more nearly approached by a base or plate made of a mixture of differently-colored rubbers and vulcanized than, as heretofore, by the use of rubber of a specific solid color, which in some cases prevents attaining the tinge or color corresponding with that of the natural gum of the patient's mouth, the tinge of the natural gum varying considerably in different persons.

In my application, Serial No. 279,058, filed July 5, 1888, I have set forth and claimed an artificial denture made of the compound constituting the subject-matter herein claimed.

My improved rubber or vulcanizable compound, consisting of a "hash" made up of a mixture or combination of differently colored or tinted rubbers or equivalent gums, so that the combined shade or tint approaches closely the shade and tinge of the natural gum of the mouth which is to be supplied with the artificial denture, is or may be produced by the method below set forth. I do not wish, however, to be understood as confining my invention to any particular method, and do not herein claim the method, reserving the right to claim it elsewhere.

I take sheets or strips of vulcanizable rubber or similar gum of different tints and lay them one upon another with the colors or tints alternating and pass such combined layers or sheets between rolls or other suitable pressing apparatus, and after the sheets have been firmly pressed and united by pressure I cut or crush or otherwise reduce the combined sheet into minute particles and thoroughly

mix or commingle them together; or the differently-colored sheets may be mingled or mixed by passing the united sheets through ribbed rolls, producing a mixture with each color identified. The result is a mass of vulcanizable-rubber particles, presenting, when formed into a sheet, block, roll, &c., not a solid color, but a combined tinge, which, when vulcanized, will approach much nearer the tinge of the natural human gum than was permissible heretofore where solid colors or single tints were employed.

In the accompanying drawings, Figure 1 represents nine sheets of vulcanizable gum or rubber arranged and combined in accordance with the method practiced by me, and Fig. 2 is the compound product ready for use by the dentist.

For example, in the drawings, *a* is a sheet or layer of rubber of bright red or scarlet; *b*, sheets or layers of white rubber; and *c* sheets or layers of pink or flesh-tinted rubber. I prefer to employ nine sheets or layers of the ordinary vulcanizable rubber used in dental work for the making of my compound for artificial dental plates, artificial gums for such plates, or dentures, &c.—that is to say, a sheet of bright red or scarlet color as a central layer and four sheets of white and four of pink or flesh-colored rubber, the white and pink sheets being disposed equally on opposite sides of the central sheet and alternating one with the other. The thus combined sheets are then subjected to pressure, as by being passed through suitable pressure-rollers, to reduce, lengthen out, and make thinner the mass, to, say, about the thickness of one of the original white or pink sheets—the sixteenth of an inch, more or less. The compressed and combined sheets are then fed horizontally, preferably, to a cutting apparatus and cut into thin strips, which are bunched and recut, and again bunched and recut, say, about seven times in all. This will have so reduced, segregated, or comminuted the compound sheets as to produce fine particles of the variously-tinted compound, which are thoroughly mixed and formed into suitable shape for use.

The sheet of bright red or scarlet rubber is a desideratum, as it gives life and tone to the finished product; but care should be taken not to have too great a quantity of this bright

red rubber, as too bright a color in the finished product would result.

It will be obvious, of course, that any desired tint can be obtained, it being only necessary to regulate the thickness of the respective sheets or layers of the differently-tinted rubbers; or this may be attained by the employment of different numbers of sheets differently arranged and of the desired colors. For instance, if it is desired to obtain a light tinge, more or thicker sheets of the white rubber should be employed than of the pink rubber, and the reverse if a darker tinge is desired. So, if a still darker tinge is desired the white color may be omitted.

I do not of course restrict myself to the exact arrangement of the differently-colored sheets or layers, as they may be differently arranged and combined with the same result. For instance, the rubber may be made in the form of strings and the differently-colored strings wound or twisted into a rope and then cut or crushed fine.

Various other ways may be employed to mix and combine the variously tinted or colored rubbers; but I have contented myself with indicating in detail a suitable way of producing the compound.

I have described my compound with more especial relation to the employment of rubber sheets; but any other suitable vulcanizable gum may be employed.

I claim as my invention—

As a new article of manufacture, a variegated vulcanizable compound for artificial dentures, composed of variously-colored rubber finely comminuted and commingled, whereby the natural gum of the human mouth may be closely imitated in the vulcanized denture, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GILBERT WALKER.

Witnesses:

FRANCIS W. FRIGOUT,
G. L. LEOPOLD.