

R. A. DUNNING.
SPONGE SHEET.
APPLICATION FILED OCT. 7, 1908.

960,855.

Patented June 7, 1910.

FIG. 1.



FIG. 2.

WITNESSES

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SPONGE-SHEET.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT A. DUNNING, a citizen of the United States, residing in Yarmouth, county of Cumberland, State of Maine, have invented certain new and useful Improvements in Sponge-Sheets, of which the following is a specification, reference being had to the drawings accompanying the same and forming a part thereof.

My invention relates to a new and novel form of fabric composed of an absorbent and expansible material, such as small particles of waste sponge.

The object of my invention is to utilize scrap sponge in the production of a sheet composed of small pieces of sponge held together by a sizing of mucilaginous consistency and characteristics which will more or less hold together in sheet form particles of sponge, but which may be removed by soaking or washing the sheet in water.

A further object of my invention is to hold the particles of sponge together in the form of a thin sheet while said sponge sheet is being formed in the shape of a padding for saddles or harness; in the shape of an inner sole for a shoe; or for various other purposes; or so that other forms of fabric may be attached to the sponge sheet by sewing or otherwise, as desired, the purpose being to retain the sponge in the form of a sheet for distribution or shipment to users and until it has been formed and so manipulated into the desired form, or until secured by other means, when the sizing can be removed by soaking it in water or washing it to restore the particles of sponge to their normal absorbent condition.

In carrying out the objects of my invention, sponge is taken, sorted and freed from shells or other foreign matter and impurities, and is then run through a picking machine and is picked or broken into particles of the required degree of fineness. This product is then washed, dried and treated with a suitable sizing, which may be glue and paraffin, glue and soap, or any other form of sizing that will be thoroughly absorbed by the particles of sponge. The particles are then spread out in thin layers to

form sheets of proper thickness for the intended use, and pressed to cause the pieces of sponge to adhere to each other, and pressed into a thin sheet, after which it is dried and set so that the particles composing the sheets will be firmly held in a compressed state and adhere together, when the sheets may be cut up into the desired shapes and forms, and mechanical means used to hold the particles of sponge together when the sizing has been removed by washing or otherwise.

In the accompanying drawings forming a part of this specification, Figure 1 is a plan of the sponge sheet composed of small particles of sponge united by suitable sizing and pressed and dried to hold them in a compressed condition; and Fig. 2 is a sectional edge view of the sheet showing the particles of sponge in layers.

In making a sponge sheet, any quantity of sponge may be used to make a thick or a thin fabric, the amount of material being controlled by the use to which the finished article is to be put. The product produced by the process herein defined will be cheap and the sheets will be held in their compressed form for a sufficient length of time to be used for the purposes for which they are designed and the particles composing them held together with sufficient tenacity so that the sheets may be cut into the desired forms.

It will be noted that the sponge used in the production of these sheets maintains its moisture-absorbing and retaining characteristics inasmuch as the cells of the sponge are not destroyed in the production of the sponge sheet, each particle of the sponge being of the same cellular nature as a complete large sponge would be.

Having thus described the invention, what I claim is—

1. An article of manufacture, comprising cellular pieces of sponge saturated with a mucilaginous sizing and compressed in the form of a sheet while the sizing is wet or moist.

2. An article of manufacture consisting of a sponge sheet composed of particles of

cellular sponge saturated with a mucilaginous sizing soluble in water, the particles being united with sufficient tenacity to form a sheet by compression while they are wet
5 or moist.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing

witnesses, this the fifteenth day of September, A. D. 1908.

ROBERT A. DUNNING. [L. s.]

Witnesses:

CHARLES W. KINGHORN,
LEON R. COOK.