S. GWYNN.

Journal Box Linings.

No. 138,641. Patented May 6, 1873.

Fig 1.

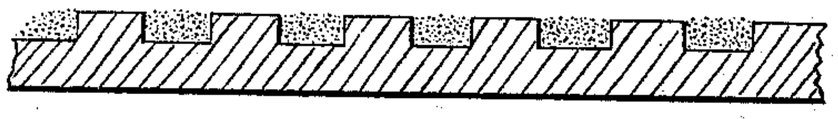


Fig 3.

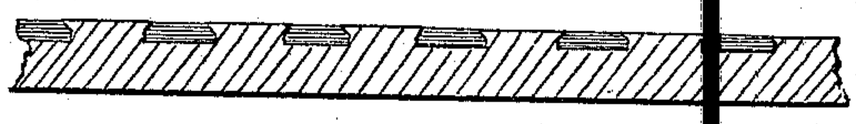


Fig 2.

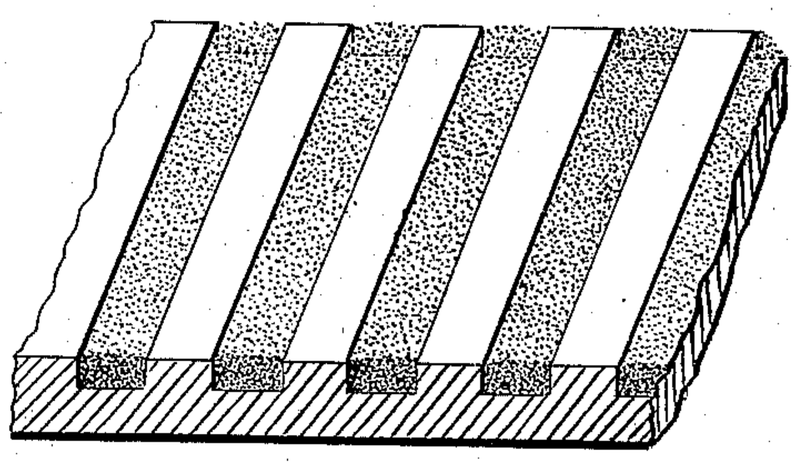


Fig 4.

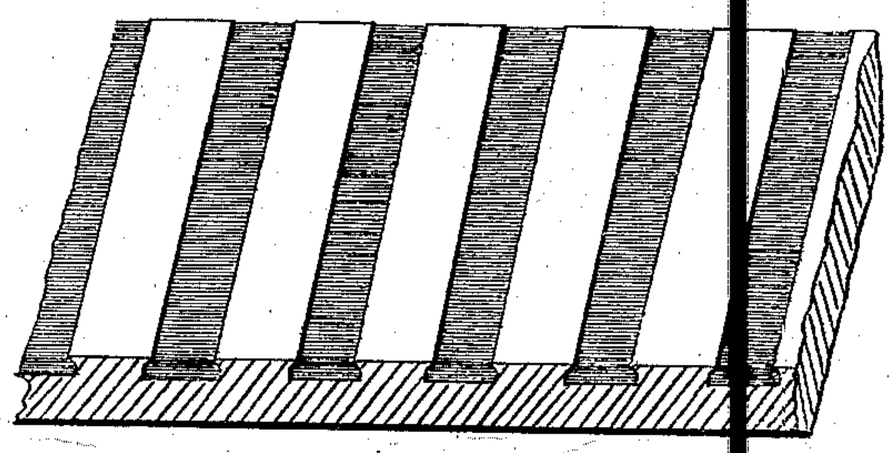


Fig 5.

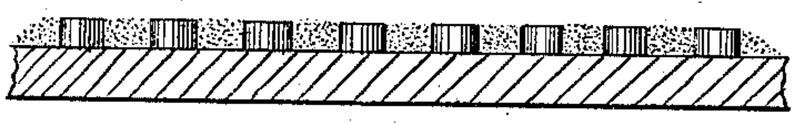


Fig 7

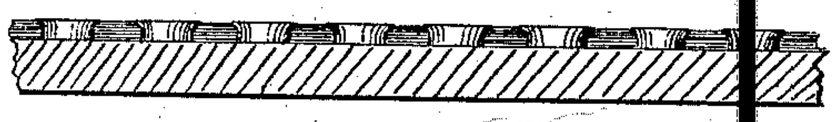


Fig 6.

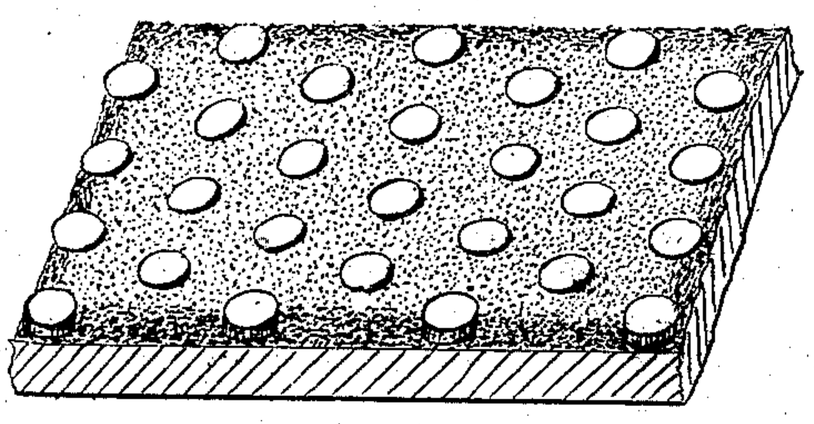
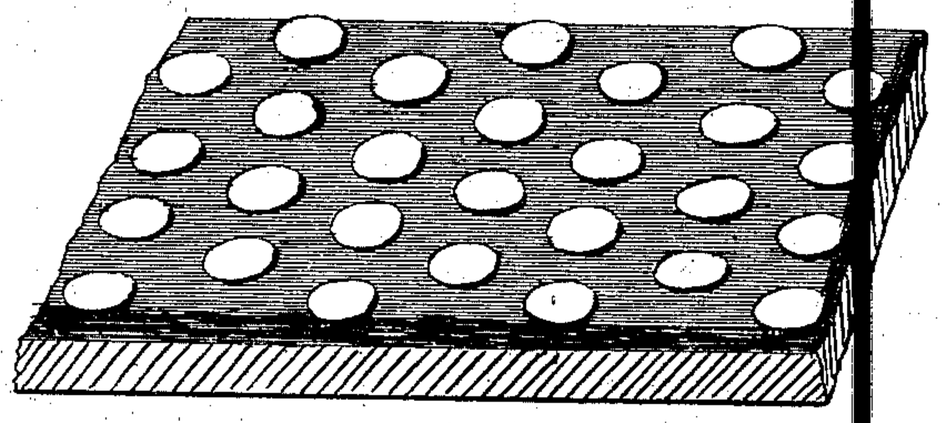


Fig 8.



Witnesses.

A. Livingston Mills

A. J. Fitch

Inventor.

Stuart Gwynn

UNITED STATES PATENT OFFICE.

STUART GWYNN, OF NEW YORK, N. Y., ASSIGNOR TO THE AMERICAN METALINE COMPANY, OF SAME PLACE.

IMPROVEMENT IN JOURNAL-BOX LININGS.

Specification forming part of Letters Patent No. **138,641**, dated May 6, 1873; application filed January 29, 1873.

To all whom it may concern:

Be it known that I, STUART GWYNN, of the city, county, and State of New York, have invented a new manufacture, the same being an Improved Lining for Journal-Boxes and other rubbing surfaces, of which the following is a specification, reference being had to the accompanying drawing forming part of the same.

On the 12th day of April, 1870, certain Letters Patent of the United States were issued to me, numbered from 101,862 to 101,869, inclusive, for certain compositions of matter denominated "metaline," and for the process or method of making the same, as also the office it performs, to which reference is made.

The invention herein intended to be described and claimed relates to a special mode of applying the said several kinds of metaline or their equivalent, or any of them, to practical use; and consists in a combination of metaline with the material, in the manner and for the purposes hereinafter particularly described.

Figure 1 is an edge view of a plate of copper, brass, or other suitable metal, showing the first stage of one of the modifications of my invention. Fig. 2 is a surface view of the same in perspective. Fig. 3 is an edge view of the same after it has been subjected to pressure, and thus completed for use. Fig. 4 is a surface view of the same in perspective. Figs. 5, 6, 7, and 8 are similar views, respectively, of another modification of my invention.

In carrying out my invention as shown in Figs. 1, 2, 3, and 4, a sheet of metal has a number of right-angled channels or grooves cut into its surface, as shown, to a depth of, say, half the thickness of the sheet. These grooves are then filled with finely-powdered metaline, for a description of which, and the method of preparing which, reference is made to the Letters Patent of April 12, 1870, hereinbefore alluded to. The sheet with the metaline filling the grooves is then subjected to severe pressure, preferably by running the same between rollers, so as to reduce it considerably in thickness, whereby the metaline is at once compacted into a solid mass, and the metal between the grooves is spread laterally at the surface out upon the metaline, thereby making the grooves broader at the base than at the top, forming a dovetail space, as seen in Figs. 3 and 4, and thus securely holding the metaline in the grooves.

A modification of this invention is to cast or otherwise fabricate plates with short studs or pins standing up at short distances from each other over the surface, and filling the spaces between the pins with powdered metaline, as seen in Figs. 5 and 6, and then subjecting the plates thus prepared to pressure, preferably between rollers, whereby the pins will be flattened or spread out at the top, and the metaline at the same time compressed and consolidated, as seen in Figs. 7 and 8.

It is evident that the form and construction of the plate may be variously modified without departing from the spirit of my invention. For example, grooves or channels may be cut crossing each other at right angles, or any angle, so as to form projections, square, diamond-shaped, or any other shape desired.

Pins or wires may be inserted either as studs or staples or loops, thereby forming spaces into which the metaline may be pressed and held, or recesses may be made in the surfaces by drilling or punching partly through the metal; the object aimed at being to make in the surface of a continuous sheet of metal depressions or channels, into which metaline may be deposited, compacted by pressure, and securely held, so as not to be displaced by use.

In order that the thing described may be distinctly seen, I have made the drawing on a somewhat enlarged scale, it not being advisable, usually, to use metal plates as thick as represented in the drawing.

For journal-boxes it is desirable that these plates, when completed, should be sufficiently thin to be conveniently bent into a form to conform to the journal for which they may be intended.

Such purpose, as has been indicated, is to line journal-boxes and provide other surfaces subjected to friction in use, with a material which will obviate the necessity of employing oil or other extraneous lubricator, an office performed by metaline, as fully explained in my patents of the 12th of April, 1870, above referred to.

What I claim as a new manufacture is—

A sheet of metal, with which is incorporated metaline, substantially as and for the purposes specified.

STUART GWYNN.

Witnesses:

A. LIVINGSTON MILLS,

A. S. FITCH.