

(No Model.)

C. J. BRADBURY.

TOP FOR SUCTION BOXES OF PAPER MAKING MACHINES.

No. 342,497.

Patented May 25, 1886.

FIG. 1.

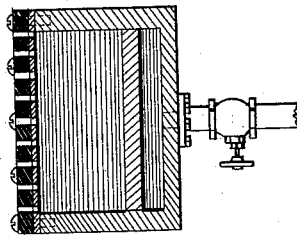
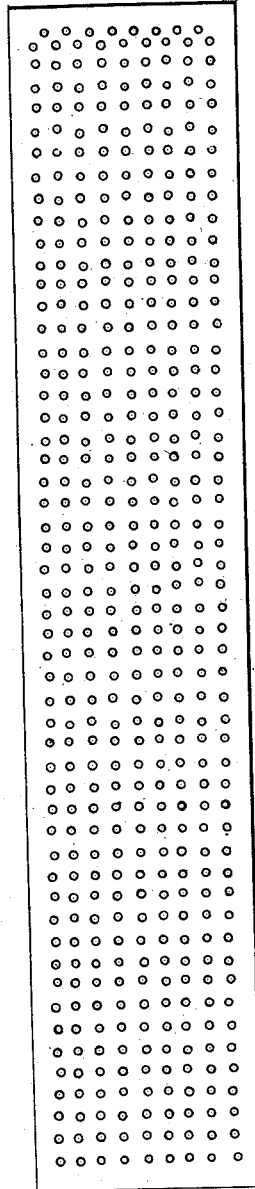


FIG. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES J. BRADBURY, OF MATTAPAN, MASSACHUSETTS.

## TOP FOR SUCTION-BOXES OF PAPER-MAKING MACHINES.

SPECIFICATION forming part of Letters Patent No. 342,497, dated May 25, 1886.

Application filed February 8, 1886. Serial No. 191,180. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES J. BRADBURY, of Mattapan, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Tops for Suction-Boxes of Paper-Making Machines, of which the following is a specification.

My invention relates to paper-making machines, and particularly to the tops of suction-boxes in what are generally known as "Four-drainer machines," and has for its object the improvement in such machines of the contrivance mentioned, whereby objections and difficulties heretofore arising and experienced are avoided, all as hereinafter set forth.

My invention consists in a top for suction-boxes, having its upper surface composed of hard rubber and its base of metal, all as hereinafter fully described and claimed.

In the drawings hereto annexed and forming a part of this specification, Figure 1 represents a cross-section of a suction-box having my invention applied thereto. Fig. 2 is an under side plan view of my suction-box top, showing the manner in which I prefer to secure the metallic base to the upper surface and body of the top.

Similar letters of reference refer to similar parts in both figures.

The construction and function of suction-boxes in the type of machines referred to are so well understood by those at all skilled in the art of paper-manufacture as to require no description herein.

As is well known, the tops of suction-boxes were formerly made entirely of metal, and while, as thus constructed, they answer all of the general requirements of their office, they were open to the objection of causing undue abrasion of the wire-cloth apron carrying the pulp as it passed thereover, owing to the necessarily great amount of friction between the apron and top, occasioned by the operation mentioned. It has been proposed to overcome this objection by constructing the top entirely of hard rubber, by which the friction before mentioned is reduced to the minimum, and while this end was attained another difficulty arose, in that the hot pulp carried by the apron had the effect of softening the hard rubber to some degree, causing the top to sag in the center, and thus fail to present a level surface to the apron—a point of very great importance in suction-box tops.

With this brief explanation, the description of my improvements may be proceeded with.

In the drawings, *a* represents the body of a suction-box, which is made water-tight, as usual, and from which the air is exhausted in any of the well-known ways.

*b* represents the perforated or foraminous top of the box, which I construct of two plates, *c* and *d*, the former composed of hard rubber, and constituting the upper surface, designed to come in contact with the apron, and the latter, *d*, composed of metal, constituting the lower or body portion of the top.

*e* represents the usual perforations in the cover, and *f* the pulp-carrying apron, a cross-section of a portion of the latter only, in contact with the top, being shown.

By the construction shown and described, I am enabled to form a suction-box cover which has all the firmness and other desirable characteristics comprised in a metallic top, combined with the virtues of a hard-rubber top, and having none of the defects of the latter. The function of the metallic portions or base of the top is merely to support the non-abrasive hard-rubbersurface *c*, and maintain it firmly in a level position.

It is obvious that I might construct my top of three plates—the upper and lower of hard rubber and the center of metal—or the upper hard-rubber plate might be chambered, and the lower metallic sustaining-plate set therein, and other similar changes might be made without departing from the spirit of the invention.

What I claim is—

1. A suction-box cover having the surface designed to come in contact with the pulp-carrying apron composed of hard rubber, and the body or sustaining portion composed of metal, as set forth.

2. A suction-box cover consisting of two plates, the upper, or that designed to come in contact with the pulp-carrying apron, composed of rubber, and the lower, or opposite, composed of metal, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 28th day of January, 1886.

CHARLES J. BRADBURY.

Witnesses:

G. PHILIP MORRILL,  
HATTIE J. MORRILL.