

No. 745,974.

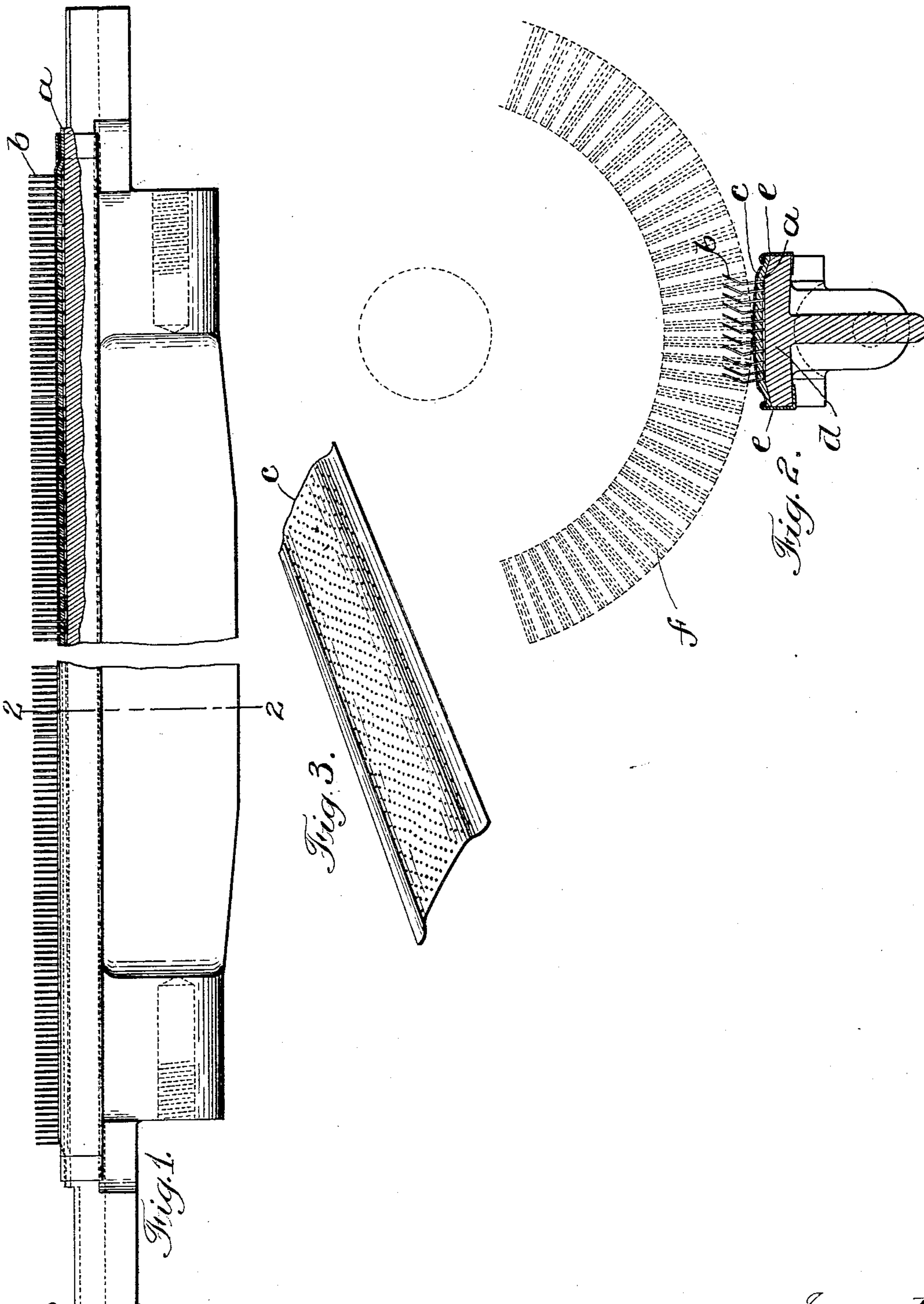
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M. E. SULLIVAN.

CARD CLOTHING.

APPLICATION FILED MAY 4, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

MICHAEL E. SULLIVAN, OF NEW BEDFORD, MASSACHUSETTS.

CARD-CLOTHING.

SPECIFICATION forming part of Letters Patent No. 745,974, dated December 1, 1903.

Application filed May 4, 1903. Serial No. 155,478. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL E. SULLIVAN, of New Bedford, in the county of Bristol and State of Massachusetts, have invented certain
 5 new and useful Improvements in Card-Clothing, of which the following is a specification.

This invention relates to card-clothing for carding-machines, such clothing being composed generally of a backing of leather or
 10 other like flexible material and wire teeth inserted in the said backing and projecting from the outer side thereof.

While leather is the best known material for the backing of card-clothing and is in
 15 general use for this purpose, its use is attended with certain objections, the principal ones of which are as follows: First, the nature of leather is such that particles of lint and other matter contained in the material
 20 being carded adhere somewhat closely to the outer surface of the leather backing and obstruct the spaces between the teeth, the adhesion of the said matter to the backing being so close that its removal is attended with
 25 some difficulty; secondly, the compressible and yielding nature of the leather prevents it from supporting the teeth and causing them to stand out with the desired degree of firmness and stiffness.

30 My invention has for its object to overcome and obviate these and other objections that exist to the use of card-clothing as heretofore made; and it consists in the improvements which I will now proceed to describe and
 35 claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a partial side elevation and a partial longitudinal section of one of the top flats of a
 40 carding-machine, the same being provided with card-clothing embodying my invention. Fig. 2 represents a section on line 2 2 of Fig. 1, together with a dotted-line representation of a brush used for cleaning the card-clothing
 45 and removing lint therefrom. Fig. 3 represents a perspective view of a portion of the veneer, facing, or reinforcing sheet hereinafter referred to.

The same letters of reference indicate the
 50 same parts in all the figures of the drawings.

In the drawings, *a* represents the usual backing or base of a sheet of card-clothing,

the same being of flexible or compressible material, such as leather.

b b represent the usual wire teeth, which are
 55 inserted, usually in the form of staples, in the backing *a*, the parts of the wire forming the legs of the staples projecting from the outer side of the backing and constituting the teeth, while the necks of the staples lie against the
 60 inner side of the backing.

In carrying out my invention I provide a sheet or piece of card-clothing thus constructed or of any construction which includes a flexible base or backing of relatively
 65 yielding and compressible material, with a relatively hard veneer, facing, or reinforcing sheet *c*, superimposed upon the outer surface of the backing *a* and surrounding the bases of the teeth. The said sheet, which for convenience I will hereinafter term the "facing,"
 70 may be made of any relatively hard and dense material which does not possess the property of adhering closely to particles of lint, but, on the contrary, presents a hard and relatively
 75 smooth surface from which the accumulations of lint may be readily brushed. The said facing at the same time should be sufficiently rigid or capable of supporting edgewise
 80 pressure to enable it to support the teeth and prevent them from leaning or tipping from their desired position relative to the backing. In practice I have found that a suitable material for the facing *c* is thin sheet metal, preferably aluminium. The facing *c* is per-
 85 forated, as indicated in Fig. 3, so that it receives and closely surrounds the teeth *b*. The facing-sheet is preferably made sufficiently thin to enable it to be penetrated by the
 90 means used for penetrating the backing *a*, so that the backing and facing sheets may be assembled before the insertion of the teeth, the teeth being inserted simultaneously in the backing and facing.

In this embodiment of my invention I have
 95 shown the card-clothing applied to one of the top flats *d* of a carding-machine, the edges of the facing *c* being confined, with the edges of the backing *a*, by means of clamping ears or flanges *e e*, suitably secured to the flat *d*. The
 100 flat here shown is of the usual construction adapted for connection in an endless chain with a number of other flats of like construction. In Fig. 2 I show by dotted lines por-

tions of the bristles or brush material of a rotary brush *f*, which is arranged to act upon the teeth of the chain of flats in the returning stretch of said chain, the brush removing
5 the lint and other matter from between the teeth.

I have found that the facing *c* besides reinforcing the backing and supporting the teeth so that they are not liable to be tipped
10 out of place furnishes a surface which can be very quickly and thoroughly cleaned by the brush *f*, the hard material of the facing preventing the lint from adhering to its outer surface.

15 It is obvious that my invention is not limited to use in connection with a top flat as here shown and that card-clothing embodying my invention may be used in connection with my carding mechanism or appliance.

20 I claim—

1. Card-clothing provided with a relatively

hard veneer or facing superimposed upon the outer surface of the tooth-holding base or backing.

2. Card-clothing provided with a thin sheet 25 or layer of relatively hard material perforated to receive the clothing-teeth and superimposed upon the outer surface of the tooth-holding base or backing.

3. Card-clothing the backing or tooth-hold- 30 ing base of which is reinforced to support and stiffen the teeth.

4. Card-clothing the backing or tooth-hold- ing base of which is provided with a facing of perforated sheet metal covering its outer 35 side and surrounding the teeth.

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

MICHAEL E. SULLIVAN.

Witnesses:

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