

(No Model.)

J. McQUEEN & W. MOORES.
NIPPER MECHANISM OF COMBING MACHINES.

2 Sheets—Sheet 1.

No. 415,346.

Patented Nov. 19, 1889.

Fig. 7.

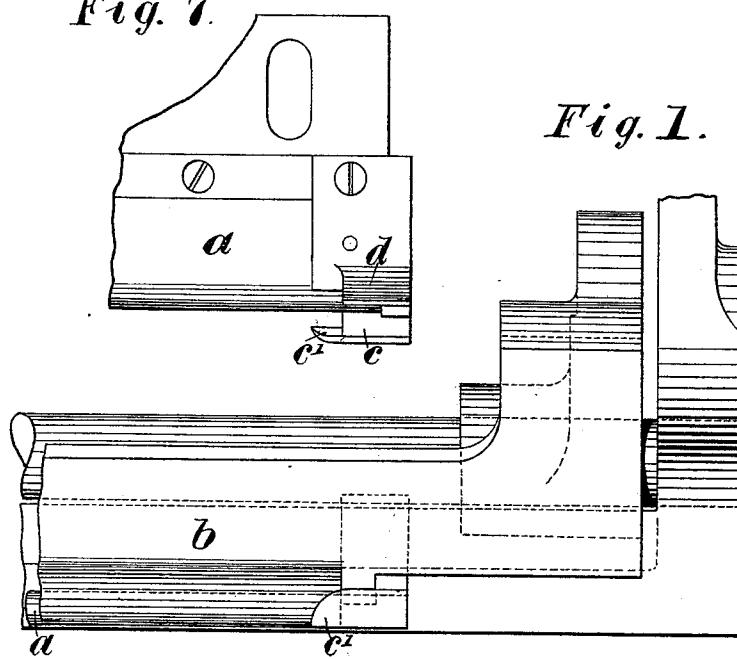


Fig. 1.

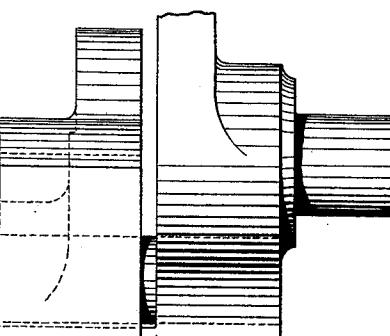
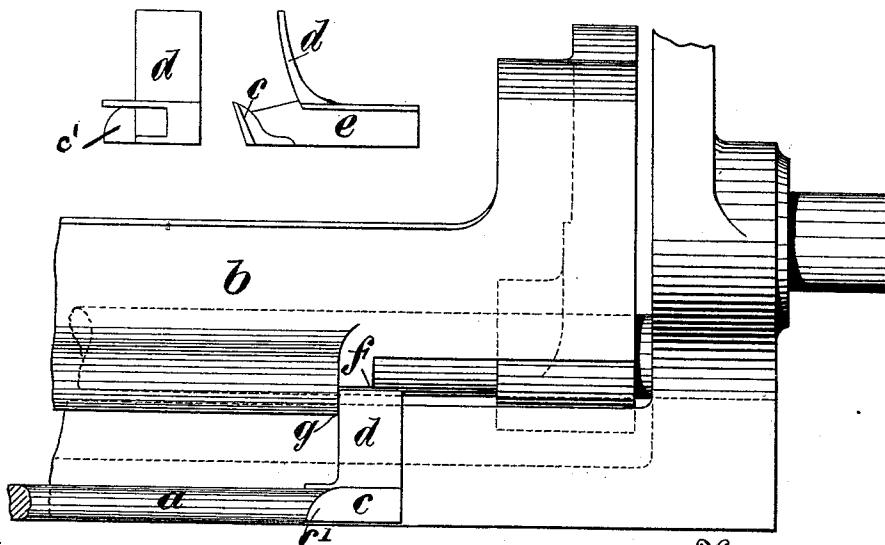


Fig. 5.

Fig. 6.

Fig. 2.



Witnesses.

H. de Vos
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John McQueen, &
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Fig. 3.

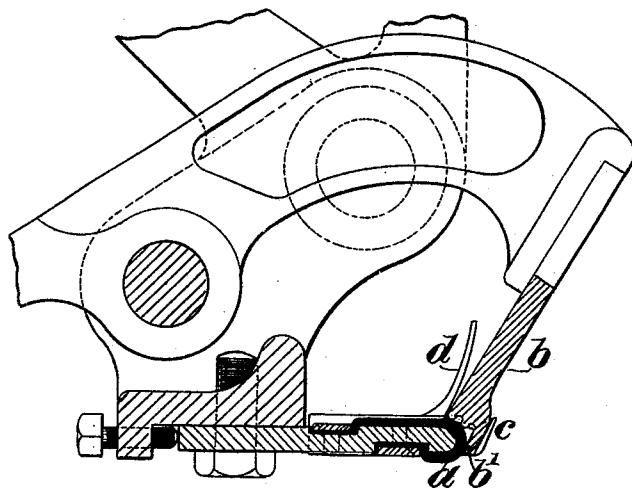
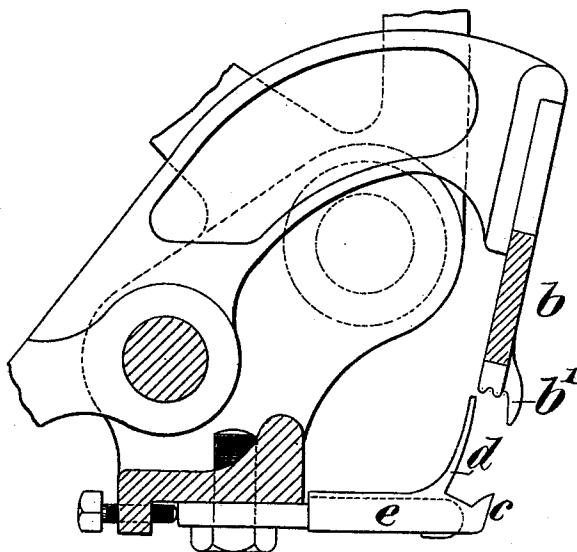


Fig. 4.



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H. deRos.

Ex. L. Richards.

UNITED STATES PATENT OFFICE.

JOHN MCQUEEN AND WALTER MOORES, OF MANCHESTER, COUNTY OF LANCASTER, ENGLAND.

NIPPER MECHANISM OF COMBING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 415,346, dated November 19, 1889.

Application filed May 3, 1889. Serial No. 309,489. (No model.) Patented in England July 4, 1887, No. 9,432.

To all whom it may concern:

Be it known that we, JOHN MCQUEEN and WALTER MOORES, subjects of the Queen of Great Britain and Ireland, residing at Manchester, county of Lancaster, England, have invented certain Improvements in Nipper Mechanism of Combing-Machines, (for which we obtained a patent in Great Britain, No. 9,432, dated July 4, 1887,) of which the following is a specification.

Our invention relates to the nipper mechanism of the machinery employed in the combing of textile materials, and particularly to the cotton-combing machines of the Heilmann type. In such machines the cotton is fed to the combing apparatus in the form of a lap, which is held by the nippers while the exposed end is being combed, as is well understood. As the lap of cotton passes between the nipper and the cushion-plate there is a tendency for the cotton to spread or widen out at the edges, and to prevent this is the object of our invention. At or near the ends of the cushion-plate we fix guide-pieces, which project from the said plate sufficiently to prevent the spreading of the lap beyond a determined width, which is arranged to be suitable to the length of the rows of combs on the combing-cylinder. As the lap is fed forward, the said guides prevent side spreading or the side escape of portions of the fiber and maintain a uniform width or length of the lock of staple being combed, the result being that the width of the sliver of combed cotton is more uniform and the edges are more regular.

Our invention is clearly illustrated by the accompanying drawings, wherein—

Figure 1 is a front view of one end of a pair of combing-machine nippers, and shows the nippers as when closed. Fig. 2 is a corresponding view showing the nippers as when open. Fig. 3 is a sectional view of the closed nippers. Fig. 4 is a sectional view of the open nippers, the guide being shown in elevation. Fig. 5 is a back view of the guide-piece *d*, which we apply at the end of the cushion-plate of the nippers. Fig. 6 is an inside view of the same guide-piece. Fig. 7 is a view of the guide-piece as it appears when looking down upon it, one end of the cushion-plate also appearing in the figure.

In Figs. 1 to 4 and 7, *a* is the ordinary cushion-plate, *b* is the ordinary upper plate, and *c c' d e* is the guide-piece which we apply to the cushion-plate. The said guide-piece consists of a front guide *c* and a back guide *d*, these two parts being united by a connecting-piece *e*, so as to form one casting or piece of metal for convenience of attachment to the end of the plate *a*; but, if preferred, the two guides may be in separate parts.

It will be understood that the plate *a* is provided at each end with a guide-piece, the two guide-pieces being made right and left hand. The piece shown in Figs. 5 and 6 is adapted for the left-hand end, which does not appear in Figs. 1 and 2. The downward-extending lip *b'* of the nipper-plate is cut away at the part from *f* to *g* in Fig. 2, so as to clear the front guide, which extends back and is in close contact with the front edge of the cushion-plate, as seen in Fig. 3, and also in Fig. 7, which is a view of the guide, as seen when looking down upon one end of the cushion-plate. By so forming the front guide the fibers are prevented from escaping sidewise between the guide and the cushion-plate. The gripping-edge of the nipper-plate extends horizontally past the front guide to the point *f*, so that any fibers which may spread beyond the line of the guides will be held and combed. From the front guide a finger *c'* extends horizontally a short distance beyond the vertical inner edge of the guide, and when the nipper-plate is brought down the end of the lip passes between the said finger and the cushion-plate. The object of this finger is to prevent the upward escape of fibers at the end of the lip of the nipper-plate and to insure that all the fibers shall be properly combed. The back guide *d* is curved to clear the nipper-plate as it descends, and the inner vertical edge is in line with the edge of the front guide, or thereabout, so that the outward or lateral spread of the fibers is limited both at the back and the front of the nipper-plate.

An important advantage resulting from the use of our invention is that a wider lap of cotton may be fed to the combing-cylinder, so that the amount of work performed is increased; or the said cylinder may be shorter

as compared with the width of the lap, so that a shorter machine will perform the same effective duty.

What we claim as our invention is—

- 5 1. In the nipper apparatus of combing machinery, the combination, with the cushion-plate, of the front guide *c* at each end of the cushion-plate, and a nipper-plate which has its lip cut away, as from *f* to *g*, to clear the
- 10 said guides, substantially as set forth.
- 15 2. In the nipper apparatus of combing machinery, the front guides *c*, each formed with a lateral finger *c'*, substantially as set forth, in combination with cushion and nipper plates.

3. The nipper apparatus for combing machinery, consisting of the cushion-plate provided at each end with the guides *c c' d e*, and of the nipper-plate cut away at *f* at each end to clear the part *c* of each guide, substantially as set forth. 20

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN MCQUEEN.
WALTER MOORES.

Witnesses:

EDWARD K. DUTTON,
FREDK. DILLON.