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1,772,318

MACHINE FOR COATING SHEETS WITH BRONZE POWDER AND THE LIKE

Filed July 9, 1928

2 Sheets-Sheet 1

Fig. 1.

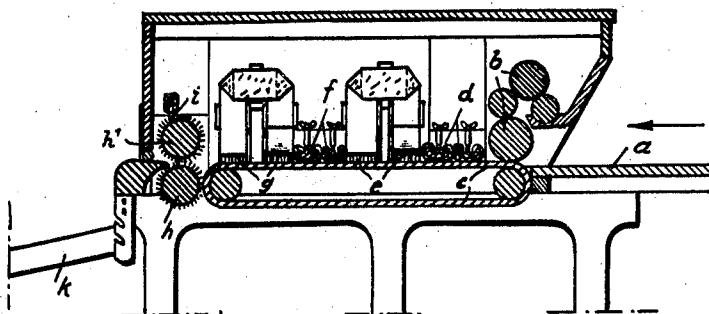
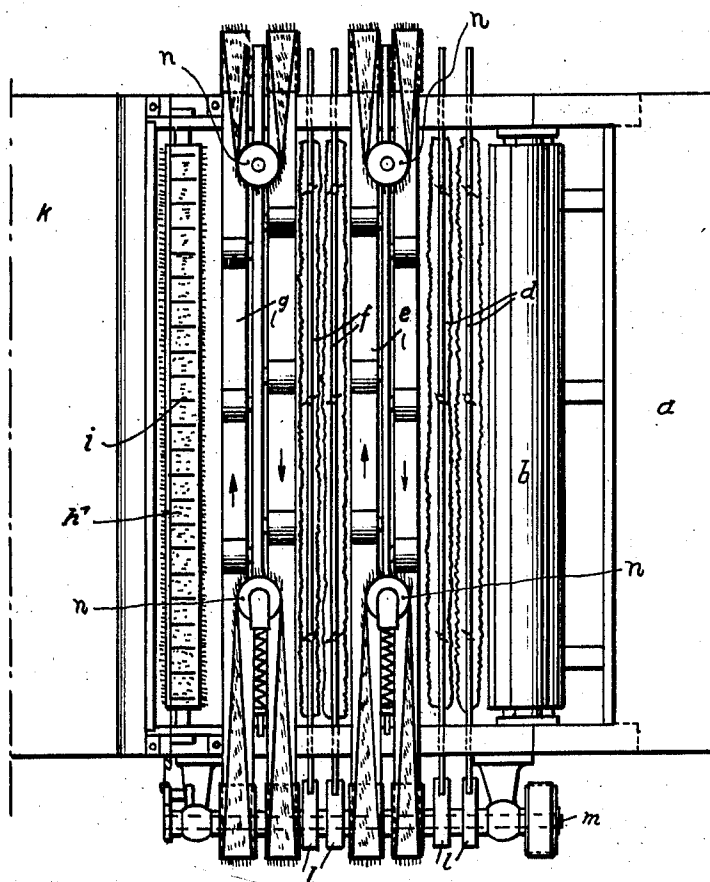


Fig. 2



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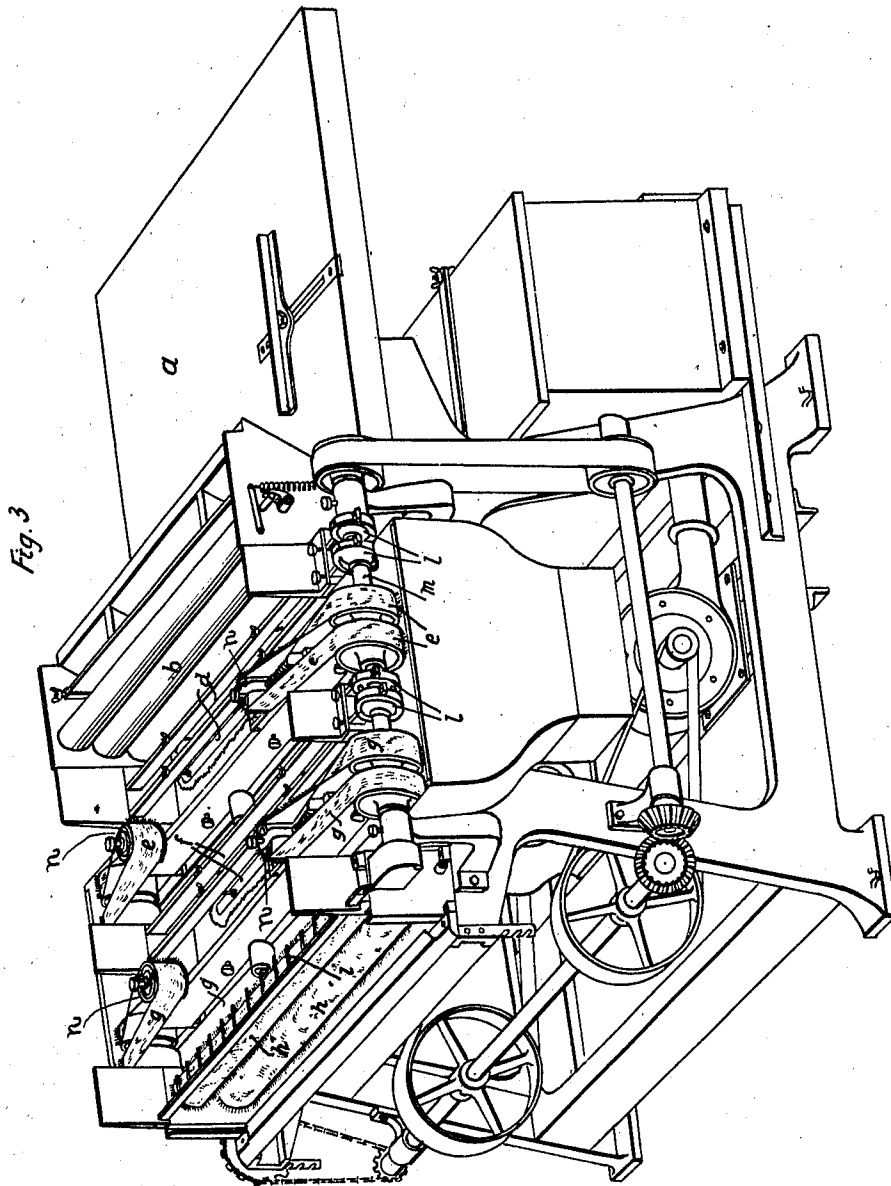
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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MACHINE FOR COATING SHEETS WITH BRONZE POWDER AND THE LIKE

Application filed July 9, 1928, Serial No. 291,385, and in Germany July 12, 1925.

The invention relates to machines for coating sheets of paper or the like with bronze powder or the like, the machines being of the kind in which several burnishers are arranged in series in the path of sheets fed through the machine, each burnisher being followed by a sheet wiper for removing loose powder.

According to my invention the wipers are of the kind which work transversely of the direction of travel of the sheets. Heretofore rotary brushes have been used between the burnishers, and these have the defect that they quickly become coated with powder, and are then no longer capable of wiping the sheets, but merely smear powder over the sheet and spoil the effect of the burnishers. Transversely working wipers have been used, with a single burnisher, but for many purposes a single burnishing, followed by wiping, is not sufficient, and the practice is frequently adopted of passing the sheets through the machine again, or through another similar machine, without re-bronzing, merely for the purpose of repeating the burnishing and wiping.

According to my invention successive burnishings and transverse wipings are performed in a single machine, with much saving of time and labour. The first burnisher applies a preliminary more or less rough polish, after which the sheet is wiped and thus prepared for receiving a higher polish by the succeeding burnisher or burnishers.

An apparatus in accordance with the invention is shown in the accompanying drawing, in which Fig. 1 is a vertical section thereof, Fig. 2 a plan view, and Fig. 3 is a perspective view.

In the drawing *a* represents a feed table, and *b* a set of rollers for applying bronze powder to sheets of paper or other material fed from the table on to an endless conveyor *c*. Close to the bronzing rollers there are two burnishers *d*, reciprocated by means of ec-

centrics *l* on a shaft *m* and these are succeeded, in the direction of travel of the sheet, by an endless brush or wiper *e*, working transversely of the sheet, for removing loose bronze powder. This wiper is in the form of an endless band driven by two pulleys on the shaft *m* at one side of the table, there being two similar guide pulleys at the other side, and the band being looped round rollers *n* with vertical axes above the table. Two parallel courses of the band travel across the table in opposite directions as indicated by arrows in Fig. 2. Beyond this brush or wiper *e* there is a second set of burnishers *f*, which give a high polish to the sheet, and from these burnishers *f* the sheet passes to a second endless brush or wiper *g* for removing any powder which may have been left in a loose, non-adhering state by the burnishers *f*. Receptacles are provided at the sides of the machine, for collecting the powder swept off the sheet by the wipers *e* and *g*. The burnishers and wipers are not of novel construction.

The bronzed sheet passes from the conveyor *c* to a pair of delivery rollers *h*, *h*¹ covered with skin, plush or the like. These clean it thoroughly on both sides. In order that they may do so they must themselves be kept clean, and for this purpose there is provided for each of them a reciprocating wiper or scrapers *i*, which removes the dust therefrom. This dust is carried away by means of a fan or blower.

The parts are arranged so compactly that notwithstanding the duplication of the burnishers and wipers the over-all length need not exceed that of the machines of a similar kind heretofore used, and there is a great saving of space as compared with the use of two separate machines with single burnishers and wipers.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

In a machine for coating sheets with bronze powder or the like the combination of sheet feeding means, a plurality of burnishers disposed in series in the path of the sheets, a plurality of sheet wipers in the form of endless travelling bands working transversely of the direction of travel of the sheet, each of said wipers succeeding one of said burnishers, in the direction of travel of the sheet, a pair of rotary sheet cleaning brushes succeeding the last wiper, and reciprocating scrapers for automatically cleaning the said rotary brushes.

In witness whereof I have signed this specification.

ROBERT LONTKE.

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