

MEANS FOR PREVENTING OFFSET FROM FRESHLY PRINTED SHEETS.

Patented Sept. 12, 1922.

2 SHEETS—SHEET 1.

Fig. 4.

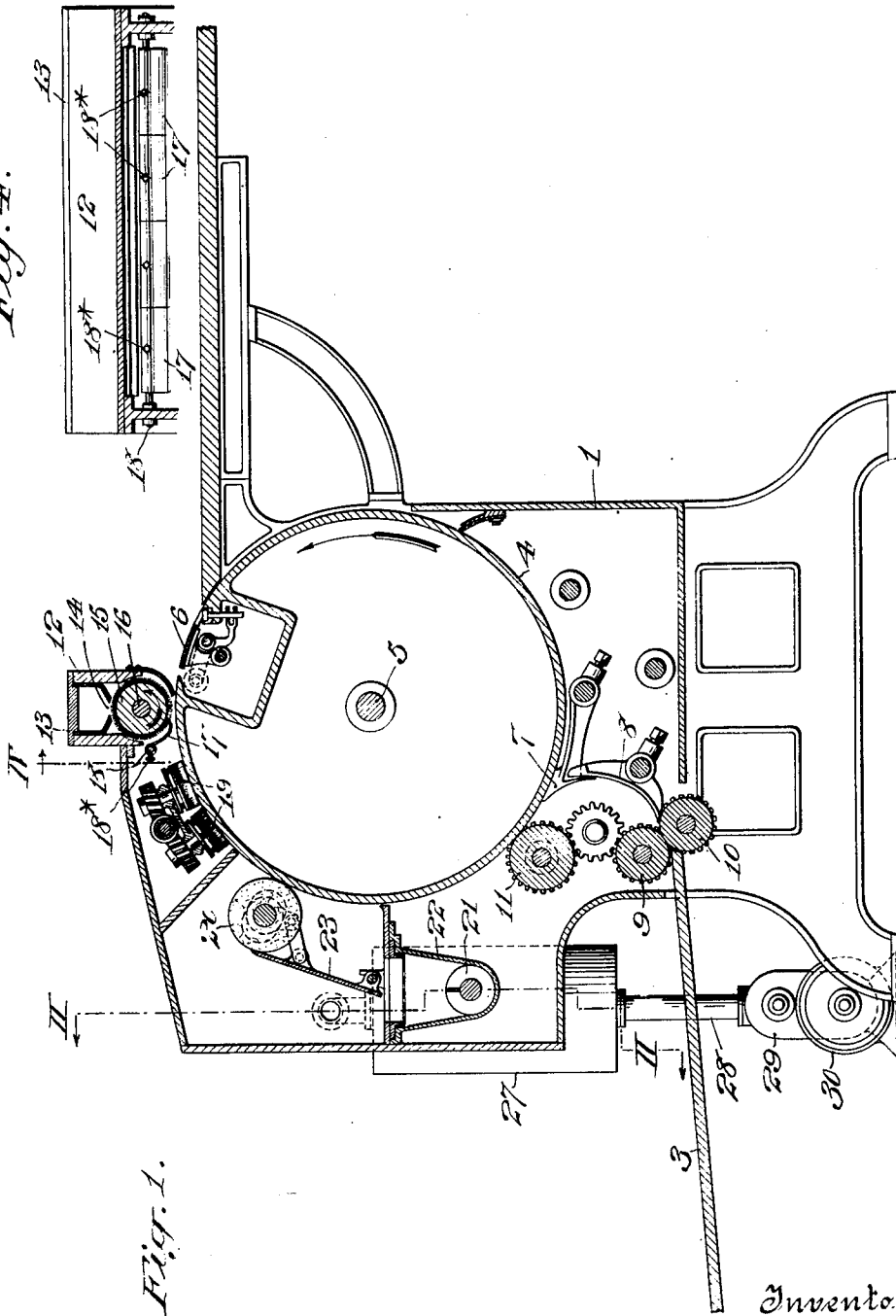


Fig. 1.

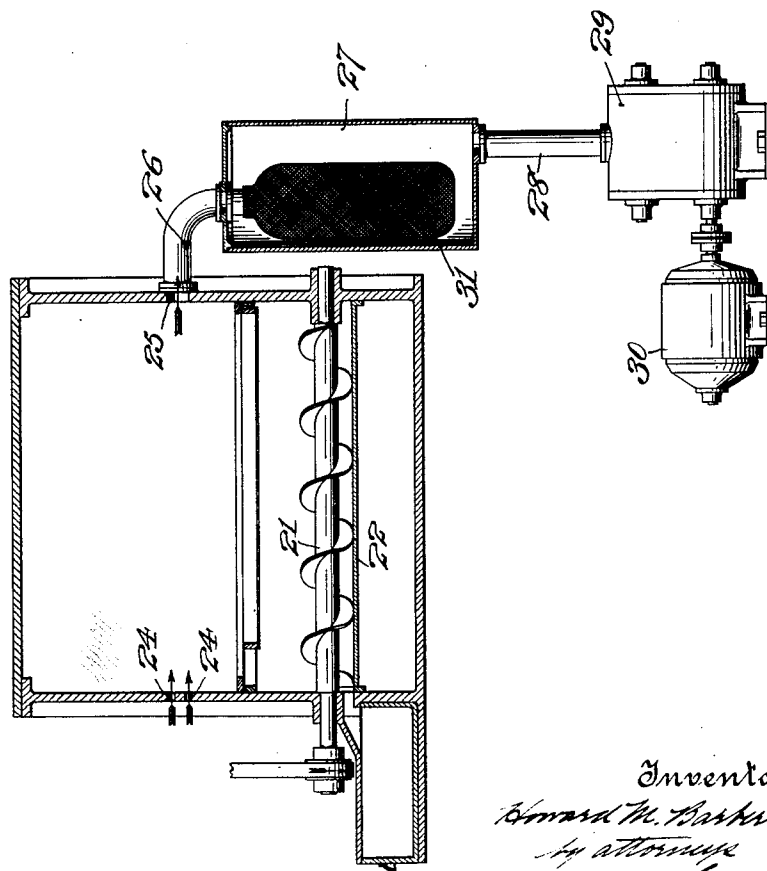
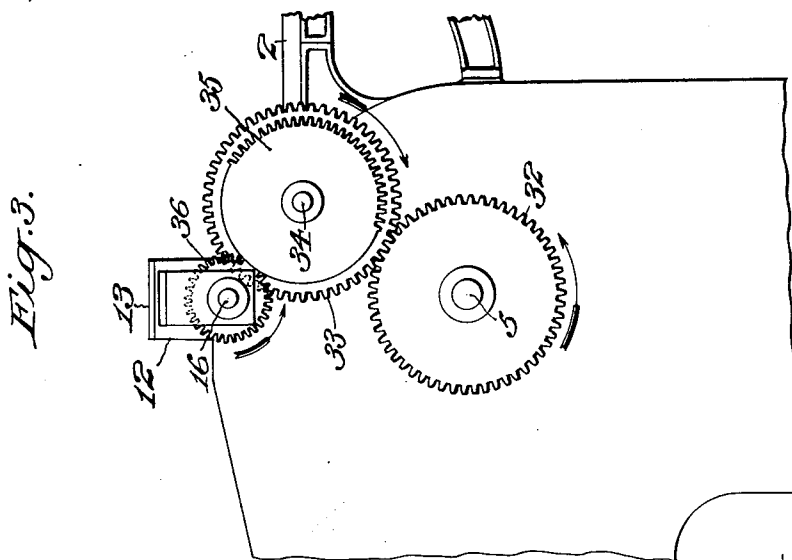
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 MEANS FOR PREVENTING OFFSET FROM FRESHLY PRINTED SHEETS.
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE

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MEANS FOR PREVENTING OFFSET FROM FRESHLY-PRINTED SHEETS.

Application filed February 27, 1920. Serial No. 361,798.

To all whom it may concern:

Be it known that I, HOWARD M. BARBER, a citizen of the United States, and resident of Stonington, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Means for Preventing Offset from Freshly-Printed Sheets, of which the following is a specification.

10 The object of my invention is to provide a novel means for applying talc powder to freshly printed sheets, such for instance, as freshly printed colored sheets for preventing the sheets from offsetting when placed in
15 piles.

A further object of my invention is to provide novel means for preventing the escape of the talc powder dust from within the casing through which the sheets are
20 passed when being delivered, out into the room.

A further object is to provide novel means whereby the talc powder feeding roll will be rotated at a uniform predetermined speed
25 only during the passage of the sheets thereunder.

A machine which includes my means is represented in the accompanying drawings, in which,

30 Fig. 1 represents a vertical section from front to rear through the machine.

Fig. 2 represents a vertical section from side to side, taken in the plane of the line II—II of Fig. 1, looking in the direction of
5 the arrows.

Fig. 3 represents a detail side view showing the gearing for driving the talc powder feeding roll.

Fig. 4 represents a detail section taken in
40 the plane of the line IV of Fig. 1.

The enclosed casing through which freshly printed sheets are passed is denoted by 1, the feed board by 2 and the delivery board by 3. The sheet carrying cylinder 4
45 is mounted on the drive shaft 5 within the casing 1. This cylinder is provided with the usual sheet grippers 6, which grippers may be operated to take the sheets successively from the feed board 2 and release the
50 sheets to be passed to the delivery board 3, by any suitable operating mechanism (not shown herein).

Guides 7 and 8 serve to direct the sheets from the cylinder 4 to the coacting drawing
55 rollers 9 and 10. The delivery roller 11 is

mounted in contact with the cylinder 4 in proximity to the guides 7, 8. The reservoir for the talc powder supply is denoted by 12 and it is provided with a suitable removable cover 13. This reservoir 12 has an
60 opening 14 in its bottom through which the talc powder is supplied to a feed roller 15 mounted on a suitable cross shaft 16. This feed roller may be covered with a pile fabric, such for instance, as plush and it is spaced
65 a short distance from the top of the cylinder 4, so that as the sheets pass between the feed roll and cylinder their freshly printed surfaces will not be engaged by the feed
70 roll.

A transversely arranged sectional blade 17 is carried by a cross bar 18 with the edge of the blade engaging the pile of the feed roll for the purpose of scraping the powder from the surface of the feed roll and de-
75 positing the powder on to the freshly printed surface of the sheet.

As the quantity of the talc powder deposited on the sheets depends largely upon the set of the blade 17, I have found it desirable to make this blade in independently
80 adjustable sections across the machine so as to properly control the deposit of the talc powder. I have provided set screws 18* for this purpose.

After the sheet passes the feed roll 15, its printed surfaces with the talc powder dusted thereon is engaged by the polishing pads 19, which may be driven by any suitable means (not shown herein). After the sheet
90 leaves the polishing pads it is engaged by the brush roller 20, which serves to brush the superfluous talc powder from the surface of the sheet.

A conveyer 21 located in a cross trough
95 22 serves to remove the heavier particles of the talc powder, a scraper 23 being located in position to scrape the powder from the brush roller 20 and direct the same into the said trough 22.

To prevent the powder dust from escaping from within the casing into the room, I provide a vacuum device as follows:

One side of the casing is provided with air inlet holes 24 which are arranged in
105 alinement with the air outlet 25 in the other side of the casing. A passage 26 leads from this air outlet 25 to a vacuum device, in the present instance, into a chamber 27 from which a passage 28 leads to a vacuum pump
110

29 of any well known or approved form, which pump may be driven by any suitable means such as a motor 30.

A bag 31 surrounds the mouth of the passage 26 so that the fine powder dust which is exhausted from the inside of the casing may be caught in this bag and again used if so desired.

The means which I have shown for driving the talc powder feeding roll only while the sheet is passing beneath the same, is as follows:

A gear 32 fixed on the shaft 5 meshes with a gear 33 fixed on a shaft 34. This shaft 34 is provided with a mutilated change gear 35 which meshes with a mutilated change gear 36 on the shaft 16 of the feed roller. The relative sizes of these gears and the number of teeth thereon serve to control the driving and the dwell of the feed roll so that the feed roll will only rotate as the sheet is passing beneath the same. It will readily be seen that this movement of the feed roll can thus be controlled for sheets of different lengths.

I have discovered that by applying the talc powder to the freshly printed surfaces of the sheets and polishing the same, I not only prevent the offsetting of the sheets when placed in a pile, but also secure a better appearance to the sheets.

By removing the powder dust from within the casing and thus preventing this dust from escaping into the room, I am enabled to use the machine successfully where it could not be used in ordinary circumstances without this means.

It is evident that various changes may be made in the apparatus for handling the sheets without departing from the spirit and scope of my invention; hence I do not wish to limit myself to the particular embodiment herein shown, but

What I claim is:

1. An enclosed casing, a rotary cylinder for passing a freshly printed sheet therethrough, a talc powder feeding roll spaced from said cylinder, and a scraper engaging said roll for distributing the powder along the sheet as it passes between the roll and cylinder.

2. An enclosed casing, a rotary cylinder for passing a freshly printed sheet therethrough, a talc powder feeding roll spaced from said cylinder, a scraper engaging said roll for distributing the powder along the sheet as it passes between the roll and cylinder,

and means for polishing the said powdered surface.

3. An enclosed casing, a rotary cylinder for passing a freshly printed sheet therethrough, a talc powder feeding roll spaced from said cylinder, a scraper engaging said roll for distributing the powder along the sheet as it passes between the roll and cylinder, and means for polishing the said powdered surface, and a vacuum device connected to the casing for drawing the fine dust from the casing into a separate receptacle for preventing the dust from escaping into the room.

4. An enclosed casing, means for passing a freshly printed sheet therethrough, means for distributing talc powder along the freshly printed surface of the sheet, means for polishing the powdered surface, said casing having oppositely arranged inlet and outlet openings in its side walls, and a vacuum device connected to said outlet opening for drawing the fine dust from within the casing into a separate receptacle for preventing the dust from escaping into the room.

5. An enclosed casing, means for passing freshly printed sheets therethrough, a talc powder feeding roll, and means for driving the roll at a uniform predetermined speed during the passage of the sheets thereunder and for causing the roll to dwell between sheets.

6. An enclosed casing, means for passing freshly printed sheets therethrough, a talc powder feeding roll, and means for driving the roll at a uniform predetermined speed during the passage of the sheets thereunder and for causing the roll to dwell between sheets comprising a constantly rotating drive shaft and a changeable mutilated gear connection between the drive shaft and roll shaft.

7. An enclosed casing, means for passing freshly printed sheets therethrough, a talc powder feeding roll, and means for driving the roll at a uniform predetermined speed during the passage of the sheets thereunder and for causing the roll to dwell between sheets comprising a constantly rotating drive shaft, an idler shaft geared thereto, and a changeable mutilated gear connection between the idler shaft and roll shaft.

In testimony, that I claim the foregoing as my invention, I have signed my name this twentieth day of February 1920.

HOWARD M. BARBER.