

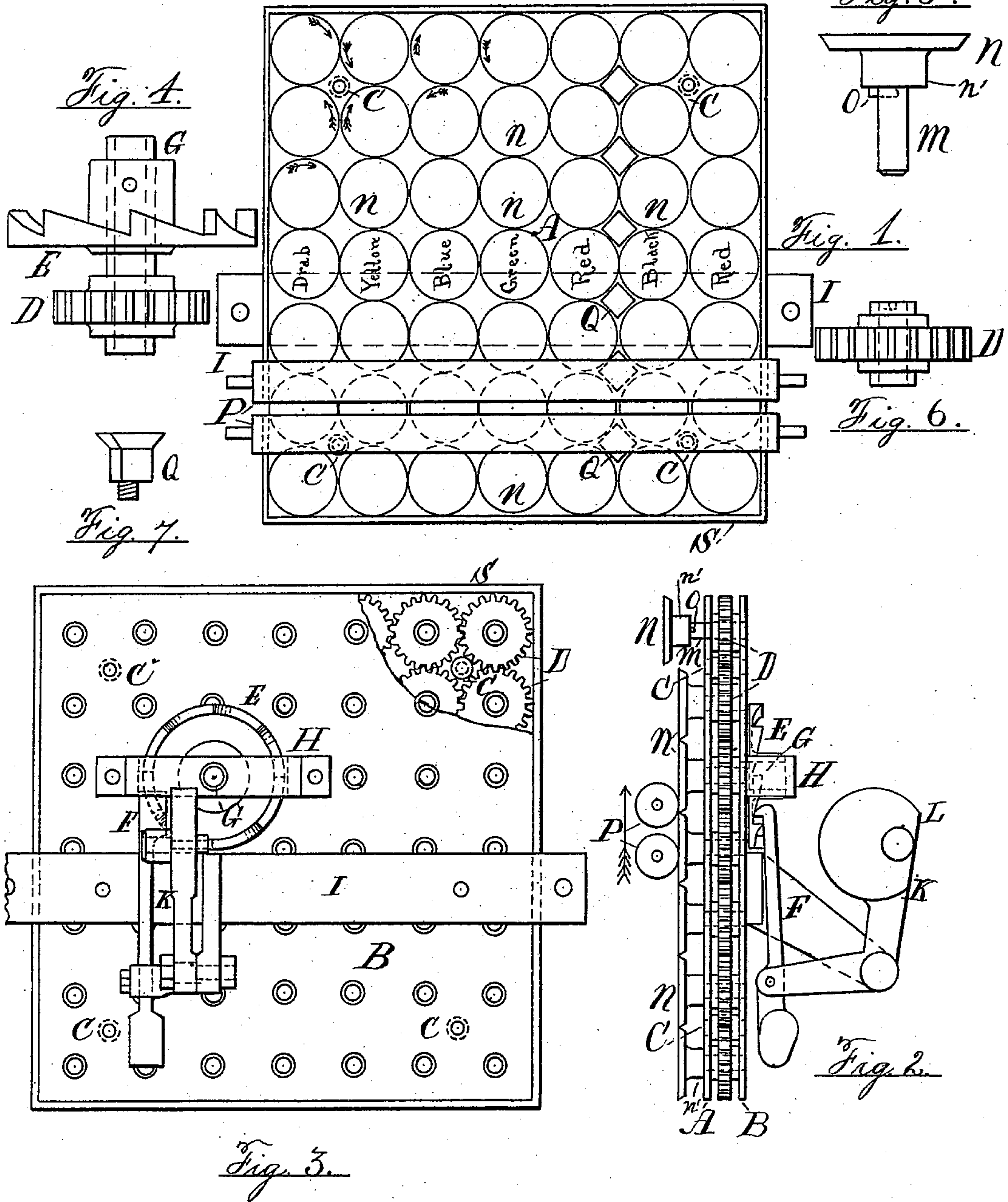
(No Model.)

B. S. WHITEHEAD.

INKING ATTACHMENT FOR PRINTING PRESSES.

No. 291,969.

Patented Jan. 15, 1884.



Attest:

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UNITED STATES PATENT OFFICE.

BENJAMIN S. WHITEHEAD, OF NEWARK, NEW JERSEY.

INKING ATTACHMENT FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 291,969, dated January 15, 1884.

Application filed June 30, 1882. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN S. WHITEHEAD, of Newark, in the county of Essex and State of New Jersey, have invented a new and
5 useful Improvement in Inking Attachments for Printing-Presses, of which the following is a specification.

This invention relates to inking attachments for printing-presses, whereby several colors
10 may be printed at a single impression of the type, the object of the invention being to more perfectly spread the ink, to simplify and reduce the cost of construction, and to otherwise more perfectly adapt the attachment for
15 the purposes for which it is intended.

Referring to the accompanying drawings, in which similar letters of reference indicate like parts in each of the figures, Figure 1 is a plan view of my improved attachment. Fig. 2 is a
20 side view of the same. Fig. 3 is an inverted plan, partly in section. Figs. 4, 5, and 6 are detail views of certain parts of the device, and Fig. 7 is a side view of one of the intermediate disks.

25 In carrying out the invention I arrange between two plates, A B, held apart by shouldered posts C, whereby a frame-work is formed, a series or collection of cog-wheels in parallel rows, running at right angles to the axis of the
30 inking-rolls P, the cogs of one row engaging with those in the laterally-adjacent row or rows and with each other, as shown, so that power transmitted to one cog will actuate all simultaneously, and a positive motion be maintained throughout the inking-surfaces of the
35 attachment. Said cogs operate intermittently, actuated by a ratchet-wheel, E, and pawl F, said ratchet being hung on the lower end of the shaft G of one of the cogs, and supported
40 by the strap H, Fig. 3, secured to the plate B. The frame A B is secured to an ordinary printing-press by means of a bar, I. The pawl is operated by a projection on the back of the press striking the arm or lever K at the end
45 L, which lifts the said end and draws the pawl forward, causing the ratchet, and with it the collection of cogs, to revolve a fraction of a revolution. When the projection has passed the end of the arm, the said arm drops by its
50 own weight, and causes the pawl to engage with another tooth of the ratchet for a repeti-

tion of the movement. The pawl may be operated by some other device to accomplish the same result. Into each of the cogs is inserted the shank M of an inking-disk, N, the feather
55 O causing the disk to revolve with the cog intermittently a fraction of a revolution at each movement, the combinations of surfaces being practically never the same, as the adjacent cogs and the accompanying inking-disks move
60 in opposite directions, as indicated. The ink is thus perfectly spread upon the rolls P, and by them the type is furnished therewith.

It will be apparent from the above description and the drawings that the parallel rows
65 of inking-disks are arranged in bearings or seats that are fixed and permanent in their relations each to the other, so that when the attachment is once properly arranged on the press (the lines of separation between the rows
70 of disks being straight lines at right angles to the axes of the inking-rolls, a position necessary to give a perfect outline between the colors) no subsequent care need be exercised in placing the disks individually to obtain the
75 best results. The revolving inking-disks are arranged with their smooth inking-surfaces, which engage with the rolls P, above the plate A, so that said revolving inking-disks alone engage with said rolls, to spread the ink when
80 a sharp outline between the colors is desired. The peculiar arrangement of the revolving disks in parallel rows, with engaging peripheries above any surrounding and stationary surfaces, secures not only a perfectly-solid
85 body of color, but also, by this arrangement, the area of inking-surface engaging with the rolls increases toward the center of the row of inking disks or plates, (or the line of disk-axes.) The ink is thus prevented from gath-
90 ering in too profuse quantities on the rolls P, near or at the line which separates the two colors, and thus the said two colors are effectually prevented from mixing, although no intervening uncolored or uninked portion is
95 allowed to remain on the roll caused by a separation of the inking disks or plates. When found desirable, the disks Q are employed, which are removably secured in the spaces between the rotating disks N, for the purpose of
100 more closely joining the ink at the lines of contact. These disks are of similar construction

to the larger disks N, and their shanks are designed to be inserted in perforations in the top plate of the frame in a removable position. The rolls P coact with the revolving smooth-faced inking plates or disks, to spread the ink. From the rolls the ink is delivered to the type in the usual manner. The arrangement of the disks or plates upon the frame-work and their relations to the cogs are such as that they may be individually removed from their several seats without disturbing adjacent disks or other parts of the device, there being no parts on the disk or its connections projecting into undercut parts of the frame. Thus, should any one of said disks be accidentally marred or discolored, the same can be readily raised from its seat, be cleaned, and replaced in its bearing or seat in the frame, a shoulder, N', raising the inking-surface above the plate provided with said bearing, and a shank, M, entering the cog D, and being prevented from turning therein by any suitable device or arrangement, such as the feather.

I am aware that, broadly, inking-disks arranged in rows are not new, and also that brushes have been used in block-printing, arranged in a collection and actuated simultaneously by means of a corresponding series of cogs and a hand-crank, and therefore such features I do not wish to be understood as claiming, broadly.

Having thus described my invention, what I claim is—

1. An inking attachment for a printing-press, consisting, substantially, of a collection

of revolving inking-disks arranged in parallel rows above the frame-work in or on which they revolve, the peripheries of the disks of adjacent rows engaging with one another, all substantially as and for the purposes herein set forth and shown.

2. The disks N, having the shoulders N', the shanks M, and feathers O, in combination with cogs D and a frame-work, substantially as and for the purpose set forth and shown.

3. The inking attachment consisting of a collection of disks arranged in parallel rows to form the entire table-surface, each disk having a shoulder resting on its driving-cog, in combination with said cogs, adapted, substantially as described, to be intermittently operated.

4. In combination with the frame-work A B of an inking attachment for a printing-press, the collection of inking-disks arranged in parallel rows, the line of contact of the peripheries thereof being straight lines, said disks being arranged and adapted to be withdrawn individually without disturbing the adjacent mechanism, substantially as herein set forth.

5. The collection of disks arranged in parallel rows, and removably mounted on rotating cogs, in combination with the stationary disks removably fixed between the rotating disks, as and for the purpose specified.

BENJAMIN S. WHITEHEAD.

Witnesses:

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