

(No Model.)

J. WATERSTON.
INK DISTRIBUTER.

No. 516,620.

Patented Mar. 13, 1894.

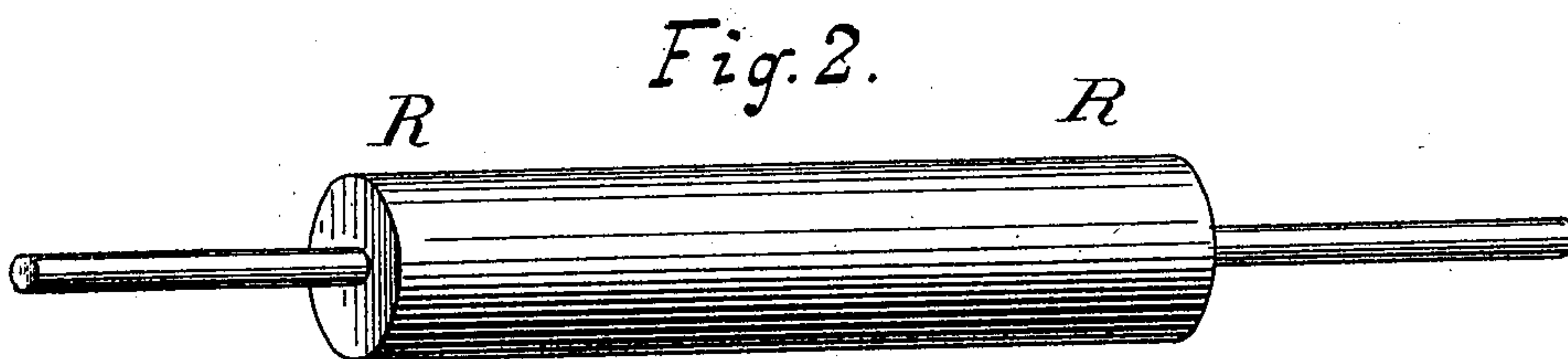
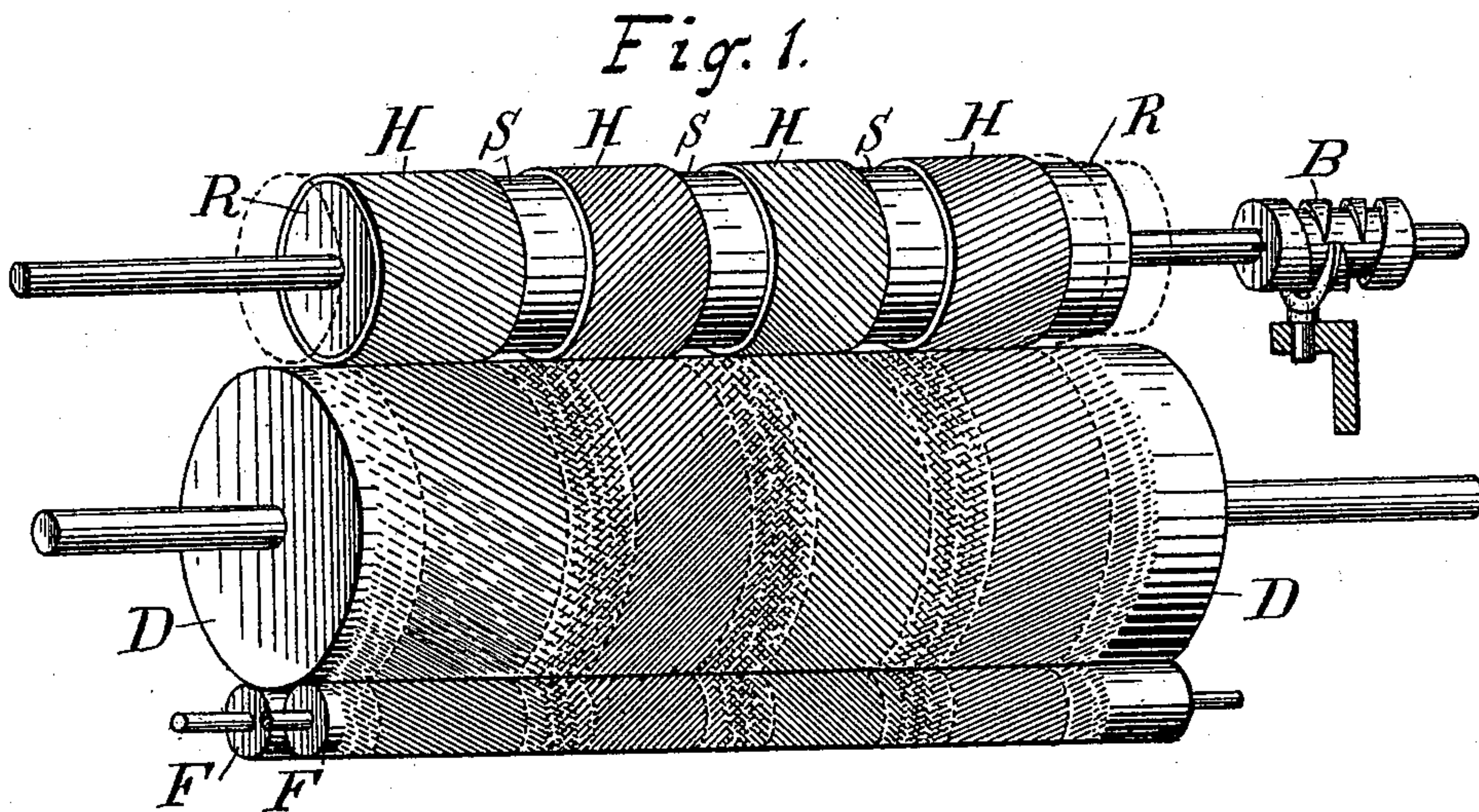
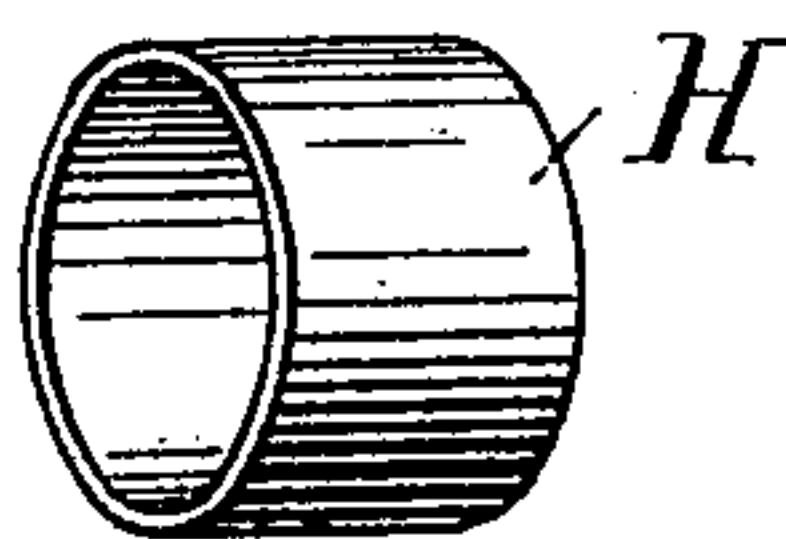


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES WATERSTON, OF NASHVILLE, TENNESSEE, ASSIGNOR, BY MESNE ASSIGNMENTS, TO GEORGE EDWIN SANBORN, OF CHICAGO, ILLINOIS.

INK-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 516,620, dated March 13, 1894.

Application filed March 2, 1892. Serial No. 423,466. (No model.)

To all whom it may concern:

Be it known that I, JAMES WATERSTON, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented a new and useful Improvement in Ink-Distributers, of which the following is a specification.

My invention relates to improvements in the device for distributing printers' ink of several different colors so as to impress them in parts in solid color and in other parts in varying degrees of mixture of different adjoining colors, and this at one and the same time on parts of the same general surface or sheet and by means of one apparatus, without mixing the different colors too much or too little; and these are the practical objects of the invention. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a vibrating-roller, with the collars or hose disposed thereon, a distributing roller and two form rollers. Fig. 2 is a perspective view of the vibrator-roller and shaft, without the new attachments or additions, and Fig. 3 is a perspective view of a ring or collar composed of some suitable substance—india rubber, rubber hose or other like material.

Similar letters refer to similar parts throughout the several views.

R is the vibrator-roller and shaft.

D is the distributing roller.

H is a ring or short tube consisting of a section of rubber hose or other like elastic material.

B is the "vibrator" which gives endwise motion—to and fro—to the vibrator-roller. Short lengths of elastic hose H, are slipped onto the vibrator-roller R so as to leave between them the spaces S—greater or less, at will—but not too great to allow the adjacent collars H to traverse a part of the circumference of the roller D traversed by the adjacent collar H.

D is the ordinary distributing roller, and F F two ordinary form rollers. The other parts of the printing press, constituting no part of the invention, are not shown. Either from a fountain or in any other usual way inks of different colors may be placed upon the dif-

ferent lengths of hose or rubber collars H H, as, for instance, upon the first one to the left red, upon the next one to the right blue, next yellow, and lastly black on that located at the right end of the vibrator-roller or in any other desired order of colors; and the number of collars and rubber hose may be varied at will. The vibrator and distributor rollers being set in motion in any ordinary way, the ink is distributed or spread upon a certain part of the distributing roller D, opposite the center of the corresponding collar H, and for a space converse in proportion to the length of the vibration, in a solid color corresponding to the color of the ink on the length of hose or rubber collar making contact therewith. There being no contact between that part of the vibrator-roller spaces S located between the hose H and the opposite part of the distributing roller D, there will be a shading into each other of the two adjacent colors coming from the two adjacent sections of hose or collars H on each side and an absence of a solid body of either color, governed by the amount of space between the hose and the extent of the vibration given to the vibrator-roller. The collars H hold to the vibrator-roller R sufficiently to remain in place thereon, but may be removed for the purpose of cleaning, or for the purpose of substituting sections of different lengths, or varying spaces, as may be desired. Very pretty effects may be obtained by distributing colored inks in this way, as in book-cover and other like work.

I am aware that sectional rollers used for the purpose of distributing inks of different colors in the same press are old. In my invention the vibrator-roller itself is not sectional, but its surface is divided up and appropriated more or less temporarily in the way shown to inks of any desired colors or combinations of colors. Of course each collar may place the ink in varied thicknesses at the two extremes of its motion as compared with its center of vibratory motion.

The elastic feature of the rings or collars H enables them to hold to the vibrator roller automatically and sufficiently to remain in place thereon, while they are easily adjustable, and also facilitates distribution, thus taking part in at least two functions.

The collars or rings H are continuous or entire, or in other words not divided at any point, and the elasticity they possess, of the different kinds, is preferably due to rubber, of which they may be in whole or in part composed. The distributing-roller and the form-roller each has a cylindrical surface on which the ink is distributed in varying tints in different parts through the effects of the vibratory movement of the separate sections or rings.

I claim as my invention—

1. In ink distributors, a round vibrator-roller or shaft provided with one or more elastic, continuous and adjustable rings or collars automatically held upon the roller or shaft by the elasticity of the rings or collars, in combination with a distributing-roller.

2. In ink distributors, a round vibrator-roller or shaft provided with two or more ad-

justable, continuous and elastic collars, rings or sections composed of rubber, and held in place upon the roller by their own elasticity, in combination with a distributing-roller and a form-roller each provided with a continuous cylindrical ink distributing and carrying surface.

3. In ink distributors, two or more elastic rings or collars held upon a vibrating-roller by their own elasticity and in combination therewith.

4. In ink distributors, two or more rubber rings or collars held upon a vibrating roller by their own elasticity and in combination therewith.

JAMES WATERSTON.

Witnesses:

M. N. MILLER,

ED V. JONES.