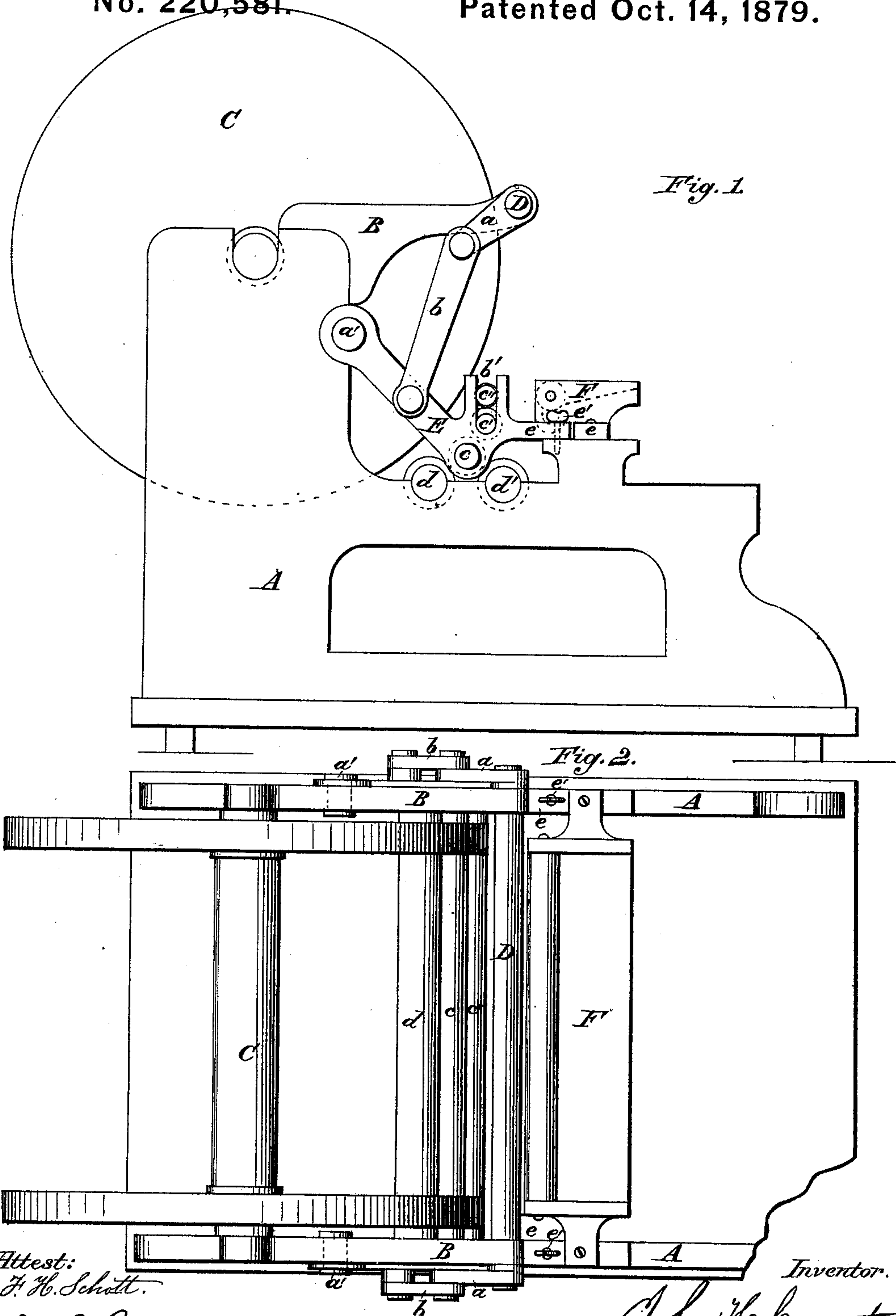


J. H. CRANSTON.
Inking Apparatus for Printing-Machines.
No. 220,581. Patented Oct. 14, 1879.



Attest:
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D. T. Cowl

Inventor.
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Fig. 3.

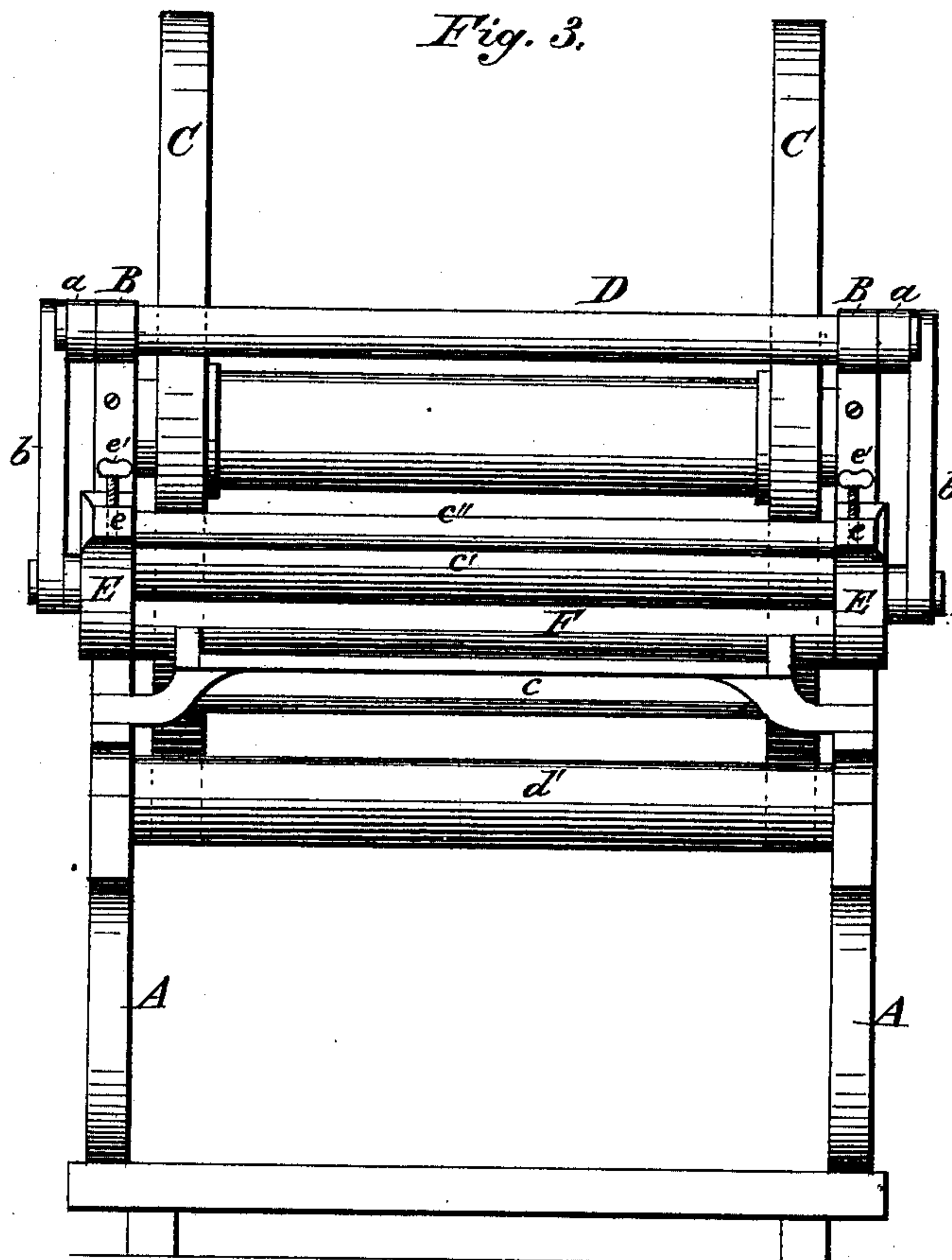
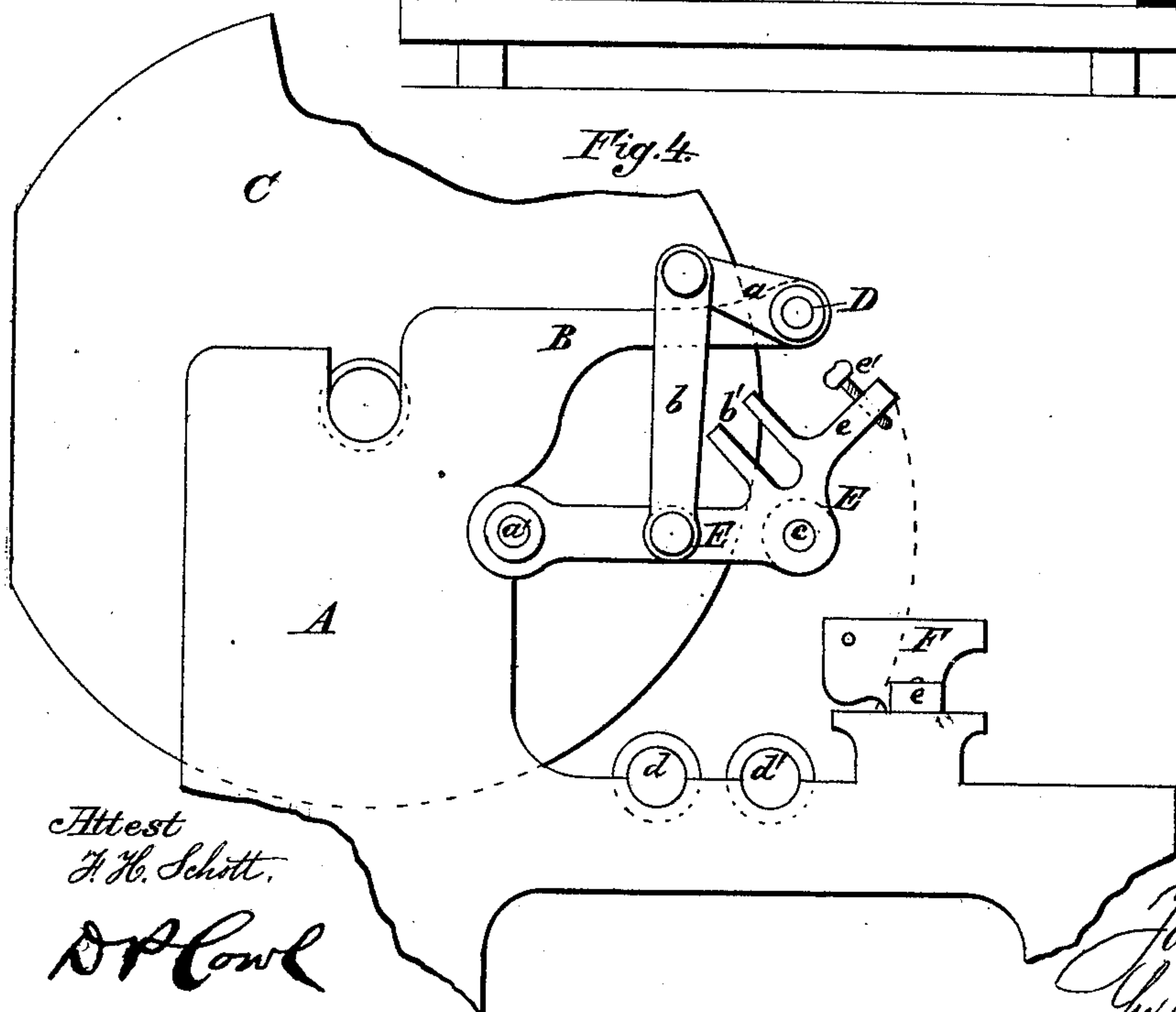


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN H. CRANSTON, OF NORWICH, CONNECTICUT.

IMPROVEMENT IN INKING APPARATUS FOR PRINTING-MACHINES.

Specification forming part of Letters Patent No. **220,581**, dated October 14, 1879; application filed April 4, 1879.

To all whom it may concern:

Be it known that I, JOHN H. CRANSTON, of Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Inking Apparatus for Printing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of printing-machines known as "cylinder-machines," and more especially to that part of the machine called a "distributor," by means of which the ink is taken from a fountain and applied to the types, the principal object being to render the inking or form rolls and other parts of the apparatus which require to be frequently removed for washing or other purposes more accessible than in the machines hitherto constructed, thus expediting the operation of removing and replacing the rolls; and the invention consists in the construction and arrangement of the distributing-frame with its connected operating mechanism, as will be hereinafter fully described, and then specifically stated in the claim.

In the drawings, Figure 1 is a side view of a portion of the machine, showing the distributor and a part of the lifting mechanism. Fig. 2 is a plan of the parts represented in Fig. 1, showing their relative position when in operation. Fig. 3 is an end view of the machine with the distributor slightly elevated. Fig. 4 is a side view with the distributing-frame raised and the removable rolls taken out.

The press-frame A requires no especial description, as the only change required from that heretofore constructed is the addition of the projecting arms or brackets B from that part of the frame which carries the cylinder C. These arms or brackets carry in suitable journal-bearings the rock-shaft D, to each end of which shaft, and parallel, so that they move through the same arc, are secured the arms *a*. To the outer ends of these arms are pivoted the links *b*, the lower ends of which links are in turn pivoted to the distributing-frame E,

which carries the distributing-rolls, and is hinged to the machine-frame A by the pivotal joints *a'*.

Journaled in the distributing-frame is the distributing-roll *c*, which rests, when the machine is at work, upon the inking or form rolls *d* and *d'*, (journaled in the machine-frame,) that apply the ink to the type. Resting upon the distributing-roll and journaled in the slots *b'*, formed in the distributor-frame, is the cloth-roll *c'*, and above this and journaled in the same slot *b'* is the vibrator or vibrating roll *c''*. This arrangement of rolls in the distributor-frame for applying ink to the type differs but little from that commonly used for the same purpose, and will not, therefore, require a more specific description. The two projecting ends *e* of the distributor-frame rest, when the machine is ready for operation, upon the main frame A at the ends of the ink-fountain F, and are held firmly in position by the screws *e'*, that pass through the part *e* and are screwed into the frame A; but when these screws are released the distributor-frame may be raised, together with the rolls, and by removing the rolls *c'* and *c''* from the slots in which they are journaled the frame may be raised sufficiently to allow the form or inking rolls *d* *d'* to be taken out over the fountain F whenever such removal becomes necessary for washing up or other purposes.

The rock-shaft D, placed above the distributor, is entirely out of the way, and prevents the complication of parts and difficulty of access that would be unavoidable were the shaft placed beneath the type-bed. If desired, a hand or small balance-wheel may be placed upon one or both ends of the rock-shaft to assist in raising the distributor, which, by the system of connecting-links through which its attachment to the rock-shaft is made, is forced to rise equally at each side of the machine, and is held in position by a ratchet upon the rock-shaft and a pawl attached to the bracket. This method of constructing and operating the distributor will be found to possess these advantages, namely: economy in construction and a great saving in the time ordinarily required for the removal and replacement of the rolls.

I am aware that a rock-shaft journaled in

the machine-frame beneath the type-bed and connected by gearing with links pivoted to arms secured to a hinged distributor-frame lying over inking-rolls has heretofore been employed, as shown in Letters Patent granted to C. B. Cottrell, dated June 25, 1878, No. 205,357, and I therefore lay no claim to such invention; and I am also aware of the patents of C. B. Cottrell, dated February 1, 1876, No. 172,975, and G. P. Gordon, dated May 18, 1869, No. 90,091, in which the hinged joint of the distributor-frame in the former and the rock-shaft of said frame in the latter lie above the ink-rolls; and therefore in view of these inventions I desire to limit my claim to the construction and arrangement of the parts shown therein.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent, the following:

The printing-machine frame A, carrying the ink-rolls *d d'*, and provided with the brackets B, carrying the rock-shaft D, arranged above said rolls, and provided with the arms *a*, in combination with the links *b* and distributor-frame E, hinged to the machine-frame, and provided with open slots for holding the removable rolls *c' c''*, extensions *e*, and retaining-screws *e'*, the whole constructed and arranged to operate in the manner and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 1st day of April, 1879.

JOHN H. CRANSTON.

Witnesses:

LUCIUS BROWN,
GEORGE F. BARD.