

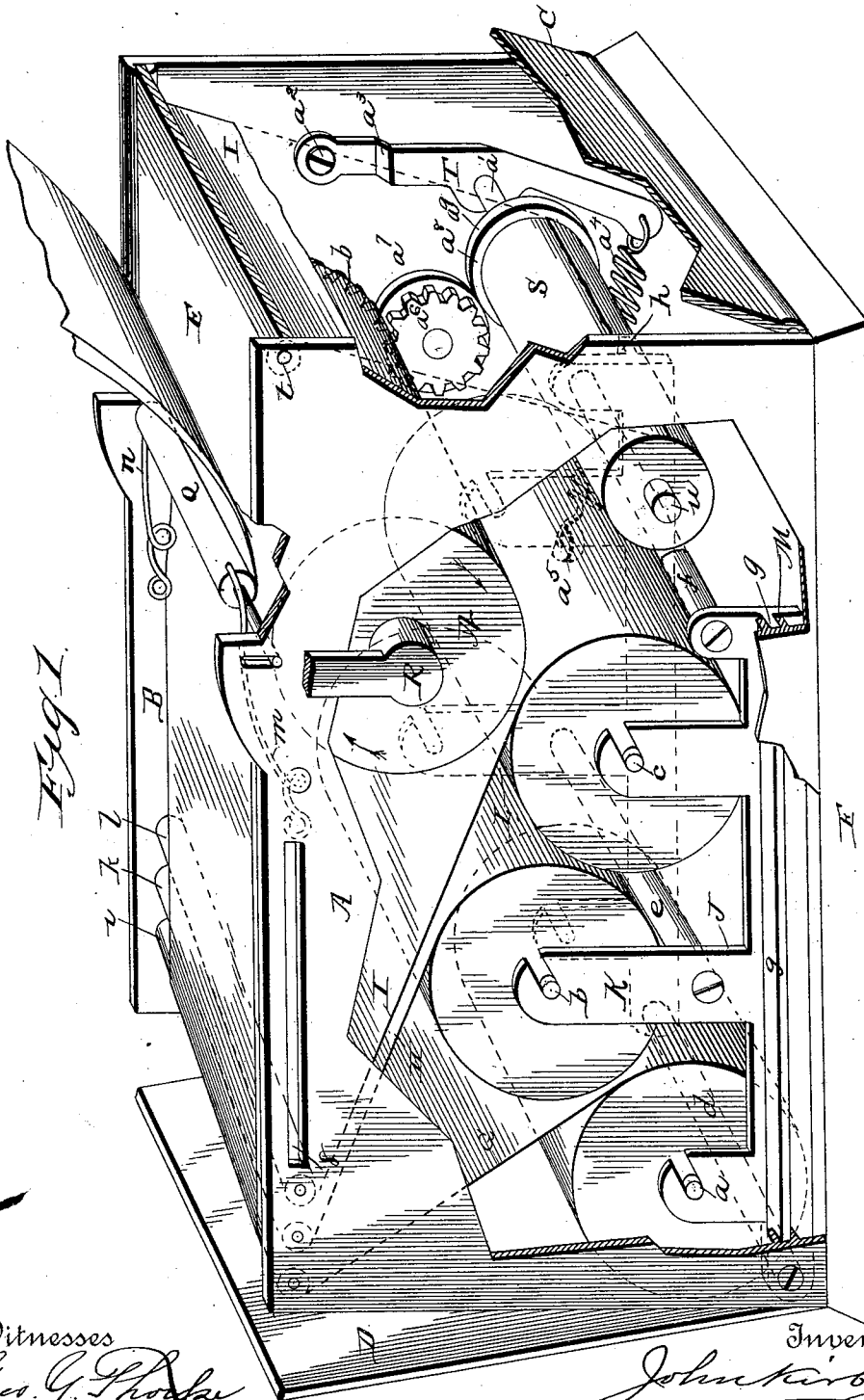
(No Model.)

2 Sheets—Sheet 1.

J. KIRBY, Jr.
AUTOGRAPHIC REGISTER.

No. 469,667.

Patented Feb. 23, 1892.



Witnesses
Geo. G. Thorne
D. A. Taubelschmidt

Inventor
John Kirby, Jr.

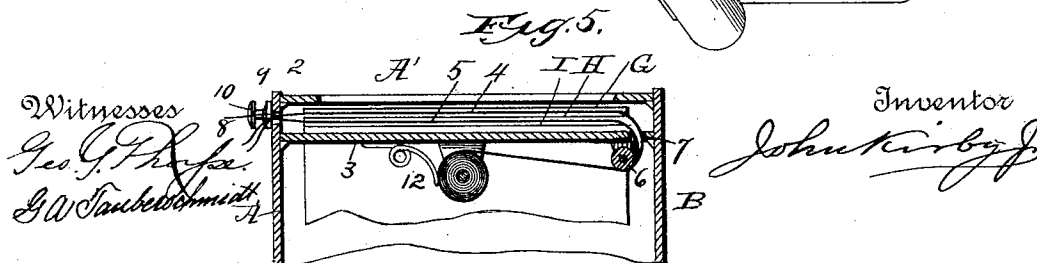
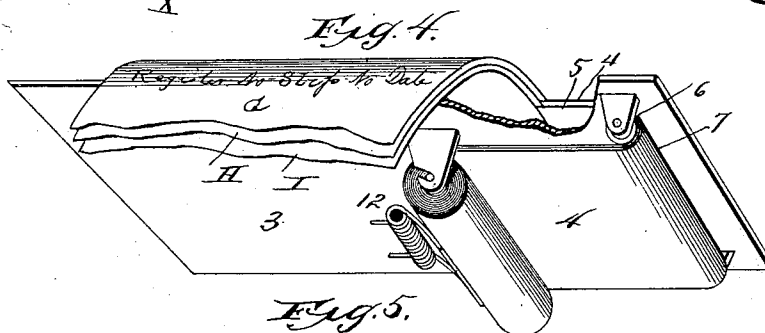
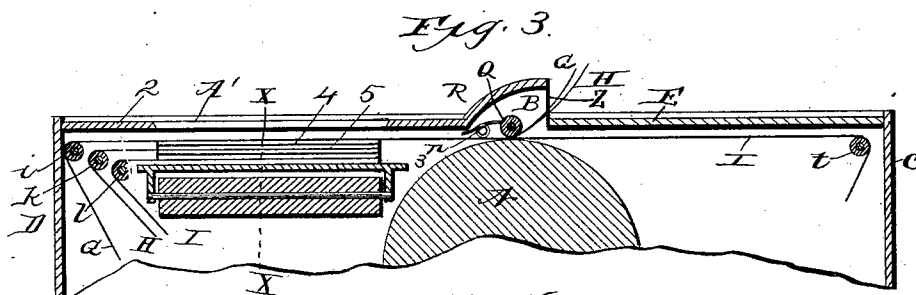
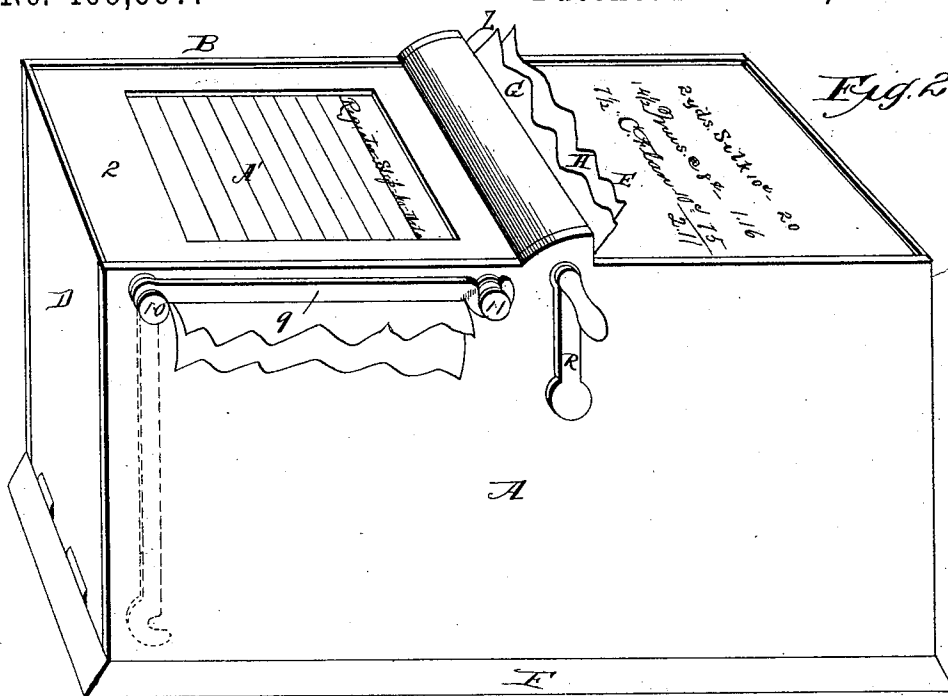
(No Model.)

2 Sheets—Sheet 2.

J. KIRBY, Jr.
AUTOGRAPHIC REGISTER.

No. 469,667.

Patented Feb. 23, 1892.



Witnesses
Geo. J. Phypa.
G. A. Taubel Schmidt

Inventor
John Kirby Jr.

UNITED STATES PATENT OFFICE.

JOHN KIRBY, JR., OF DAYTON, OHIO.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 469,667, dated February 23, 1892.

Application filed January 8, 1890. Serial No. 336,273. (No model.)

To all whom it may concern.

Be it known that I, JOHN KIRBY, Jr., of Dayton, county of Montgomery, and State of Ohio, have invented certain new and useful
5 Improvements in Autographic Registers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

10 My invention relates to a class of registers in which a number of strips of paper are unwound from delivery-wheels and passing over a suitable bearing-plate are interposed
15 by sheets of carbon-paper or other manifold- ing material, whereby a number of impres- sions are made by one writing, and whereby the strips may be separated after passing the manifolding papers and the lower strip
20 passed to a place of concealment and the upper strip or strips to without the register- case, where the portion written upon may be severed from the remainder of the strip or strips, the several features of which will be hereinafter fully set forth.

25 Its objects are to provide simple and effective means for mounting the delivery-wheels, in connection with mechanism for conveying the paper through the register and means for rewinding the strips or any number of
30 them, if desired, to be concealed within the case. I accomplish these objects by the mechanism shown in the drawings, as will be hereinafter fully described.

35 In the drawings, Figure 1 represents a perspective view of the register with its top removed, its rear end partially open, its front and side broken away sufficiently to show the interior mechanism, the writing-tablet, and means for securing the manifolding material to the exterior of the case being omitted.
40 Fig. 2 is a perspective view of the register as seen when in service. Fig. 3 is a longitudinal section through the upper portion of its center. Fig. 4 is a perspective view of the under side of the tablet upon
45 which the writing is done, showing also the manifolding material and strips of paper which receive the writing. Fig. 5 is a cross-section through the line xx of Fig. 3.

50 The register-case is composed of two sides A B, ends C D, a removable top plate which may be secured to the case by any desired

means, and which is provided with an opening A', through which the writing is done, a glass top E, and base F, the sides being supported by suitable cross-bars. (Not shown.) 55

G, H, and I are paper strips wound upon rollers $a b c$, mounted, as shown, in a frame J, consisting of two sides K L, held together by cross-bars $d e f$ and provided with project- 60 ing ribs $g h$, which ribs slide to and fro in ways attached to the sides A B of the case, as shown at M, by which the frame J can be withdrawn at the open end D of the case, when it can be quickly charged with paper 65 and replaced to its position within the case. The paper strips pass over rollers $i k l$ and along over the top side of the plate 3, which plate may be supported upon lugs, as shown in Fig. 5, or by any other convenient means, and 70 which supports the paper while being written upon to a feed-roller N, suitably mounted within the case, and preferably of such diameter as to require but one revolution to move the requisite amount of paper forward at each 75 operation. A friction-roller Q is movably mounted above the feed-roller and is pressed down on the paper by means of springs $m n$, the free ends of which bear against the top side of the roller-journals, as shown. When 80 the feed-roller is turned by means of a crank R in the direction indicated by arrows in Fig. 1, the paper is moved forward, the under strip passing under the glass window E, over a roller t , is wound upon a receiving-roller S, 85 as shown by broken lines in Fig. 1, and the upper strips pass through an outlet Z to without the register-case and are severed in the usual manner. It will be observed that the diameter of the receiving-wheel constantly 90 enlarges as the paper is wound upon it. Hence its speed must also change to conform to its increasing diameter in order to keep the proper tension on the paper, and to accomplish this I mount the journal u of the 95 receiving-roller in a suitable bearing, preferably formed in the side A of the case, and the journal a' is mounted in an adjustable bearing T, pivoted at a^2 to the side B of the case and formed with an offset a^3 . One end of a 100 spring a^4 is attached to the adjustable bearing, the opposite end being secured to the side of the case at a^5 . A gear-wheel a^6 , having a flat smooth portion a^7 , is mounted to the

side B of the case, its teeth engaging with corresponding gearing *b* at the end of the feed-roller. The receiving-roller is provided with a flange *a*⁸, having a flat surface *a*⁹, which corresponds with the portion *a*⁷ of gear-wheel *a*⁶, the two being held in contact by a spring *a*⁴, and thus the receiving-roller is revolved by the movement of the feed-roller. The diameters of the gear-wheels *a*⁶ and *a*⁷ and flange *a*⁸ of the receiving-roller are of such proportions to the gearing *b* of the feed-roller as to cause the receiving-roller to revolve with sufficient rapidity to take up the first movement of paper as fast as unwound from the delivery-reel. As the diameter of the receiving-roller increases, more tension applies to the paper between it and the feed-rollers, and this is compensated for by the action of spring *a*⁴, which yields to the strain on the paper. Thus the friction of the surfaces *a*⁷ *a*⁹ is reduced and the speed of the receiving-roller lessened in conformity with its increasing diameter. The pivoted bearing T is made of elastic material, and by pressing its lower end toward the side of the case journal *a*¹ may be freed from its bearing and the receiving-roller removed from the case. On the under side of plate 3 is mounted a reel of carbon or other manifolding material which in this instance consists of two strips 4 5. The number of strips employed may, however, be varied to conform to the number of strips employed to receive the writings. These manifolding-sheets pass over a roller 6, also mounted on the under side of plate 3, through a slot 7 to the top side of and across plate 3, interposing the paper strips G H I, as more clearly shown in Fig. 5, through an opening 8 to without the case, where they are held firm by a pivoted bar 9 and set-screws 10 11. When the set-screws are loosened, the bar drops, as shown by dotted lines in Fig. 2, when a fresh supply of the manifolding material may be drawn from the reel and the worn-out portion severed therefrom. Thus when the top strip is written upon the strips beneath by means of interposed manifolding material are caused

to receive the same impression, as seen beneath the glass window E in Fig. 2, while a spring 12 prevents the slacking of the manifolding material from the reel.

I am aware that registers of the class herein described have heretofore been made with a receiving-roller for storing the paper, as in United States Letters Patent Nos. 286,560, 355,749, and 374,231; but in all these machines the receiving-roller is used as a means for unwinding the delivery-wheels, which is not the case in my invention. I also disclaim the devices shown and described in United States Letters Patent No. 339,339. I disclaim, broadly, the features shown and described in the aforesaid patents.

I have also shown and described what to me appears to be the best manner of carrying out my invention, the details of construction, however, may be varied and still come within its scope.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an autographic register, a feed-roller carrying a gear-wheel, a receiving-roller provided with a friction-surface, and an automatically-adjusted bearing for the receiving-roller, in combination with a combined gear-wheel and friction-pulley engaging, respectively, with the gear of the feed-roller and the friction-surface of the receiving-roller.

2. In an autographic register, a feed-roller carrying a gear-wheel, a receiving-roller provided with a friction-surface, and a spring-held bearing in which one end of the receiving-roller is journaled, in combination with a combined gear-wheel and friction-pulley engaging, respectively, with the gear of the feed-roller and the friction-surface of the receiving-roller.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN KIRBY, Jr.

Witnesses:

R. M. ELLIOTT,
WILLIAM H. BARNES