No. 731,187. PATENTED JUNE 16, 1903.

J. W. IRISH.

CARBON COPYING APPARATUS.

APPLICATION FILED SEPT. 30, 1902.

NO MODEL.

FIG. 1.

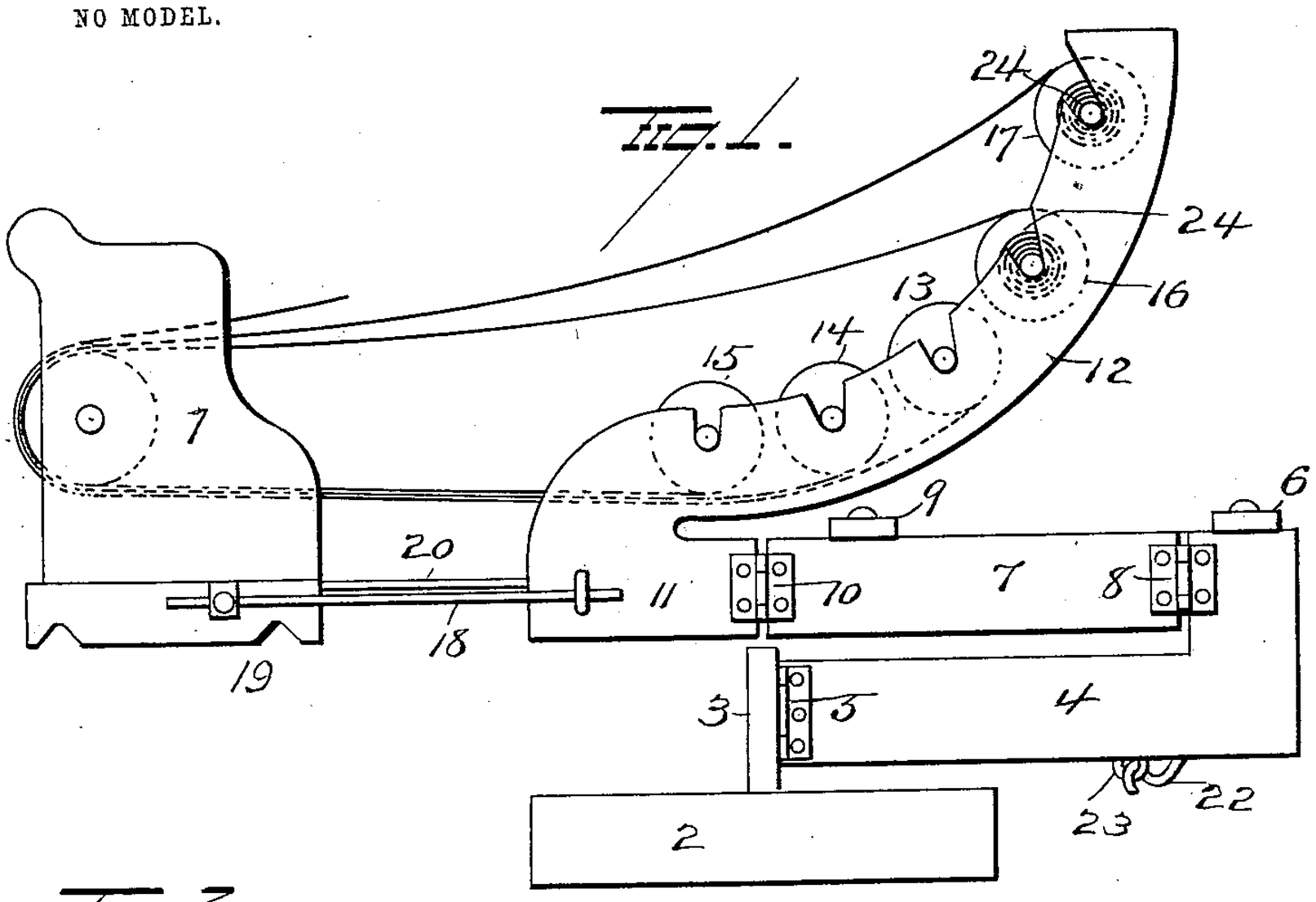


FIG. 3.

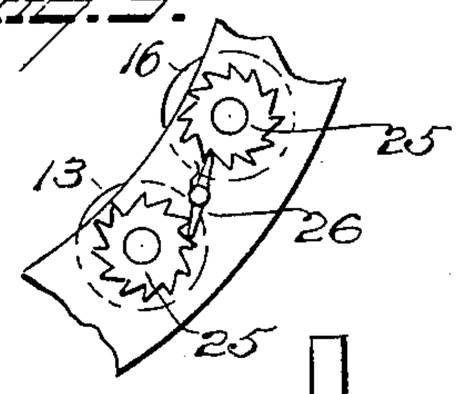
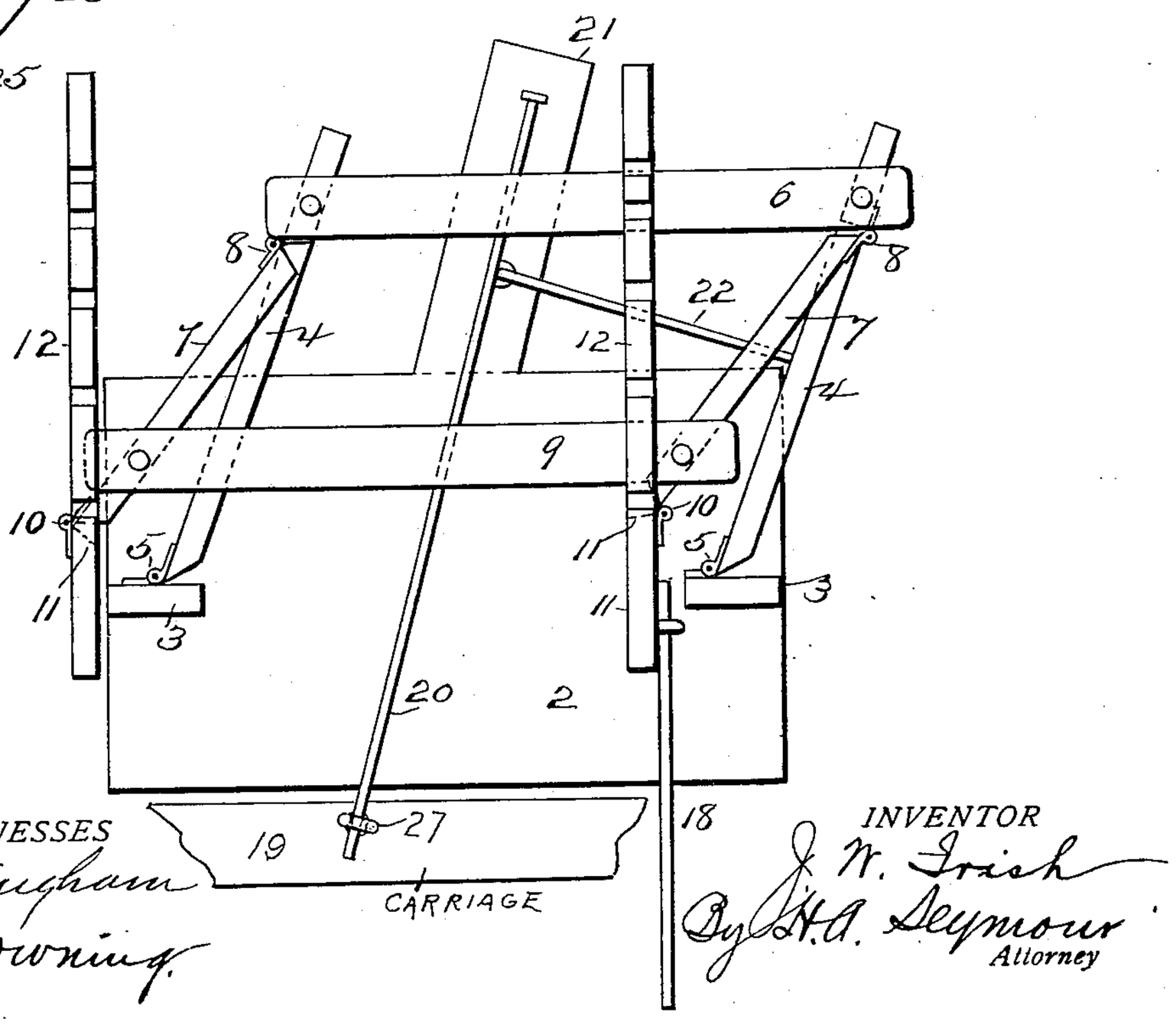


FIG. 2.



WITNESSES

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No. 731,187. Patented June 16, 1903.

UNITED STATES PATENT OFFICE.

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CARBON COPYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 731,187, dated June 16, 1903.

Application filed September 30, 1902. Serial No. 125,423. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. IRISH, a resident of Richland Center, in the county of Richland and State of Wisconsin, have invented certain new and useful Improvements in Carbon Copying Apparatus; 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.

My invention relates to an improved carbon copying apparatus, and more particularly to an improved device of this character to be attached to a type-writing machine, the object of the invention being to provide improved mechanism whereby the carbon-paper, carbon copying-paper, and original are automatically fed to the type-writing machine and the carbon-paper and carbon copy-paper rewound on rolls, while the original sheet is preferably perforated to permit it to be torn off in desired lengths, or it might also be wound on a roll, if desired.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view illustrating my improvements. Fig. 2 is a top view of my apparatus with the rolls removed, and Fig. 3 is a view of a modification.

1 represents a type-writing machine, and 2 the base-plate of my improved apparatus, on which posts 3 are secured. To these posts 3 horizontally-disposed L-shaped arms 4 are connected by hinges 5 and are connected at the upper end of their shorter members by a cross-bar 6, compelling uniform movement of said arms. To the forward edge of the shorter upright member of arms 4 bars 7 are connected by hinges 8, and they are secured together by means of a cross-bar 9. These bars 7 are connected by hinges 10 with blocks 11, carrying notched inclined or curved racks 12 to support the trunnions of rolls 13, 14, 15, 16, and 17, and one of these blocks 11 is connected by a rod 18 with the carriage 19 of a type-writing machine, the rod 18 being preferably secured to the carriage by a set-screw, as shown. To compel the rear portion of the apparatus to move uniformly with the forward end thereof, a rod 20 is hinged at one end to a rearwardly-extending arm 21 on base-plate 2 and connected at its opposite end to the carriage near the center, while a hook 22, pivotally connected to rod 20, engages an eye 23 on one arm 4 and through the medium of cross-bar 7 compels the rear end of the apparatus to move uniformly with the forward end thereof. The connection of the arm 20 with the carriage must, of course, be such as will permit a pivotal and also a longitudinal movement of said rod. This can be readily accomplished by passing the rod 20 loosely through an eyebolt 27, pivoted to the carriage.

In the arrangement of rolls shown roll 15 is for carbon copy-paper, roll 14 for carbon-paper, roll 13 for original paper, roll 16 to rewind carbon copy-paper, and roll 17 to rewind the carbon-paper. These several papers each comprise a continuous sheet or strip which is automatically drawn by the platen thereover, and springs 24 may be provided on the rewinding-rolls to wind the paper thereon. The original paper-roll is preferably perforated in any desired lengths to be torn off when a sheet is full; but, if desired, a roll may also be provided to wind the same thereon.

The operation of my improvements is as follows: The apparatus is connected with the carriage of the type-writing machine, as above explained, and the racks 12 will move in conformity with the carriage, as the several hinge connections will permit of perfect freedom of movement. As the platen is turned it will draw the carbon copy-paper, the carbon-paper, and the original paper from their rolls over the platen. The end of the carbon copy-paper and carbon-paper being passed around rolls 16 and 17, respectively, will be wound thereon by springs 24, and the original can be torn off in lengths desired.

Instead of employing springs to wind the rewinding-rolls I might provide the outer ends of the unwinding-roll trunnions and rewinding-roll trunnions with toothed wheels 25, as shown in Fig. 3, and interpose a pivoted dog 26 between them, so that the unwinding of one roll will, through the medium

of the dog 26, serve to wind the other, as will be readily understood.

It will be seen that with my improvements the carbon copy-paper can be preserved in a continuous roll and great time will be saved in operating the type-writing machine, for the papers are always ready for use and no time is lost in placing the same in position and drawing it from the machine.

A great many slight changes might be made in the general form and arrangement of the parts described without departing from my invention, and hence I do not limit myself to the precise construction set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In a paper-feeding device for type-writing machines, the combination with a support and a roll-holder, of a frame comprising hinged sections, said frame hinged to said support and roll-holder.

2. In a paper-feeding device for type-writing machines, the combination with a support, a roll-holder and a series of rolls mounted on said holder, of a frame comprising a series of hinged sections connecting said roll-holder and support and hinged to said roll-holder and support and means for connecting said holder and frame with the carriage of a type-writing machine.

3. In a paper-feeding device for type-writing machines, the combination with a support, a roll-holder and a series of rolls mounted on said holder, of a frame comprising a series of hinged sections, said sectional frame hinged to the support and roll-holder, means for connecting the roll-holder with the carriage of a type-writing machine and separate means for connecting the sectional frame with the carriage.

4. The combination with a bed-plate, of a laterally-movable sectional frame thereon, a rack, mounted on said sectional frame, rolls on said rack carrying carbon-paper, carbon copying-paper, and original paper, to be fed over the platen of a type-writing machine, rolls on said rack to wind thereon the carbon-paper and carbon copying-paper after it has passed over the platen, a rod connecting the rack with the carriage of the machine, another rod hinged to the bed-plate and connected to said carriage, and a hook connecting said rod with the hinged frame.

5. The combination with a bed-plate, of posts thereon, hinged arms on the posts, a rack, and hinged bars connecting the arms and rack, of rolls supported in the rack to supply paper to a type-writing machine, rolls on the rack to wind the paper thereon after passing over the platen of said machine, and means for turning said last-mentioned rolls.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAS. W. IRISH.

Witnesses:
P. L. LINCOLN,
K. W. EASTLAND.