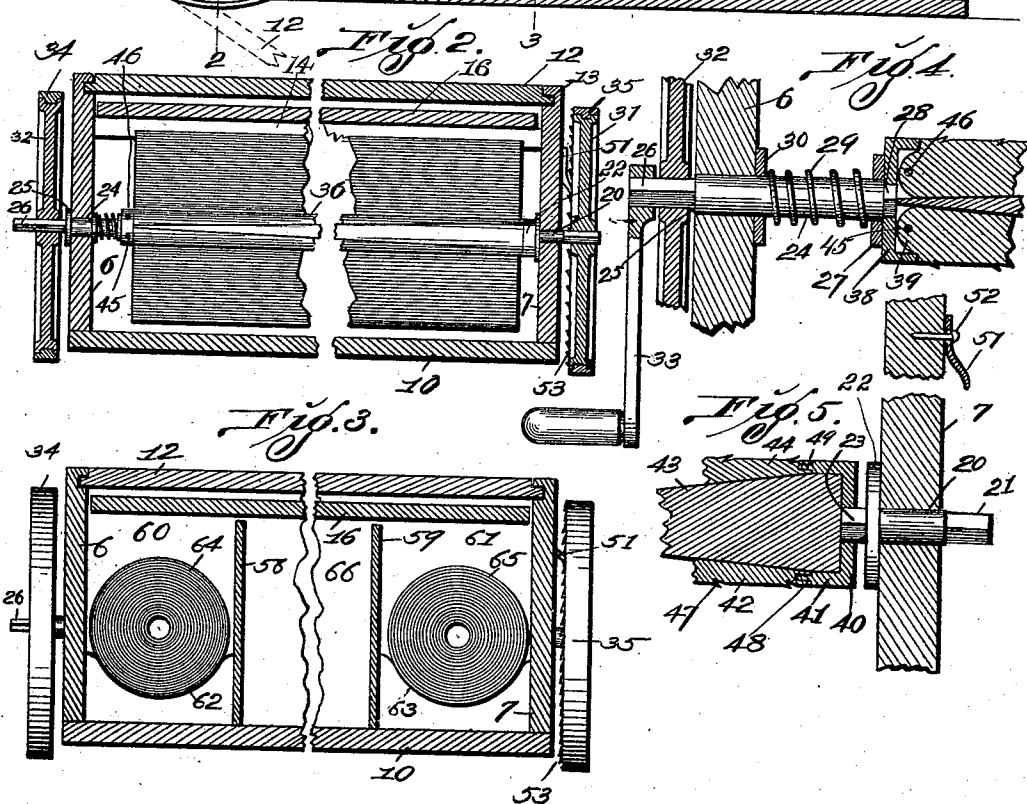
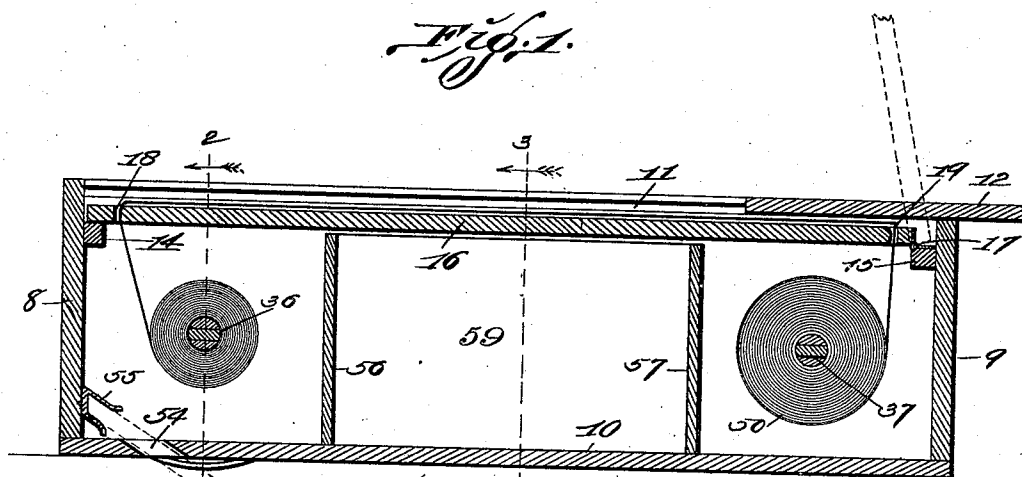


A. F. McINTIRE.
STENOGRAPHER'S CABINET.

No. 577,369.

Patented Feb. 16, 1897.



attest
M. P. Smith
S. G. Wells

Inventor:-
Arthur F. McIntire.
By Higdon, Logan & Higdon
Attys.

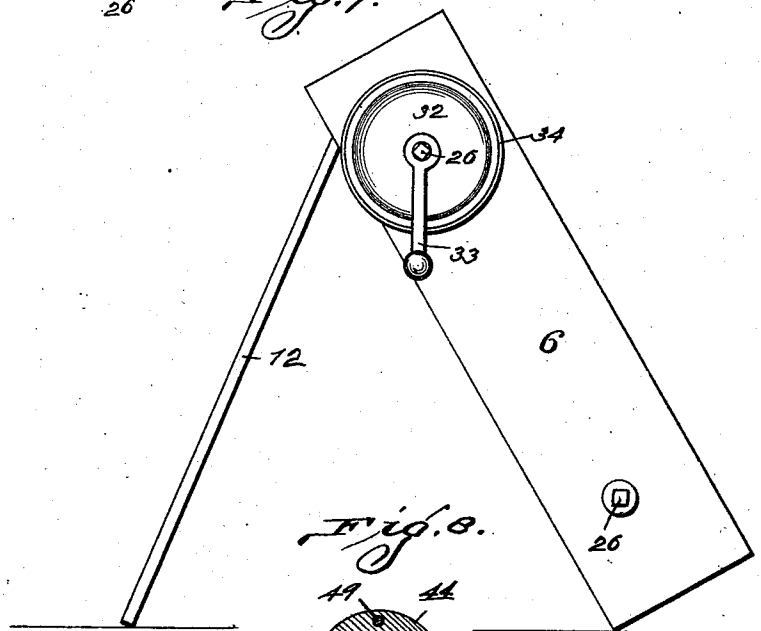
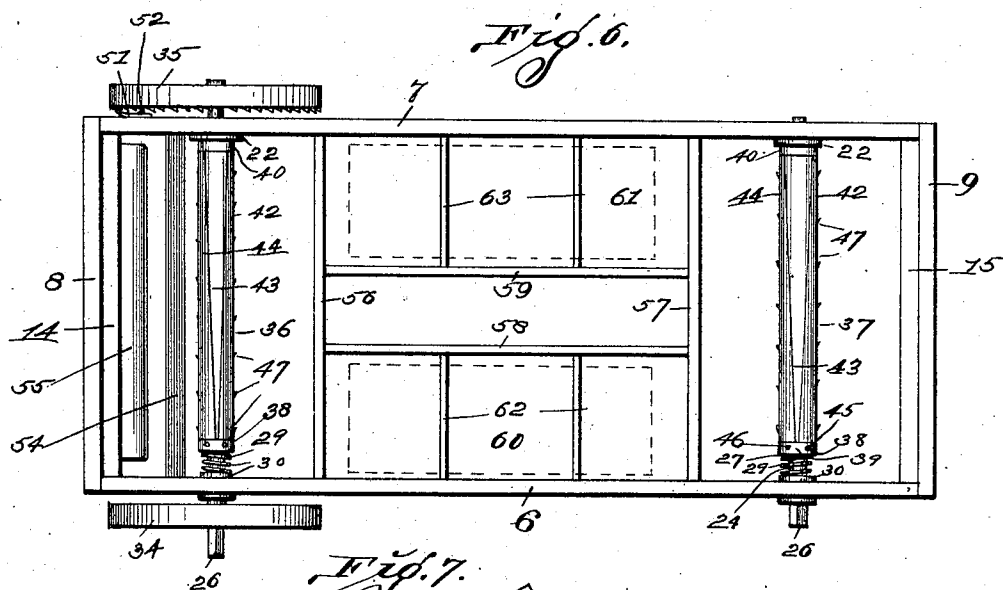
(No Model.)

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By Higdon, Logan Higdon
July 5.

UNITED STATES PATENT OFFICE.

ARTHUR F. MCINTIRE, OF ST. LOUIS, MISSOURI, ASSIGNOR TO DESMONDE C. MCINTIRE, OF SAME PLACE.

STENOGRAPHER'S CABINET.

SPECIFICATION forming part of Letters Patent No. 577,369, dated February 16, 1897.

Application filed October 17, 1896. Serial No. 609,223. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR F. MCINTIRE, of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Stenographers' Cabinets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to stenographers' cabinets; and it consists in the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

Figure 1 is a vertical sectional view taken longitudinally of my improved stenographer's cabinet. Fig. 2 is a vertical transverse sectional view taken approximately on the line 2 2 of Fig. 1 and looking in the direction indicated by the arrow. Fig. 3 is a vertical transverse sectional view taken approximately on the line 3 3 of Fig. 1 and looking in the direction indicated by the arrow. Fig. 4 is an enlarged detail sectional view of one end of the front mandrel and illustrating its construction and operation, parts being broken away to economize space. Fig. 5 is an enlarged detail sectional view of the opposite end of the mandrel shown in Fig. 4, parts being broken away to economize space. Fig. 6 is a top plan view of my improved stenographer's cabinet with the writing-plate and cover removed. Fig. 7 is a side view in elevation of the cabinet in position for transcribing notes and with the cover being used as a prop or leg to support the cabinet in such position. Fig. 8 is a transverse sectional view taken approximately on the line 8 8 of Fig. 5.

In the construction of my improved stenographer's cabinet I employ a rectangular box consisting of the side pieces 6 and 7, which side pieces are framed together by the end pieces 8 and 9 and the bottom 10. A groove 11 is formed in the inner face and near the upper edge of each of the side pieces 6 and 7, and the hand-rest 12 operates between the upper edges of said side pieces, with the flanges 13, which project from the opposite edges of said hand-rest, operating in said grooves 11, thus forming a sliding connection between said hand-rest 12 and the box. A cleat 14 is attached to the inner face of the

end piece 8 and near its upper edge, and a corresponding cleat 15 is attached to the inner face of the end piece 9 in horizontal alignment with said cleat 14.

The writing-plate 16 is attached to the cleat 15 by means of the hinge 17, and the free end of said writing-plate rests upon the cleat 14. The hinge 17 allows the writing-plate 16 to tip upwardly, as shown in dotted lines in Fig. 1, and said plate approximately fills the space within the four walls of the box. In the front or free end of the plate 16 is a slot 18, which extends nearly across said plate, and in the rear or hinged end of said plate is a slot 19, corresponding to the slot 18. The hand-rest 12 operates above the writing-plate 16 and closely to said writing-plate.

Near the front end of the side piece 7 is a bearing formed horizontally through said side piece and in which is rotatably mounted the spindle 20. The spindle 20 has the squared portion 21 projecting outwardly from the outer face of the side piece 7. The disk 22 is rigidly fixed to said spindle and operates against the inner face of the side piece 7, and the squared portion 23 of said spindle extends inwardly from said disk. A bearing is formed horizontally through the side piece 6 in alignment with the spindle 20, and the spindle 24 operates in said bearing. Upon the outer end of the spindle 24 is a disk 25, rigidly fixed to said spindle and operating against the outer face of the side piece 6, and the squared portion 26 extends outwardly from said disk. The spindle 24 extends some distance inwardly from the side piece 6, and upon the inner end of said spindle is a disk 27, rigidly fixed to said spindle. The squared portion 28 extends inwardly from the end of said spindle and from said disk 27. An expansive coil-spring 29 is mounted upon the spindle 24 between the disk 27 and the side piece 6, and the disk 30 is loosely placed upon said spindle 24 against the inner face of the side piece 6 and against the outer end of the coil-spring 29.

A traction-wheel 31 is fixed upon the squared portion 21 of the spindle 20, and a corresponding traction-wheel 32 is fixed upon the squared portion 26 of the spindle 24, and said squared portion 26 extends some dis-

tance outwardly from the hub of said wheel 32 to receive the crank 33. Annular grooves are formed in the peripheries of the wheels 31 and 32, and the rubber tires 34 and 35 are placed around said wheels in said grooves.

The hand-crank 33 is removably mounted upon the squared portion 26 of the spindle 24. A mandrel 36 is removably mounted between and carried by the spindles 20 and 24. A similar mandrel 37 is mounted between the rear ends of the side pieces 6 and 7, and the spindles on the mandrels 37 are identical with the spindles already described, with the exception that they do not carry the wheels 31 and 32.

The mandrels 36 and 37 are essentially alike, and they are constructed as shown in Figs. 4 and 5.

A disk 38 has an opening in its center to receive the squared portion 28, projecting from the inner end of the spindle 24, and an annular rim or flange 39 projects inwardly from the edge of said disk, thus forming a cap. A similar cap, consisting of the disk 40, has an aperture in its center to receive the squared portion 23, projecting inwardly from the spindle 20, and an annular flange 41, projecting inwardly from the edge of said disk. Between the cap mounted upon the spindle 20 and the cap mounted upon the spindle 24 is mounted a metallic roller consisting of the portions 42, 43, and 44.

The portions 42 and 44 are essentially alike. Their inner faces are flat and inclined, while their outer faces are horizontal and are segments of a circle. The large ends of the portions 42 and 44 are placed loosely within the flange 39 and are pivotally attached to said flange by means of the pins 45 and 46, which pins extend through said flange and through said inner end and are riveted in position. The portion 43 of the roller has inclined opposite surfaces which engage the flat surfaces of the portions 42 and 44. The large end of the portion 43 is fixed within the flange 41. The edges of the portion 43 are segments of a circle, and when the portions 42, 43, and 44 are in position they form a cylindrical roller. The circular faces of the portions 42 and 44 are upset with a pointed punch, thus forming the teeth 47. Projecting inwardly from the inner edge of the flange 41 is a lug 48, which engages a recess in the free end of the portion 42, and a similar lug 49 engages a recess in the free end of the portion 44, as required to hold said free end in position relative to said flange.

A roll of paper 50 of the desired length is mounted upon the mandrel 37. By sliding the spindle 24 through its bearing and compressing the spring 29 the squared end 28 is withdrawn from the disk 38 and the mandrel may then be removed from the box. The portion 43 may then be withdrawn from between the portions 42 and 44 and the flat faces of the portions 42 and 44 are brought together and they may then be inserted through

the opening in the roll, after which the portion 43 is again inserted between the portions 42 and 44, and the insertion thereof acts as a wedge to spread the free ends of the portions 42 and 44 apart, thus forcing the teeth upon said portions into the material of the paper roll. After the parts composing the metallic roller have been thus forced into position the mandrel may be replaced by placing one end upon the squared portion 23 of the spindle 20, sliding the spindle 24 through its bearing, compressing the coil-spring 29, placing the mandrel in position, and then releasing the spindle 24, thus allowing the squared portion 28 to be pressed into position within the disk 38 by the expansion of the coil-spring 29. The free end of the paper composing the roll is passed upwardly through the slot 19 in the writing-plate 16, and thence forwardly along the upper face of said writing-plate and downwardly through the slot 18 in the free end of said writing-plate and is wrapped around the mandrel 36. As the crank 33 is turned in the proper direction the paper is wound upon the mandrel 36 and unwound from the mandrel 37, passing over the writing-plate 16. The hand of the stenographer or writer rests upon the hand-rest and writes upon the paper as it passes above the writing-plate 16. The traction-wheels 31 and 32 extend below the bottom 10 of the box and rest upon the table. During the operation of writing, when it is desired to advance the paper forwardly over the writing-plate 16, the operator may bear down upon the box and slide it forwardly upon the table, and the rubber tires 34 and 35 upon the wheels 31 and 32 will frictionally engage the table and cause the mandrel 36 to be rotated and the paper to be wound upon said mandrel.

A spring-pawl 51 is attached to the outer face of the side piece 7 by means of a screw 52, and in position to have its free end engage the teeth 53 upon the inner face of the rim of the wheel 31, as required to prevent the wheels from being rotated backwardly when the cabinet is drawn backwardly upon the table, and thus prevent the paper from being unwound from the mandrel 36. If the cabinet is not being used upon a table, the mandrel 36 may be operated by manually engaging either of the wheels 31 or 32, or it may be operated by means of the crank 33. When the cabinet is being used upon a table, the crank 33 is removed.

When the stenographer desires to transcribe the notes which have been written upon the paper and which paper has been wound upon the mandrel 36, the crank 33 is placed upon one end of the mandrel 37, the spring-pawl 51 is turned upon the screw 52 into such a position as that its free end will not engage the teeth 53, and then the paper may be re-wound upon the mandrel 37 by the operation of the crank 33, and the paper may again be wound upon the mandrel 36 as the notes are transcribed.

A slot 54, having inclined walls, is formed

transversely of the bottom 10 and in a position substantially below the mandrel 36, and said slot is of such a size and shape that it will receive one end of the hand-rest 12, as indicated by dotted lines in Fig. 1.

A channel-bar 55 is attached to the inner face and near the lower edge of the end piece 8 and in position to receive the end edge of the hand-rest 12 after it has passed through the slot 54. The channel-bar 55 is made of springy sheet metal and its edges are flared outwardly and are such a distance apart that the channel between them is normally narrower than the thickness of the hand-rest 12, so that when the edge of the hand-rest is inserted between the flared edges of the channel-bar it will press said edges apart and be firmly gripped thereby.

When the notes are to be transcribed upon a type-writer, it will be found convenient to place the hand-rest 12 through the slot 54 and in engagement with the channel-bar 55. Then the cabinet may be set upon end at an angle and be supported by said hand-rest.

Partition-walls 56 and 57 are placed within the box and transversely thereof and near the mandrels 36 and 37, respectively. The space between the partition-walls 56 and 57 is divided longitudinally by the partition-walls 58 and 59, and in the spaces 60 and 61 thus formed are placed sheet-metal bottoms 62 and 63, respectively, which bottoms are curved to form resting-places for the extra rolls of paper 64 and 65. The space 66 between the walls 58 and 59 may be used to carry pencils, erasers, &c. The writing-plate 16 may be raised as required to gain access to the pencils and paper, as shown in dotted lines in Fig. 1. If the paper is in position above the writing-plate 16 and attached to both of the mandrels 36 and 37 and it is desired to raise the writing-plate, it is only necessary to increase the amount of paper between the mandrels by unwinding it from one of the mandrels. The writing-plate may then be raised without detaching the paper from either mandrel.

After one side of the paper has been used and the paper wound upon the mandrel 36 the end which is attached to the mandrel 37 may be disconnected from said mandrel and then reattached and rewound upon said mandrel 37 inside out. Then the mandrel 37 may be removed from the box and turned around and replaced, and this will bring the unwritten side of the paper upwardly upon the writing-plate 16, and the paper may be run again through the cabinet and the unwritten side used.

I am aware that roll-paper has been used in printing-presses and cash-registers and in other ways, but I am not aware that any device has ever been invented whereby roll-paper was adapted for the use of stenographers, as herein set forth.

A cabinet constructed in accordance with the principles of my invention is simple, in-

expensive, and will be found very satisfactory for the purposes stated.

I claim—

1. In a stenographer's cabinet, a suitable box, a writing-plate mounted in said box, a hand-rest slidingly mounted in said box above said writing-plate, mandrels rotatably mounted in said box in positions parallel with each other and in alinement with said writing-plate, and a channel-bar attached to the inner face of one of the end walls of said box and a slot formed transversely through the bottom piece of said box and in inclined alinement with said channel-bar, substantially as specified.

2. In a stenographer's cabinet, a suitable box, a writing-plate mounted in said box, mandrels rotatably mounted in said box in positions parallel with each other and in alinement with said writing-plate, a channel-bar attached to the inner face of one of the end walls of said box and a slot formed transversely through the bottom piece of said box and in inclined alinement with said channel-bar, substantially as specified.

3. In a stenographer's cabinet, a suitable box, a writing-plate mounted in said box and mandrels rotatably mounted in said box in positions parallel with each other and in alinement with said writing-plate; each of said mandrels consisting of spindles mounted in the side pieces of said box and removable rollers connecting said spindles; traction-wheels fixed to the front pair of said spindles and holding the front end of said box from the table, substantially as specified.

4. In a stenographer's cabinet, a suitable box, a writing-plate mounted in said box and mandrels rotatably mounted in said box in positions parallel with each other and in alinement with said writing-plate; each of said mandrels consisting of spindles mounted in the side pieces of said box and removable rollers connecting said spindles, each of said removable rollers consisting of the disk 38, the flange 39 projecting from the edge of said disk, the portions 42 and 44 pivotally connected to said flange, the disk 40 having a central aperture, the flange 41 projecting from the edge of said disk and the portion 43 fixed to the flange 41 and the disk 40; traction-wheels fixed to the front pair of said spindles and holding the front end of said box from the table, substantially as specified.

5. In a stenographer's cabinet, a suitable writing-plate, mandrels mounted in positions parallel with each other and in alinement with said plate, and traction-wheels upon one of said mandrels, substantially as specified.

6. In a stenographer's cabinet, a suitable writing-plate, mandrels mounted in positions parallel with each other and in alinement with said plate, traction-wheels upon the ends of one of said mandrels, and a ratchet for controlling the direction of rotation of said wheels, substantially as specified.

7. In a stenographer's cabinet, a suitable

- writing-plate, mandrels mounted in positions parallel with each other and in alinement with said plate, traction-wheels upon the ends of the front one of said mandrels, ratchet-teeth upon one of said wheels, and a spring-pawl mounted in position to engage said ratchet-teeth and to turn upon the pivot out of engagement with said ratchet-teeth as desired, substantially as specified.
- 10 8. In a stenographer's cabinet, a suitable box, a writing-plate mounted in said box, transversely-alined spindles mounted in bearings in the sides of said box, removable mandrels connecting said spindles and mounted 15 in positions parallel with each other and in alinement with said writing-plate, and traction-wheels upon the outer ends of the front pair of said spindles, substantially as specified.
- 20 9. In a stenographer's cabinet, a spindle rotatably mounted in one side of the cabinet, a disk fixed to near the inner end of said spindle and engaging the inner face of the wall of the cabinet, the portion of said spindle inside 25 of said disk being polygonal, a second spindle mounted in alinement with the first-mentioned spindle and in the opposite side of the cabinet, a coil-spring upon said second spindle and inside of the wall of the cabinet, a disk fixed upon said second spindle near its 30 inner end and engaging the inner end of said coil-spring, the portion of said spindle inside

of said disk being polygonal, a removable mandrel connecting said spindles and having apertures in its ends to receive the polygonal portions of said spindles, said second spindle 35 being mounted to slide endwise in its bearing and to be held in its normal position by the expansion of said coil-spring, and traction-wheels upon the outer ends of said spindles, 40 substantially as specified.

10. In a stenographer's cabinet, a mandrel consisting of two wedge-shaped pieces, a cap forming a hinge connection between the large ends of said pieces, a wedge-shaped piece 45 to be inserted between the first-mentioned wedge-shaped pieces and from their free ends, a cap attached to the large end of the last-mentioned wedge-shaped piece, lugs projecting from the last-mentioned cap and engaging 50 apertures in the free ends of the first-mentioned wedge-shaped pieces, and teeth projecting from the outer faces of the first-mentioned wedge-shaped pieces, the whole forming a cylindrical roller when the parts 55 are in their normal positions, substantially as specified.

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

ARTHUR F. MCINTIRE.

Witnesses:

EDWARD E. LONGAN,
MAUD GRIFFIN.