

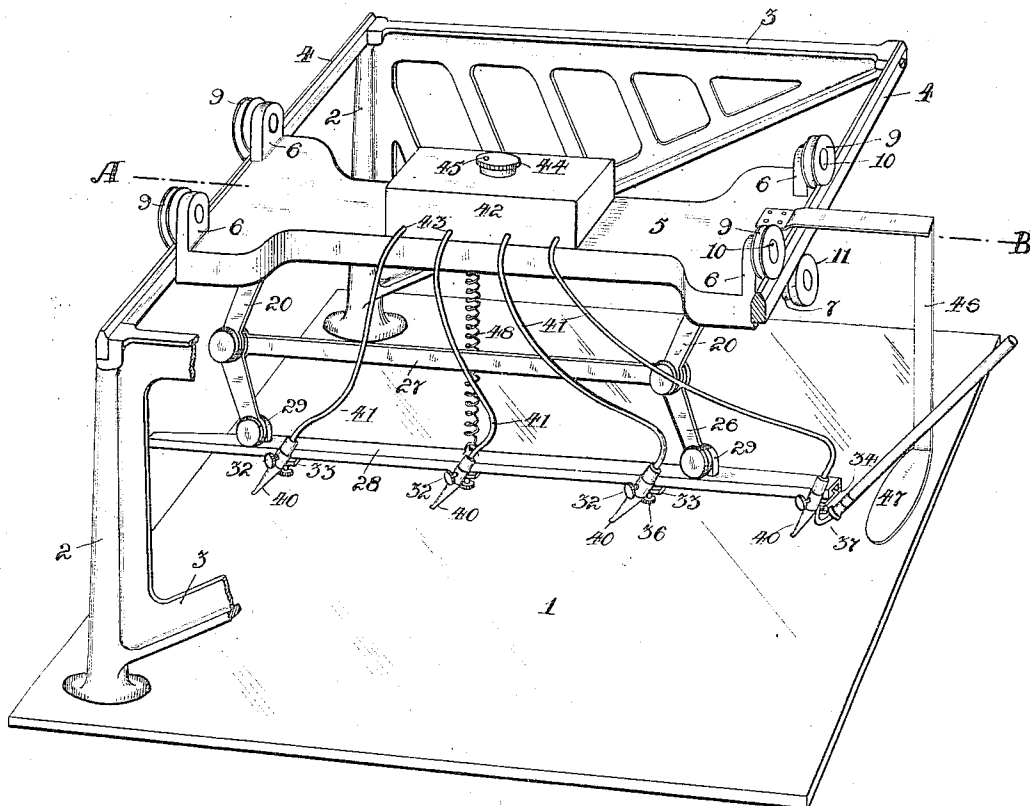
J. C. GARDINER.  
 MULTIPLE SIGNING MACHINE.  
 APPLICATION FILED MAR. 1, 1909.

957,765.

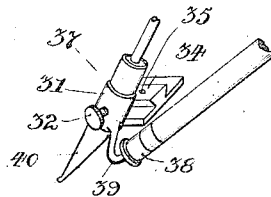
Patented May 10, 1910.

2 SHEETS—SHEET 1.

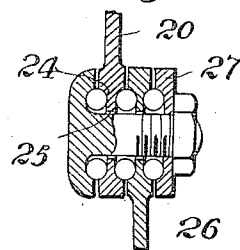
*Fig. 1.*



*Fig. 5.*



*Fig. 6.*



Witnesses

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*Rene Pigeon*

Inventor.

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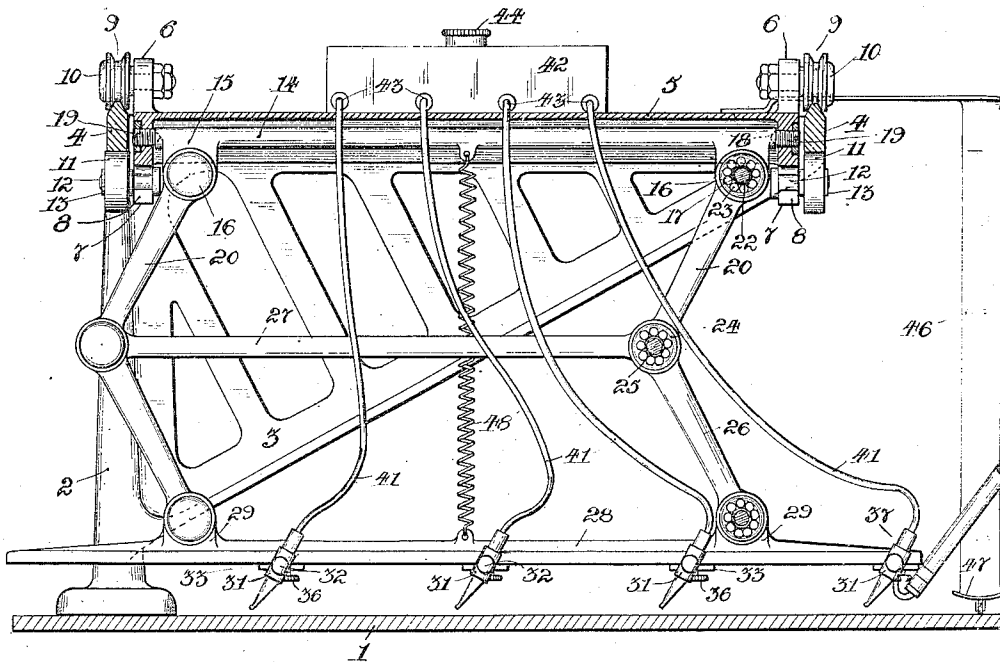
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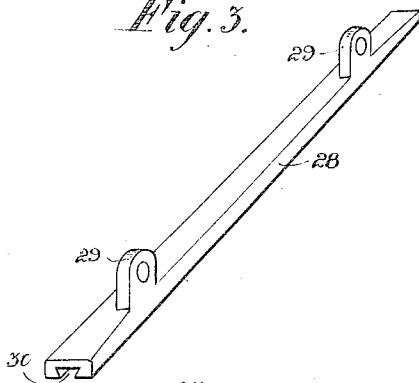
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2 SHEETS—SHEET 2.

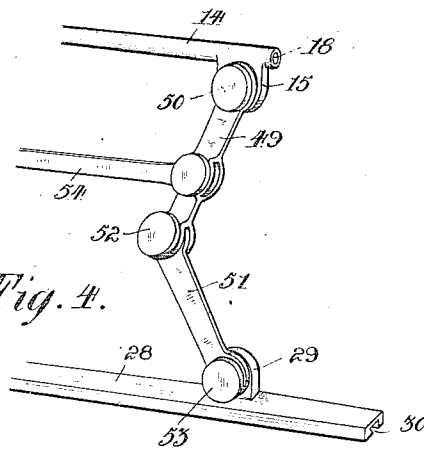
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses  
 Harry Davis.  
 Rene Pigeon

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# UNITED STATES PATENT OFFICE.

JAMES CLARK GARDINER, OF MONTREAL, QUEBEC, CANADA.

## MULTIPLE-SIGNING MACHINE.

957,765.

Specification of Letters Patent. Patented May 10, 1910.

Application filed March 1, 1909. Serial No. 480,590.

*To all whom it may concern:*

Be it known that I, JAMES CLARK GARDINER, resident of 591 St. Paul street, in the city and district of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Multiple-Signing Machines; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to improvements in multiple signing machines, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel arrangement and construction of parts, whereby a plurality of pens are operated simultaneously by a master pen or holder through a paralleling arrangement of parts, supported by a carriage operating coincidentally with the movement of said master pen.

The objects of the invention are to facilitate the signing of commercial or other documents particularly where a number of signatures must be duplicated on one sheet, thereby saving time and labor, and to devise a simple, cheap and efficient machine for the said purpose.

In the drawings, Figure 1 is a perspective view of the machine showing one supporting bracket broken away to disclose the parts. Fig. 2 is a sectional view on the line A—B in Fig. 1. Fig. 3 is a perspective detail of the pen bar. Fig. 4 is a perspective detail of a modification of the parallel bars. Fig. 5 is a perspective detail of the master pen joint. Fig. 6 is a cross section through the middle joint of the paralleling device.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is the base preferably formed of glass so as to present a clean smooth surface on the top side, though it may be made of any suitable material which can be properly surface finished. 2 are posts projecting upwardly from said base and rigidly secured thereto, one post being arranged at each of two corners respectively. 3 are brackets having their sides formed in the shape of right angle tri-angles and rigidly secured to the posts 2, the apexes of the tri-angles being above said base intermediate of the depth thereof. The apexes and the said posts are joined by the rails 4, said posts, said brackets and said

rails forming the frame of the machine, there being a clear opening between said posts 2 beneath the rail joining said posts.

5 is the carriage having the hangers 6 in the form of lugs projecting upwardly therefrom, one at each corner thereof and the central lugs 7 projecting downwardly from the bottom thereof at each end, said hangers 6 having suitable central holes therethrough and said lugs 7 each having an open slot 8 from the lower end. 9 are rollers journaled on the pins 10, said pins being rigidly secured in the hangers 6. 11 are rollers journaled on the pins 12, said pins being rigidly secured in the desired position in the slots 8 by the nuts 13. The body of the carriage is preferably made of a bar of metal reduced centrally and flaring out at each end to the hanger 6, the said rollers 9 supported by the said hangers 6 forming the running gear of said carriage and the said rollers 11 being the retaining rollers for keeping the said rollers 9 securely on the rails 4 and at the same time steadying the carriage in operation. It will be seen from the above description that the said carriage 5 travels freely along the rails 4 between the posts 2 and that with proper bearings the slightest touch to said carriage will move it farther. The whole frame and carriage may be of mere light construction on a comparatively heavy base as the work for which the said frame is designed is not such as will require either heavy supports or anything very substantial in the way of a carriage. It must be understood that this carriage is only shown in one form here, as also the frame, and that without departing from the spirit of the invention, said frame may be greatly modified as well as the construction of the carriage.

14 is the suspension bar having the lugs 15 extending downwardly from each end thereof and suitable ball races 16 formed around the central orifices 17 and having also the recesses 18 in the ends thereof, into which the pointed pins 19 are inserted through the lugs 7, forming pin bearings for the said suspension bar, on which said bar freely swings. 20 are links having at their top ends ball races 16 and also corresponding orifices 22 to the orifices 17 and suitably secured to said lugs 15 with the balls 23 arranged in said races. 24 are ball races at the lower ends of said links and 25 are central orifices within said races. 26 are

the lower links similarly formed to the said upper links as regards the ball bearings and joined thereto, the longitudinal bar 27 being suitably inserted in the middle ball bearing.

28 is a pen bar having lugs 29 projecting upwardly therefrom, said lugs being similarly formed as regards the ball bearings and the lugs 15 and joined to the lower end of the lower links 26, thereby giving perfect freedom of movement of said pen bar, always of course in a parallel direction. 30 is a longitudinal dove-tailed groove in the lower side of the said pen bar 28. 31 are the barrels of the pen sockets having the set screws 32 inserted therethrough. 33 are lateral plate extensions from said barrels each having the dove-tailed piece 34 in the top thereof corresponding to and sliding in the dove-tailed groove 30, said plate 33 and piece 34 having a threaded orifice 35 upwardly therethrough, in which is inserted the set screw 36, so that said pen sockets may be rigidly secured in any place along said pen bar as desired. 37 is the master holder having at its lower end thereof a rubber neck 38 joining it to the stem 39, said stem 39 preferably being curved around and rigidly secured to the end one of said pen sockets. The holder 37 projects upwardly in a suitable slanting direction for writing purposes. The rubber neck 38 is made in any suitable form and at one end is joined to the master holder 37 preferably being in alinement with said holder of which it forms the bottom end. The extreme lower end of said rubber neck 38 is joined to the stem or off-set 39 projecting laterally from the rear one of the barrels 31 of the pen sockets, so that the whole carriage is free to move with each movement of said master holder and said holder is placed in such a position behind the rearmost pen barrel that it may be grasped in the hand in the position that a penman usually places it in and the whole machine operated at the slightest movement of the hand or fingers. This joint is herein described as formed of a piece of rubber but it will readily be understood that any resilient material may be used in place of said rubber, as long as the said master holder is set well to the rear by the off-set to which said resilient neck is joined. 40 are the pens secured in the said pen sockets and preferably of the fountain type of pen, the usual reservoir of the fountain pen being omitted in the present description and illustrations, though it must be understood that the invention may be used with the ordinary form of reservoir fountain pen, however, only the lower receptacle for the ink is shown in each of these pens and to this is joined a rubber tube 41, there being several of these rubber tubes, namely, one to each pen.

42 is an ink well having suitable outlet

holes 43 to which the rubber tubes are attached. 44 is a cover or stopper for said ink well having any suitable form of shutter air hole 45.

46 is a hand rest preferably formed of a flat piece of metal rigidly secured to the carriage 5 extending outwardly therefrom and downwardly to the rest portion 47 thereof, immediately below the master holder 37.

48 is a light spring preferably spiral and caught on to the lower side of the carriage 5 at one end and at the other end to the pen bar 28.

In the operation of this invention, the pens are held slightly above the surface of the base by the spring 48, the documents to be signed are slid along the base under said pens, such documents as bank notes, where they are originally in sheets, each sheet having a plurality of notes thereon, and the said notes are placed in relation to each pen, so that the said pen is immediately over the blank space for the signatures. The operator grasps the holder in the usual fashion of writing and operates the master pen and thus signs his name, the other pens are brought down to the paper with the master pen, the said spring offering but slight resistance and as the master pen continues to move over the paper, the remaining pens coincidently mark the paper over which they are placed being, of course, the several notes on the sheet. The parallel arrangement of bars insures perfect accuracy of travel of the said pens, but for drawing and writing purposes, the said parallel arrangement of bars has been known for a number of years, and it is not with any intention of claiming that feature alone that this invention has been made, it is rather with a view of using the said parallel bars to the best advantage that the present construction has been conceived and designed and as aforesaid the modifications of the various parts to this invention may be considerable, without departing from the salient features.

The stopper of the ink well previous to the operation, is preferably turned a little so as to allow the air into the said well, this promotes the flow of ink through the various tubes to the pens which hold it as customary until actually operating on the paper.

The form of pen is not described in detail herein as it is quite unimportant as long as a suitable style is adopted, preferably a ball pointed pen with any desirable form of retainer for the ink toward the point, while not in use.

The hand rest, of course, may be omitted without interfering with the successful operation of the invention, though it offers considerably facility to the operator in the writing, and has a tendency to avoid the

cramp incidental to long periods of work by the operator.

The flexible joint in the master holder is, of course, a most important feature, that is to say, it materially increases the efficiency of the machine as the writer is free to place said holder in the most convenient position in his hand and it is well known that even with good penmen, there is a great diversity as regards the placing of the holder in the hand.

The parallel bar arrangement, which has been described herein, may be changed to an arrangement such as illustrated in Fig. 4, and in this particular arrangement, 49 are the upper links secured by pin bearings 50 to the suspension bar 14. 51 are the lower links joined to said upper links 49 by the pin bearings 52, said lower links being joined to the pen bar 28 by the pin bearings 53; the upper links 49 are joined slightly above the bearing by the longitudinal bar 54. There is not a great deal of difference in this arrangement, but it is a slight change in the form of parallel bars and novel construction.

The location of the ink well on the carriage as herein shown and described, is perhaps the most suitable place for the said ink well in the machine, but various changes may be made in construction, with the result that the said ink well may be quite differently placed, further, a reservoir may be formed at any part of the machine for the ink, the salient feature being that the said pens are fed from a reservoir or reservoirs to avoid the necessity of frequent refilling.

It must be understood that without departing from the spirit of the invention, pencils or other devices for marking may be substituted for the pens supported by the pen bar.

What I claim as my invention is:

1. In a multiple signing machine, the combination with a base having a surface finished upper side and a frame supported thereon having a suitable track-way, of a carriage traveling on said track-way, a plurality of parallel bars suspended from said carriage, a pen bar supported from said parallel bars having a longitudinal dove-tailed groove in the bottom side thereof, a plurality of pen sockets having lateral lugs and corresponding dove-tailed pieces fitting into said slot and slidably arranged therein, a plurality of pens in said sockets, and suitable means for feeding said pens.

2. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel rails joining said end pieces and forming a track-way, of a carriage having a running gear of rollers traveling on said track-way, a plurality of pens, a pen bar supporting said pens in a row, an ink well sup-

ported by said carriage and suitably connected with said pens, and a plurality of parallel bars supporting said pen bar from said carriage and insuring the coincident operation of the several pens on the manual operation of one of said pens.

3. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel rails joining said end pieces and forming a track-way, of a carriage traveling on said rails, an ink well supported thereby, a plurality of pens having suitable ink receptacles, a plurality of flexible tubes joining said well to said pens, means for retaining said pens in a row, and suspension means supporting the retaining means and insuring the coincident operation of the several pens on the manual operation of one of said pens.

4. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel rails joining said end pieces and forming a track-way, of a carriage traveling on said rails, a suspension bar swinging under said carriage, a pen bar and links joining said pen bar to said suspension bar, a longitudinal bar joining said links, a plurality of pens supported by said pen bar, and means for feeding said pens.

5. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel arms joining said end pieces and forming a track-way, of a carriage traveling on said track-way, a plurality of parallel bars suspended under said carriage, marking devices secured to the lower of said bars, and a master holder for operating said devices simultaneously.

6. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel arms joining said end pieces and forming a track-way, of a carriage rolling on said rails having lugs from the lower side, retaining rollers adjustably secured in said lugs and rolling on the lower side of said rails, a suspension bar swinging from said lugs, a plurality of links depending from said suspension bar, bars longitudinally joining said links, a plurality of marking devices secured to the lower of said bars, and a master holder for operating said devices coincidently.

7. In a multiple signing machine, the combination with the base and a frame supported thereby having upright end pieces and parallel arms joining said end pieces and forming a track-way, of a carriage traveling on said track-way, a pen bar, a plurality of parallel bars suspended from said carriage and supporting said pen bar, a plurality of pens, means for feeding said pens, a master holder for operating said pens coincidently,

and a hand rest rigidly secured to said carriage and arranged under said master holder.

8. In a device of the class described, in combination, a glass base, posts extending upwardly from said glass base at the corners, a frame supported by said posts having parallel rails, a carriage traveling on said parallel rails, a pen bar, a plurality of pens arranged in said bar, suspension means from said carriage for said pen bar and insuring the coincident operation of the several pens, and a master holder for directing the movement of said pens.

9. In a device of the class described, in combination, a rectangular base having a surface finished top, a pair of posts, one projecting upwardly from each of two corners of said base and rigidly secured thereto, triangular shaped brackets extending from said posts, parallel rails joining said brackets, a carriage traveling on said rails, a pen bar, pen sockets adjustably secured to said bar, a plurality of parallel bars suspended from said carriage and having links supporting said pen bar, a plurality of pens in said sockets, means for feeding said pens, and a master holder directing the coincident operation of said pens.

10. In a device of the class described, in combination, a frame forming an elevated track-way, a carriage traveling on said track-way, an ink reservoir supported by said carriage, a pen bar, a plurality of parallel bars supporting said pen bar and sus-

pended from said carriage, a plurality of pens having suitable ink receptacles, and a plurality of flexible tubes connecting said pen receptacles to said reservoir.

11. In a device of the class described, in combination, a plurality of pens in suitable arrangement, a stem rigidly secured to and extending from the rearmost of said pens, means for holding said pens, means for supporting said holding means and insuring the coincident operation of said pens, a master holder and a neck of resilient material rigidly secured to the lower end of said master holder at one end and to said stem at the other and adapted to allow the said holder to rest in any desired position in the hand of the writer.

12. In a device of the class described, in combination, a plurality of pens suitably supported and arranged to operate coincidentally on the manual operation of one of said pens, an ink well supported above said pens and flexible means firmly secured at one end to said pens and at the other end to said well and extending free therebetween to permit the free movement of said holding means and to allow the flow of ink from said well to said pens.

Signed at the city and district of Montreal, Province of Quebec, Canada, this 23rd day of February, 1909.

JAMES CLARK GARDINER.

Witnesses:

G. H. TRESIDDER,  
P. SHEE.