

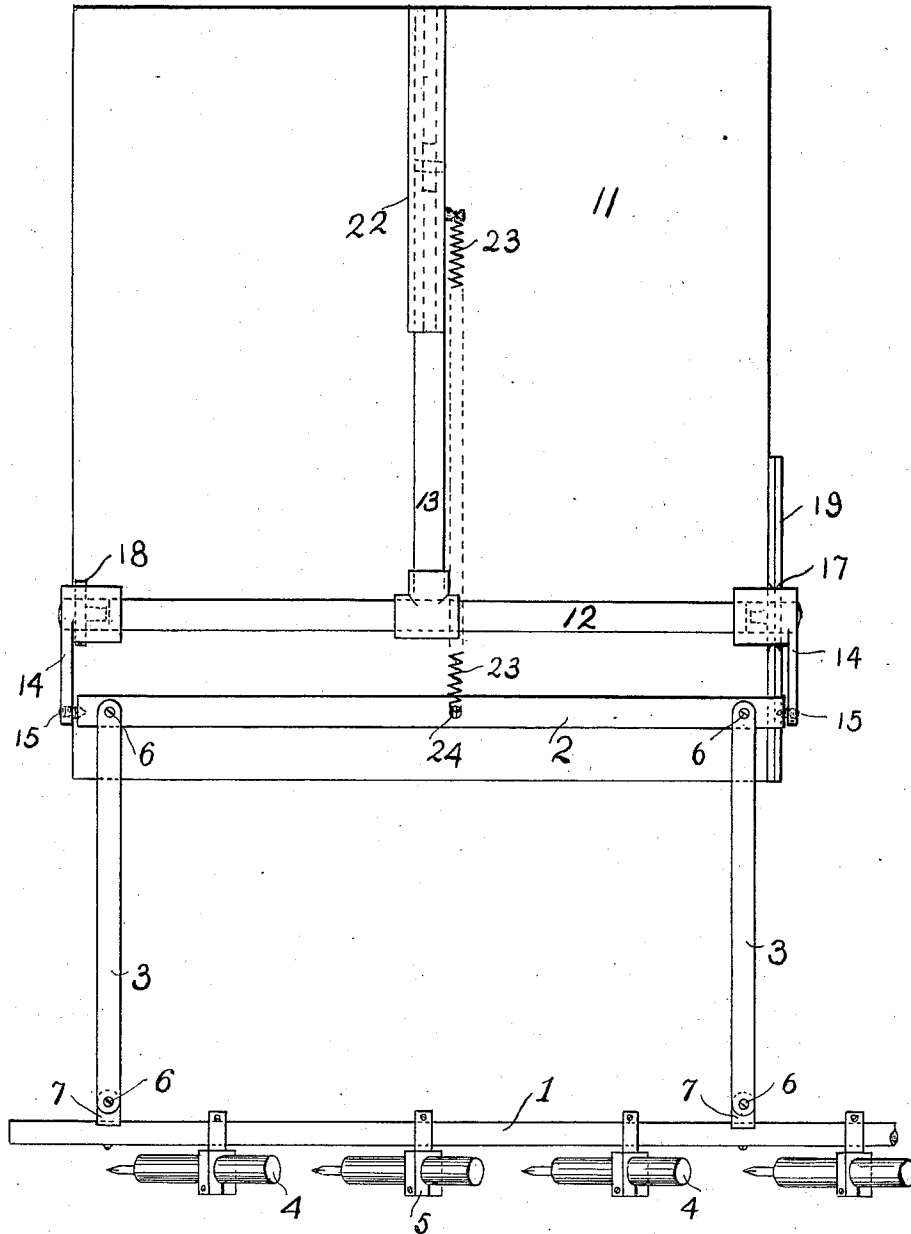
F. A. JOHNSON.
MACHINE FOR WRITING A PLURALITY OF SIGNATURES.
APPLICATION FILED JULY 3, 1912.

1,066,116.

Patented July 1, 1913.

3 SHEETS-SHEET 1.

Fig. 1



Witnesses,
R. B. Mackinnon
Elmer Hanna

Inventor,
F. Amos Johnson

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3 SHEETS—SHEET 2.

Fig- 3

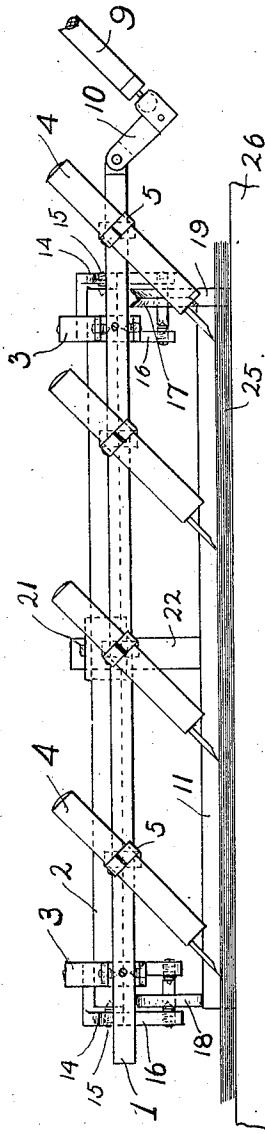
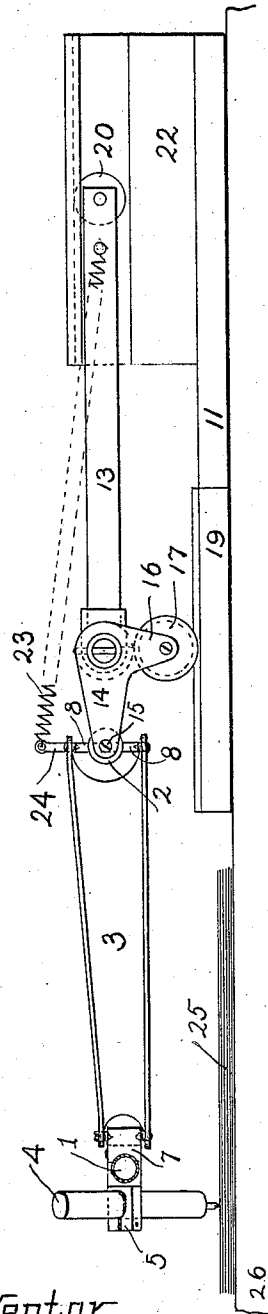


Fig- 2



Witnesses,
R. Mackinnon
Elmer H. H. H.

Inventor,
F. Amos Johnson

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Fig. 4

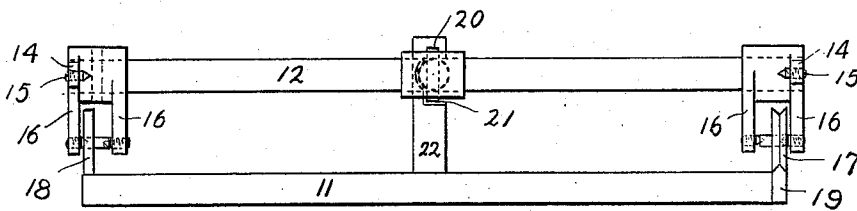
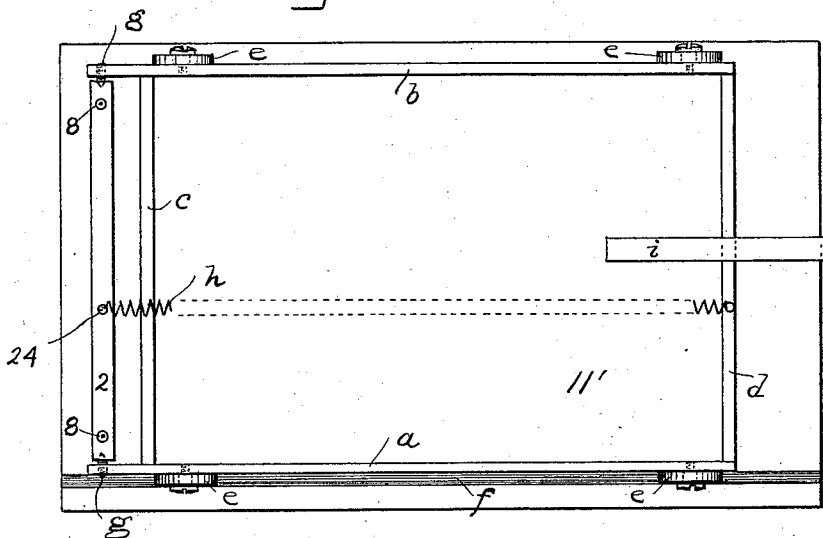


Fig. 5



Witnesses,
T. Mackinnon
Elmer Hansen

Inventor,
F. Amos Johnson

UNITED STATES PATENT OFFICE.

FRANK AMOS JOHNSON, OF DUNELLEN, NEW JERSEY, ASSIGNOR TO THE SIGNATURE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

MACHINE FOR WRITING A PLURALITY OF SIGNATURES.

1,066,116.

Specification of Letters Patent.

Patented July 1, 1913.

Application filed July 3, 1912. Serial No. 707,613.

To all whom it may concern:

Be it known that I, FRANK AMOS JOHNSON, a citizen of the United States, and a resident of Dunellen, in the county of Middlesex and State of New Jersey, have invented certain new and useful Improvements in Machines for Writing a Plurality of Signatures, of which the following is a specification.

My invention relates to machines for simultaneously writing a plurality of signatures and is designed especially for signing checks or other instruments, where there are a large number of signatures to be affixed.

My invention belongs to that class of machines referred to in which the pens are mounted on a common pen-bar which has a universal movement in a horizontal plane and where the pen pressure is given and maintained by the hand of the user.

My present improvement relates to the means for mounting the pen-bar so as to obtain a free and easy universal movement and to provide a compact construction which can be cheaply made.

In the following description reference is made to the accompanying drawings in which:

Figure 1 is a plan; Fig. 2 is a front elevation; Fig. 3 is a left elevation; Fig. 4 is a left elevation of the bed plate and parts mounted thereon—the pen-bar and its immediate connections being removed; and Fig. 5 shows in plan an alternative construction of the parts shown in Fig. 4.

The pen-bar 1 constitutes one side of a parallelogram; the other side being a rock-shaft 2, to which the pen-bar is pivotally connected by forked links or arms 3. This construction gives a parallel ruler movement and permits the pens or writing members 4 to be carried with the pen bar in a longitudinal direction with reference to the pen-bar, to which they are held by adjustable clamps 5. The links 3 are attached to the pen-bar by conical pins 6 which enter corresponding centers in blocks 7 which are secured to the pen-bar and the links are attached to the rock-shaft 2 by similar conical pins, also marked 6, and posts 8. These posts are firmly fixed in the shaft 2 and are of sufficient length to give the leverage that is necessary to secure the required rigidity to the frame, so that when the front end of the

pen-bar is depressed by the pilot 9 to which it is attached by an arm 10, the pen-bar will be evenly depressed at both ends. The links 3 are formed of sheet metal pressed into channel shape; which affords extreme lightness and gives the necessary rigidity.

In order to give a transverse movement to the pen-bar and thus secure universal movement for the pens, I mount the rock-shaft 2 on a suitable carriage which is adapted to reciprocate back and forth on the top of a bed plate 11. The frame of this carriage is preferably made T-shaped, of light tubes, a head 12 and a stem 13. The head portion 12 has front and rear horizontal arms 14, between which the rock-shaft 2 is pivoted to turn on conical centers 15. Two pairs of vertical arms 16 which are attached to the same portion, carry front and rear rolls 17 and 18 respectively. The front roll 17 has a V-groove which fits a corresponding V-track 19 which is secured to the front side of the bed 11. The rear roll travels on the upper surface of the bed. These rolls support the left end, head, or main portion of the carriage and the front roll guides the movement of the carriage in a straight line as it is moved back and forth on the bed. The tube 13 which constitutes the stem of the T-frame of the carriage has in its right hand end a roll 20 which is adapted to enter and to travel back and forth in a slot 21 of a bracket 22 which extends up from the bed 11. This affords a second guide or trackway for the carriage—the other being the V-track 19. It is desirable that the axes of the rolls be as far apart as possible as that gives more stability to the structure and enables the rock-shaft to be carried firmly by the carriage. In the alternative construction to be presently described, the two guides are tandem. It will be noticed that the bracket 22 which contains the slot 21, extends around the top of the roll 20. A spring 23 connects the upper or free end of an arm 24 which is secured to the rock-shaft 2, to the stem of the T-frame of the carriage, near the roll 20. The tension of the spring tends to raise the pen-bar and serves as a complete or partial counterpoise for the pen-bar and pens and at the same time holds the roll 20 upward in its slot.

It is evident from the above construction that the carriage is held to a reciprocating

motion on the bed plate and that the rock-shaft 2 will always be parallel to its original position on the bed.

In Fig. 5 I have shown an alternative construction comprising a rectangular frame for the carriage, which is composed of the parts *a*, *b*, *c* and *d*, mounted on four wheels *e*. Two of these wheels, which are attached to the front rail *a*, travel in a groove *f* in the bed 11'. The rock-shaft 2 is mounted on conical centers *g* and a spring *h* performs the same office as spring 23 in supporting the pen-bar. A guard rail *i* prevents the part of the frame *d* from being raised by the action of the spring.

The checks or other documents 25 which are to be signed are placed at the left of the bed 11 on a suitable shelf or table 26 which also supports the machine itself.

What I claim, is:

1. In a machine of the class described, the combination of the following elements, to-wit: a pen-bar having a plurality of pens mounted thereon; a horizontal rock-shaft; a pair of arms pivotally connecting said pen-bar to said rock-shaft; a base; a reciprocable carriage mounted on said base—said rock-shaft being mounted on said carriage and a supporting spring for said pen-bar interposed between said rock-shaft and said carriage.

2. In a machine of the class described, a pen-bar having a plurality of pens mounted thereon; a horizontal rock-shaft; a pair of arms pivotally connecting said pen-bar to said rock-shaft; a base; a carriage mounted on said base—said rock-shaft being mounted on said carriage; in combination with means for limiting the movements of said carriage to a reciprocating movement.

3. In a machine of the class described, a pen-bar having a plurality of pens mounted thereon; a horizontal rock-shaft; a pair of arms pivotally connecting said pen-bar to said rock-shaft; a base; a carriage mounted on said base—said rock-shaft being mounted on said carriage; in combination with two parallel guides for said carriage, whereby said carriage is limited to a reciprocating movement.

4. In a machine of the class described, the combination of the following elements, to-wit: a pen-bar having a plurality of pens mounted thereon; a horizontal rock-shaft; a pair of arms pivotally connecting said pen-bar to said rock-shaft; a base; a carriage, on which said rock-shaft is mounted, mounted on said base—said carriage comprising a frame having a pair of rolls adapted to support one end of said carriage—the axes of

said rolls being parallel to the axis of said rock-shaft; a guideway for one of said rolls; a third roll which has its axis parallel to the other rolls and a guideway for said third roll.

5. In a machine of the class described, the combination of the following elements, to-wit: a pen-bar having a plurality of pens mounted thereon; a horizontal rock-shaft; a pair of arms pivotally connecting said pen-bar to said rock-shaft; a base; a carriage comprising a T-shaped frame having a head and stem portion; a pair of rolls adapted to support the head of said carriage frame; a guideway for one of said rolls; a roll mounted in the stem portion of said frame; a guideway for the last mentioned roll on top of said roll and means interposed between said rock-shaft and said carriage for maintaining said roll in contact with its guideway.

6. In a machine of the class described, the combination of the following elements, to-wit: a pen-bar having a plurality of pens mounted thereon; a horizontal rock-shaft; a pair of arms pivotally connecting said pen-bar to said rock-shaft; a base; a T-shaped carriage having a head and stem portion; a pair of rolls adapted to support the head portion of said carriage; a guideway for one of said rolls; a roll mounted in the stem portion of said carriage; a guideway for said stem roll and a spring interposed between said rock-shaft and said carriage, whereby the weight of said pen-bar and pens hold the stem roll in its guideway.

7. In a machine of the class described, the combination of the following elements, to-wit: a pen-bar having a plurality of pens mounted thereon; a horizontal rock-shaft; a pair of arms pivotally connecting said pen-bar to said rock shaft; a base; a carriage comprising a T-shaped frame having a head and a stem portion; a pair of rolls adapted to support the head of said carriage frame; a guideway for one of said rolls; a roll mounted in the stem portion of said frame; a guideway for the last mentioned roll on top of said roll and means interposed between said rock-shaft and said carriage for maintaining said roll in contact with its guideway comprising an arm attached to said rock shaft and a spring connecting the free end of said arm to said carriage.

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

F. AMOS JOHNSON.

Witnesses:

T. O. MACKINNON,
M. C. CRANE.