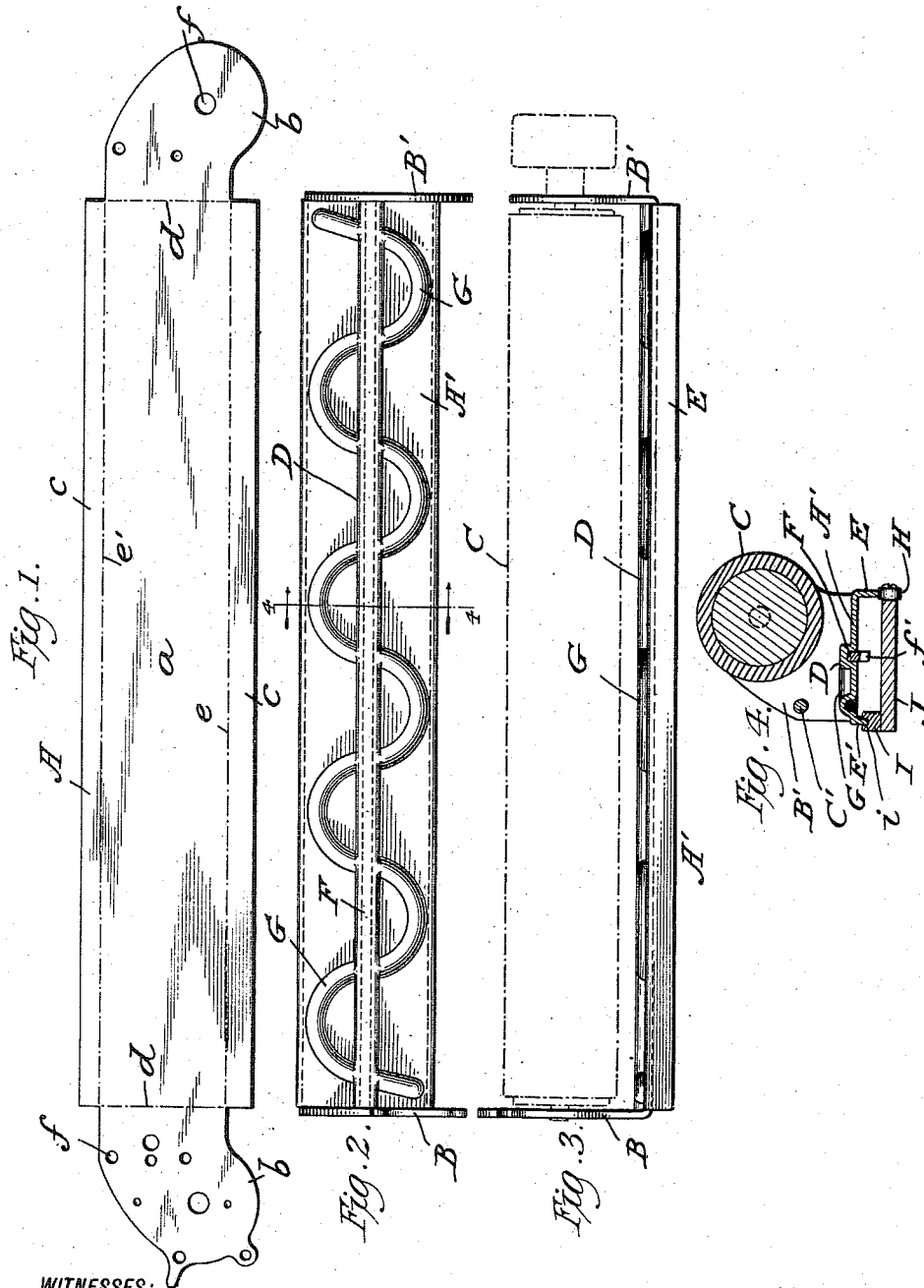


G. F. ROSE.
 PLATEN CARRIAGE FOR TYPE WRITERS.
 APPLICATION FILED OCT. 11, 1909.

995,186.

Patented June 13, 1911.



WITNESSES:

A. R. Hordeman
W. C. Powell

INVENTOR,
George F. Rose,

BY *Griffiths Bernhard*
 ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE F. ROSE, OF NEW YORK, N. Y.

PLATEN-CARRIAGE FOR TYPE-WRITERS.

995,186.

Specification of Letters Patent. Patented June 13, 1911.

Application filed October 11, 1909. Serial No. 522,113.

To all whom it may concern:

Be it known that I, GEORGE F. ROSE, a citizen of the United States, residing in the city of New York, borough of Manhattan, county and State of New York, have invented a certain new and useful Platen-Carriage for Type-Writers; of which the following is a specification.

This invention pertains to a typewriter, and more particularly to the platen carriage thereof.

The carriage of this invention is adapted for use in connection with foldable typewriters of the class disclosed in United States Letters Patent No. 754,242, dated March 8, 1904, wherein said carriage is supported on a foldable support whereby it may, when in an inoperative position, be folded into substantially overhanging relation to a key board. It is to be understood, however, that my new carriage may be used in connection with any other class of typewriters. I have stated that the invention is adapted for foldable typewriters for the reason that said machines are compact in construction and light in weight for convenience in transportation by traveling salesmen, etc.

The object of this invention is to reduce the weight and simplify the construction of the platen carriage, while insuring the rigidity and stiffness of the carriage to stand the strain without bending or buckling in any of its parts. My new carriage is of light weight, its parts are reinforced and stayed so that it will not become twisted or distorted by cross and diagonal strains, and it is, moreover, economical to manufacture.

My invention is characterized by pressed sheet metal in the construction of the carriage, the same comprising bottom and end members struck up from a blank of sheet metal, preferably of pressed steel. The metal is first stamped or "blanked out" from a sheet of the required gage, and the parts are thereafter bent, whereby upstanding end pieces and depending flanges are produced on a bottom member. Said end pieces are adapted to support the platen, together with several or all of the devices associated with the platen for operating said platen and for feeding and controlling the paper, whereas the depending flanges constitute the track rails for supporting the carriage in its sliding travel upon the machine frame.

The bottom member of the carriage is, preferably, ribbed by pressing the metal, said rib construction being for the purpose of precluding any twist or distortion of the carriage by transverse and diagonal strains. As one embodiment of this part of the invention, the bottom member is provided with a sinuous rib extending across and lengthwise of the carriage, but it is considered important to provide said bottom member with a straight central rib extending lengthwise of the carriage, said rib accommodating a rack with which coöperates the escapement dog or dogs adapted to regulate the sliding movement of the carriage.

In the accompanying drawings I have illustrated one practical embodiment of the invention, but the construction shown therein is to be understood as illustrative, only, and not as defining the limits of the invention.

Figure 1 is a plan view of a sheet metal blank from which the carriage of this invention is adapted to be produced. Fig. 2 is a plan view of the carriage. Fig. 3 is a side elevation of the carriage shown in Fig. 2. Fig. 4 is a cross section through the carriage on the line 4—4 of Fig. 2 showing the platen cylinder and a base upon which the carriage is adapted to slide.

In Fig. 1 of the drawings I have shown a blank, A, from which the carriage for a typewriting machine is adapted to be produced in accordance with this invention. The blank comprises a body portion, *a*, end portions, *b*, *b*, and side portions, *c*, *c*. The blank is adapted to be bent transversely on the dotted lines, *d*, *d*, and longitudinally on the dotted lines, *e*, *e*.

Blank, A, is composed of sheet metal, preferably of steel of the required gage, and the end portions, *b*, *b*, of said blank are shaped as shown in Fig. 1 so as to produce the desired end members of a platen carriage. While end members, *b*, *b*, have the shape shown in Fig. 1, it is not desired to limit the invention to the particular contour, nor to the exact number and arrangement of perforations, *f*, in said end members.

After stamping the blank, A, I proceed to bend it transversely at its end portions and on the dotted lines, *d*, *d*, thereby producing the upstanding end sections, B, B', on the bottom member, A'. The blank is, furthermore, bent on the dotted lines, *e*, *e*, so as to produce the depending flanges, E, E', one of

the side portions, *c*, producing the flange, *E*, and the other side portion producing the flange, *E'*, see Fig. 4. The flanges extend lengthwise of bottom member, *A*, and they are positioned at the respective sides thereof. The flange, *E*, is somewhat wider than flange, *E'*, and said flanges are parallel to each other.

At the time of, or after stamping blank, *A*, it should be punched or perforated so as to produce the openings, *f*, in the end members, *b*, prior to bending the parts, *b*, so as to produce the end members, *B*, *B'*. The openings, *f*, in the end members, *B*, of the blank accommodate the pivotal shaft for a platen cylinder, *C*, and the pivots of various other devices which are associated with the platen and the carriage for the purpose of operating said platen and the carriage, and for supporting the rods, one indicated at *C'* in Fig. 4, to which the paper table and the paper guides may be attached.

D designates a rib which is pressed in the metal composing bottom member, *A'*, of the carriage. This rib extends lengthwise of said bottom member, and it is positioned centrally thereon, the rib being between end members, *B*, *B'*, of the carriage. The rib, *B*, extends upwardly from the upper face of bottom member, *A'*, and said rib is chambered or hollow, as shown more clearly in Fig. 4; the rib opening through the under face of the bottom member, *A'*. Within said rib, *D*, is a rack, *F*, said rack forming one element of an escapement mechanism which is associated with the carriage for the purpose of limiting its endwise movement to a step by step movement. The rack is composed, preferably, of tempered steel, and it is provided on its lower edge with a plurality of teeth, *f'*. The rack is fitted tightly in the chambered part of upstanding longitudinal rib, *D*, so that it is retained securely in position by frictional engagement with the walls of the chamber, and if desired, the metal composing the hollow rib may become pressed or crimped around or into engagement with the metal composing the rack. The lower edge of the rack, said edge having the teeth, *f'*, depends from the under surface of bottom member, *A'*, and with the teeth of said rack is adapted to engage the pawl or pawls which control the feed movement of the carriage in the usual or in any preferred way.

In addition to the longitudinal central rib, *D*, bottom member, *A'*, of the carriage is provided with cross ribs which are pressed up from the metal composing said bottom member, and in a preferred form of the additional ribs, said bottom member is provided with a sinuous rib, *G*, the latter intersecting with central rib, *D*, substantially as shown in Fig. 2. The ribs may be

pressed into the metal before the blank, *A*, is bent to produce the carriage, or said ribbing of the bottom member, *A'*, may be effected after the end sections and side flanges are bent.

The depending flanges, *E*, *E'*, central rib, *D*, and serpentine rib, *G*, materially strengthen or reinforce the bottom of the carriage so as to preclude bending, twisting or distortion of said carriage by transverse, diagonal and longitudinal stresses. The carriage is extremely simple in construction, all of its parts being composed of a single integral piece of metal, and it is economical to manufacture. The side flanges and the ribs impart a certain degree of stiffness and rigidity to the carriage, and the stiffness is supplemented by embedding rack, *F*, into the channel of central rib, *D*. End members, *B*, *B'*, are united by the pivotal shaft or platen, *C*, and by one or more rods which support the paper table and the paper clips (not shown), so that the end members are not liable to movement relative to each other, nor can they spread by the operation of the platen cylinder by the feed of the paper into contact with said cylinder.

One flange of the carriage coöperates with rollers, *H*, whereas the other flange engages with the guide, *I*, said rollers and the guide being on a base member, *J*, as shown in Fig. 4. The guide, *I*, and the base, *J*, may be composed of aluminium when the other parts of the typewriting machine are made of this metal in order to secure lightness, but if desired, said guide, *I*, may be composed of steel. As shown, the guide is provided with a longitudinal channel or groove, *i*, into which fits the narrow depending flange, *E'*, on the bottom member, *A'*, of the carriage. The rollers, *H*, one of which is shown in Fig. 4, are mounted on base, *J*, to rotate freely thereon, and with each roller engages the lower edge of the wider flange, *E*, on bottom member, *A'*, of the carriage. By making the flanges, *E*, *E'*, of different widths, the carriage is brought into coöperative relation to the rollers and to the guide rail. The rail prevents any sidewise motion of the carriage because flange, *E'*, fits snugly in the groove, *i*, whereas rollers, *H*, insure easy movement to the carriage when it slides along base, *J*. The flanges, *E*, *E'*, support the bottom member, *A'*, of the carriage in a raised position and allow ample space below said bottom member, *A'*, for the operation of the escapement dogs (not shown), said dogs being adapted for engagement with teeth, *f'*, of rack, *F*.

By stamping blank, *A*, and perforating its end pieces at one operation, economy and accuracy are secured in the manufacture of the blank. If desired, certain of the holes, *f*, in the blank may be provided with a col-

lar formed by punching out or displacing the metal of the holes, said collar or collars being adapted to support the rivets, screws or shafts of some of the working parts to be supported on the carriage.

Rack, F, may be held in hollow rib, D, of the carriage by frictional engagement therewith, as described, or said rack may be held in position by other means, such as by the employment of screws adapted to pass through the carriage or its rib, D, and enter holes in the rack. A most important advantage is that the rack is braced or stayed in place within the hollow rib or part of the carriage, so that said rack is laterally stiffened by the carriage and is held in an accurate, true position relative to the other parts of the escapement mechanism, said rack being so supported that it cannot be displaced laterally.

Having thus fully described the invention, what I claim as new, and desire to secure by Letters Patent is:

1. A typewriter carriage composed of pressed sheet metal and formed from a blank which is bent to produce a bottom member, upstanding end members, a plurality of depending flanges, said flanges being positioned at the front and rear edges of the carriage and extending lengthwise of the bottom member thereof, and guiding means which cooperate with said flanges for directing the longitudinal movement of said carriage.

2. A typewriter carriage composed of pressed sheet metal and formed from a blank which is bent to produce a bottom member, end members extending upwardly from the bottom member, a plurality of depending flanges positioned at the front and rear of the carriage, respectively, said flanges extending lengthwise of the bottom member, one of said flanges being wider than the other flange, and guiding means which cooperate with said flanges for directing the longitudinal movement of the carriage.

3. A typewriter carriage composed of pressed metal and formed from a blank which is bent to produce a bottom member and a plurality of flanges, said flanges being positioned substantially at the front and the rear, respectively, of the bottom member and extended lengthwise of said bottom member, and separate guiding means cooperating with the respective flanges for directing the longitudinal movement of said carriage.

4. A typewriter carriage composed of pressed sheet metal and formed from a blank which is bent transversely near its ends to produce upstanding end members, and is bent, also, in the direction of its length to produce a plurality of depending flanges, said depending flanges extending lengthwise

of the carriage and positioned substantially at the front and rear, respectively, of said carriage, and guiding means which cooperate with said flanges for directing the longitudinal movement of said carriage.

5. A typewriter carriage provided with a pressed metal bottom member, and with a plurality of integral depending flanges, said flanges extending lengthwise of the carriage and positioned substantially at the front and rear, one of said flanges being wider than the other flange, a guide member cooperating with said wider flange, and a channeled guide member within which the narrow flange is slidably fitted.

6. In a typewriter, a carriage provided with a pressed metal bottom member having a plurality of longitudinal depending flanges positioned substantially at the front and rear, respectively, of said carriage, one of said flanges being wider than the other, a guide roller cooperating with the wider flange, and a grooved guide rail fixed relatively to the carriage, and within the groove of which rail is slidably fitted the narrow flange of said bottom member.

7. In a typewriter, a carriage provided with a pressed metal bottom member having longitudinal depending flanges, said flanges being positioned substantially at the front and rear, respectively, of the carriage, a guide roller cooperating with one of said flanges, and a fixed guide member cooperating with the other of said flanges.

8. In a typewriter, a carriage provided with a pressed metal bottom member and with a plurality of longitudinal depending flanges, one of said flanges being wider than the other, a guide roller cooperating with one of said longitudinal flanges, and a fixed guide rail cooperating with the other of said longitudinal flanges.

9. In a typewriter carriage, a unitary pressed metal bottom member provided with a plurality of integral longitudinal depending guiding flanges, a longitudinal hollow integral rib extending upwardly from the face of said bottom member and positioned in a plane intermediate the depending flanges, and an escapement rack confined partly within said hollow rib, whereby lateral distortion of the rack is precluded by the engagement of the rack with said bottom member.

10. In a typewriter carriage, a unitary pressed metal bottom member provided with a longitudinal chambered integral rib positioned intermediate the front and rear edges of said bottom member, said rib extending upwardly from the top surface of the carriage and the chamber of said rib opening through the bottom surface of the carriage, and an escapement rack separate from the bottom member, said rack being

housed partly within the chambered rib and said rack being retained from lateral distortion by contact with the walls of said rib.

11. In a typewriter carriage, a unitary 5 pressed metal bottom member provided at its front and rear edges with longitudinal depending guide flanges, a longitudinal hollow rib positioned intermediate said depending flanges, and a reinforcing rib extending 10 transversely of the bottom member and substantially intersecting with said longitudinal rib, said ribs and flanges being integral with the bottom member.

12. In a typewriter carriage, a unitary 15 pressed metal bottom member provided at its front and rear edges with depending longitudinal guide flanges, a hollow rib extending upwardly from the bottom member and positioned in a different horizontal 20 plane from, but in parallel relation to, the depending flanges, and a reinforcing rib positioned intermediate the hollow rib and the flanges, said ribs and flanges being integral with the bottom member.

25 13. In a typewriter carriage, a unitary bottom member composed of pressed metal and provided at its front and rear edges with longitudinal depending guide flanges, a hollow rib positioned centrally on said

bottom member and extending lengthwise 30 thereof, said rib being in a horizontal plane above the depending flanges and positioned parallel thereto, and a sinuous rib extending transversely with respect to the bottom member and positioned intermediate the 35 hollow rib and said depending flanges.

14. In a typewriter, a unitary carriage comprising a pressed steel bottom member, and members extending upwardly from and integral with said bottom member, guide 40 flanges integral with the bottom member and depending therefrom, said flanges extending lengthwise of the bottom member and positioned at the front and rear edges, respectively, of the same, a hollow rib integral 45 with the bottom member and positioned in a plane between said depending flanges and above the same, and a transverse rib also integral with the bottom member and positioned intermediate the hollow rib and 50 the depending flanges.

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

GEORGE F. ROSE.

Witnesses:

H. I. BERNHARD,
JAS. H. GRIFFIN.