(No Model.)

Z. G. SHOLES.

WAY FOR RECIPROCATING PARTS OF MACHINES.

No. 524,185. Patented Aug. 7, 1894.

Fig. 1.

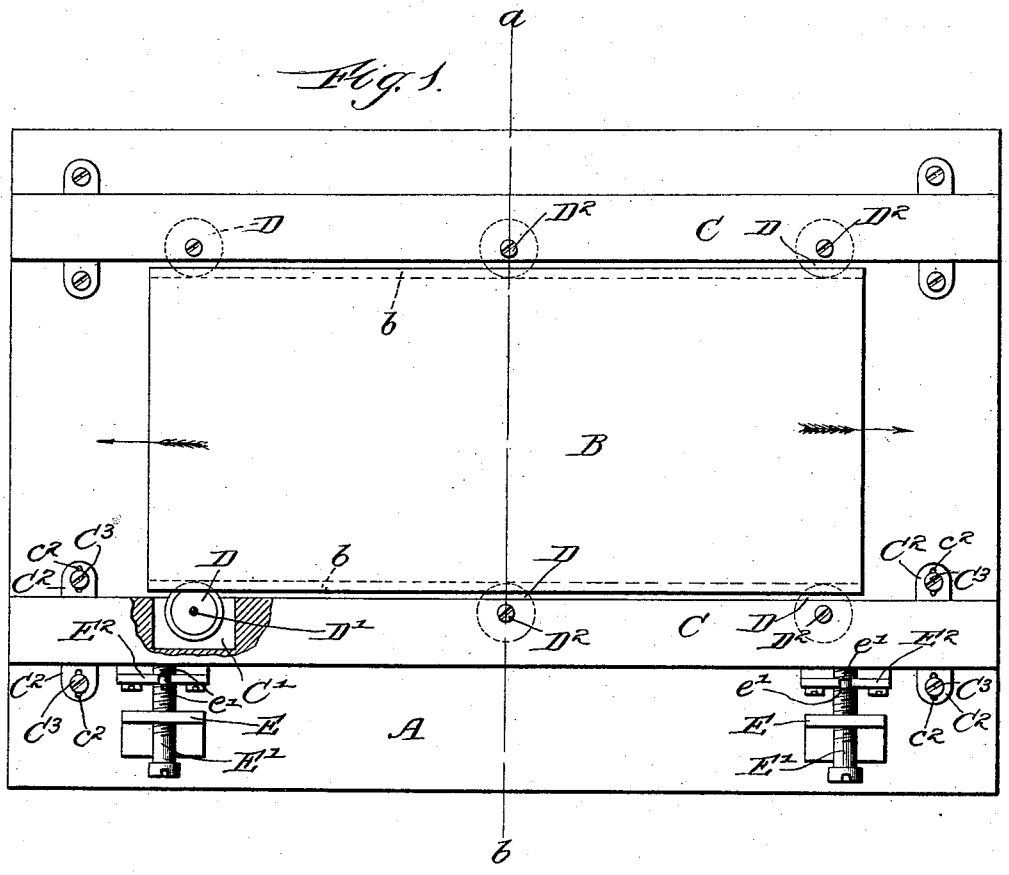
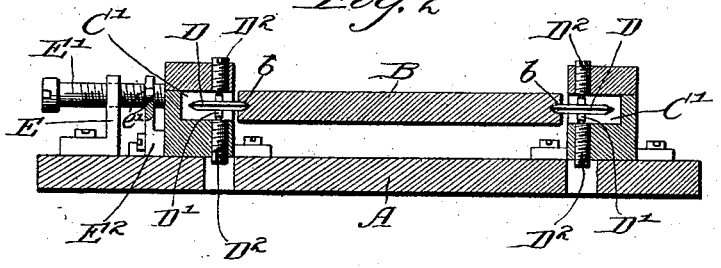


Fig. 2.



Witnesses:
Ambrose Risdon
Alice Linee

Inventor:
Jahnon G. Sholes
By Cyrus Keller
Atty

UNITED STATES PATENT OFFICE.

ZALMON G. SHOLES, OF CHICAGO, ILLINOIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE REMINGTON-SHOLES TYPEWRITER COMPANY, OF ILLINOIS.

WAY FOR RECIPROCATING PARTS OF MACHINES.

SPECIFICATION forming part of Letters Patent No. 524,185, dated August 7, 1894.

Application filed May 25, 1893. Serial No. 475,411. (No model.)

To all whom it may concern:

Be it known that I, ZALMON G. SHOLES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ways for Reciprocating Parts of Machines; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My improvement relates particularly to means for supporting reciprocating parts of mechanism, such as saws, planers, and typewriters, the object being to support reciprocating parts of machinery in such manner as to reduce friction to the greatest extent and to allow the least possible deviation of the reciprocating part from its chosen path.

In the accompanying drawings: Figure 1 is a plan of mechanism embodying my improvement. Fig. 2 is a vertical section in line *a*—*b* of Fig. 1.

In said drawings, A is any suitable base.

B is the part to be reciprocated in the direction of the arrows on Fig. 1.

C, C, are rails located at each side of the part, B. At each side, the part, B, is provided with a longitudinal channel, *b*.

D, D, are wheels arranged in a horizontal plane and having a tapering periphery extending into the channels, *b*. At each wheel the rail, C, has formed in it a recess, C′, and the wheels, D, are located wholly or partially in said recesses. Each of said wheels has an axle, D′, rigid therewith and terminating in cone shaped ends. Above and below said axle, plugs, D^2, are screwed through portions of the rail above and below the cavity, C′, in line with the axles, D′, and each such plug has a cavity into which the adjacent end of the axle extends. All of said plugs may be screwed up and down to give to the wheels, D, an accurate and firm adjustment. Each wheel may be thus held so as to wholly prevent movement other than rotation, and each wheel may be raised or lowered in proper alignment with the other wheels, and all the wheels may be raised or lowered to give to the part, B, a precise adjustment.

The lateral adjustment of the part, B, is effected by shifting the wheels, D, at one side of said part, B, horizontally toward or from said part. This is done by shifting one of the rails, C, laterally. The rail, C, at the upper portion of Fig. 1, is shown as being secured immovably to the base, A, while the rail, C, at the lower portion is shown provided with mechanism for shifting it. Ears, C^2, extend horizontally from said rails, C, over the base, A, and each such ear is provided with a slot, c^2, elongated at right angles to said rail, and a screw, C^3, extends through each of said slots. When said screws are tightened, said rail is held immovably. After loosening said screw, said rail may be moved toward and from the part, B, after which said screws may be again set. To provide for a closely measured and positive movement of said rail toward and from the part, B, I have provided in front of the latter a post, E, secured to the base, A, and through said post a screw bolt, E′, is threaded horizontally with its forward end extending loosely through the block, E^2, which is secured to or is a part of said rail, C. At each side of said block, E^2, said screw bolt has a shoulder or collar, *e*′, which is larger than the opening through said block. Thus said bolt engages said block, E^2, at each side of the latter. When said bolt is retracted from the post, E, said screw bolt draws on the block, E^2, and moves it to the said rail, C, away from said part, B. On turning said screw bolt forward, said block, E^2, and said rails, C, are moved toward the part, B, so that the latter is held more closely by the wheels, D. Said screw bolts are to be operated only after releasing the screws, C^3; and after an adjustment of the said rail has been effected by means of the screw bolts, E′, the screws, C^3, are to be tightened to hold said rail in the new position.

The reciprocating part, B, may be in the

form of the part shown in the drawings or of any other form, and it may be reciprocated by the hand or by mechanism.

I claim as my invention—

1. The combination with a piece of mechanism to be reciprocated, of wheels arranged at opposite sides of said part and in engagement therewith, and means for effecting an adjustment of said wheels parallel to the plane of said wheels and parallel to their axes, substantially as described.

2. The combination with the part B, of wheels D, located at each side of and engaging said part B, vertically adjustable mechanism supporting the wheels at one side of said part B, and mechanism for shifting said supporting mechanism toward and from said part B, substantially as described.

3. The combination with the base A, and part B, of rails C, screw plugs D^2, supported by said rails, wheels D, supported by said screw plugs and engaging said part B, and screw bolts E′, and suitable connections for shifting one of said rails toward and from the part B, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 29th day of April, 1893.

ZALMON G. SHOLES.

Witnesses:

CYRUS KEHR,

AMBROSE RISDON.