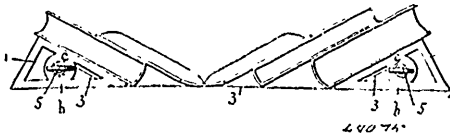
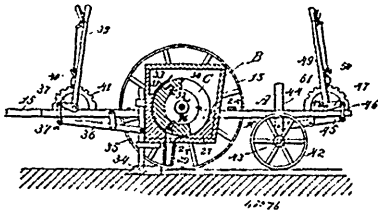


No. 48,075. Book Holder. (Porte-livre.)

Benjamin Ives Gilman, Boston, Massachusetts, U.S.A., 29th January, 1895; 6 years.

Claim.—In a book holder, the combination, with two triangular frames, and a flexible connection between said frames, of means for connecting one or both ends of said connection to said frames, to vary the length of the holder, consisting of a rod journaled in one of the frames, and provided with a longitudinal slot therein, adapted to receive one end of said connection, and means for turning said rod to wind or unwind said connection and means for preventing said rod from turning, substantially as set forth.

No. 48,076. Seed Planter. (Semoir.)

Caleb Eliphalet Packard Hobart, Cherokee, Iowa, U.S.A., 29th January, 1895; 6 years.

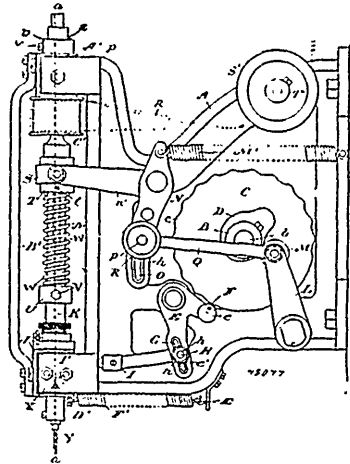
Claim.—1st. In a planter, the combination with a frame, an axle mounted in the frame, and a wheel loosely mounted upon each end of the axle and having the inner face of its hub made conical, of seed boxes on opposite sides of the frame, seed dropping wheels mounted on the axle in the said boxes, conical sockets adapted to receive the conical end of the hubs, said sockets being fitted to slide on but to turn with the axle, and a lever mechanism for operating the sockets, substantially as described. 2nd. In a planter, the combination with a frame, an axle mounted in the frame, wheels on the axle and having the inner faces of their hubs made conical, seed boxes on the frame, and dropping wheels in the seed boxes, of conical socket adapted to receive the conical ends of the hubs, said sockets being fitted to slide on the axle but to turn therewith, a pivoted operating lever, pivoted shifting bars engaging the sockets, and links secured to the shifting bars and to the operating lever on opposite sides of its pivot, substantially as described. 3rd. In a planter, the combination, with a wheeled frame, seed boxes carried thereby and seed droppers in the boxes, of plows having their shanks sliding in ways on the front part of the seed boxes, pivoted links having one end connected with the plow shanks, a crank shaft, links connecting the first named links with the cranks of the said shaft, and a lever for operating the shaft, substantially as described. 4th. In a planter, the combination, with a wheeled frame, and seed dropping mechanism carried thereby, of standards fitted to slide in ways in the rear part of the frame, an axle mounted in the lower ends of the standards, a roller at each end of the axle, pivoted links having one end connected with the standards, a crank shaft, links connecting the first named links with the cranks of the said shaft, and a lever for operating the shaft, substantially as described.

No. 48,077. Machine for Boring Piano or Organ Key-Boards. (Machine pour perfore les claviers d'orgues et pianos.)

Joseph M. Loose, Toronto, Ontario, Canada, 29th January, 1895; 6 years.

Claim.—1st. In a machine for boring piano and organ keys, the combination, with the motion transmitters and the framework, of means for automatically and successively at one operation of the machine cutting an oval hole to a predetermined depth and then boring a round hole from any part of the plane of the oval hole, substantially as specified. 2nd. In a machine for boring piano and organ keys, the combination, with the motion transmitters and the framework, of means for automatically and successively at one operation cutting an oval hole to a required depth, and then boring a round hole from any part of the plane of the oval hole, and means for adjusting the machine to cut an oval hole of any required and predetermined depth, and for boring a round hole of any required and predetermined depth, substantially as specified. 3rd. In a machine for boring piano and organ keys, the combination, with the framework of a cutting tool, means for transmitting a rotary motion to the cutting tool, means for transmitting a vibratory movement to the cutting tool simultaneous with the rotary movement, sub-

stantially as specified. 4th. In a machine for boring oval holes in piano and organ keys, the combination, with the framework of a hollow cutting tool, means for transmitting a combined rotary and vibratory motion to the cutting tool to cut an oval hole, a bit within the cutting tool, means for causing the descent of the bit after the cut-



ting tool has ceased cutting to bore a round hole as a continuation of the oval hole through the remainder of the material, substantially as specified. 5th. In a machine for boring oval holes in piano and organ keys, the combination, with the framework of a cam having a corrugated periphery journaled in the framework, a traveller rolling on the periphery of the said cam, a spindle journaled in the framework, a cutting tool connected to the spindle, means for transmitting movement from the traveller to the spindle and cutting tool, means for transmitting a rotary motion to the spindle and cutting tool, and means for automatically lowering and raising the spindle, substantially as specified. 6th. In a machine for boring oval holes in piano and organ keys, the combination with the framework of a cam having a portion of its periphery corrugated and the remainder smooth journaled in the framework, a traveller rolling on the periphery of the said cam, and adapted to receive a vibratory motion therefrom, a spindle journaled in the framework, a cutting tool connected to the end of the spindle, means for connecting the traveller with the spindle and transmitting a vibratory motion from the said traveller to the said spindle, means for transmitting a rotary motion to the said spindle and cutting tool, means for raising and lowering the said spindle and cutting tool, and means for arresting the descent of the said spindle, substantially as specified. 7th. In a machine for boring oval holes in piano and organ keys, the combination with the framework of a hollow spindle journaled in the framework, a hollow cutting tool connected to the said spindle, means for raising and lowering the said spindle, means for imparting to the spindle a rotary and also a vibratory motion, a bit within the said spindle arranged to pass out through the end of the cutting when the spindle has stopped its descent, substantially as specified. 8th. In a machine for cutting oval holes in piano and organ keys, the combination with the framework of a hollow spindle journaled in the framework, a hollow cutting tool connected to the lower end of the said spindle, a bit within the said spindle and adapted to pass out through the end of the cutting tool, means for forcing the said bit downwards through the said spindle, means for raising and lowering the said spindle and arresting its downward descent, means for imparting a rotary motion to the said spindle, and means also for imparting a vibratory motion to the said spindle simultaneous to the rotary motion, substantially as specified. 9th. In a machine for boring oval holes in piano or organ keys, the combination with the framework of a spindle journaled therein a cutting tool connected to the lower end of the said spindle a sliding bearing for each end of the said spindle, a cam journaled in the framework, a traveller rolling on the face of said cam, and a connection between said said traveller and said sliding bearing to transmit motion from the said cam to the said bearing, substantially as specified. 10th. In a machine for cutting oval holes in piano or organ keys, the combination with the framework of a hollow spindle journaled therein, a hollow cutting tool connected to the lower end of the said spindle, a bit within the said spindle and adapted to move out through the end of the cutting tool, a sliding bearing for each end of the said spindle, a cam having a serrated face, a traveller rolling on the face of the said cam, a connection between the said roller and the lower one of the sliding bearings, means for imparting a rotary motion to the spindle, means for raising and lowering the spindle, means for arresting the descent of the spindle, means for forcing the bit through the lower end of the cutting tool after the descent of the spindle has been arrested, and means for returning the bit into the spindle and returning the spindle to its normal position, substantially as specified. 11th. In a machine for boring oval holes in piano or organ keys, the combination with the