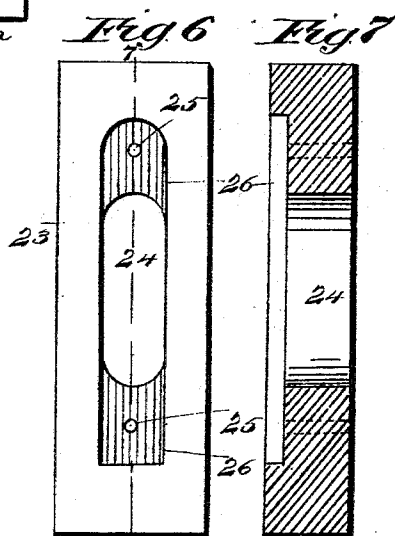
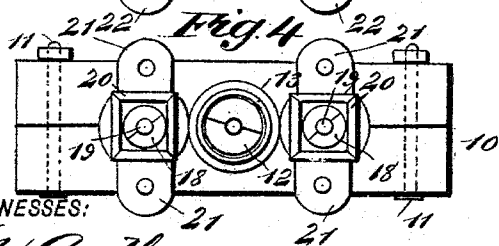
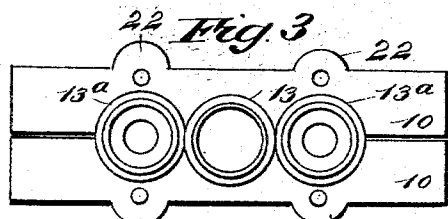
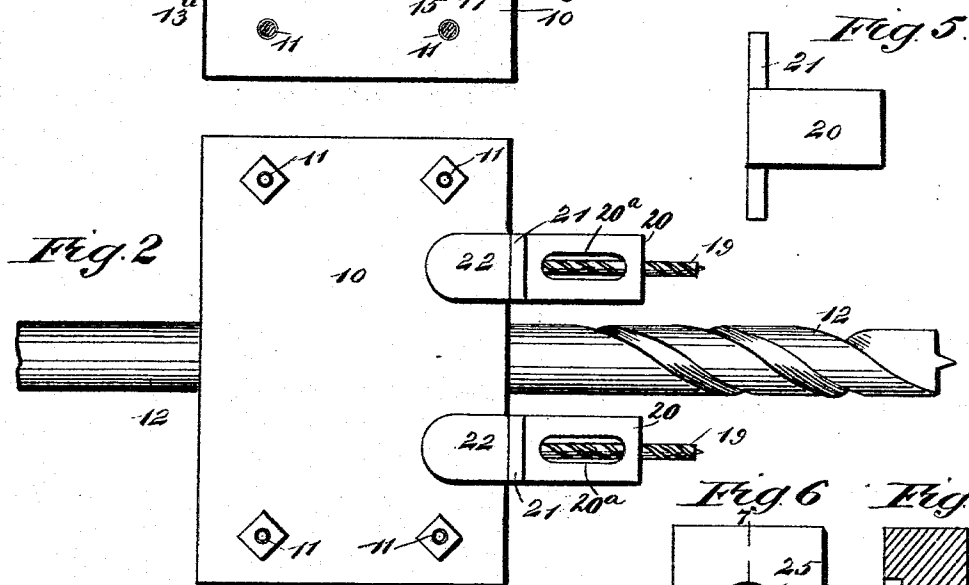
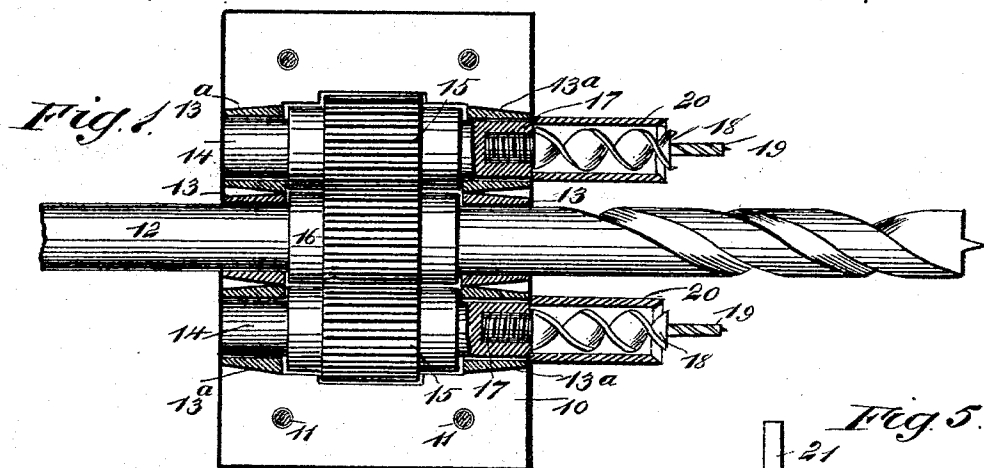


(No Model.)

D. HEPP.
MORTISING MACHINE.

No. 516,014.

Patented Mar. 6, 1894.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL HEPP, OF CHICAGO, ILLINOIS.

MORTISING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 516,014, dated March 6, 1894.

Application filed November 28, 1893. Serial No. 492,195. (No model.)

To all whom it may concern:

Be it known that I, DANIEL HEPP, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Mortising-Machine, of which the following is a full, clear, and exact description.

My invention relates to improvements in mortising machines; and the object of my invention is to produce a very simple and inexpensive machine, which may be used in connection with an ordinary boring machine having a sliding arbor, and which is adapted to rapidly and nicely mortise the stiles of window frames so as to produce the holes for the pulleys, the mortise for the pulley hanger flanges, and the screw holes in which the screws are set to hold the pulley hangers in place.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a sectional plan view of the device embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a front elevation with the bits removed. Fig. 4 is a front elevation with the bits in place. Fig. 5 is a side elevation of one of the chisels used in connection with the side bits. Fig. 6 is a front elevation of the stile, showing the mortise therein; and Fig. 7 is a longitudinal section on the line 7-7 of Fig. 6.

The machine is provided with a two-part bearing box 10, the box being made in two parts for convenience in inserting the bits, and the two parts of the box are held together by bolts 11 or equivalents. The box may be of any desired shape, but is preferably rectangular, as illustrated. Extending centrally and horizontally through the box is a bit 12, which may be of any approved construction, so far as its boring portion is concerned, and it is held to turn in anti-friction bearing rings 13 which are held from turning in the box in any suitable manner and are arranged at the front and rear end of the box. Similar rings 13^a are arranged on opposite sides of the cen-

ter rings 13 and serve as bearings for the side bit shafts 14, these being arranged parallel with the center bit 12 and on opposite sides thereof, the length of the bit shafts 14 corresponding to the length of the box 10. The bit shafts 14 have enlarged middle portions on which are formed gear wheels 15, and these mesh with a similar gear wheel 16 which is formed on the main bit 12, so that when the main bit is turned by a boring machine or otherwise, the side bit shafts will also revolve. The bit shafts have sockets 17 in their outer ends into which are screwed the threaded shanks of the bits 18, which, as illustrated in Fig. 1, are arranged on opposite sides of the main bit and are shorter, the bits being arranged to form the mortise for the flanges of the pulley hanger, as hereinafter described.

The bits 18 are provided with small extensions 19, which are adapted to make screw holes in the window frame stiles. The bits 18 are also adapted to be incased by the hollow chisels 20, which are rectangular in cross section and have, preferably, flanges 21 adapted to be fastened to lugs 22 on the upper and lower sides of the box 10. Each chisel has also a hole 20^a in the side through which chips may be discharged.

In the operation of the machine, the material to be operated upon, is placed upon a sliding bed, which moves at right angles to the bits. A hole is first bored in the material by the central bit and then the bed is moved and another hole bored, and so on until the central orifice 24 is produced. It will be understood that the side bits and chisels will not be in contact with the material while forming the orifice 24, the length of the central bit permitting this. After the orifice 24 has been formed the central bit is passed through the center of the said orifice 24 so as to bring the side bits and chisels in contact with the material when the screw holes 25 and mortises 26 for the flanges of the pulley hangers, will be formed by said bits and chisels. Instead of forming the central orifice 24 first, the screw holes 25 and mortises 26 may be formed first, and then the orifice 24. In this case a hole is bored in the material by the central bit and while the said bit is in the hole so bored the side bits and chisels

are brought into action to produce the holes 25 and mortises 26, after which the central orifice 24 is produced in the same manner as before described. The chisels may be used 5 or not, as desired, and the ends of the mortises made round or square according as the flanges of the pulley hangers are round or square.

When the machine is operated, the main 10 bit 12 is revolved by placing it in a common boring machine having a sliding arbor, and a suitable carriage may be employed to carry the stiles and bring them against the bits.

Having thus described my invention, I 15 claim as new and desire to secure by Letters Patent—

1. A mortising machine, comprising a central bit, side bits geared to the central bit, 20 and hollow chisels incasing the side bits, substantially as described.

2. A mortising machine, comprising a central bit, side bits geared with the central bit and provided with extensions of less diameter, said side bits being of less length than 25 the central bit, and hollow chisels incasing the large portion of the side bits, substantially as described.

3. In a mortising machine, the combination with a bearing box, a central bit mounted in 30 the box and provided with a gear wheel, side bits, shafts mounted in the box and provided with gear wheels meshing with the gear wheel of the central bit, and bits carried by the said side shafts, of hollow chisels secured to the 35 box and inclosing the said side bits, the said chisels being apertured, substantially as described.

DANIEL HEPP.

Witnesses:

SEVERIN G. SIMANSEN,
EDWARD HENDRICKSON.