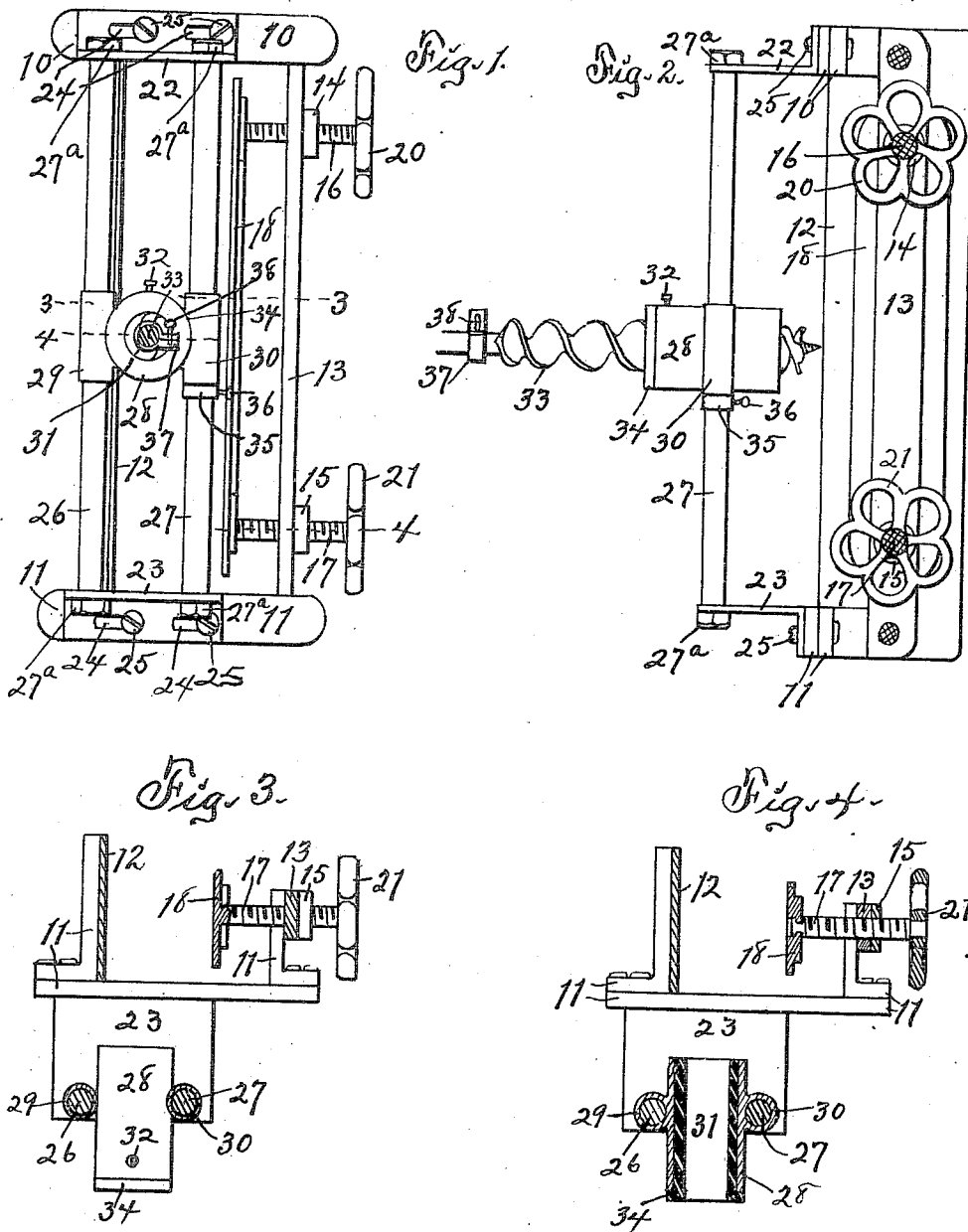


M. NICHOLLS.
GAGE FOR LOCK MORTISING BITS.
APPLICATION FILED NOV. 8, 1909.

971,627.

Patented Oct. 4, 1910.



Attest:
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UNITED STATES PATENT OFFICE.

MOSES NICHOLLS, OF STERLING, COLORADO, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO SAX-NICHOLLS-COHN COMPANY, OF OTTUMWA, IOWA, A CORPORATION OF ARIZONA TERRITORY.

GAGE FOR LOCK-MORTISING BITS.

971,627.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed November 8, 1909. Serial No. 526,910.

To all whom it may concern:

Be it known that I, MOSES NICHOLLS, a citizen of the United States of America, and resident of Sterling, Logan county, Colorado, have invented a new and useful Gage for Lock-Mortising Bits, of which the following is a specification.

The object of this invention is to provide an improved construction for gage supports for mortising-bits.

A further object of this invention is to provide improved means for adjusting a gage support for mortising-bits in order to support the bit relative to the object being mortised.

A further object of this invention is to provide improved means for adjusting and locating the bit relative to either end of a mortise.

A further object of this invention is to provide improved means for adjusting and determining the depth of a bore to be made by a bit in mortising.

A further object of this invention is to provide means for interchangeably using and guiding mortise-bits in a gage.

My invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in my claim and illustrated by the accompanying drawing, in which—

Figure 1 is an elevation showing my improved device mounted on a door as required for making a mortise in said door to receive a lock. Fig. 2 is a side elevation of the same. Fig. 3 is a cross-section on the indicated line 3—3 of Fig. 1. Fig. 4 is a cross-section on the line 4—4 of Fig. 1.

In the construction of the device as shown the numerals 10, 11 designate yokes, preferably compassing a square notch and having parallel arms of unequal length at and set inwardly from opposite end portions. A plate 12 is fixed at its ends to and located on the inner faces of the longer arms of the yokes 10, 11. A bar 13 is fixed at its ends to and located on the outer faces of the shorter arms of the yokes 10, 11. The bar 13 is parallel with the plate 12. Hubs 14, 15 are formed on the outer face of the bar 13 and screw seats are formed in said hubs and bar. Adjusting screws 16, 17 are screwed through the seats in the hubs 14, 15 and bar 13. A clamp plate 18 is mounted parallel with the

inner face of the bar 13 and inner end portions of the adjusting screws 16, 17 are swiveled in end portions of said clamping plate. By means of the adjusting screws 16, 17 the clamping plate 18 can be moved to and fro relative to the plate 12 and operating there-with form a clamp for mounting the yokes 10, 11 rigidly on an object to be mortised, such as a door (not shown). Hand wheels 20, 21 are mounted on the adjusting screws 16, 17. Angle plates 22, 23 are mounted on the outer faces of the yokes 10, 11. The angle plates are formed with slots 24 and are secured adjustably to the yokes by cap screws 25 extending through said slots and seated in the yokes. By means of the cap screws 25 and slots 24 the angle plates 22, 23 may be moved transversely of the door or other object being mortised. The outstanding portions of the angle plates 22, 23 are spaced apart distances approximating to and compassing the length of any mortise desired to be made and are connected by rods 26, 27 parallel with each other and extending at their ends through said angle plates and secured by nuts 27^a.

A gage barrel 28 is mounted between the rods 26, 27 and is secured thereto by apertured ears or slide bearings 29, 30 formed on opposite sides of said barrel and loosely embracing said rods. The bore of the barrel 28 is at right angles to the face of the object to be mortised. A bushing 31, preferably of vulcanite material, is mounted in the bore of 28 and secured thereto by a set screw 32 in said barrel. The bushing 31 is formed with a bore corresponding with the diameter of a bit 33 to be used therein and when a bit of different diameter is to be used a bushing of different interior diameter also would be employed. The bushing 31 is formed with a peripheral flange 34 at its outer end abutting the outer end of the barrel 28. A collar 35 is adjustably mounted on the rod 26 and may be moved longitudinally of said rod 26 and secured thereto by a set screw 36 for the purpose of fixing and determining downward movement of the barrel 28, thus locating the bit 33 in respect of the lowermost point of a mortise to be made in the object. A gage stop 37 is mounted adjustably on the bit 33 and may be moved longitudinally thereof and secured thereto by a set screw 38. It is the function of the gage stop

37 to engage the outer end of the bushing 31 and determine the depth to which the bit 33 can be inserted into the object.

In the the practical use of this device, the
 5 tool is clamped to the object to be mortised in such a manner as to span or compass the desired location of the mortise. Then the angle plates 22, 23 are adjusted so that
 10 the center of the bit 33 coincides with the center of the face to be mortised. Then the collar 35 is adjusted on the rod 26 to determine downward movement of the barrel. Then the bit is inserted in the barrel, or
 15 bushing therein, and the gage stop 37 is adjusted to determine the desired depth of the mortise. Then the bit is rotated by a brace not shown so as to bore a series of holes one above the other into the object to be mortised to the desired depth. The bit
 20 employed should be slightly larger than the width of the mortise to be made and the holes should be bored with said bit in close relation to each other so that when the boring of the mortise is completed the lock
 25 can be slipped into such mortise without trimming the walls thereof. Of course it will be necessary to form a countersink in the face of the object to take the face plate of the lock, and such countersink is
 30 preferably formed with a chisel, but it has nothing to do with the present invention or the use thereof.

When the tool is to be employed for making a mortise beyond the capacity of the tool in one position, it can be adjusted longitudinally of the object by loosening and
 35 resetting the clamp screws.

I claim as my invention—

A gage for lock-mortising bits, comprising yokes, a plate connecting said yokes, a
 40 bar connecting said yokes parallel with and spaced from the plate, adjusting screws threaded to said bar between the yokes, a clamping plate between the first plate and
 45 bar, ends of the adjusting screws swiveled in said clamping plate, angle plates formed with longitudinally slotted members arranged parallel with the yokes, set screws
 50 extending through the slotted members of the angle plates and seated in said yokes, rods rigidly mounted in outstanding members of the angle plates, said rods parallel
 55 with each other and spaced apart, a gage-barrel slidingly mounted on said rods, a collar adjustably mounted on one of the rods and serving as a stop for the gage-barrel in one direction, and means for mounting a bit in said gage-barrel.

Signed by me at Des Moines, Iowa, this thirtieth day of October, 1909.

MOSES NICHOLLS.

Witnesses:

EARL M. SINCLAIR,
 S. C. SWEET.