W. M. BARR.

PLANER.

No. 108,955. Patented Nov. 8, 1870.

Fig. 1.

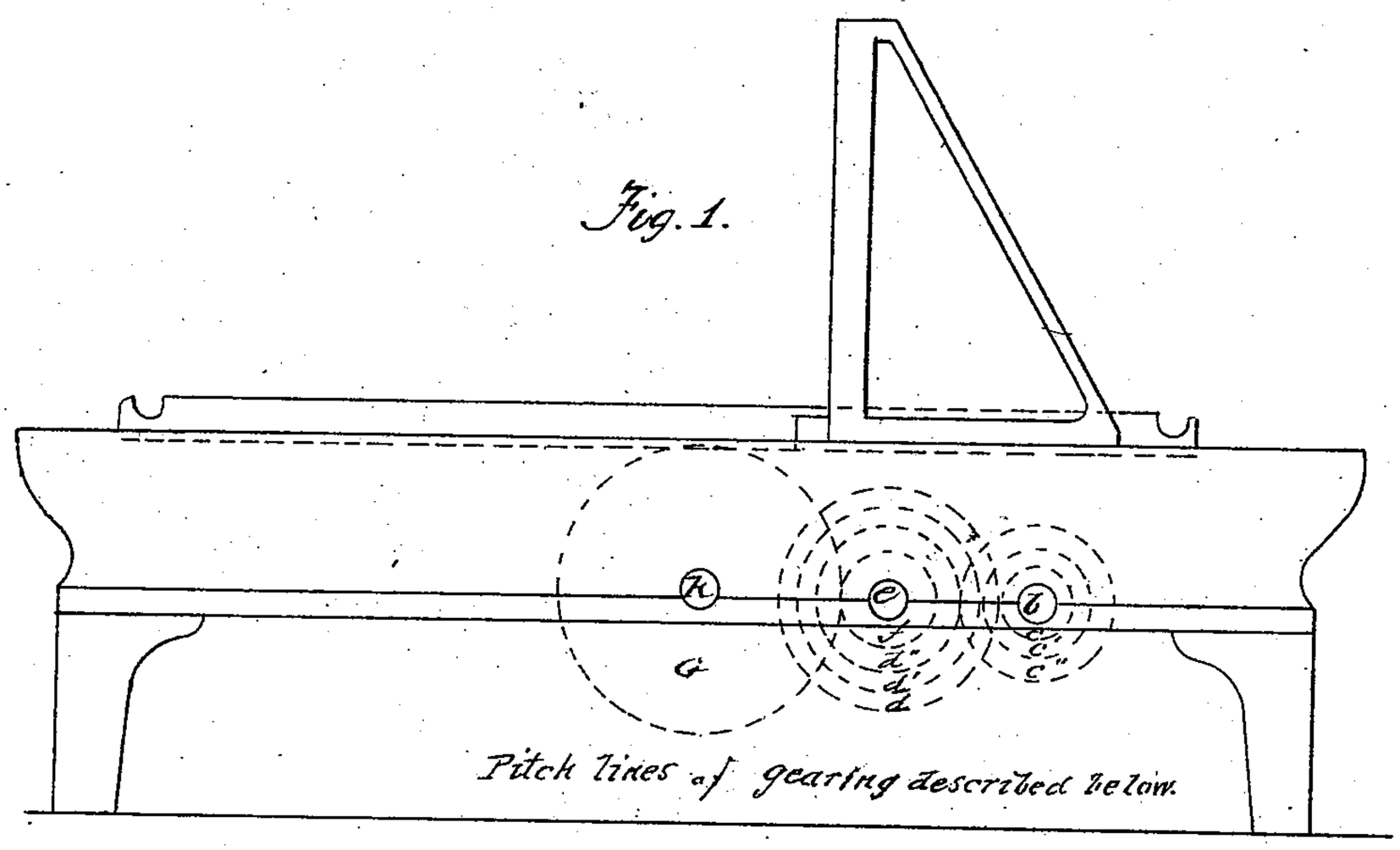


Fig. 2.

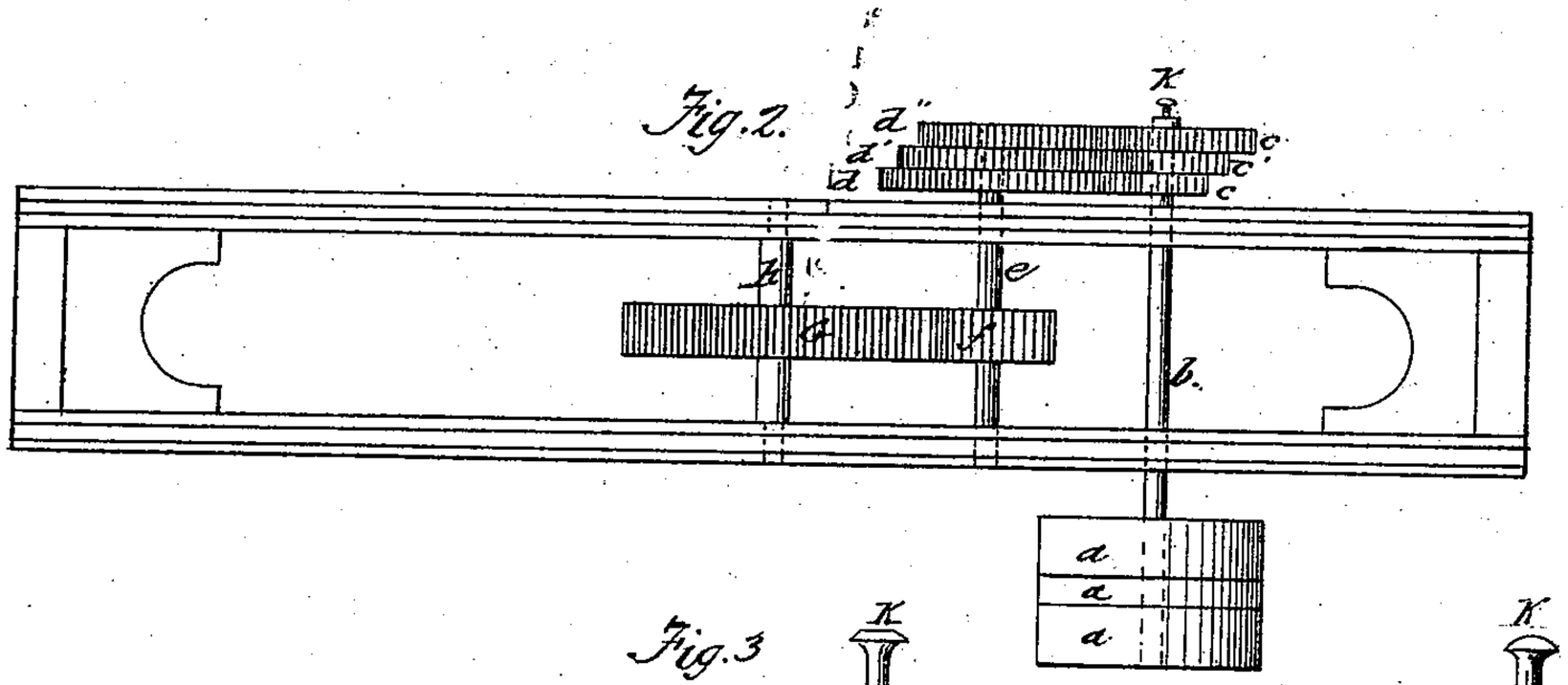
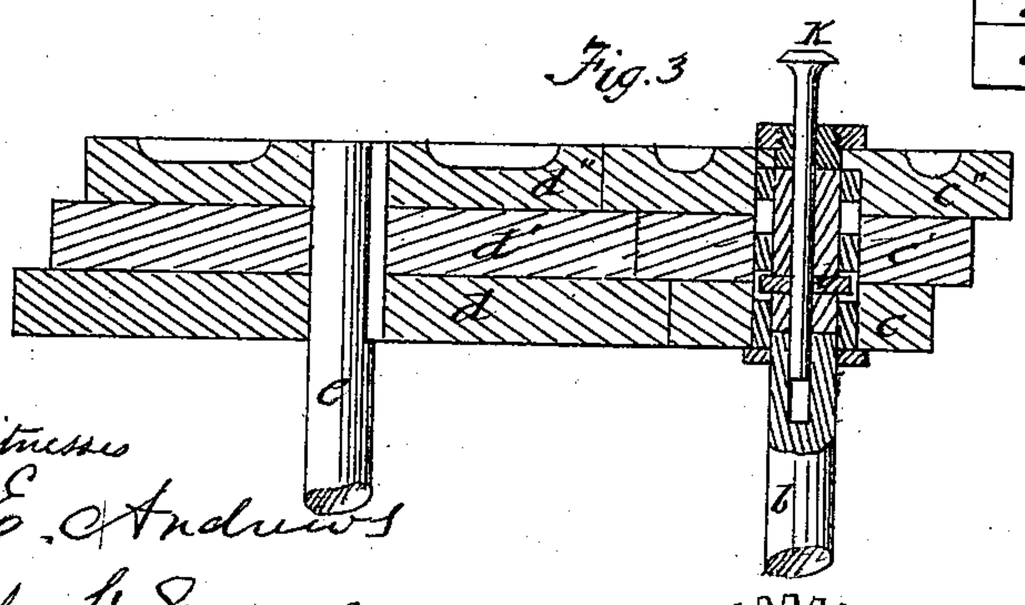
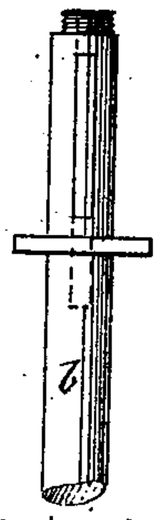


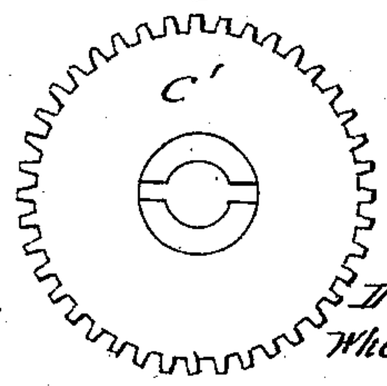
Fig. 3





Details of Fig. 3
Showing Slot in shaft "b"

Details of Fig. 3
Pin "K" with feather "a"



Details of Fig. 3.
Wheel "c'" showing recess and Key way.

Witnesses
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WILLIAM M. BARR, OF WILLIAMSPORT, PENNSYLVANIA.

Letters Patent No. 108,955, dated November 8, 1870; antedated October 28, 1870.

IMPROVEMENT IN GEARING FOR METAL-PLANERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM M. BARR, of the city of Williamsport, county of Lycoming, State of Pennsylvania, have invented a new and useful Improvement in Power-Planers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in applying a system of gearing to power-planers, in order to suit the speed of the planer to the kind of metal being operated on.

When a planer is speeded properly for cast-iron, it runs too fast for cast-steel, and too slow for brass.

By the system of gearing employed by me, the speed may be varied according to the difference in the gears, as fully described below.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1 is an elevation.

Figure 2 is a plan.

Figure 3 is an enlargement of the gearing marked *c c′ c″ d d′ d″* in fig. 2.

As my improvement is in the running-gear, I will proceed to describe its action only, without reference to the particular kind of framing employed.

The pulleys, *a a a*, receive motion in the usual manner, giving motion to the shaft *b*. In the end of this shaft a hole is drilled, large enough to admit the pin *k*, shown in the enlarged view at fig. 3. The shaft *b* is slotted to admit the feather *l*, which is secured in pin *k*.

The gearing *c c′ c″* is fitted with a recess large enough between each pair of wheels to allow the feather *l* in pin *k* to be entirely free from the gearing on one side before entering the gearing on the other side. This recess is shown in the parts colored black in fig. 3.

From one recess to the other is cut a key-way, large enough to permit the feather *l* in pin *k* to pass through and engage any one gear-wheel of the system, at the will of the operator.

The gears *d d′ d″* are all keyed fast to the shaft *e*.

When it is desired to give the table of the planer the slowest speed the pin *k* is pushed in until the feather *l* enters the key-way in *c*, which communicates its motion to the gear-wheel *d*.

On this same shaft *e* is a pinion, *f*, which gears into the master-wheel G, from which the table receives its motion.

The table of the planer is then running at its slowest speed, *c* being the smallest driving, and *d* the largest driven wheels of the system.

When the feather *l* engages the wheel *c′* the planer will run as much faster as the difference between the wheels *c* and *c′ d* and *d′*.

To run the planer still faster, the feather *l* should engage the wheel *c″*, and so on for any number of wheels that may be desired.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the recessed gear-wheels *c c′ c″*, hollow slotted shaft *b*, pin *k*, and feather *l*, with the gear-wheels *d d′ d″*, substantially as hereinbefore described.

WILLIAM M. BARR.

Witnesses:

E. ANDREWS,

H. F. SNYDER.