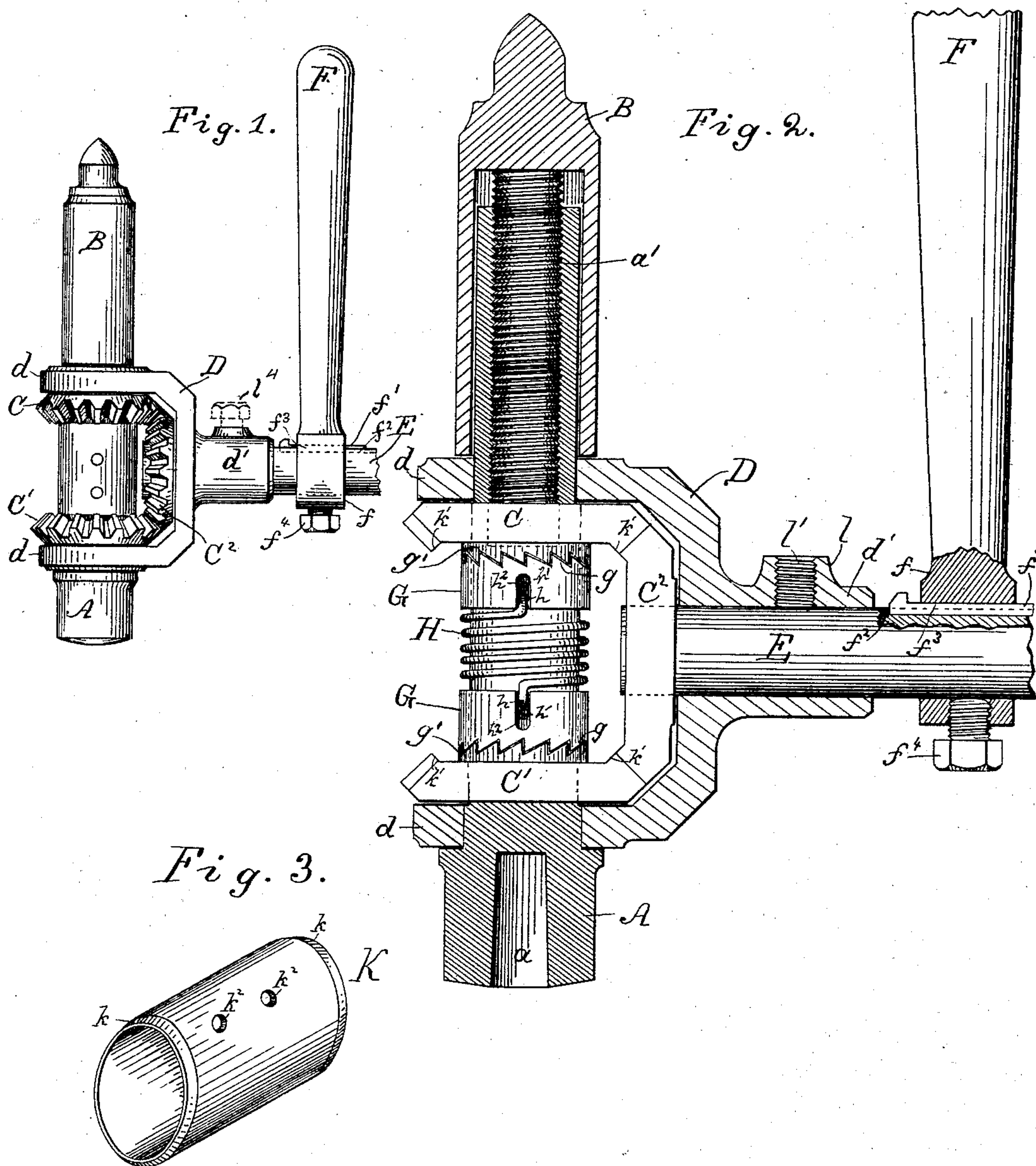


(No Model.)

A. W. LINTON.
RATCHET DRILL.

No. 370,956.

Patented Oct. 4, 1887.



Witnesses
Nathaniel Parkhurst,
R. A. Balderson,

Inventor
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UNITED STATES PATENT OFFICE.

AUGUST W. LINTON, OF FARGO, DAKOTA TERRITORY, ASSIGNOR OF ONE-HALF TO EDWARD P. LUNDBERG, OF SAME PLACE.

RATCHET-DRILL.

SPECIFICATION forming part of Letters Patent No. 370,956, dated October 4, 1887.

Application filed July 5, 1887. Serial No. 243,391. (No model.)

To all whom it may concern:

Be it known that I, AUGUST W. LINTON, a citizen of the United States, residing at Fargo, in the county of Cass and Territory of Dakota, have invented certain new and useful Improvements in Ratchet-Drills; and I do 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 ap-
10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

15 My invention has relation to ratchet-drills; and it consists in the novel construction and arrangement of its parts.

In the accompanying drawings, Figure 1 is an elevation of my drill. Fig. 2 is an enlarged
20 view of Fig. 1, partly in section and partly perspective. Fig. 3 is a perspective view of the shield which protects the ratchet-wheels and spring.

My invention is described as follows:

25 A is a ratchet-spindle having in its lower end a square opening, a , to receive the drill, and on its upper end a female feeding-screw, a' , into which is screwed the feeding male-screw B.

30 C C' C² are three bevel cog-wheels, all the same size, and are movable around spindle A.

D is a fork-shaped frame having the upper and lower arms, d d' , and a perforated handle, d' .

35 E is a shaft which passes through the perforation or cylindrical opening in the handle d' , and has rigidly secured on its inner end the bevel cog-wheel C², which meshes with the bevel cog-wheels C and C'.

40 F is a handle having a perforation, f , in its lower end, through which the shaft E runs, and said handle is secured to the said shaft E by means of a key, f' , which fits into a slot, f^2 , in said shaft, and a corresponding slot, f^3 , in the perforation of said handle. It is also ad-
45 ditionally secured in place by means of a set-screw, f^4 , which passes through the lower end of said handle and impinges against the said shaft.

50 G G are two ratchet-rings, which fit around the spindle A, each of which bears ratchet-teeth g . The hubs of said cog-wheels C C' ex-

tend down and up and terminate in rings similar to said rings G G, and have ratchet-teeth g' , which correspond with teeth g^2 and mesh with the same.

55 H is a spiral spring coiled around the spindle A, the ends h of which are turned into the slots h' in the said rings G G. The purpose of this spring is to keep the said ratchet-rings pressed up and down that they may be in contact with the teeth on the hubs of the said cog-wheels. The said ratchet-rings G G are held from turning on the spindle A by means of
60 screws h^2 h^2 , which are passed through said slots and screwed into the spindle A until their upper ends are flush with the outer surface of the said rings. 65

K is a hollow cylinder, and is a shield to protect the hubs and ratchet-teeth g' of the wheels C C', the ratchet-rings G G, the spiral spring
70 H, and the screws h^2 . Its bevel ends k are made to conform to the inner bevels of the flanges k' of the said wheels C C' and to snugly fit in the same, thus giving to the whole drill great strength and security. When it is put on,
75 the said screws h^2 h^2 , which pass through the perforations k^2 , and screwed home in the spindle A, above described, it is then turned around until the said perforations do not coincide with the said screws, so that the screws
80 by no possibility can work up.

The drill is operated by working the handle F to and fro. This operation moves the cog-wheel C² back and forth, which in turn turns the cog-wheels C C' back and forth, thus first
85 moving one ratchet-ring G and then the other, and so on, at every push and pull, keeping the drill constantly moving in one direction. On the perforated handle d' is an elevation, l , through which is made a female screw, l' , in
90 which the set-screw f^4 , above mentioned, is designed to fit, and may be screwed down until it impinges the shaft E, and may thus be made to hold it secure and keep it from turning in its socket. This continuous double-gear-
95 ratchet-drill may be changed to an ordinary drill by taking off the arm F and screwing the set-screw f^4 into the female screw l' , as above described.

I wish to explain which is a big advantage: 100 the ratchet-teeth on both wheels are so set that you need only move the handle back and for-

ward slightly to keep the drill in continuous motion.

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

5 In the double-gearred ratchet-drill above described, the combination, with the spindle A, bearing in its upper end the screw B, the forked frame D, having the perforated handle d' , and the threaded opening l' , adapted to receive the set-screw f^t , the shaft E, bearing the handle F and working in the perforated handle d' , bevel cog-wheel C^2 , rigidly secured on the inner end of said shaft, bevel cog-wheels 10 $C C'$, working around the spindle A, having flanges h' and hubs terminating in rings which fit around said spindle and bear ratchet-teeth

g' , ratchet-ring G, working around the spindle A, having slots h' and teeth g , meshing with teeth g' , spiral spring H, coiled around said spindle and between said ratchet-rings, having their ends h turned into the slots h' , screws h^2 , fitting in said slots and screwed into said spindle, shield K, fitting over said ratchet-rings, said screws, and said coil-spring, its bevel ends fitting in the bevel flanges h' , substantially as shown and described, and for the purposes set forth. 20 25

In testimony whereof I affix my signature in presence of two witnesses.

AUGUST W. LINTON.

Witnesses:

W. W. SMITH,
ALFRED WALLIN.