E. H. NEVICZKY.

SAFETY GAS VALVE.

APPLICATION FILED SEPT. 12, 1921.

1,423,010. Patented July 18, 1922.

Fig. 1

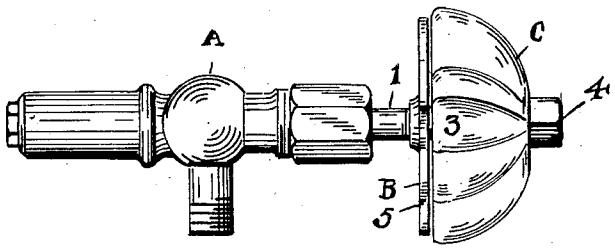


Fig. 2

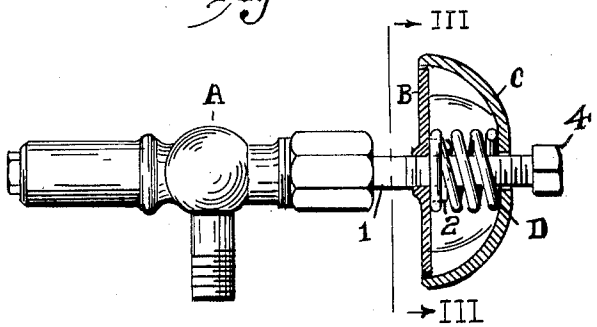
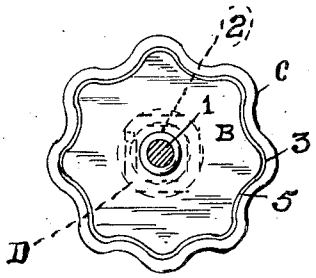


Fig. 3



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UNITED STATES PATENT OFFICE.

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SAFETY GAS VALVE.

1,423,010. Specification of Letters Patent. Patented July 18, 1922.

Application filed September 12, 1921. Serial No. 499,981.

To all whom it may concern:

Be it known that I, ELEANOR H. NEVICZKY, a citizen of the Republic of Hungary, and residing in the city of McKeesport, in the county of Allegheny and State of Pennsylvania, have invented or discovered new, useful, and Improved Safety Gas Valves, of which the following is a specification.

My invention consists in a new and improved safety gas valve intended especially for domestic stoves and ranges.

It very frequently happens that small children, when left alone, will play with the shiney valves of the stove, and instances are not rare where they have turned on the gas with fatal results.

The object which I have in view is the provision of a new and improved safety valve which may be conveniently operated in substantially the usual manner by older persons to turn on or off the gas, but which small children will not be able to operate.

In the standard gas valve for stoves and ranges, the hand wheels are fixed to the stem, but in the case of my improved valve the hand wheel is loosely mounted on the stem so as to both rotate, and slide longitudinally to a limited degree thereon. I fix on the said stem a disk, and between said disk and the hand wheel I coil about the stem a helical spring which normally holds the hand wheel away from the disk. I provide the disk and the hand wheel with coacting portions, so that when the hand wheel is forced inwardly along the stem toward the disk, the perimetral edges of the hand wheel will fit over and engage with the edge of the disk so that when the hand wheel is turned, the disk and the valve stem are turned with it.

In the accompanying drawings, Fig. 1 is an elevation of a gas valve embodying my invention, the hand wheel being shown in its idle position; Fig. 2 is a similar view showing the hand wheel forced into engagement with the disk so that the valve can be operated by turning the hand wheel, the hand wheel and disk being shown in section to show the helical spring, and Fig. 3 is a sectional view taken along the line III—III in Fig. 2.

The following is a detailed description of my invention.

A represents an ordinary rotary gas valve of the usual type used on domestic stoves and ranges. 1 is the valve stem having its protruding end threaded. B is a metal disk screwed down on said stem and held in proper position by a lock nut 2. C is the hand wheel, which is shown bowl shaped or of the conventional concave type, having its wall fluted as at 3, in a usual manner, to assist the hand in obtaining a firm grip. The hand wheel C is not fixed on the stem, as is now the usual practice, but is free to rotate thereon and is also to slide longitudinally of the stem, the outward movement of the hand wheel being, however, limited by the cap nut 4 screwed onto the outer end of the stem. D is a helical spring which is coiled about the stem 1 between the disk B and the hand wheel C, thus normally holding the hand wheel in the position, relative to the disk, shown in Fig. 1 wherein the hand wheel is shown spaced away from and out of engagement with the disk. The base of the spring may be engaged about the nut 2. However, by pushing the hand wheel in along the stem, thus compressing the spring, the perimeter of the hand wheel is brought into position wherein it surrounds the disk, as shown in Fig. 2. The perimeter of the disk is fluted, as at 5, or contoured to fit with relative snugness in the hand wheel, so that there is an interlocking action when the parts are in the relative positions shown in Fig. 2. Thus, when the hand wheel is in the position shown in Fig. 2, by turning the hand wheel, the disk and stem are turned also, whereby the gas can be conveniently turned on or off. When the hand wheel is released, the spring D will force it outwardly out of engagement with the disk, so that the hand wheel may be turned idly without affecting the valve.

Thus while an adult or older child may readily operate the valves, a small child may play with the valves without danger, as it would not be intelligent enough to push in the hand wheel to the necessary degree before turning the same, and any accidental inward push exerted on the hand wheel would be successfully resisted by the spring which should be made strong enough to resist a casual push.

I have shown the fluted hand wheel now in very common use and have contoured the perimeter of the disk to interlock therewith. Thus, my invention may be very conveniently and cheaply applied to gas valves of this very well known type, by simply threading the stem to a somewhat greater length,

enlarging the hole in the hand wheel so that it will rotate and slide on the stem, and installing the disk and spring.

If desired, however, any character of interlocking action between the hand wheel and disk may be provided.

It is evident from the foregoing that my invention provides a very useful safety feature at but little cost, and one that will be greatly appreciated in homes or institutions where there are small children.

What I desire to claim is:—

1. In combination with a rotary gas valve having a protruding stem, a limit nut screwed on the outer end of said stem, a disk provided with a serrated perimeter fixed on said stem intermediate of the valve and said limiting nut, a concaved hand wheel freely mounted on said stem between said disk and said limit nut, said hand wheel being interiorly provided with a circumferential surface adapted to interlock with the perimeter of said disk, and a helical spring coiled about said stem between said disk and said hand wheel, whereby said hand wheel is normally idle on said stem but by pushing said hand wheel along said stem into engagement with said disk said hand wheel is operatively coupled to said stem to operate the valve.

2. In combination with a rotary gas valve having a protruding stem, a limit nut screwed on the outer end of said stem, a disk provided with a serrated perimeter fixed on said stem in spaced relation to said nut, a bowl shaped hand wheel slidably and rotatably mounted on said stem between said limit nut and said disk, and a helical spring coiled about said stem between said disk and nut, said hand wheel being internally serrated to mate with the perimeter of said disk, whereby the hand wheel may be operatively connected to the valve by pushing it against said spring and along said stem into mating engagement with said disk.

3. In combination with a gas valve having a protruding stem, a hand wheel free to rotate on and slide longitudinally of said stem, said hand wheel being concaved toward said disk and having a fluted perimeter and said disk being of proper diameter and contour to fit in said hand wheel and interlock therewith, and a helical spring coiled about said stem between said disk and said hand wheel whereby said hand wheel is normally held out of engagement with said disk but by pushing said hand wheel along said stem, compressing said spring, said hand wheel may be interlocked with said disk and the valve may be operated by turning said hand wheel.

Signed at Pittsburgh, Pa., this 9th day of Sept. 1921.

ELEANOR H. NEVICZKY.