

## A DIAMOND HAWK.

THERE was shown in the International Exhibition of 1851 a celebrated figure of a Hawk composed entirely of gold and jewels—literally a mass of gems. The "Knyphausen Hawk" is life-size. It stands on a species of rockwork, and is decorated with numerous fine specimens of carbuncles, amethysts, turquoises, rubies, &c. When the head of the bird is removed a gold



drinking-cup is found to be concealed in the body, from which it is said two rival Dutch counts pledged each other at their reconciliation: and that this sumptuous Hawk was made to commemorate the event of the restoration of peace between the two families. The gold cup is an elegant piece of workmanship, and perhaps the counts, thinking with Moore, might have said—

Send round the cup—for oh, there's a spell in  
Its every drop 'gainst the ill of mortality.  
Talk of the cordial that sparkled for Helen,  
Her cup was a fiction, but this is a reality.

It is the property of the Duke of Devonshire and valued at £40,000.

## Abundance of Life in the Arctic Seas.

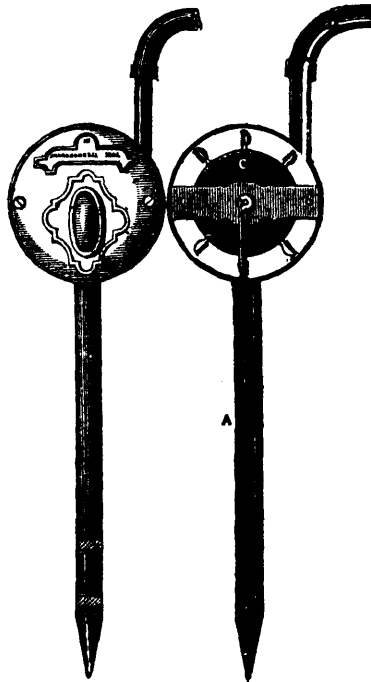
It is a popular error that the cold of the Arctic seas is unfavorable to fish life. "In truth," says Prof. Hind, "the Arctic seas and the great currents flowing from them are in many places a living mass, a vast ocean of living slime, and the all-pervading life which exists there affords the true solution of the problem which has so often presented itself to those engaged in the great fisheries—where the food comes from which gives sustenance to the countless millions of fish which swarm on the Labrador, on the coast of Newfoundland and in the Dominion and United States waters, or wherever the Arctic current exerts an active influence." In the Arctic seas the waters are characterized by a variety of colors; and it is found that if a fine insect net be towed after a ship it becomes covered with a film of green in green water and a film of brown in the brown water. These films are of organic origin. "It is a living slime, and where it abounds there are also to be found swarms of minute crustaceans, which feed on the slime, and in their turn become the food of larger animals." Dr. Brown has shown that the presence of this slime, spread over 100,000 square miles, provides food for myriads of birds that frequent the Arctic seas in summer, and also furnishes sustenance for the larger marine animals, up to the giant whale. "During the recent voyage of the *Valorous* to Disco, Dr. J. Gwyn Jeffreys, when between 200 and 300 miles east of Cape Farewell, caught with the towing net some floating masses of pulpy greenish matter, which was found to consist of a vast assemblage of diatoms, each individual being about the tenth of an inch in length. This diatom was subsequently found to have a very wide range, and to extend over some thousands of square miles." These con-

tribute to the support of the smaller marine animals, and these in turn to higher forms.

This "slime of the ocean" appears to live abundantly in the coldest water and in the neighborhood of ice. The great ice drift coming from the Spitzbergen seas, sweeping round Cape Farewell, then northwesterly to Davis' straits, is augmented by immense bergs and floes from Baffin's bay and Hudson's straits, and at length, on the banks of Labrador, countless thousands of these ground, bringing with them their "slime." Thus the "slime" which accompanies the icebergs and ice floes of the Arctic current accumulates on the banks of northern Labrador, and renders the existence possible there of all those forms of marine life—from the diatom to the minute crustacean—and from the minute crustacean to the crab and prawn, together with molluscous animals and starfish, in vast profusion—which contribute to the support of the great schools of cod, which also find their home there.

## PNEUMATIC PEN.

Among the many attempts of inventors to supply a ready means of copying an indefinite number of writings, drawings, &c., is the apparatus shown in sketch, which, apart from the question of utility, is at least simple and ingenious. The pneumatic pen, as it is called, is not new in principle, as a perforating machine, acting in a similar way, has been in use by embroidery manufacturers for many years, and all that the inventor of this apparatus has done is to arrange the whole thing in such a simple way that it can be as readily used as an ordinary pen. The tube, A, in the illustration contains

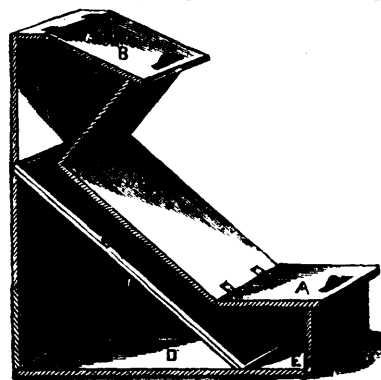


the needle B, which is connected to a crank on the axis of the fan wheel, C. Rapid motion is imparted to the fan by means of a blast of air either from the mouth of the writer or an air bellows, through the flexible rubber tube, D, connected with a foot bellows or blown from the mouth of the operator. On moving the point of the pen over a sheet of paper it becomes pierced with very fine holes in lines of the desired pattern. Ink or colour is then spread over the surface which fills the holes, and passes through the stencil to as many sheets of paper as may be brought in contact with it. Originals may, it is stated, be multiplied in this way at the rate of 300 per hour. The arrangement is patented in England and abroad.

**TO CLEAN TIN VESSELS.**—First rub your tins with a damp cloth, then take dry flour and rub it on with your hands, and afterward take an old newspaper and rub the flour off, and the tins will shine as well as if half an hour had been spent in rubbing them with brick-dust or powder which soils the hands.

## A Simple Ash-Sifter.

In no well managed family is a waste of coal allowed, but the ashes are separated from the cinders, and all of these that can be burned are utilized. Sifting coal ashes is generally a disagreeable job, and it is not to be wondered at that servants shirk it, when allowed to, yet by proper arrangements the labor can be greatly reduced, and the work done rapidly and neatly. We have on former occasions figured various ash-sifters, and we now give one devised by J. H. Ten Eyck, one of the firm of Ten Eyck & Co., of Auburn, N. Y., whose business of reproducing enlarged plain or colored portraits from photographs and daguerreotypes, brings them in relation with people all over the Union. The engraving, reproduced from an exceedingly neat drawing, shows the ash-sifter with one side removed, to expose the interior arrange-



MR. TEN EYCK'S ASH SIFTER.

ment. No measurements are given, because as Mr. T. E. suggests, it may be built in a wood-shed or other outbuilding, and will be of a size to suit the place, or the amount of work required of it. The sifter consists of an inclined sieve—the wire-cloth for which may be had of the desired fineness at the hardware stores—placed at such an angle, that the cinders will roll down of their own weight, while the ashes will fall through the meshes of the sieve. This sieve (C) is enclosed on all sides, and is provided with a receptacle (B) for the ashes, as they come from the grate, one (D) for the sifted ashes, and another (E) for the cinders freed from the ashes. Its working is automatic; the material to be sifted being put in at B, will slide down the sieve, until stopped by an accumulation of cinders at E, but on removing these, the sifting will go on again. The ashes must be removed, as they accumulate at D, or the sifter may be placed where the ashes will pass down through the floor, or out at one side of their own weight. Those who, like the writer, use the ashes in earth-closets, will prefer the construction shown in the engraving, in which they are kept dry and ready for use, when needed.

**TEA AND HOT BISCUIT.**—A professor of hygiene in a young ladies' seminary writes as follows: Popular opinion associates the teapot with the middle-aged and the elderly ladies, but popular opinion would find itself mistaken, if not shocked, to see the middle-aged lady teachers refreshing and rebuilding their brains, at the day's close, with that perfection of all foods and brain-builders, a glass of milk, while they of 16 sip their cups of tea. And then the fancy for hot biscuits is something truly marvelous. There was a time when nothing else could be had for breakfast. That, of course, was a glad time for the mistaken souls that dream of finding bliss in such a way, and was a no less glad time for the pill-vendors. Now, by one of those revolutions which come to families now and then, the hot biscuit breakfast has come to be a thing of the past, and substitute the "ounce of prevention" of dyspepsia—in the form of bread which has reached its perfection by means of the chemical change secured by an interval of 24 hours between the baking and the eating.