

RECENT INVENTIONS.

The several figures in the accompanying engraving scarcely need explanation, as the main features of the devices are shown. Figs. 1 and 2 represent a stamp canceler having on the face of one of the dies a coil of platinum wire that is heated by the passage of an electrical current. There is a key in the handle which completes the electric circuit when the instrument is grasped in the hand.

Fig. 3 represents a simple device for dusting ashes, plaster, guano, Paris green, or other pulverized substances upon plants. The substance is placed in the receptacle and passes through the aperture in the middle of the conical bottom. The sieve seen at the lower end of the receptacle is moved up and down by the handle attached to the vertical rod, when the material feeds slowly through the hole in the bottom, and is evenly distributed by the sieve.

The shoemaker's lamp shown in Fig. 4 explains itself. It is designed for heating the implements used in smoothing and burnishing the edges of the soles of boots and shoes.

Fig. 5 represents a boat which is capable of being folded very compactly, as shown in Fig. 6. The body, or covering, consists of a skin of flexible waterproof material. The frame

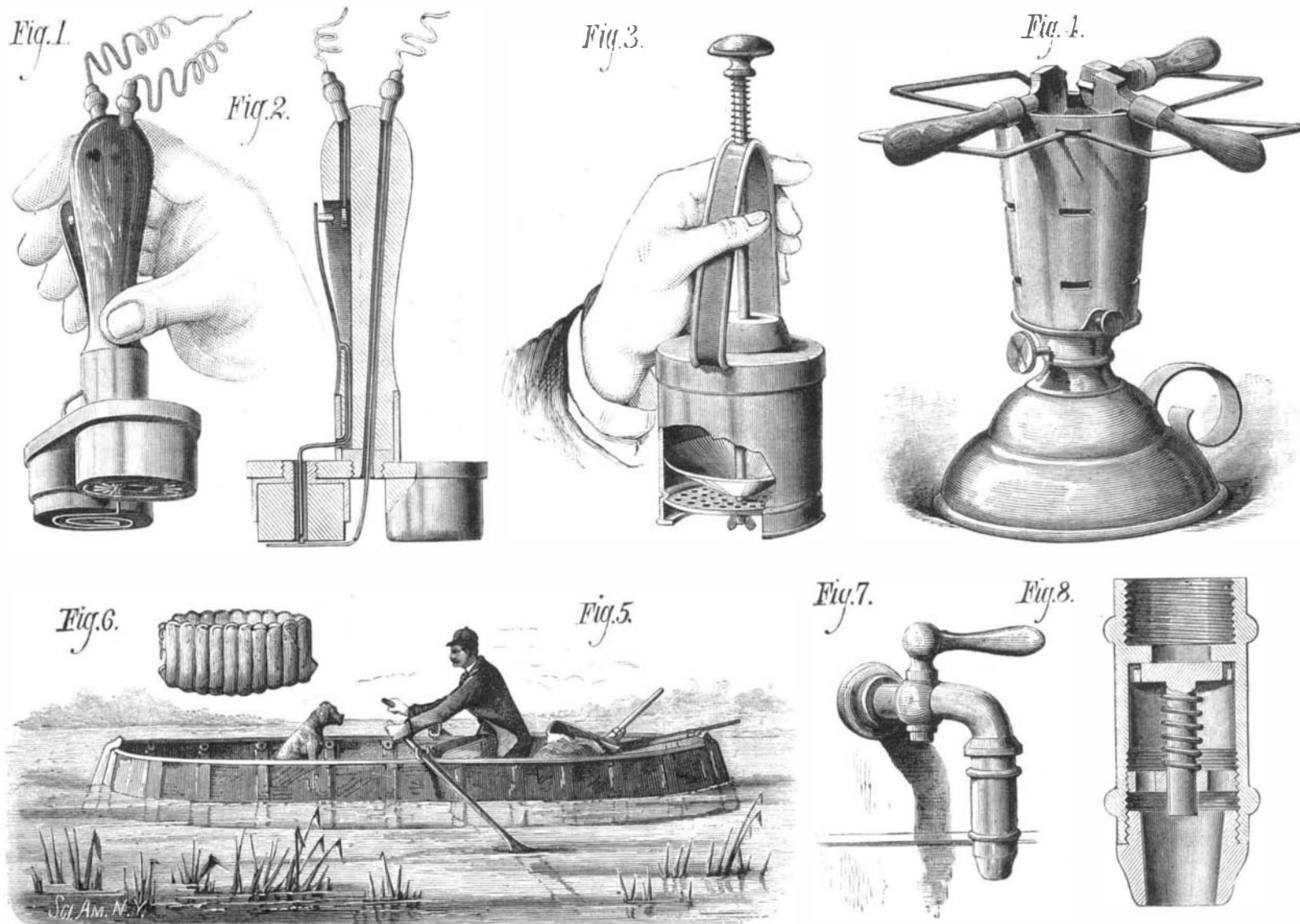
at the central office rings out the signal, and simultaneously a little tablet on the switch board drops and reveals the name of Baldwin & Co. An attendant sees at a glance that some one at Baldwin's desires to talk with No. 12, and, finding this to be the box at the Cramp yards, connects the wires of the two places, either by means of the pins referred to or by joining them to a rod fixed in the back of the switch board. Now, the man at Baldwin's practically has his mouth to the ear of the person at Cramp's, and can talk to him about the weather, or the price of steamships, or order some machinery, or invite him to dinner, as he chooses. If he wants some article which the shipbuilder cannot supply, they may recommend him to one of the other 398 establishments connected with the telephone exchange, and, by going through the same simple process, he can order coal at Port Richmond, call for cars at Washington Street wharf, send for a man at Manayunk, and, in fact, can talk with a dozen individuals in as many distant points in less than that number of minutes. The instrument is so arranged that any number of persons can talk on as many subjects at the same time, from different points, without experiencing the difficulty that occurred at the building of the Tower of Babel.

Useful and Mischievous Birds.

The State Entomologist of Illinois gives the following classification of native American birds, with regard to their capacities for use or mischief:

To be Preserved and Fostered.—Blue birds, titmice (chickadees), warblers (small warbling birds found on trees and in gardens), kinglets (ruby-crowned and golden-crowned wrens), nuthatches and creepers (black, white, and brown), wrens, martins (swallows), vireos (greenlets), tanagers, finches, song sparrow, chipping sparrow, field sparrow, clay-colored sparrow, black throated bunting, indigo bird, cardinal grosbeak, ground robin (chewink), black birds (crow, bobolinks, meadow lark, and others), all the fly-catchers (including king birds and the peewee), cuckoos, nighthawks (goat suckers and whip-poor-wills), swifts (chimney swallows), all the wood-peckers except the yellow-billed—*Sphyrapicus varius*—(known in Central and Northern Illinois as the sap-sucker), and, perhaps, also the large red-headed wood-pecker—*Melanerpes erythrocephalus*, plovers, prairie snipe (prairie plover), quail.

To be Destroyed.—Cedar bird, Baltimore oriole (hanging bird), larger owls, hawks, and the yellow-billed wood-pecker



Figs. 1 and 2. Dow's Electric Stamp Canceler.—Fig. 3. O'Brien's Plant Duster.—Fig. 4. Rosentjerna's Lamp.—Figs. 5 and 6. Osgood's Folding Boat.—Figs. 7 and 8. Hutchinson's Water Regulator.

A FEW NOVELTIES.

work is arranged so that it may be readily extended for use or folded for transportation.

Fig. 7 shows in perspective and Fig. 8 in section a water regulator, which is designed to control the flow of water from any particular outlet, so that water may be drawn simultaneously from several outlets in the same building. This is particularly useful where the pressure or supply of water is insufficient to carry it to a higher outlet when the lower one is open. The resistance offered by the spring-actuated disk may be varied by screwing up the disk upon which the spring rests.

The Telephone in Philadelphia.

The Philadelphia Local Telegraph Company has perfected an arrangement putting their clients in the various parts of the city into immediate telephonic connection. This is done by means of an ingenious telephonic switch board recently devised. As described by a local paper, the front of the apparatus consists of a walnut frame and bright strips of brass, punctured with holes, into which wires are fitted to make the necessary connections. Behind this all the wires converging in the office concentrate. The board just put in operation accommodates no less than 400 different lines, which have an aggregate length of 1,000 miles, thus placing each firm or individual having telephonic connection with the main office in direct communication with 399 other persons scattered over the city. Should an individual at the Baldwin works desire to converse with a person at Cramp's shipyard, he ascertains from a printed card the number or call of the Kensington ship-builders. As an instance, if the number of the Cramp telephone is 12, the speaker at Baldwin's touches a spring attached to his instrument to designate the number, and immediately a bell

Telephone circuits, working substantially similar to the above, are now in operation in the principal cities of the United States.

Correspondence.

A Fast Little Steam Yacht.

To the Editor of the Scientific American:

I have noticed several articles in your valuable paper in relation to steam yachts, and send you the following, hoping that you will give it room:

Last winter two boys, William and John, sons of Daniel Kelly, aged 17 and 19 years, both of them readers of the SCIENTIFIC AMERICAN, commenced work on a steam yacht, and although then at work in the shops of the Chicago and Michigan Lake Shore Railroad, they worked nights, and toward spring the work was nearly completed. John, the younger of the boys, now gave his whole time to the boat, and in April she was ready for business. She is named the Susie Watson, and is 25 feet keel, 28 feet 6 inches over all, 6 feet beam, built of oak 1 inch thick, on oak frames 1½ inch by 1½ inch. She has an upright boiler 24 inches in diameter, 52 inches high, with 90 one inch flues; her engine is 4½ by 6; her wheel is 28 inches, 40 to 42 pitch, and with 100 pounds steam makes 300 turns per minute; she is capable of running 11 miles an hour, and has room for about 20 passengers. She has been used as a ferry on Muskegon Lake during the season, and from April 1st to December 8th made an average of 80 miles per day. This entire boat, including boiler and engine, was constructed by these boys, who are now building a much larger one for next season.

W. C. WOLVERTON.

Muskegon, Mich., December 30, 1878.

(sap-sucker of Central and Northern Illinois). This species is distinguished from the other small wood-peckers by its pale yellowish breast, a large patch of black upon the upper part of the breast; the throat of the male is a bright red, and that of the female is white; the adults, both male and female, have the top of the head also red.

Doubtful.—The following arc birds whose habits are not sufficiently known to justify full recommendation, and whose habits are sometimes beneficial and sometimes injurious:

Thrushes—including the common robin, cat bird, mocking bird, brown thrasher, wood thrush, tawny thrush, and hermit thrush. Shrikes—including the great northern shrike and white rumped shrike (butcher bird), Savanna bunting, crow, blue-jay, red-headed wood-pecker, saw-whet owl, screech owl, horned lark, orchard oriole, and pigeons.

Sulphur for Diphtheria.

Mr. John S. Wiles, a surgeon of Thorncombe, Dorset, writes to the London Times that after two cases of malignant diphtheria out of some nine or ten he had been called to attend had proved fatal, the mother of a sick child showed him an extract from an American paper concerning a practitioner who used sulphur to cure the disease. Accordingly he used milk of sulphur for infants and flowers of sulphur for older children and adults, brought to a creamy consistency with glycerine; dose—a teaspoonful or more, according to age, three or four times a day, swallowed slowly, and application of the same to the nostrils with a sponge. Result: he did not lose a case there or elsewhere, and he succeeded in saving life when the affection had almost blocked the throat.