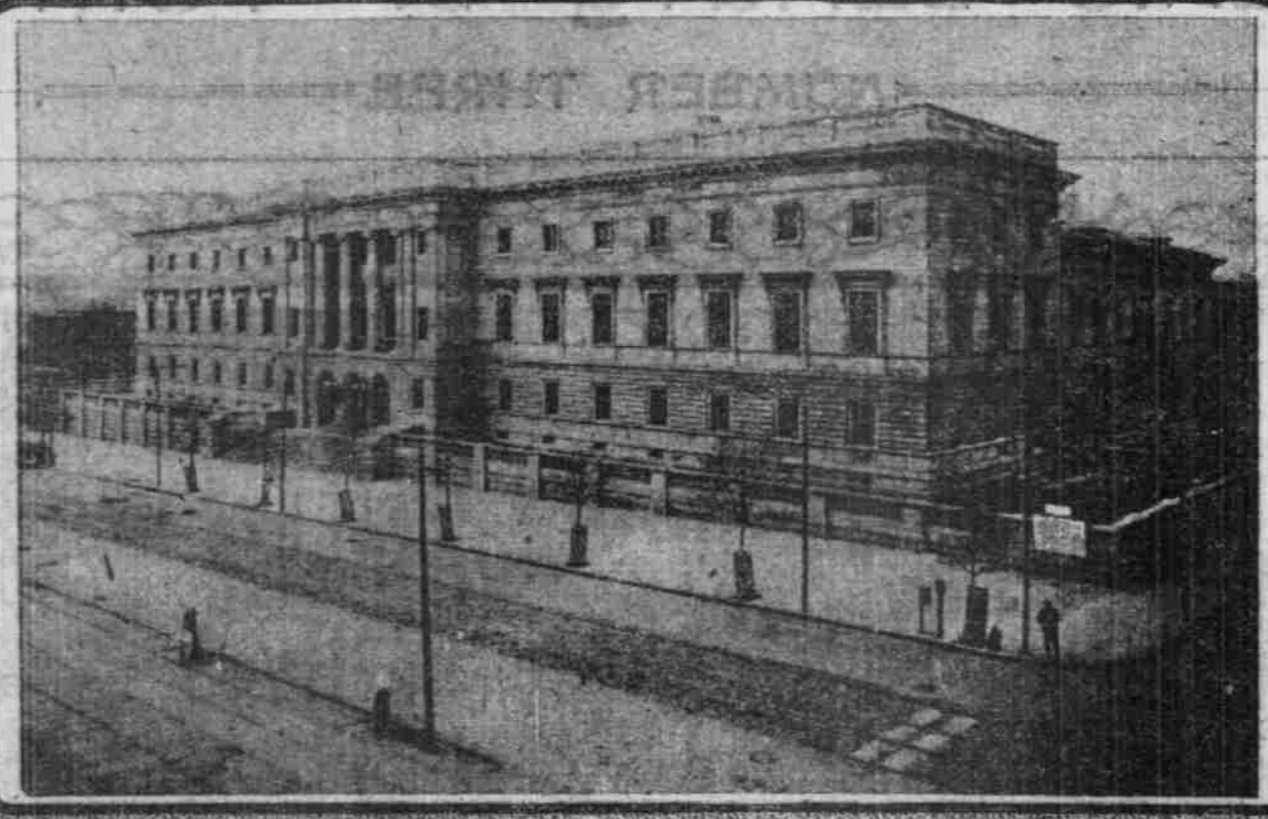


UNCLE SAM'S NEWLY CONSTRUCTED COIN FACTORY

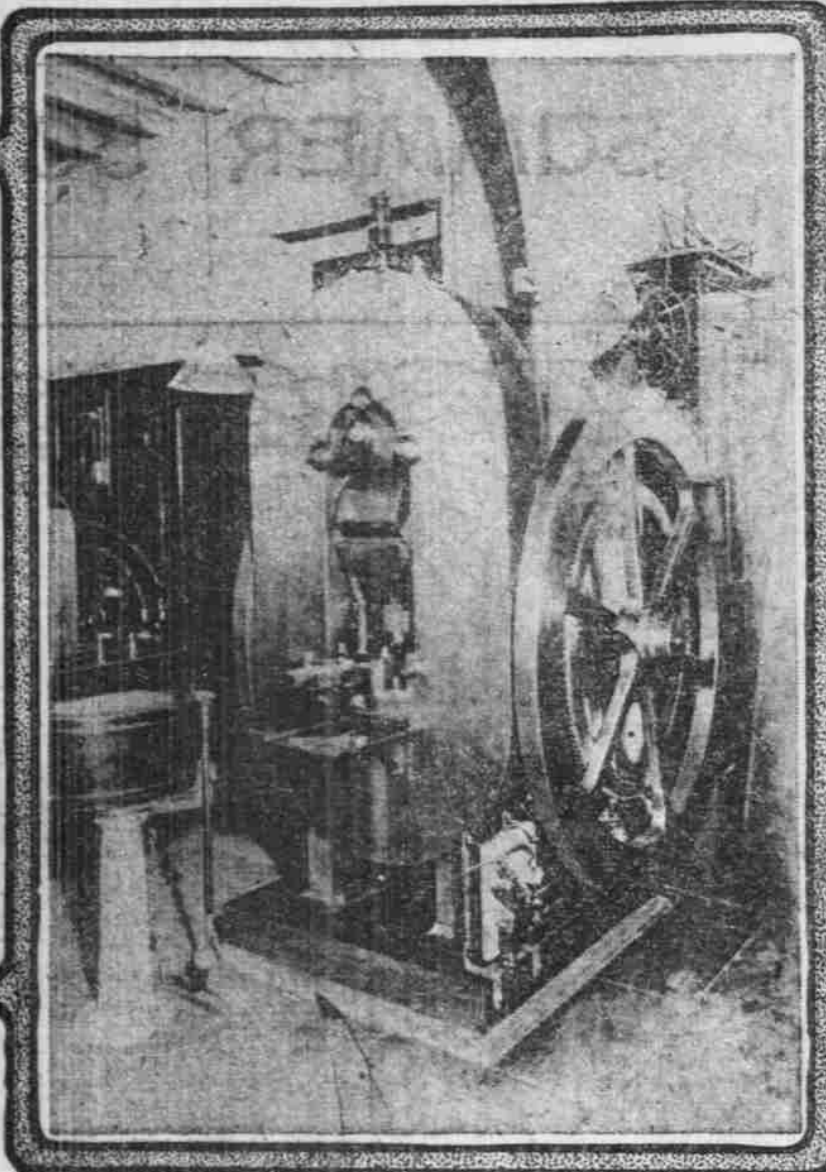
MINT AT PHILADELPHIA THAT COST \$2,400,000



POURING THE MOLDS



INTERESTING DESCRIPTION OF MODERN PROCESS OF COINING.



A COINING PRESS

(Special Correspondence.)
PHILADELPHIA, June 23.—Uncle Sam will hereafter coin his Eastern money by a brand new process and with brand new machinery. His great \$2,400,000 Mint has at last received its last finishing touch, and you may now inspect here, in the Quaker City, the best equipped and most artistically modeled coin-factory of the world. Whereas, in the old Philadelphia Mint you were permitted only to peep through small windows at the industry of dark rooms, you may in the new structure stroll comfortably upon high, overhanging galleries and there watch every act of the Nation's money-makers, telling in their ample, well-lighted laboratories.

The Melting-Room.
 Leaving the deposit-room, where it is received, the gold and silver bullion is taken first to the new melting-room. Here are 16 new melting furnaces, whose temperature can be raised to 600 degrees by ignition of the oil fuel now exclusively used. In the melting furnaces of the old Mint anthracite coal was alone employed, but the present strike among the miners of this fuel does not affect the

cost of coining our money today. Piled about the gas furnaces are keg-shaped crucibles made of plumbago, or black-lead. These, as needed, are placed in the gas-flame, and in them are thrown the gold and silver bricks—the raw material out of which the coin of the realm is to be made. These gold and silver bricks are brought from all parts of the world and vary greatly in size. Before being made into money, they must be alloyed with copper, until the resulting metal is what is termed "900 fine," 1000 being purity. And, by the way, there are only two places in the world where absolutely pure gold can be found, i. e., here at the Philadelphia Mint and at the Royal Mint, London. All assays are made from these standards.

The molten metal reaches a certain color, which they can detect only after long experience, but which may be said to be a cherry-red. It is ready to be molded into ingots. But before this is done, a few drops of the molten metal are removed by the assayer.

Each finishing ingot comes from the mold with a blunt end, or "top," this being the end of the mold in which the liquid metal is poured. A row of "topping" machines bite off this irregularity, and from these bars are passed to men at benches, who file off the rough edges. The filings from this process are caught in oil-cloth-lined boxes and carefully saved. Next the properly-shaped ingots are sent to a long table, where they are placed side by side in a row, where a man with a brand and hammer stamps upon each a number designating its melt. The bars now pass to the assayer, who compares the few drops of metal taken from the furnace, at the time the melt was made, with the correspondingly numbered lot of the finished product. If the latter fails to reach 900 fine, it must be remelted until it so assays.

Rolling Department.
 Ingots which run the gauntlet of the assayer pass next into the rolling department, which, like the melting-room, has been equipped with brand new machinery. Between pairs of massive rollers the ingots are passed 15 times, by which process they have reached just half the thickness required. Before this process is completed, they are sent to the annealing or tempering furnaces, where they are heated cherry-red and plunged into water. Then they are put through another series of rollers 15 times before receiving their proper thickness, which, of course, depends upon the denomination of the finished coin to be made from them. Ingots which before the rolling process resembled sticks of solder, in point of size, leave the last rolling press in the form of strips vary-

ing in dimension up to six feet in length, four inches in width and about a sixteenth of an inch in thickness. In the old Mint these strips were made by a sort of combined rolling and pulling process, which has now been abandoned.

The flat strips of gold or silver are next fed to a series of cutting machines, which move very rapidly, with a vertical motion. A man on one side feeds the carriage, and one on the other takes out the strips bearing the round holes from which the metal has been cut. Into a tray beneath each cutter fall the neatly trimmed disks, known as blanks or planchets, upon which the final designs are to be stamped. Blanks about the size of a quarter are cut in a single row from each strip; others in a row of two. The refuse strips are folded into convenient lengths for carriage and returned to the smelter.

The blanks or planchets next pass to the cleaning department, and thence to a series of wonderful automatic weighing machines. Each of these is composed primarily of 10 upright brass tubes, beneath which passes a long sliding-bar. Each movement of the bar pushes off the 10 bottom planchets into a small basket on one end of a small scale-beam. The blank coins are weighed instantly and are passed through a series of troughs leading to three boxes. Into one box falls the "light," into the second the "heavy," and into the other the "standard" planchets are condemned and melted over, so scrupulous is Uncle Sam in his endeavor to give the people honest coin of full weight. But his economy equals his honesty, and all planchets which are too heavy are taken into an adjusting-room. Here I saw 140 women, each with a small set of scales and a file. They were industriously filing the

edges of the heavier until all came down to standard heaviness.

The next step was to run all planchets of proper weight through the milling machines, which put on the flat rim or raised edge, which protects each coin's face from abrasion. The milled blanks are then heated to a cherry red by passage through an automatic heating furnace, from which they drop into a copper colander, are then lifted by a crane into a bath of muriatic acid, are revolved in this bath and are finally dropped into a revolving screen filled with sawwood sawdust, such as jeweler's use, which thoroughly cleanses and dries them, ready for coining.

Coining-Room.
 Against the long wall of the coining-room I was shown 34 great, heavy presses, each with a vertical face of polished steel cut in the shape of a giant letter "O." At a sort of manger filled with glistening planchets there sat feeding each machine, and in front thereof a young woman with a canvas apron, into which she now and then placed a handful of the new disks. The mouth of each mangle machine is a small upright tube of the diameter of the coin to be stamped, and into this the blanks were continually inserted in high cylindrical stacks. From the upright brass tube a pair of automatic fingers rapidly took each bottom coin and placed it upon the lowermost of two dies, rapidly clashing together, like hungry jaws. These two coming together at one blow struck the top and bottom impression, and at the same time, by force of expansion, the disk of metal tightened within a dented collar, which gave the finished coin a reeded edge. Silver dollars and gold coins were thus stamped at the rate of 50 per minute; quarters and half-dollars, 30 a minute; nickels, 15 a minute; pennies, 12 a minute. You will note that this is the

first time I have mentioned nickels and pennies. They are distinctly Philadelphia coin, not being stamped at our other mints. But the stamping is the first process which Uncle Sam subjects them to. Their planchets are supplied by a New England firm.

From the coining-room the finished money goes to the proving department, where its accuracy is again tested. It is now ready for the counting-room. In this department gold coins, silver dollars and half-dollars are all counted by weight, being stacked up inside of steel frames and swept off into the pan of a huge scale. The quarters, dimes, nickels and pennies are shuffled over large flat boards with parallel strips of brass between which a row of coin fits loosely. Being filled with the finished disks, it is tilted until the pieces flowing over it fill all of the spaces between strips. Double rows having been allowed to fall off into a bin beneath, the board stands exactly full—no more or less. In this way 1200 in dimes were being counted on a single board every 15 seconds and thrown into an aperture at the front of the counter's table. Leaving the counters, the new money was put into steel strong boxes to await shipment to the various Subtreasuries in money boxes inclosed in iron-hooped cases sealed with wax.

I will give you some surprising facts about the half-splitting economy which Uncle Sam is exacting since he moved into this new coin factory. The loss of a grain of gold or silver dust is prevented, if possible, by making recoveries from the roof to the very walls of the cellar. The floors of the melting-room are of honeycombed iron. Anything dropped thereupon will go through. This honeycomb in the neighborhood of the furnace is removed daily. The dust then swept from the bare floor is, together with all

broken crucibles, crushed in a mill and put through a process for separating the precious metal particles. The clothing which the melters and molders wear, also the aprons of the women coiners, must never leave the building. Lockers and dressing-rooms where they change their clothes under guard are provided. The working apparel and mittens when worn out are burned and the gold and silver extracted from them. These recoveries from the melting department are averaging \$12,400 a year, while the total loss in the entire mint is falling below \$500 a year.

There has also been devised an improved system of safeguards against dishonesty among the 375 men and 175 women employed in the great factory. All gold, silver, nickel or bronze is placed in strong boxes every evening. Taken out in the morning, it is carefully weighed on giant scales graduated from 1-200 ounce to 16,000 ounces. Thence it passes to the appropriate departments. In the course of its transit or manufacture it is throughout the day brought back at intervals and reweighed. Thus there is a system of transfers in operation all day long. At a daily settlement the accounts of all departments are balanced by three checkers, respectively representing the superintendent, melder and coiner. If there be a shortage in any department, its employees are held until it is made good. The last shortage was due to a small strip of gold adhering inside a copper canister used in annealing. All hands were held until it was recovered. Under the old system thefts were easier. Two years ago a melder stole abrasion 6-cent pieces worth \$240 and received 15 months imprisonment. Some years before that a way clerk got away with \$18,000. His property was confiscated and he served 7½ years.

JOHN ELFRITH WATKINS, JR.
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PRETTY ROMANCE OF ALICE HAY

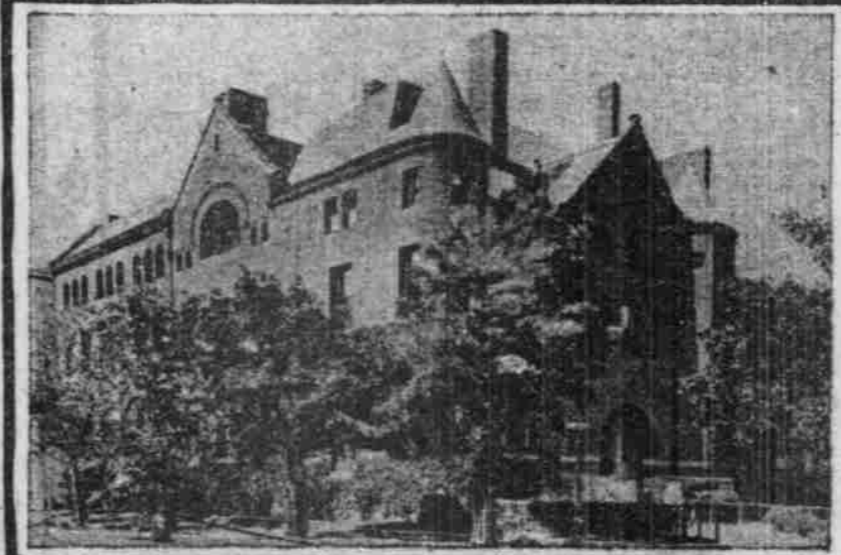
STORY OF THE ENGAGEMENT OF THE GREAT DIPLOMAT'S SECOND DAUGHTER



MISS ALICE HAY



MRS. HAY WIFE OF THE SECRETARY OF STATE



THE HAY RESIDENCE IN WASHINGTON



JAMES W. WADSWORTH, JR.

WASHINGTON, June 23.—(Special Correspondence.)—Every love match is surrounded by its own halo of romance. The engagement of Miss Alice Hay and Mr. James Wolcott Wadsworth, Jr., is by no means an exception to this rule. All the circumstances surrounding it are of more than ordinary interest. It was formally announced by the Secretary of State and Mrs. Hay on Easter Sunday at Washington.

The day was full of the sunshine of early Spring. The family of Secretary Hay attended service, as is their custom, at the Church of the Covenant, on Connecticut avenue. Miss Hay was with them, accompanied by her fiancé, Mr. Wadsworth. When the service was over they joined the throng of gayly dressed women and distinguished-looking men on this thoroughfare, where the fashion and beauty of Washington is sure to be seen on Easter Sunday.

The young couple walked home through beautiful Farragut Square. It was a time for congratulation, and though few were disposed to stop them, they were quite the most interesting figures in this famous Easter procession.

Miss Hay first met Mr. Wadsworth here in Washington, where his father has occupied a distinguished position in Congress for nearly 30 years. Mr. James Wadsworth, Sr., is a man of wealth. Their winter residence is 1735 K street,

event that was of so much interest all over the land.

Both of these young ladies of the Cabinet circle, by virtue of the prominent social position of their parents, have held an enviable place in the esteem of the public. They were, to begin with, acknowledged beauties. Opinions differed somewhat as to which was the more attractive of the two. Many thought the older sister, with her great, dark, expressive eyes and soulful face, was by far the handsomer. Still others think Miss Alice Hay, with her perfectly molded features and exquisite coloring, is the beauty.

In describing Miss Hay, one would say she resembles her mother. She has the same clear-cut features, betokening force of character and reserve of manner. With this are combined a freshness of expression and a fresh, brilliant coloring, pink cheeks and dark eyes, and hair that almost seems golden in certain lights. Miss Hay is tall, with a figure which, like her face, gives every evidence of exuberant health. Both sisters have deep-toned, musical voices.

They have been brought up in an atmosphere of the highest culture. Miss Alice Hay is appreciative of the best in literature, and her tastes, while kindred to those of her sister, have not as yet taken the form of public print. The youngest sister has some housewifely preferences, and in the frequent absences of her mother from Washington has shown great capabilities in presiding over their home at the capital.

As the daughter of the Secretary of

State, Miss Hay has enjoyed the best society here and in England. She understands the social life of London better than the majority of girls, having become acquainted with it from the most desirable viewpoint, that of a diplomat's daughter, at the time her father was our Ambassador to the Court of St. James.

Both of the daughters of Secretary Hay are American women of the best type. They have frequently expressed their preference for their native land. They are sincerely attached to their girlhood friends at the capital, and enjoy their Washington home life to the fullest extent. The residence of the Secretary of State is delightful in every respect. It is situated in one of the most beautiful residential sections of the capital. Its south windows overlook one of the most beautiful parks in the city, Lafayette Square, with its historic suggestions, its fine statues and symmetrical old trees, and the distant view of the colonial front of the White House.

Mr. James Wadsworth enjoys an undoubted popularity here. He is a graduate of Yale. He is reading law, and a young man of no inconsiderable ability in business. At golf he is one of the best players of the Chevy Chase Club, and as a horseman he is still better known. He has been said of him that he "was brought up in the saddle."

Miss Hay is fond of out-of-door life, but has no special fad, such as golf. Both Mrs. Whitney and Miss Hay enjoy looking on at exhibitions of college athletics. They are quite imbued with the college spirit,

and naturally their preferences are for Yale, the alma mater of their lamented brother, Adelbert Hay, who was their ideal man.

Mrs. Hay has always been a social leader in Washington. She is a woman of wealth, the daughter of the late Amasa Stone, a millionaire, of Cleveland, O. As Mrs. Hay's mother died two years ago and her son, Adelbert Hay, less than a year ago, she has been absent from society and has entertained but three times this season. Two of the entertainments were obligatory for the official hostess, the diplomatic breakfast that followed the New Year's reception at the White House, and the Cabinet dinner to the President and Mrs. Roosevelt and the other members of the Cabinet circle in Easter week. The other entertainment was the breakfast and reception in February at the time of her daughter's marriage.

The marriage of Miss Hay and Mr. Wadsworth will take place early in the Fall, in Washington.

The Wrong Side for Tracts.
 Robert Kettle, a Glasgow manufacturer, was one of the warmest advocates which the cause of teetotalism ever had in the commercial capital of Scotland. He was always willing to speak a word in season to promote this reform. Usually he carried about with him a bundle of tracts, which he distributed at houses and shops where he happened to call. One day he gave a few to a young lady. Visiting at the house two or three days later, he noticed his friend had used the tracts as curl-papers.

"I see, my lassie," he said, "ye hae made use of the tracts I left wi' ye, but—this to spare her blushes—ye've put them on the wrong side of your head, my woman."